



April 14, 2026

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Reclamation Report
Golden 8 Federal #001
Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660,
nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and
nAB1929041495
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc (XTO), has prepared the following *Reclamation Report* for the Golden 8 Federal #001 (Site). This *Reclamation Report* documents the Site history, reclamation activities completed to date, and proposes a vegetation monitoring plan.

BACKGROUND

The Site is located in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (32.4912491°, -104.0083542°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

Eight releases occurred at the Site between 2010 and 2019. The releases were reported to the New Mexico Oil Conservation Division (NMOCD) on Release Notification and Corrective Action Form C-141s and were assigned Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and nAB1929041495. The Site was decommissioned and remediation and reclamation activities were completed at the Site during 2024.

Excavation of impacted soil and final confirmation soil sampling activities were completed at the Site between March and June 2024. The combined final excavation extents measured approximately 7,075 square feet. A total of approximately 2,860 cubic yards of impacted soil were removed during the excavation activities. Based on the delineation and excavation soil sample analytical results, a *Closure Request* dated January 16, 2026, was submitted to the NMOCD on January 19, 2026. The NMOCD approved the *Closure Request* for the eight above listed Incident Numbers between February 2 and February 5, 2026. Additional details regarding the releases, historical *Deferral and Closure Requests*, Site Characterization, delineation and excavation activities, and confirmation soil sample analytical results can be referenced in the January 16, 2026, *Closure Request* attached as an appendix in this report. Remediation of the releases was completed in accordance with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC).

RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavations were backfilled and the disturbed areas were restored to the original condition. The excavations were backfilled with locally procured soil. Following backfill activities, the entire well pad was reclaimed and recontoured to match the surrounding topography. The excavation extents are shown on the attached Figure 1 and the well pad reclamation area is shown on the attached Figure 2.

One representative 5-point composite sample (BF01) was collected from the topsoil backfill material on March 19, 2026. The backfill soil sample was transported under strict chain-of-custody procedures to Cardinal Laboratories in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): benzene, toluene, ethylbenzene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B; total petroleum hydrocarbons (TPH)–gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standards Method 4500.

Laboratory analytical results for the backfill soil sample confirmed compliance with NMOCD requirements for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 milligrams per kilogram (mg/kg), BTEX concentrations less than 50 mg/kg, and TPH concentrations less than 100 mg/kg. The laboratory analytical results are summarized in the attached Table 1 and the complete laboratory analytical report is included as Appendix A. Photographic documentation of the current Site condition is included in Appendix B.

The reclaimed well pad will be re-seeded during the Spring of 2026, when temperatures and precipitation are conducive to vegetation growth. The Site will be seeded with the below BLM seed mix #2 for sandy sites at the rate specified in pounds of pure live seed (PLS) per acre.

Species/Cultivar	PLS/Acre
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled, and the seed will be covered by chaining or harrowing the Site.

VEGETATION MONITORING

The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and Site degradation, and to monitor for and treat invasive and noxious weed species.

- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed pasture area has uniform vegetative cover that reflects a life-form ratio of plus or minus 50 percent (%) of pre-

XTO Energy, Inc.
Reclamation Report
Golden 8 Federal #001

disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

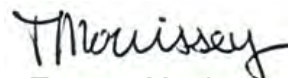
RECLAMATION APPROVAL REQUEST

The approved January 16, 2026, *Closure Request* is included in Appendix C. Based on the reclamation activities completed to date and proposed vegetation monitoring plan described above, XTO respectfully requests approval of this *Reclamation Report* and a status update to *Reclamation Report Approved, Pending submission of Re-Vegetation Report* for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and nAB1929041495.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC


Aimee Cole
Senior Managing Scientist


Tacoma Morrissey, P.G.
Associate Principal

cc: Robert Woodall, XTO
Richard Kotzur, XTO
Bureau of Land Management


Appendices:

- Figure 1 Excavation Area Map
- Figure 2 Well Pad Reclamation Area
- Table 1 Backfill Soil Sample Analytical Results
- Appendix A Laboratory Analytical Report & Chain of Custody Documentation
- Appendix B Photographic Log
- Appendix C January 16, 2026, *Closure Request*



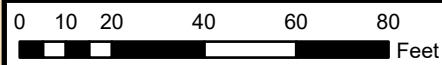
FIGURES

Legend

 Excavation and Reclamation Area



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)



Excavation Area Map

XTO Energy, Inc.
Golden 8 Federal #001
Unit K, Section 08, T 21S, R 29E
Eddy County, New Mexico

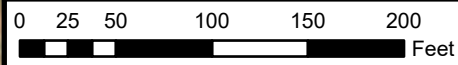
FIGURE
1



Legend

- Site Location
- Reclamation Area

Golden 8
Federal #001



Sources: Environmental Systems Research Institute (ESRI)

Well Pad Reclamation Area

XTO Energy, Inc
 Golden 8 Federal #001
 Unit K, Section 08, T 21S, R 29E
 Eddy County, New Mexico

FIGURE
2



TABLES



TABLE 1 BACKFILL SOIL SAMPLE ANALYTICAL RESULTS Golden 8 Federal #001 XTO Energy, Inc. Eddy County, New Mexico										
Sample Designation	Sample Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Reclamation Requirement for the top four feet (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Backfill Soil Sample										
BF01	03/19/2026	-	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

< : Indicates result less than the stated laboratory reporting limit

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NE: Not Established



APPENDIX A

Laboratory Analytical Report & Chain of Custody Documentation



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 25, 2026

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8 FEDERAL #001

Enclosed are the results of analyses for samples received by the laboratory on 03/20/26 10:04.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/20/2026	Sampling Date:	03/19/2026
Reported:	03/25/2026	Sampling Type:	Soil
Project Name:	GOLDEN 8 FEDERAL #001	Sampling Condition:	Cool & Intact
Project Number:	03C1558223	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.4912491-104.0083542		

Sample ID: BF01 SURFACE (H261569-01)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/23/2026	ND	2.12	106	2.00	1.11		
Toluene*	<0.050	0.050	03/23/2026	ND	2.41	121	2.00	5.69		
Ethylbenzene*	<0.050	0.050	03/23/2026	ND	2.61	130	2.00	6.29		
Total Xylenes*	<0.150	0.150	03/23/2026	ND	7.81	130	6.00	7.09		
Total BTEX	<0.300	0.300	03/23/2026	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	03/20/2026	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: JF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	03/23/2026	ND	178	89.1	200	20.2		
DRO >C10-C28*	<10.0	10.0	03/23/2026	ND	181	90.4	200	30.8		
EXT DRO >C28-C36	<10.0	10.0	03/23/2026	ND						

Surrogate: 1-Chlorooctane 71.8 % 52.4-130

Surrogate: 1-Chlorooctadecane 69.5 % 39.9-141

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- QR-04 The RPD for the BS/BSD was outside of historical limits.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
BS1 Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Airnee Cole
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 720-384-7365 Fax #: _____
 Project #: 03C1558223 Project Owner: XTO Energy, Inc
 Project Name: Golden 8 Federal Battery #1
 Project Location: 32.4912491, -104.0083542
 Sampler Name: Chioe James
 P.O. #: _____ Company: XTO Energy, Inc
 Attn: Dale Woodall
 Address: 3104 E Greene St
 City: Carlsbad State: NM Zip: 88220
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	Chloride
H101-500	BF01	Surface	C	1	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	X	X		3/19/2028	1355	X	X	X

FOR LAB USE ONLY

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Relinquished By: *Chioe James* Date: *3-20-28* Time: *10:04* Received By: *Chioe James* Date: *3-20-28* Time: *08:30*

Delivered By: (Circle One) *UPS* Observed Temp. °C: *5.18* Corrected Temp. °C: *5.04* Sample Condition: *Apparent* Cool Intact Bacteria (only) Spills Observed Temp. °C: _____ Corrected Temp. °C: _____

Turnaround Time: *Standard* *Rush* Bacteria (only) Spills Observed Temp. °C: _____ Corrected Temp. °C: _____

REMARKS: *CL5*



APPENDIX B

Photographic Log



Photographic Log
XTO Energy, Inc.
Golden 8 Federal #001



Photograph 1 Date :3/19/2026
Description: Backfilled excavation area
View: Northwest



Photograph 2 Date :3/19/2026
Description: Backfilled excavation area
View: Northeast



Photograph 3 Date :3/19/2026
Description: Backfilled excavation area
View: East



Photograph 4 Date :3/19/2026
Description: Well pad overview
View: Southwest



APPENDIX C

January 16, 2026 *Closure Request*



January 16, 2026

New Mexico Oil Conservation Division

1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Closure Request
Golden 8 Federal #001
Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660,
nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and
nAB1929041495
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to update the status of previously remediated releases, document remediation activities completed following the decommissioning of the Golden 8 Federal #001 well pad (Site), and request no further action (NFA) for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1929041495, nAB1633656856, nAB1803638613, and nAB1929041495 associated with the Site. Previously submitted documents related to these eight releases include the following:

- A *Proposed Work Plan* was submitted to the New Mexico Oil Conservation Division (NMOCD) on March 22, 2018 to address multiple releases of crude oil and produced water at the Site. The work was proposed to address six unresolved historic releases (nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1929041495, and nAB1633656856) and one recent release (nAB1803638613).
- A *Closure Request* was submitted on May 25, 2018 to the NMOCD for the seven above-listed incidents addressed in the *Proposed Work Plan*. Closure was approved for Incident Numbers nAB1929041495, nAB1633656856, and nAB1803638613.
- A *Deferral Request – Addendum to the Original Closure Request* was submitted to the NMOCD on January 2, 2020, and deferrals were approved for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, and nAB1422637219.
- A *Deferral Request* was submitted to the NMOCD for Incident Number nAB1929041495 on September 2, 2020, and denied on November 9, 2020, due to inadequate depth to groundwater determination.
- A *Deferral Request Addendum* was submitted on May 7, 2021, for Incident Number nAB1929041495 and subsequently approved.

Following the decommissioning of the Site, soil excavation was completed between March and June 2024 to address outstanding deferrals. Based on excavation activities and soil sampling laboratory analytical results, XTO is requesting NFA for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1929041495, nAB1633656856, nAB1803638613, and nAB1929041495.

XTO Energy, Inc.
Closure Request
Golden 8 Federal #001

RELEASE BACKGROUND

The Site is located in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (32.4912491°, -104.0083542°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM). Figure 1 illustrates the location of the Site.

Reporting and status details for eight active releases in the NMOCD portal that occurred at the Site between 2010 and 2019 are summarized below.

Incident Number nKMW1035646177 (2RP-0521)

Incident Number nKMW1035646177 (2RP-0521) occurred on June 14, 2010 when a drain line connection on the back of the tank failed due to internal corrosion. Approximately 90 barrels (bbls) of crude oil were released inside the tank battery containment. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 80 bbls of crude oil were recovered. A Release Notification and Corrective Action Form C-141 (Form C-141) was received by the NMOCD on June 22, 2010. The release was assigned Incident Number nKMW1035646177 (previously Remediation Permit Number 2RP-0521).

The current NMOCD status for this release is “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”. Details of the release and subsequent remedial actions conducted in response to the incident were included in the May 25, 2018 *Closure Request* and January 2, 2020 *Deferral Request – Addendum to Original Closure Request* submitted for the Site. The *Closure Request* is not available on the NMOCD Permitting website so it is included as Appendix A, and the *Deferral Request – Addendum to Original Closure Request* is attached as Appendix B. The NMOCD Permitting website states under Incident Events that deferral for Incident Number nKMW1035646177 was approved on August 3, 2023 until plugging and abandonment of the location or major modification.

Incident Number nKMW1106629393 (2PR-0633)

On February 16, 2011, a heater-treater malfunctioned causing the tank to overflow. Roughly 310 bbls of crude oil were released inside the tank battery containment and covering approximately 400 square feet of pasture outside the tank battery. A vacuum truck recovered approximately 290 bbls of crude oil. A Form C-141 was received by the NMOCD on March 2, 2011. The release was assigned Incident Number nKMW1106629393 (previously Remediation Permit Number 2PR-0633).

The current NMOCD status of the incident is “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”. Additional release details and remedial actions conducted in response to the incident were included in the May 25, 2018 *Closure Request* (Appendix A) and January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B) submitted for the Site. The NMOCD Permitting website states that deferral for Incident Number nKMW1106629393 was approved on February 1, 2021 in the Incident Events section.

Incident Number nJMW1333053660 (2PR-2082)

The fire tube on the heater-treater developed a leak on November 25, 2013, releasing approximately 6 bbls of crude oil and 15 bbls of produced water inside the tank battery containment. A vacuum truck was dispatched to the Site that recovered roughly 3 bbls of crude oil and 2 bbls of produced water. A Form C-141 was received by the NMOCD on November 26, 2013, and the release was assigned Incident Number nJMW1333053660 (previously Remediation Permit Number 2PR-2082).

XTO Energy, Inc.
Closure Request
Golden 8 Federal #001

Spill and remediation activities regarding this release were summarized in the May 25, 2018 *Closure Request* (Appendix A) and January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B) submitted for the Site. The present NMOCD status the incident is “Deferral Request Approved, Pending submission of Remediation Closure Report from the operator”.

Incident Number nAB1422637219 (2PR-2439)

On August 12, 2014, a Victaulic gasket failed on the production header when a normally open valve was shut causing pressure to build and blow out the gasket. Roughly 3 bbls of crude oil and 38 bbls of produced water were released inside the tank battery containment. Approximately 1 bbl of crude oil and 17 bbls of produced water were recovered using a vacuum truck. The gasket was replaced, and the valve was returned to normal. A Form C-141 was received by the NMOCD on August 13, 2014, and the release was assigned Incident Number nAB1422637219 (previously Remediation Permit Number 2PR-2439). The release occurred in the same area as Incident Number nKMW1106629393 (2PR-0633) and Incident Number nJMW1333053660 (2PR-2082).

The May 25, 2018 *Closure Request* (Appendix A) and January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B) submitted for the Site includes details of the remediation activities performed in response to this release. The current NMOCD status of this incident is “Deferral Request Approved, Pending submission of Remediation Closure Report from the operator”.

Incident Number nAB1607837012 (2RP-3612)

Incident Number nAB1607837012 refers to the release of 30 bbls of crude oil that occurred on February 1, 2016, when a gasket seal in the heater treater ruptured. Approximately 7 bbls of crude oil were recovered with a vacuum truck. The release affected roughly 3,060 square feet of well pad and approximately 600 square feet of pasture east of the tank battery. A Form C-141 was received by the NMOCD on March 15, 2016, and the release was assigned Incident Number nAB1607837012 (previously Remediation Permit Number 2RP-3612).

Additional remediation activities conducted in response to the incident were included in the May 25, 2018 *Closure Request* submitted for the Site. The *Closure Request* is not available on the NMOCD Permitting website so it is included as Appendix A. As discussed in the January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B), the NMOCD approved the closure of this incident in an email to the operator at the time of the release (Bopco, L.P.) dated June 6, 2018. The incident has a current NMOCD status of “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”.

Incident Number nAB1633656856 (2RP-4017)

Incident Number nAB1633656856 occurred on November 26, 2016, when an unused three-phase vessel was refitted and returned to operation. Approximately 32 bbls of crude oil was released from the vessel through a pressure relief valve and leaking connections. A vacuum truck recovered approximately 30 bbls of crude oil. The release affected roughly 3,168 square feet of caliche pad with containment and misted the pasture to the east. A Form C-141 was submitted to the NMOCD on November 29, 2016, and the release was assigned Incident Number nAB1633656856 (2RP-4017).

The May 25, 2018 *Closure Request* (Appendix A) submitted for the Site includes details of the remediation activities performed in response to this release. The January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B) discusses the approval of closure for this incident by the NMOCD in an email to the former operator (Bopco, L.P.) dated June 6, 2018. The incident has a

XTO Energy, Inc.
Closure Request
Golden 8 Federal #001

current NMOCD status of “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”.

Incident Number nAB1803638613 (2RP-4601)

On January 18, 2018, a dump valve failed causing the release of roughly 1 bbl of crude oil through the facility flare. A small amount of the fluids exiting the flare ignited. The flare fire impacted approximately 250 square feet of ground within the earthen berm and oil misted roughly 2,600 square feet of the pasture south of the well pad. MicroBlaze® was applied to the affected area. A Form C-141 was received by the NMOCD on February 2, 2018, and the release was assigned Incident Number nAB1803638613 (previously Remediation Permit Number 2RP-4601).

Additional details of the remediation activities performed in response to this release were summarized in the May 25, 2018 *Closure Request* (Appendix A) submitted for the Site. The NMOCD approved the closure of this incident in an email to the former operator (Bopco, L.P.) dated June 6, 2018, as discussed in the January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B). The incident has a current NMOCD status of “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”.

Incident Number nAB1929041495 (2PR-5672)

On September 12, 2019, internal corrosion from the bottom of the heater treater resulted in the release of approximately 0.01 barrels (bbls) of crude oil and approximately 5.79 bbls of produced water into the earthen berm surrounding the battery. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 0.01 bbls of crude oil and approximately 4.99 bbls of produced water were recovered from within the dirt berm area. XTO reported the release to the NMOCD on a Form C-141 on September 27, 2019, and the release was subsequently assigned Incident Number nAB1929041495 (previously Remediation Permit Number 2RP-5672).

A *Deferral Request* detailing delineation and excavation sampling and remediation activities completed at the Site was submitted to the NMOCD for Incident Number nAB1929041495 on September 2, 2020 and denied on November 9, 2020 due to inadequate depth to groundwater determination. A *Deferral Request Addendum* providing an update to depth to groundwater determination activities was submitted on May 7, 2021 for Incident Number nAB1929041495 and approved by the NMOCD on June 25, 2021. The *Deferral Request* and *Deferral Request Addendum* for Incident Number nAB1929041495 are attached as Appendix C and Appendix D, respectively.

CLOSURE CRITERIA

As described in the original *Closure Request* prepared for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, and nAB1803638613, the original site work and subsequent sampling occurred prior to promulgation of the August 14, 2018 spill response requirements listed in Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Therefore, the closure standards established for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, and nAB1803638613 that occurred prior to August 14, 2018 were as follows:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

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- Total Petroleum Hydrocarbons (TPH): 5,000 mg/kg
- Chloride: 600 mg/kg

As discussed in the *Deferral Request* and *Deferral Request Addendum* submitted for Incident Number nAB1929041495, this release occurred following the implementation of Table 1 from 19.15.29.12 of the NMAC so different Closure Criteria were applied for this incident. The Site is located in a medium potential karst designation area. Since the release and remediation activities occurred prior to the implementation of the *Karst Potential Occurrence Zones Public Notice*, the following Closure Criteria were applied to the release.

- Benzene: 10 mg/kg
- BTEX: 50 mg/kg
- 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

The above-listed Closure Criteria was applied to the Site during the 2024 remediation activities of the deferred releases. A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the Site per NMAC 19.15.29.13.D (1).

REMEDATION CLOSURE STATUS UPDATES

As discussed above, assessment and remediation activities for Incident Numbers nAB1607837012, nAB1633656856, and nAB1803638613 were summarized in the May 25, 2018 *Closure Request* submitted for the Site. The *Closure Request* is not available on the NMOCD Permitting website so it is included as Appendix A. The January 2, 2020 *Deferral Request – Addendum to Original Closure Request* (Appendix B) states that the NMOCD approved the closure of these incidents in an email to the operator at the time of the release (Bopco, L.P.) dated June 6, 2018. XTO does not have access to this email, and it is not available on the NMOCD Permitting website. Both reports are attached for review to confirm that all three incidents were remediated to the appropriate closure standards at the time of the releases. The incidents currently have a NMOCD status of “Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator”. XTO requests that the status of Incident Numbers nAB1607837012, nAB1633656856, and nAB1803638613 be updated to “Remediation Closure Report Approved” based on the information provided in Appendices A and B.

EXCAVATION AND SOIL SAMPLING ACTIVITIES

To address deferrals for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, and nAB1929041495, soil excavation was completed at the former central tank battery and former heater treater and separator equipment area following decommissioning of the Site. Figure 2 illustrates the estimated deferral areas for the five releases. Between March and June 2024, Ensolum personnel were at the Site to oversee excavation activities. Impacted soil was excavated from the deferral areas as indicated by visible staining and field screening activities. Two excavations were performed using heavy equipment. The northern excavation encompassed deferred Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, and the southern excavation addressed deferred Incident Number nAB1929041495. To direct excavation activities, Ensolum personnel field screened the soil samples for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

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Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavations. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

Confirmation soil samples FS01, FS02, FS20 through FS36 and FS27A were collected from the floor of the northern excavation at depths ranging from 4 feet to 18 feet bgs. Confirmation sidewall soil samples SW01 through SW04, SW11 through SW21, and SW25 through SW32 were collected from the sidewalls of the northern excavation at depths ranging from ground surface to 10 feet bgs. The soil surrounding floor samples FS26 (collected on May 2, 2024) and FS27 (sampled on April 4, 2024) was over-excavated in localized areas due to Closure Criteria exceedances. Sidewall samples SW01 through SW04 and SW11 through SW18 were also over-excavated based on analytical results. The northern excavation extent and excavation soil sample locations are presented on Figure 3.

Confirmation soil samples FS03 through FS19, FS05A, FS12A and FS15A were collected from the floor of the southern excavation at depths ranging from 2 feet to 15 feet bgs. Confirmation sidewall soil samples SW05 through SW10 and SW22 through SW24 were collected from the sidewalls of the southern excavation at depths ranging from ground surface to 4 feet bgs. The majority of the excavation was completed to a depth of 4 feet bgs; however, floor samples FS05, FS12, and FS15 were over-excavated to greater depths in limited areas based on laboratory analytical results. Similarly, sidewall samples SW08 and SW09 were also over-excavated based on Closure Criteria exceedances. The southern excavation extent and confirmation soil sample locations are illustrated on Figure 3.

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 transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico. All samples were submitted for analysis of the following contaminants of concern (COCs): 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 Standards Method SM4500.

The final floor excavation extent of the northern excavation measured approximately 3,800 square feet, and the ultimate excavation extent of the floor of the southern excavation was calculated at roughly 3,275 square feet. A total of approximately 2,860 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill in Hobbs, New Mexico. Photographic documentation of the deferral remediation activities is included in Appendix E.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results from the 5-point composite floor and sidewall samples collected from the final excavation extents report COC concentrations compliant with the Closure Criteria for the Site and the reclamation requirement in the top four feet of soil. Laboratory analytical results from the 2024 remediation activities completed at the deferral areas are summarized in Table 1, and laboratory analytical reports from the 2024 sampling events are included in Appendix F.

RECLAMATION PLAN

The excavations were backfilled with caliche in the deeper portions of the remediation excavation with material purchased locally. The top four feet of the remediation excavations were backfilled with locally procured topsoil, and the surface of the reclaimed area was chopped/roughened to help prevent future erosion by reducing runoff velocity, trapping sediment, and promoting water retention for revegetation.

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The well pad was seeded during Fall 2024 with BLM sandy sites seed mix #2. A Reclamation Summary detailing reclamation activities completed at the Site as well as proposed vegetation monitoring activities was submitted to the BLM on October 21, 2024 (Appendix G). Upon completion of revegetation, a Final Abandonment Notice (FAN), Form 3160-5, will be submitted to the BLM for final inspection and release.

CLOSURE REQUEST

Site assessment, delineation soil sampling, excavation, excavation soil sampling activities were conducted at the Site to address impacted soil from multiple crude oil and produced water releases that occurred between 2010 and 2019 (Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and nAB1929041495). As discussed above, remediation closure was previously approved for Incident Numbers nAB1607837012, nAB1633656856, and nAB1803638613; however, the status for these incidents is currently listed as "Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator". XTO requests that the statuses of these three incidents be updated to "Remediation Closure Report Approved" based on the information provided in Appendices A and B.

Deferrals for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, and nAB1929041495 were previously approved, and additional excavation occurred in the area of these releases following the decommissioning of the Site. A total of approximately 2,860 cubic yards of soil was removed from the Site during the excavation of the prior deferred areas. Impacted soil was excavated to the reclamation requirement within the top four feet of soil and to Closure Criteria at depths greater than 4 feet bgs. The excavations were backfilled, the well pad was recontoured to match the surrounding topography, and the well pad was reseeded with BLM sandy sites seed mix #2 in October 2024.

XTO believes the remedial actions conducted at the Site are protective of human health, the environment, and groundwater. As such, XTO requests no further action (NFA) for Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856, nAB1803638613, and nAB1929041495.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Katherine Kahn, P.G. (licensed in Wyoming)
Senior Managing Geologist



Tacoma Morrissey, MS, P.G. (licensed in Texas)
Associate Principal

cc: Dale Woodall, XTO
Richard Kotzure, XTO
Bureau of Land Management

Appendices:

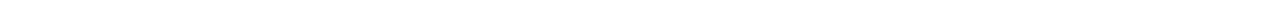
- Figure 1 Site Receptor Map
- Figure 2 Deferral Locations – Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, and nAB1929041495
- Figure 3 Excavation Soil Sample Locations
- Table 1 Soil Sample Analytical Results

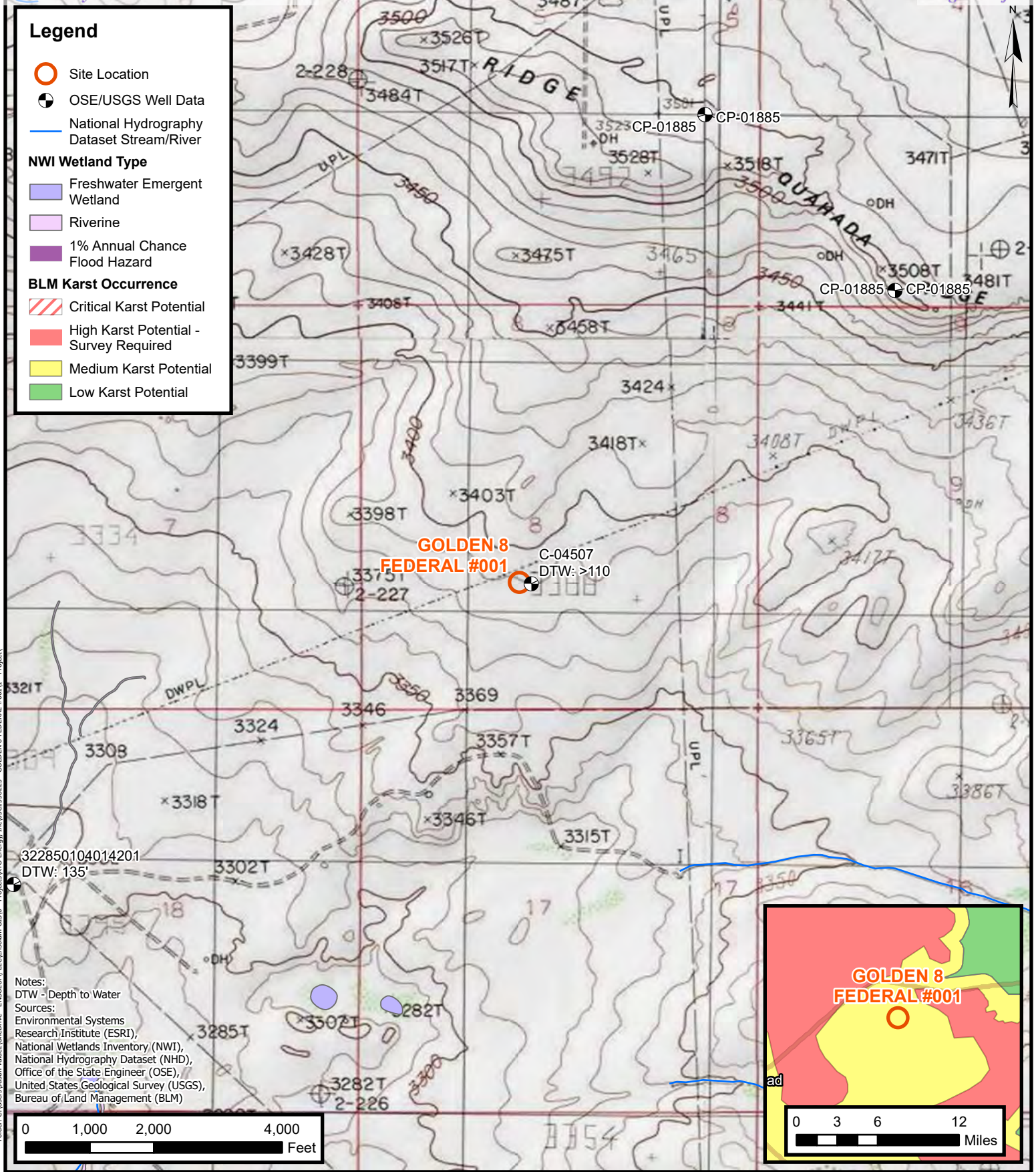
XTO Energy, Inc.
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- Appendix A May 25, 2018 *Closure Request* (Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, nAB1422637219, nAB1607837012, nAB1633656856 and nAB1803638613)
- Appendix B January 2, 2020, *Deferral Request – Addendum to the Original Closure Request* (Incident Numbers nKMW1035646177, nKMW1106629393, nJMW1333053660, and nAB1422637219)
- Appendix C September 2, 2020, *Deferral Request* (Incident Number nAB1929041495)
- Appendix D May 7, 2021, *Deferral Request Addendum* (Incident Number nAB1929041495)
- Appendix E Photographic Log
- Appendix F 2024 Laboratory Analytical Reports and Chain-of-Custody Documentation
- Appendix G October 21, 2024, *Reclamation Summary*



FIGURES





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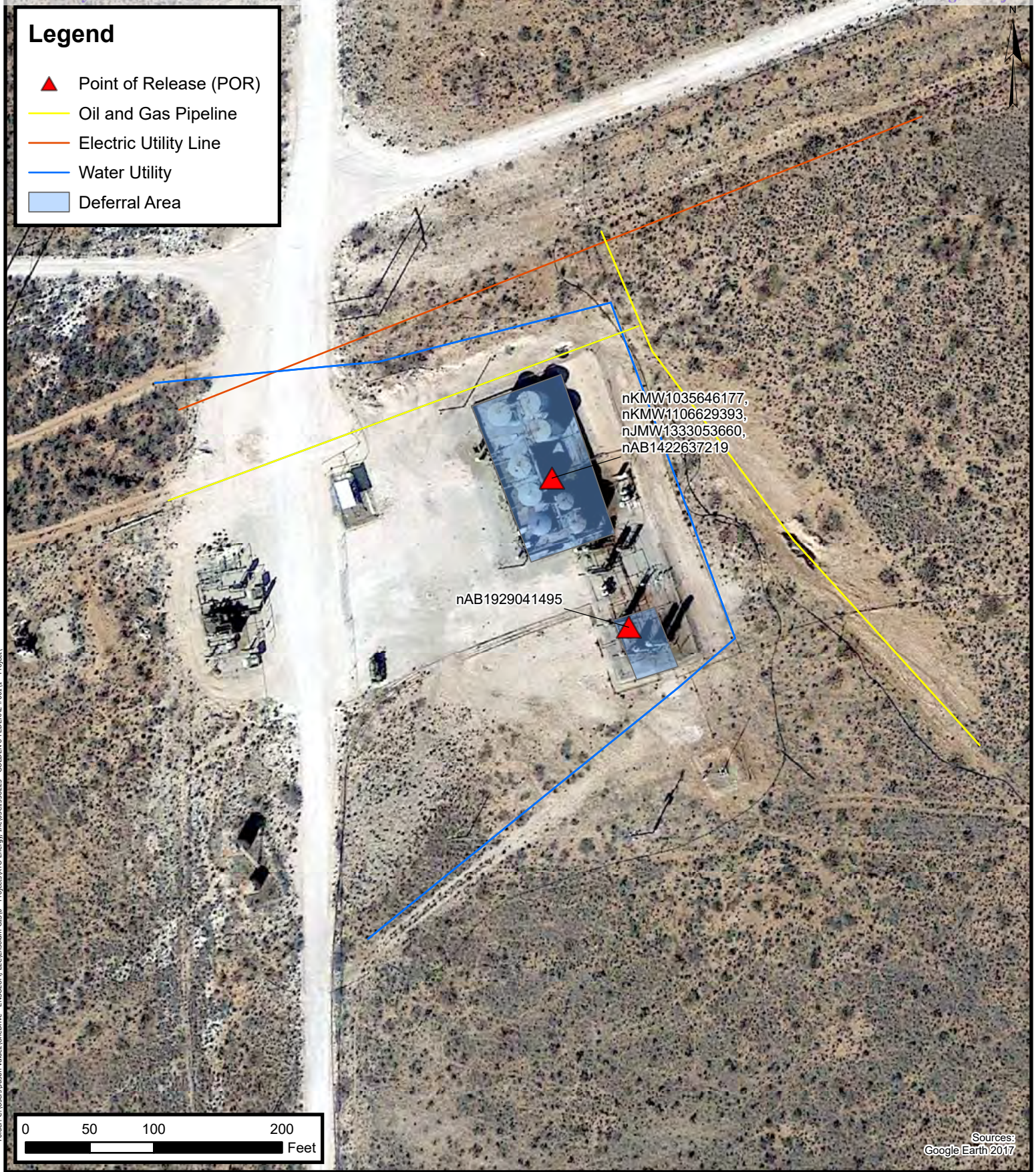


Site Receptor Map
 XTO Energy, Inc
 GOLDEN 8 FEDERAL #001
 Incident Number: nKMW1035646177, nKMW1106629393, nJMW1333053660,
 nAB1422637219, nAB1607837012, nAB1633656856,
 nAB1803638613, and nAB1929041495
 Unit K, Section 8, T 21S, R 29E
 Eddy County, New Mexico

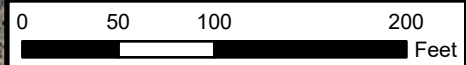
FIGURE
1

Legend

- ▲ Point of Release (POR)
- Oil and Gas Pipeline
- Electric Utility Line
- Water Utility
- Deferral Area



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Sources: Google Earth 2017



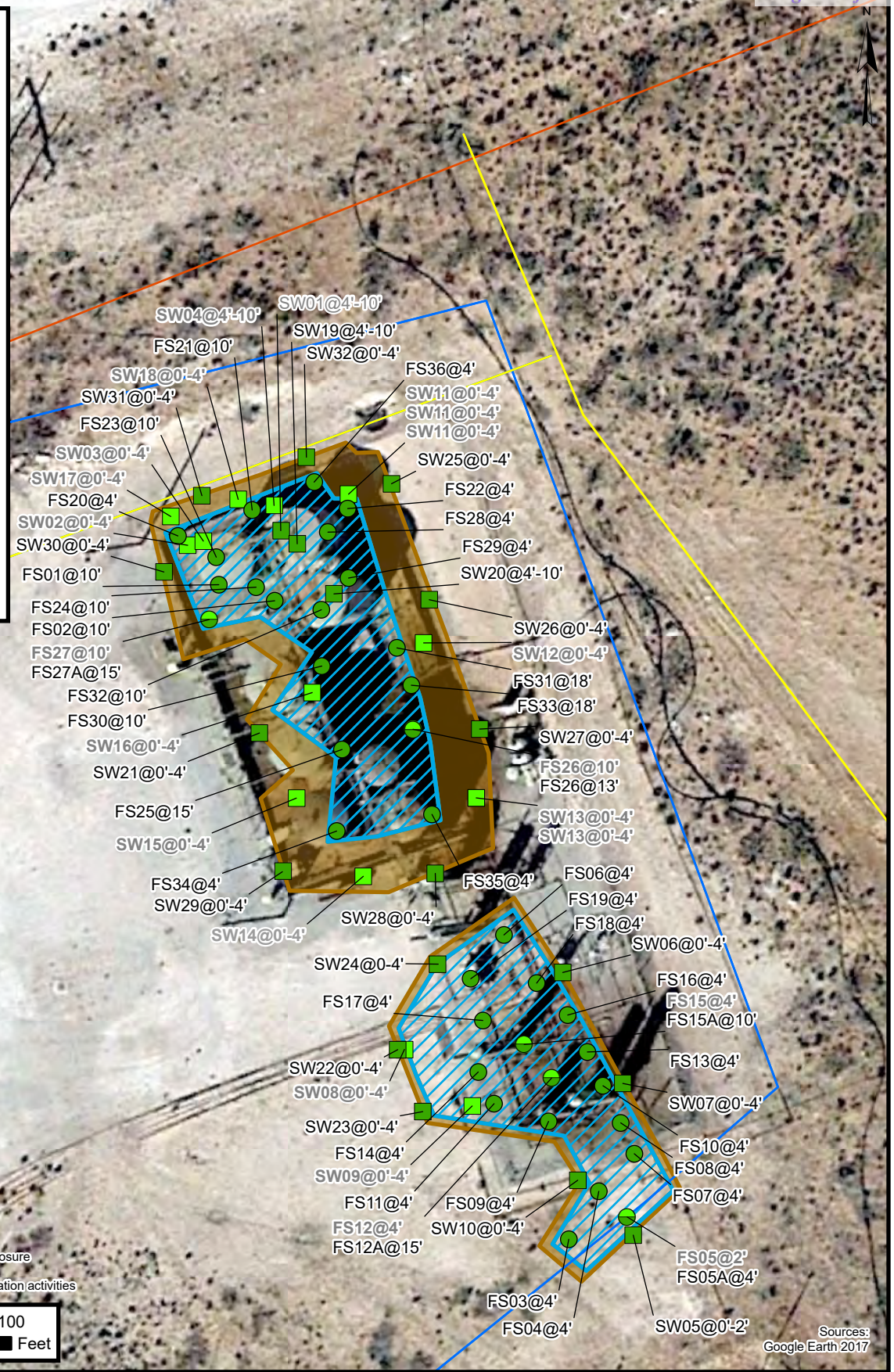
Deferral Locations

XTO Energy, Inc
 GOLDEN 8 FEDERAL #001
 Incident Numbers: nKMW1035646177, nKMW1106629393, nJMW1333053660,
 nAB1422637219, and nAB1929041495
 Unit K, Section 8, T 21S, R 29E
 Eddy County, New Mexico

FIGURE
2

Legend

- Confirmation Floor Soil Sample Compliant with Closure Criteria
- Confirmation Sidewall Soil Sample Compliant with Closure Criteria
- Confirmation Sidewall Soil Sample Not Compliant with Closure Criteria
- Confirmation Floor Soil Sample with Initial Results Exceeding Closure Criteria
- Oil and Gas Pipeline
- Electric Utility Line
- Water Utility
- Excavation Floor
- Excavation Sidewall



Notes
 Sample ID @ Depth Below Ground Surface
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable
 Grey text indicates soil sample removed during excavation activities

0 25 50 100
 Feet

Sources:
 Google Earth 2017

Excavation Soil Sample Locations

XTO Energy, Inc
 GOLDEN 8 FEDERAL #001
 Incident Numbers: nKMW1035646177, nKMW1106629393, nJMW1333053660,
 nAB1422637219, and nAB1929041495
 Unit K, Section 8, T 21S, R 29E
 Eddy County, New Mexico

FIGURE
3





TABLE



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Golden 8 Federal #001
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Reclamation Requirement (NMAC 19.15.29.13.D)			NE	NE	NE	NE	NE	NE	100	600
Confirmation Soil Samples - Northern Excavation										
FS 01	3/21/2024	10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS 02	3/22/2024	10	<0.050	<0.300	<10.0	351	88.6	351	440	608
FS 20	5/3/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS 21	4/3/2024	10	<0.050	<0.300	<10.0	760	170	760	930	976
FS 22	4/3/2024	4	<0.050	<0.300	<10.0	56.0	17.0	56.0	73.0	272
FS 23	4/3/2024	10	<0.050	<0.300	<10.0	283	70.3	283	353	784
FS 24	5/2/2024	10	<0.050	<0.300	<10.0	360	122	360	482	816
FS 25	5/2/2024	15	<0.050	<0.300	<10.0	25.0	<10.0	25.0	25.0	416
FS 26	5/2/2024	40	<0.050	<0.300	37.1	2,430	548	2,430	2,978	224
FS 26	6/3/2024	13	<0.050	<0.300	<10.0	39.7	<10.0	39.7	39.7	320
FS 27	4/4/2024	10	<0.050	<0.300	<10.0	1,260	245	1,260	1,505	352
FS 27A	4/11/2024	15	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	656
FS 28	5/3/2024	4	<0.050	<0.300	<10.0	187	73.4	187	260	224
FS 29	4/4/2024	4	<0.050	<0.300	<10.0	56.5	<10.0	56.5	56.5	240
FS 30	5/2/2024	10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,070
FS 31	4/4/2024	18	<0.050	<0.300	<10.0	11.0	<10.0	11.0	11.0	576
FS 32	5/2/2024	10	<0.050	<0.300	<10.0	246	70.0	246	316	544
FS 33	4/12/2024	18	<0.050	<0.300	<10.0	12.9	<10.0	12.9	12.9	640
FS 34	4/12/2024	4	<0.050	<0.300	<10.0	36.6	10.9	36.6	47.5	544
FS 35	4/12/2024	4	<0.050	<0.300	<10.0	71.5	19.5	71.5	91.0	304
FS 36	5/3/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW01	3/22/2024	4-10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,060
SW02	3/22/2024	0-4	<0.050	<0.300	<10.0	937	556	937	1,493	144
SW03	3/22/2024	0-4	<0.050	<0.300	<10.0	971	603	971	1,574	112
SW04	3/22/2024	4-10	<0.050	<0.300	<10.0	1,920	523	1,920	2,443	32.0
SW 11	3/28/2024	0-4	<0.050	<0.300	<10.0	150	103	150	253	64.0
SW 11	4/5/2024	0-4	<0.050	<0.300	<10.0	102	30.5	102	133	64.0
SW 11	4/12/2024	0-4	<0.050	<0.300	<10.0	382	264	382	646	96.0



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Golden 8 Federal #001
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCB Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Reclamation Requirement (NMAC 19.15.29.13.D)			NE	NE	NE	NE	NE	NE	100	600
SW 12	3/28/2024	0-4	<0.050	<0.300	<10.0	1,070	382	1,070	1,452	320
SW 13	3/28/2024	0-4	<0.050	<0.300	<10.0	129	168	129	297	128
SW 13	4/12/2024	0-4	<0.050	<0.300	<10.0	179	184	179	363	80.0
SW 14	3/28/2024	0-4	<0.050	<0.300	<10.0	597	197	597	794	960
SW 15	3/28/2024	0-4	<0.050	<0.300	<10.0	1340	508	1,340	1,848	432
SW 16	3/28/2024	0-4	<0.050	<0.300	<50.0	2,980	1,300	2,980	4,280	208
SW 17	4/3/2024	0-4	<0.050	<0.300	<10.0	142	45.3	142	187	48.0
SW 18	4/3/2024	0-4	<0.050	<0.300	<10.0	1090	595	1,090	1,685	64.0
SW 19	4/3/2024	4-10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
SW 20	4/3/2024	4-10	<0.050	<0.300	<10.0	107	18.4	107	125	560
SW 21	4/5/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW 25	5/2/2024	0-4	<0.050	<0.300	<10.0	66.3	<10.0	66.3	66.3	80.0
SW 26	5/2/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SW 27	5/2/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW 28	5/2/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW 29	5/2/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW 30	5/3/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW 31	5/3/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW 32	5/3/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
Confirmation Soil Samples - Southern Excavation										
FS 03	3/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
FS 04	3/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576
FS 05	3/26/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
FS 05	5/2/2024	4	<0.050	<0.300	<10.0	43.0	48.5	43.0	91.5	672
FS 06	3/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS 07	3/27/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
FS 08	3/27/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
FS 09	3/27/2024	4	<0.050	<0.300	<10.0	853	234	853	1,087	800
FS 10	3/27/2024	4	<0.050	<0.300	<10.0	54.4	41.0	54.4	95.4	432
FS 11	3/27/2024	4	<0.050	<0.300	<10.0	25.0	<10.0	25.0	25.0	736



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Golden 8 Federal #001
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Reclamation Requirement (NMAC 19.15.29.13.D)			NE	NE	NE	NE	NE	NE	100	600
FS 12	3/27/2024	4	<0.050	6.75	74.9	2,250	411	2,325	2,736	784
FS 12A	4/11/2024	15	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	912
FS 13	3/27/2024	4	<0.050	<0.300	<50.0	706	336	706	1,042	768
FS 14	3/27/2024	4	<0.050	<0.300	<10.0	141	28.0	141	169	752
FS 15	3/27/2024	4	<0.050	12.1	52.8	1,480	225	1,533	1,758	256
FS 15A	4/5/2024	10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,180
FS 16	3/27/2024	4	<0.050	<0.300	<10.0	60.2	49.8	60.2	110	16.0
FS 17	3/27/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	656
FS 18	3/27/2024	4	<0.050	<0.300	<10.0	16.3	16.8	16.3	33.1	64.0
FS 19	3/27/2024	4	<0.050	<0.300	<10.0	378	119	378	497	256
SW 05	3/26/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SW 06	3/26/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW 07	3/27/2024	0-4	<0.050	<0.300	<10.0	19.4	17.2	19.4	36.6	32.0
SW 08	3/27/2024	0-4	<0.050	<0.300	<10.0	422	187	422	609	208
SW 09	3/27/2024	0-4	<0.050	<0.300	<10.0	243	206	243	449	272
SW 10	3/27/2024	0-4	<0.050	<0.300	<10.0	37.0	37.2	37.0	74.2	368
SW 22	4/5/2024	0-4	<0.050	<0.300	<10.0	17.9	<10.0	17.9	17.9	416
SW 23	4/5/2024	0-4	<0.050	<0.300	<10.0	51.7	<10.0	51.7	51.7	400
SW 24	4/11/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

Notes:

bgs: below ground surface
 mg/kg: milligrams per kilogram
 NMOCD: New Mexico Oil Conservation Division
 BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics
 DRO: Diesel Range Organics
 ORO: Oil Range Organics
 TPH: Total Petroleum Hydrocarbon
 NMAC: New Mexico Administrative Code
 Grey text indicates soil sample removed during excavation activities



APPENDIX A

May 25, 2018 *Closure Request*
(Incident Numbers nKMW1035646177,
nKMW1106629393, nJMW1333053660,
nAB1422637219, NAB1607837012,
NAB1633656856 and NAB1803638613)



COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental, Inc.

3300 North A Street
Building 1, Suite 103
Midland, Texas 79705
432-704-5178

May 25, 2018

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

RE: Closure Request
Golden 8 Federal Central Tank Battery #1
2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601
XTO Energy, Inc.
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents this letter report detailing excavation and soil sampling activities at the Golden 8 Federal Central Tank Battery #1 (Site). The work was conducted according to a *Proposed Work Plan* submitted by LTE to the New Mexico Oil Conservation Division (NMOCD) on March 22, 2018 to address multiple releases of crude oil and produced water at the Site. The work was proposed to address six unresolved historic releases (2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017) and one recent release (2RP-4601). The *Proposed Work Plan* documented preliminary sampling conducted by XTO to investigate historical releases, proposed more sampling to continue site investigation, and recommended excavation of any soil identified as exceeding NMOCD regulatory standards. XTO has completed that work and, based on the results of the investigative and confirmation sampling presented in this report, requests no further action for these release events.

BACKGROUND

The Site is located in northeast quarter of the southwest quarter of Section 8 within Township 21 South and Range 29 East in Eddy County, New Mexico (Figure 1). Depth to groundwater at the Site is estimated to be greater than 200 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well is CP 00516, located approximately 1.41 miles west-southwest of the Site with a depth to groundwater of 205 feet and total depth of 275 feet. The closest surface water to the Site is a seasonal playa lake located approximately 4,366 feet to the southeast of the Site. Based on these criteria, the NMOCD site ranking for remediation action levels is a 0 and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region, LTE applied a site-specific chloride action level of 600 mg/kg.

The releases affected areas on and off the well pad. Five of the releases occurred at the tank battery where most of the fluids were contained in an earthen berm. A release at the heater treater was contained in a lined containment. The most recent release was the result of a fire at the flare that



Bratcher, M.

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caused a mist to settle over the pasture off site. As reported on the C-141s, all standing fluids were recovered during initial response activities. The releases and the areas they impacted are summarized as follows:

Release Permit Number	Date of Release	Oil Released (bbls)	Produced Water Released (bbls)	Description of Impacted Area
2RP-521	6/14/2010	90	0	Inside tank battery containment
2RP-633	2/16/2011	310	0	Inside tank battery containment and approximately 400 ft ² of pasture outside the tank battery
2RP-2082	11/25/2013	6	15	Inside tank battery containment
2RP-2439	8/12/2014	3	38	Inside tank battery containment
2RP-3612	2/1/2016	30	0	Approximately 3,060 ft ² of the well pad at the heater treater and approximately 600 ft ² of pasture east of the tank battery
2RP-4017	11/26/2016	32	0	Approximately 3,168 ft ² of the pad near the 2-phase vessel and mist over the pasture east of the well pad
2RP-4601	1/18/2018	<1	0	Mist over approximately 2,600 ft ² of pasture south of the well pad

Notes: bbls – barrels
ft² – square feet

The most recent release occurred after LTE conducted preliminary investigation of the historical releases. In the *Proposed Work Plan*, LTE presented initial sampling results, and used those results to generate a plan for additional delineation sampling and excavation of any identified impacted soil. The intent of the work plan was to address all of the releases at the Site in one effort to simplify report submittals.

ADDITIONAL DELINEATION SOIL SAMPLING

LTE collected additional soil samples on May 8, 2018 to address potential impact to soil east of the well pad to further address releases identified as 2RP-633, 2RP-3612, and 2RP-4017. No visual or olfactory evidence of the release was observed in the off-pad area. To eliminate the effects from



weathering and natural degradation of contaminants at the ground surface, subsurface samples were collected from each sample location at roughly 0.5 feet to 1 foot bgs by hand auger. Field screening was conducted using a photo-ionization detector (PID), and since visual, olfactory, and field screening observations did not suggest presence of impact, boreholes were not advanced deeper. LTE collected the soil samples directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were delivered at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to a certified laboratory, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) by USEPA Method 8015, and chloride by USEPA Method 300.0. Sample locations are depicted on Figure 2 and denoted with a “BH” sample identifier. No additional areas requiring excavation were identified during the delineation sampling event.

EXCAVATION

As specified in the *Proposed Work Plan*, excavation occurred where preliminary investigative samples exceeded NMOCD regulatory standards for TPH, and/or chloride. Two areas on the well pad west and southwest of the tank battery and one area in the pasture south of the well pad were excavated as shown on Figure 2. In an effort to delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. The northernmost excavation was approximately 57 square feet in area and 1.5 feet deep. Approximately 3.5 cubic yards of impacted soil were removed via backhoe or by hand digging when within 10 feet of production equipment or pipelines. The excavation southwest of the tank battery was approximately 612 square feet in area with a maximum depth of 7 feet. Approximately 93 cubic yards of impacted soil was removed from this location. One half to one foot of impacted soil was removed from by scraping the ground surface in the area south of the well pad that was affected by misting. Approximately 40 cubic yards of soil were removed from the scraped area. All impacted soil removed from the Site was transported and properly disposed of at Lea Land Landfarm, located in Eunice, New Mexico.

LTE collected excavation confirmation soil samples from each excavation as shown on Figure 1. Discrete soil samples were collected from the floor of the excavations to characterize each area and confirm all impacted soil had been removed. Sidewall samples were collected when depth of the excavation exceeded 2 feet. Soil samples were stored on ice and delivered to a certified laboratory under strict chain-of-custody procedures. The excavation confirmation soil samples were analyzed for BTEX by EPA Method 8021, TPH – GRO, DRO, and MRO by EPA Method 8015B, and chloride by EPA Method 300.0.

RESULTS

Laboratory analytical results from final investigative soil samples and excavation confirmation soil samples indicated no samples exceed NMOCD remediation action levels for BTEX, TPH, or chloride concentrations. BTEX was not detected in any sample. TPH ranged from non-detect to 4,500 mg/kg. The highest concentration was identified in soil sample SS05 collected in the misted area south of the well pad. Chloride ranged from non-detect to 430 mg/kg. Residual chloride



Bratcher, M.
Page 4

concentrations were highest on the well pad south of the tank battery. Laboratory analytical results are presented on Figure 2 and on Table 1. The complete laboratory analytical reports are attached.

CONCLUSIONS

Six historical releases and one recent release were investigated at this Site by collecting soil samples in locations affected by produced water and crude oil releases. The investigative sampling results identified three areas requiring remediation. Impacted soil was excavated from those areas and disposed of at an NMOCD-approved disposal facility. Subsequent confirmation soil samples collected from the excavations did not exceed NMOCD regulatory standards for BTEX, TPH, or chloride. XTO has successfully removed the impacted soil at the Site and requests no further action for these releases.

Upon approval of this request, XTO will backfill the excavations with material purchased locally and recontour the Site to match native topography. Caliche will be used on the well pad and soil matching native surroundings will be used off site. XTO will re-seed the area south of the well pad with Bureau of Land Management seed mix #2 via drill or broadcast method. Updated NMOCD Forms C-141 are included with Attachment 1.

LTE appreciates the opportunity to provide this proposed work plan to the NMOCD. If you have any questions or comments regarding this plan, do not hesitate to contact me at (970) 385-1096 or via email at aager@ltenv.com or Kyle Littrell at XTO at (970) 317-1867 or Kyle_Littrell@xtoenergy.com.

Sincerely,
LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads "Ashley L. Ager". The signature is written in a cursive, flowing style.

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

Attachments:

Figure 1 Site Location Map
Figure 2 Site Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Laboratory Analytical Reports
Attachment 2 Form C-141s

Cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Crystal Weaver, NMOCD
Shelly Tucker, BLM
Jim Amos, BLM

FIGURES



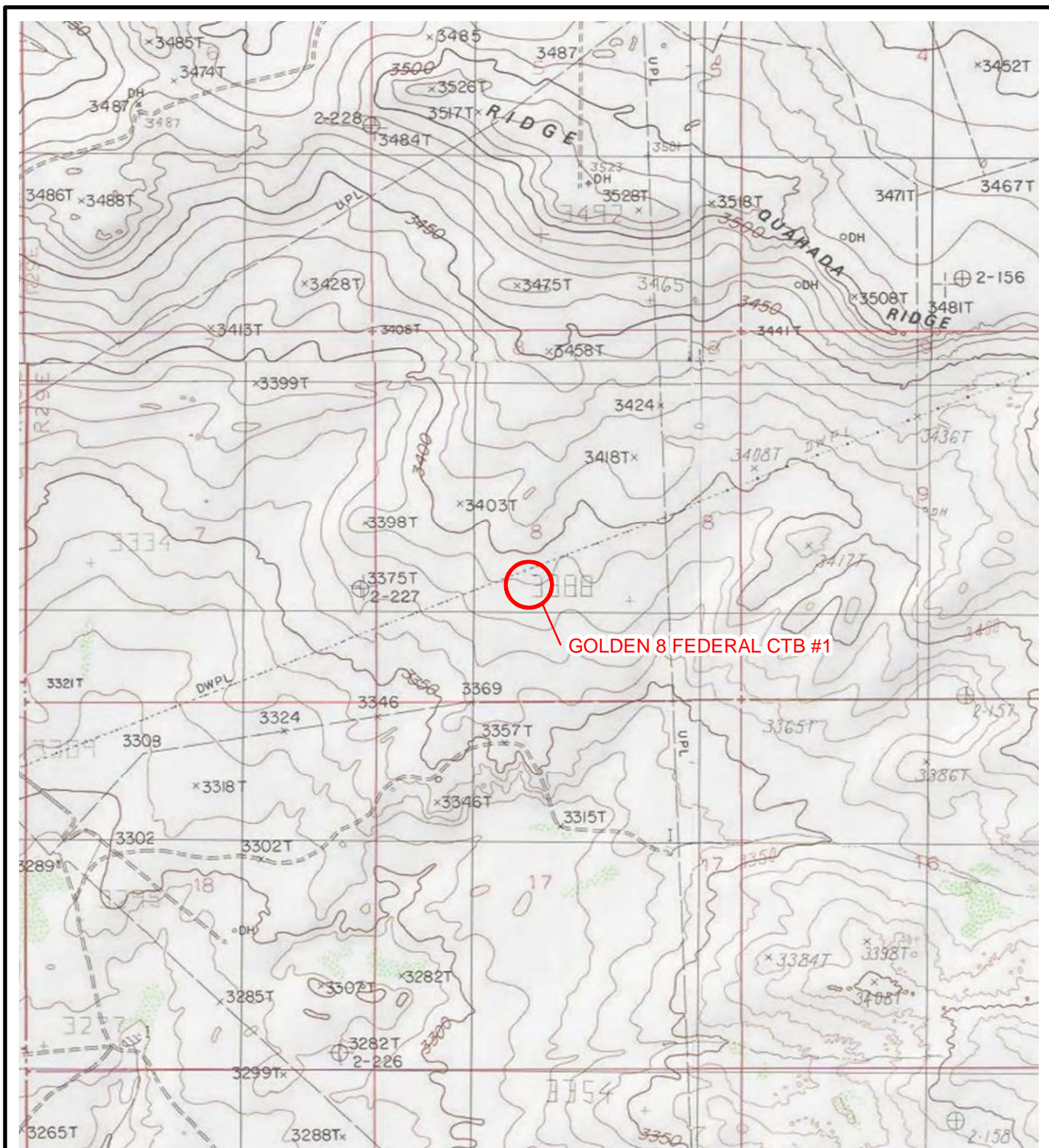
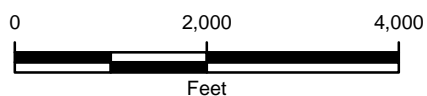


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

CTB: CENTRAL TANK BATTERY



NOTE: 2RP-521, 2RP-633,
 2RP-2082, 2RP-2439, 2RP-3612,
 2RP-4017, 2RP-4601

FIGURE 1
 SITE LOCATION MAP
 GOLDEN 8 FEDERAL CTB #1
 NESW SEC 8 T21S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



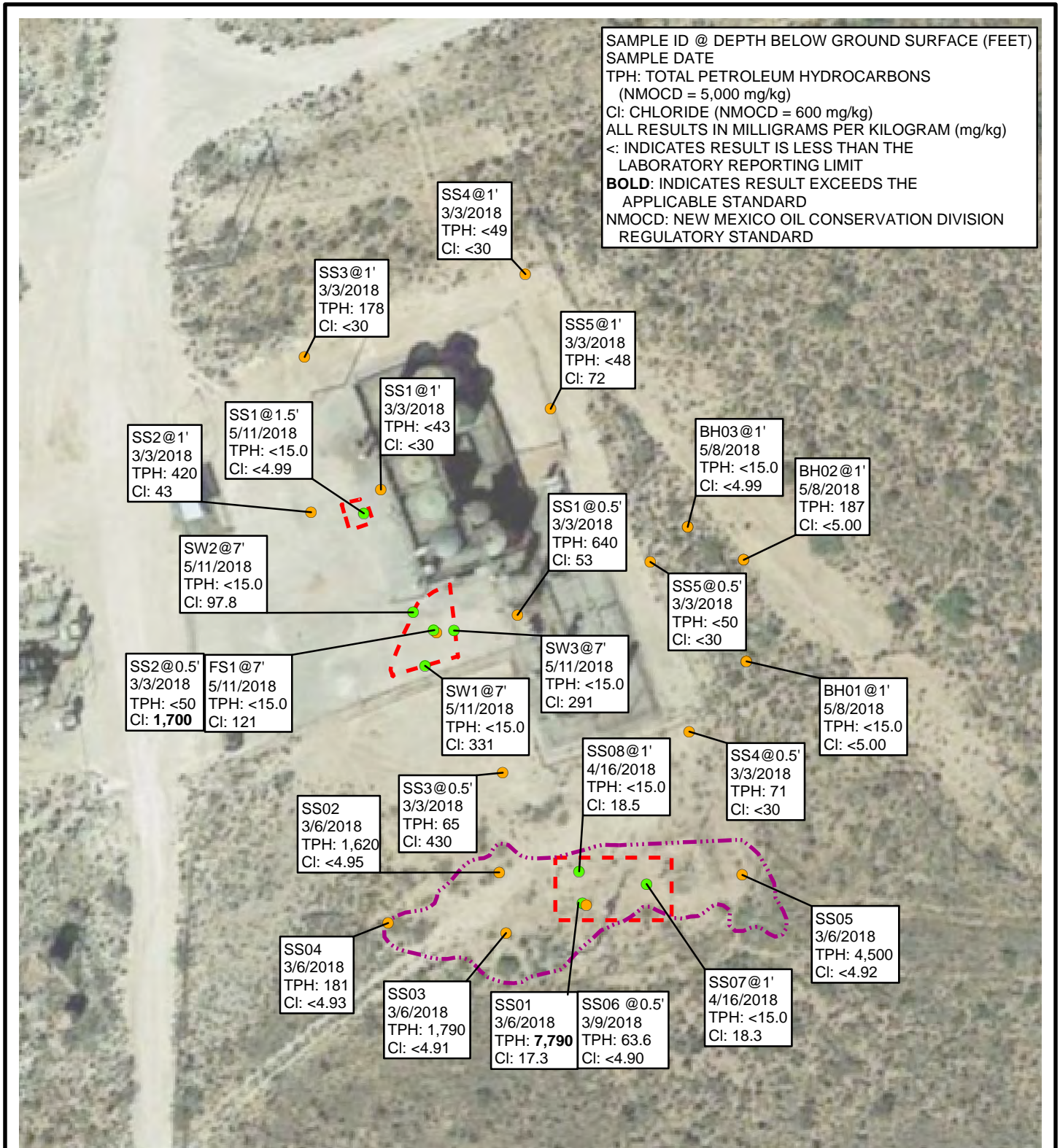


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- EXCAVATION CONFIRMATION SOIL SAMPLE
- INVESTIGATIVE SOIL SAMPLE
- EXCAVATION EXTENT

CTB: CENTRAL TANK BATTERY

NOTE: BENZENE AND TOTAL BTEX NOT INCLUDED BECAUSE ALL RESULTS WERE BELOW LABORATORY DETECTION LIMITS

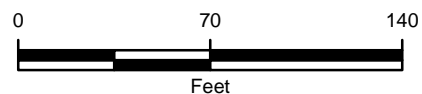


FIGURE 2
SITE SAMPLE LOCATIONS
GOLDEN 8 FEDERAL CTB #1
NESW SEC 8 T21S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS
GOLDEN 8 FEDERAL CENTRAL TANK BATTERY #1
REMEDIATION PERMIT NUMBERS 2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601
EDDY COUNTY, NEW MEXICO**

XTO ENERGY INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-40 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
INVESTIGATIVE SAMPLES												
SS1	1	3/3/2018	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<8.5	<43	<43	<30
SS2	1	3/3/2018	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	220	200	420	43
SS3	1	3/3/2018	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	38	140	178	<30
SS4	1	3/3/2018	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.8	<49	<49	<30
SS5	1	3/3/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.7	<48	<48	72
SS1	0.5	3/3/2018	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	230	410	640	53
SS2	0.5	3/3/2018	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<10	<50	<50	1,700
SS3	0.5	3/3/2018	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	11	54	65	430
SS4	0.5	3/3/2018	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.9	71	71	<30
SS5	0.5	3/3/2018	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<10	<50	<50	<30
SS01	Surface	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<74.9	7,100	686	7,790	17.3
SS02	Surface	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1,540	82.7	1,620	<4.95
SS03	Surface	3/6/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	1,700	89.9	1,790	<4.91
SS04	Surface	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	155	26.4	181	<4.93
SS05	Surface	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.8	3,900	604	4,500	<4.92
BH01 @ 1'	1	5/8/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<5.00
BH02 @ 1'	1	5/8/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	153	34.2	187	<5.00
BH03 @ 1'	1	5/8/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<4.99
EXCAVATION CONFIRMATION SAMPLES												
SS06	0.5	3/9/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	63.6	<15.0	63.6	<4.90
SS07	1	4/16/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	18.3
SS08	1	4/16/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	18.5
SS1	1.5	5/11/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<4.99
FS1	7	5/11/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	121
SW1	7	5/11/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	331
SW2	7	5/11/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	97.8
SW3	7	5/11/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	291
NMOCD Remediation Action Level	NE	NE	10	NE	NE	NE	50	NE	NE	NE	5,000	600

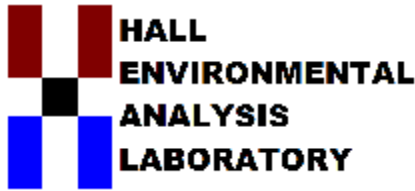
Notes:

- bgs - below ground surface
- BTEX - benzene, toluene, ethylbenzene, and total xylenes
- mg/kg - milligrams per kilogram
- NE - not established
- NMOCD - New Mexico Oil Conservation Division
- TPH - total petroleum hydrocarbons
- Bold** - indicates result exceeds the applicable regulatory standard.



ATTACHMENT 1
LABORATORY ANALYTICAL REPORTS





Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 13, 2018

A Baker

LTE

3300 N A St Bldg 1 #103

Midland, TX 79705

TEL: (432) 704-5178

FAX

RE: Golden 8 Federal 1 Tank Battery

OrderNo.: 1803223

Dear A Baker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **1803223**

Date Reported: **3/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS1

Project: Golden 8 Federal 1 Tank Battery

Collection Date: 3/3/2018 9:30:00 AM

Lab ID: 1803223-001

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 2:54:50 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	3/7/2018 5:55:30 PM	36866
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	3/7/2018 5:55:30 PM	36866
Surr: DNOP	89.6	70-130		%Rec	1	3/7/2018 5:55:30 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/7/2018 10:25:16 AM	36859
Surr: BFB	94.9	15-316		%Rec	1	3/7/2018 10:25:16 AM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2018 10:25:16 AM	36859
Toluene	ND	0.050		mg/Kg	1	3/7/2018 10:25:16 AM	36859
Ethylbenzene	ND	0.050		mg/Kg	1	3/7/2018 10:25:16 AM	36859
Xylenes, Total	ND	0.099		mg/Kg	1	3/7/2018 10:25:16 AM	36859
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	3/7/2018 10:25:16 AM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803223**

Date Reported: **3/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS2

Project: Golden 8 Federal 1 Tank Battery

Collection Date: 3/3/2018 9:40:00 AM

Lab ID: 1803223-002

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	43	30		mg/Kg	20	3/8/2018 3:07:15 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	220	9.6		mg/Kg	1	3/7/2018 6:39:24 PM	36866
Motor Oil Range Organics (MRO)	200	48		mg/Kg	1	3/7/2018 6:39:24 PM	36866
Surr: DNOP	105	70-130		%Rec	1	3/7/2018 6:39:24 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/7/2018 10:48:56 AM	36859
Surr: BFB	96.1	15-316		%Rec	1	3/7/2018 10:48:56 AM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 10:48:56 AM	36859
Toluene	ND	0.047		mg/Kg	1	3/7/2018 10:48:56 AM	36859
Ethylbenzene	ND	0.047		mg/Kg	1	3/7/2018 10:48:56 AM	36859
Xylenes, Total	ND	0.094		mg/Kg	1	3/7/2018 10:48:56 AM	36859
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/7/2018 10:48:56 AM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803223**

Date Reported: **3/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS3

Project: Golden 8 Federal 1 Tank Battery

Collection Date: 3/3/2018 9:50:00 AM

Lab ID: 1803223-003

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 3:19:40 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	38	10		mg/Kg	1	3/8/2018 11:50:16 AM	36866
Motor Oil Range Organics (MRO)	140	50		mg/Kg	1	3/8/2018 11:50:16 AM	36866
Surr: DNOP	98.5	70-130		%Rec	1	3/8/2018 11:50:16 AM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2018 11:12:38 AM	36859
Surr: BFB	96.6	15-316		%Rec	1	3/7/2018 11:12:38 AM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2018 11:12:38 AM	36859
Toluene	ND	0.049		mg/Kg	1	3/7/2018 11:12:38 AM	36859
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2018 11:12:38 AM	36859
Xylenes, Total	ND	0.098		mg/Kg	1	3/7/2018 11:12:38 AM	36859
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	3/7/2018 11:12:38 AM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803223**

Date Reported: **3/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS4

Project: Golden 8 Federal 1 Tank Battery

Collection Date: 3/3/2018 10:00:00 AM

Lab ID: 1803223-004

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 3:32:04 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/7/2018 8:07:29 PM	36866
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/7/2018 8:07:29 PM	36866
Surr: DNOP	93.0	70-130		%Rec	1	3/7/2018 8:07:29 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/7/2018 11:36:26 AM	36859
Surr: BFB	95.2	15-316		%Rec	1	3/7/2018 11:36:26 AM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/7/2018 11:36:26 AM	36859
Toluene	ND	0.046		mg/Kg	1	3/7/2018 11:36:26 AM	36859
Ethylbenzene	ND	0.046		mg/Kg	1	3/7/2018 11:36:26 AM	36859
Xylenes, Total	ND	0.092		mg/Kg	1	3/7/2018 11:36:26 AM	36859
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/7/2018 11:36:26 AM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803223**

Date Reported: **3/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS5

Project: Golden 8 Federal 1 Tank Battery

Collection Date: 3/3/2018 10:10:00 AM

Lab ID: 1803223-005

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	72	30		mg/Kg	20	3/8/2018 3:44:29 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2018 8:29:20 PM	36866
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/7/2018 8:29:20 PM	36866
Surr: DNOP	92.0	70-130		%Rec	1	3/7/2018 8:29:20 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2018 12:00:06 PM	36859
Surr: BFB	95.1	15-316		%Rec	1	3/7/2018 12:00:06 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 12:00:06 PM	36859
Toluene	ND	0.049		mg/Kg	1	3/7/2018 12:00:06 PM	36859
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2018 12:00:06 PM	36859
Xylenes, Total	ND	0.097		mg/Kg	1	3/7/2018 12:00:06 PM	36859
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	3/7/2018 12:00:06 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803223

13-Mar-18

Client: LTE
Project: Golden 8 Federal 1 Tank Battery

Sample ID MB-36903	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 36903		RunNo: 49642							
Prep Date: 3/8/2018	Analysis Date: 3/8/2018		SeqNo: 1606266		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID LCS-36903	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 36903		RunNo: 49642							
Prep Date: 3/8/2018	Analysis Date: 3/8/2018		SeqNo: 1606267		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803223

13-Mar-18

Client: LTE
Project: Golden 8 Federal 1 Tank Battery

Sample ID LCS-36866	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 36866		RunNo: 49602							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1603693		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	70	130			
Surr: DNOP	3.8		5.000		75.4	70	130			

Sample ID MB-36866	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 36866		RunNo: 49602							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1603694		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.4	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803223

13-Mar-18

Client: LTE
Project: Golden 8 Federal 1 Tank Battery

Sample ID MB-36859	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 36859		RunNo: 49627							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1604248		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.9	15	316			

Sample ID LCS-36859	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 36859		RunNo: 49627							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1604249		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	75.9	131			
Surr: BFB	1100		1000		108	15	316			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803223

13-Mar-18

Client: LTE
Project: Golden 8 Federal 1 Tank Battery

Sample ID	MB-36859	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	36859	RunNo:	49627					
Prep Date:	3/6/2018	Analysis Date:	3/7/2018	SeqNo:	1604285	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	80	120			

Sample ID	LCS-36859	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	36859	RunNo:	49627					
Prep Date:	3/6/2018	Analysis Date:	3/7/2018	SeqNo:	1604287	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	77.3	128			
Toluene	0.98	0.050	1.000	0	97.9	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	102	81.6	129			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE MIDLAND

Work Order Number: 1803223

RcptNo: 1

Received By: Anne Thorne 3/6/2018 6:55:00 AM

Completed By: Isaiah Ortiz 3/6/2018 9:14:16 AM

Reviewed By: ore 03/06/18

Handwritten signature: Anne Thorne

Handwritten signature: I O

Handwritten notes: Checked By, Prep: TDS, 3/6/18 RDT

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [] NA []
5. Sample(s) in proper container(s)? Yes [checked] No []
6. Sufficient sample volume for indicated test(s)? Yes [checked] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No []
8. Was preservative added to bottles? Yes [] No [checked] NA []
9. VOA vials have zero headspace? Yes [] No [] No VOA Vials [checked]
10. Were any sample containers received broken? Yes [] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [] # of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [] Adjusted?
13. Is it clear what analyses were requested? Yes [checked] No []
14. Were all holding times able to be met? Yes [checked] No [] Checked by:

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: _____ Date: _____
By Whom: _____ Via: [] eMail [] Phone [] Fax [] In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.0, Yes, [checked], [], [], []

Chain-of-Custody Record

Client: GTE permyan
 Mailing Address: Midland, TX
3900 N. A Street, Bid 05 #1
 Phone #: 432-764-5178
 email or Fax#: adawar@HENV.COM
 OAI/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other
 EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

Golden 8 Federal #1 Tonic Battery
(see notes)

Project #:

30-015-26931

Project Manager:

Adnan Bawar

Sampler:

AC

On Ice: Yes No

Sample Temperature:

.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/3	0930	S	SS1 SS1	1-462	cool	1803003
	0940		SS2			001
	0950		SS3			002
	1000		SS4			003
	1010		SS5			004
						005

Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRG / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VCA)	8270 (Semi-VCA)	Remarks
											X BTEX 8021
											X TPH 8015
											X Chlord 500.1

Received by:

Date: 3/4

Time: 1200

Relinquished by:

Date: 3/5

Time: 1720

Relinquished by:

Date: 3/5

Time: 1720

Remarks:

2RP-2439

2RP-0521

2RP-2028

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

3/5/18 187 Christ Water

Adnan Bawar

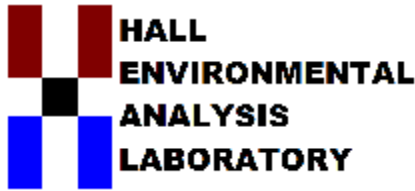


HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 14, 2018

Adrian Baker

LTE

3300 N A St Bldg 1 #103

Midland, TX 79705

TEL: (432) 704-5178

FAX

RE: Golden 8 Federal 1 RP 2RP-3612

OrderNo.: 1803221

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **1803221**

Date Reported: **3/14/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS1

Project: Golden 8 Federal 1 RP 2RP-3612

Collection Date: 3/3/2018 8:40:00 AM

Lab ID: 1803221-001

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	53	30		mg/Kg	20	3/7/2018 5:21:40 PM	36886
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	230	9.6		mg/Kg	1	3/7/2018 1:31:40 PM	36866
Motor Oil Range Organics (MRO)	410	48		mg/Kg	1	3/7/2018 1:31:40 PM	36866
Surr: DNOP	93.4	70-130		%Rec	1	3/7/2018 1:31:40 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/7/2018 2:24:20 PM	36859
Surr: BFB	89.6	15-316		%Rec	1	3/7/2018 2:24:20 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2018 2:24:20 PM	36859
Toluene	ND	0.050		mg/Kg	1	3/7/2018 2:24:20 PM	36859
Ethylbenzene	ND	0.050		mg/Kg	1	3/7/2018 2:24:20 PM	36859
Xylenes, Total	ND	0.10		mg/Kg	1	3/7/2018 2:24:20 PM	36859
Surr: 4-Bromofluorobenzene	88.1	80-120		%Rec	1	3/7/2018 2:24:20 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803221**

Date Reported: **3/14/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS2

Project: Golden 8 Federal 1 RP 2RP-3612

Collection Date: 3/3/2018 8:50:00 AM

Lab ID: 1803221-002

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	1700	75		mg/Kg	50	3/9/2018 6:59:22 PM	36886
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/7/2018 11:41:09 AM	36866
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/7/2018 11:41:09 AM	36866
Surr: DNOP	87.4	70-130		%Rec	1	3/7/2018 11:41:09 AM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/7/2018 2:47:38 PM	36859
Surr: BFB	90.0	15-316		%Rec	1	3/7/2018 2:47:38 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 2:47:38 PM	36859
Toluene	ND	0.047		mg/Kg	1	3/7/2018 2:47:38 PM	36859
Ethylbenzene	ND	0.047		mg/Kg	1	3/7/2018 2:47:38 PM	36859
Xylenes, Total	ND	0.094		mg/Kg	1	3/7/2018 2:47:38 PM	36859
Surr: 4-Bromofluorobenzene	87.4	80-120		%Rec	1	3/7/2018 2:47:38 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803221**

Date Reported: **3/14/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS3

Project: Golden 8 Federal 1 RP 2RP-3612

Collection Date: 3/3/2018 9:00:00 AM

Lab ID: 1803221-003

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	430	30		mg/Kg	20	3/8/2018 12:01:08 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	11	9.8		mg/Kg	1	3/8/2018 1:20:12 PM	36866
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	3/8/2018 1:20:12 PM	36866
Surr: DNOP	80.9	70-130		%Rec	1	3/8/2018 1:20:12 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/7/2018 7:04:03 PM	36859
Surr: BFB	91.9	15-316		%Rec	1	3/7/2018 7:04:03 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 7:04:03 PM	36859
Toluene	ND	0.048		mg/Kg	1	3/7/2018 7:04:03 PM	36859
Ethylbenzene	ND	0.048		mg/Kg	1	3/7/2018 7:04:03 PM	36859
Xylenes, Total	ND	0.096		mg/Kg	1	3/7/2018 7:04:03 PM	36859
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	3/7/2018 7:04:03 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803221**

Date Reported: **3/14/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS4

Project: Golden 8 Federal 1 RP 2RP-3612

Collection Date: 3/3/2018 9:10:00 AM

Lab ID: 1803221-004

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 12:13:32 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/7/2018 2:58:59 PM	36866
Motor Oil Range Organics (MRO)	71	50		mg/Kg	1	3/7/2018 2:58:59 PM	36866
Surr: DNOP	91.8	70-130		%Rec	1	3/7/2018 2:58:59 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/7/2018 7:27:17 PM	36859
Surr: BFB	90.1	15-316		%Rec	1	3/7/2018 7:27:17 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2018 7:27:17 PM	36859
Toluene	ND	0.050		mg/Kg	1	3/7/2018 7:27:17 PM	36859
Ethylbenzene	ND	0.050		mg/Kg	1	3/7/2018 7:27:17 PM	36859
Xylenes, Total	ND	0.10		mg/Kg	1	3/7/2018 7:27:17 PM	36859
Surr: 4-Bromofluorobenzene	88.5	80-120		%Rec	1	3/7/2018 7:27:17 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order **1803221**

Date Reported: **3/14/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: SS5

Project: Golden 8 Federal 1 RP 2RP-3612

Collection Date: 3/3/2018 9:20:00 AM

Lab ID: 1803221-005

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 12:50:46 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/7/2018 8:51:18 PM	36866
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/7/2018 8:51:18 PM	36866
Surr: DNOP	77.2	70-130		%Rec	1	3/7/2018 8:51:18 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/7/2018 7:50:27 PM	36859
Surr: BFB	91.2	15-316		%Rec	1	3/7/2018 7:50:27 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 7:50:27 PM	36859
Toluene	ND	0.048		mg/Kg	1	3/7/2018 7:50:27 PM	36859
Ethylbenzene	ND	0.048		mg/Kg	1	3/7/2018 7:50:27 PM	36859
Xylenes, Total	ND	0.097		mg/Kg	1	3/7/2018 7:50:27 PM	36859
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	3/7/2018 7:50:27 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803221

14-Mar-18

Client: LTE
Project: Golden 8 Federal 1 RP 2RP-3612

Sample ID	MB-36886	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	36886	RunNo:	49611					
Prep Date:	3/7/2018	Analysis Date:	3/7/2018	SeqNo:	1604728	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36886	SampType:	ics	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	36886	RunNo:	49611					
Prep Date:	3/7/2018	Analysis Date:	3/7/2018	SeqNo:	1604730	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	101	90	110			

Sample ID	MB-36903	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	36903	RunNo:	49642					
Prep Date:	3/8/2018	Analysis Date:	3/8/2018	SeqNo:	1606266	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36903	SampType:	ics	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	36903	RunNo:	49642					
Prep Date:	3/8/2018	Analysis Date:	3/8/2018	SeqNo:	1606267	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803221

14-Mar-18

Client: LTE
Project: Golden 8 Federal 1 RP 2RP-3612

Sample ID LCS-36866	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 36866		RunNo: 49602							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1603693		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	70	130			
Surr: DNOP	3.8		5.000		75.4	70	130			

Sample ID MB-36866	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 36866		RunNo: 49602							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1603694		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.4	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803221

14-Mar-18

Client: LTE
Project: Golden 8 Federal 1 RP 2RP-3612

Sample ID MB-36859	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 36859		RunNo: 49627							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1604248		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.9	15	316			

Sample ID LCS-36859	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 36859		RunNo: 49627							
Prep Date: 3/6/2018	Analysis Date: 3/7/2018		SeqNo: 1604249		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	75.9	131			
Surr: BFB	1100		1000		108	15	316			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803221

14-Mar-18

Client: LTE
Project: Golden 8 Federal 1 RP 2RP-3612

Sample ID	MB-36859	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	36859	RunNo:	49627					
Prep Date:	3/6/2018	Analysis Date:	3/7/2018	SeqNo:	1604285	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	80	120			

Sample ID	LCS-36859	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	36859	RunNo:	49627					
Prep Date:	3/6/2018	Analysis Date:	3/7/2018	SeqNo:	1604287	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	77.3	128			
Toluene	0.98	0.050	1.000	0	97.9	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	102	81.6	129			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE MIDLAND

Work Order Number: 1803221

RcptNo: 1

Received By: Anne Thorne

3/6/2018 6:55:00 AM

[Signature]

Completed By: Isaiah Ortiz

3/6/2018 8:25:04 AM

[Signature]

Reviewed By: spee 03/06/18

LB: DDS

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [] NA []
5. Sample(s) in proper container(s)? Yes [checked] No []
6. Sufficient sample volume for indicated test(s)? Yes [checked] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No []
8. Was preservative added to bottles? Yes [] No [checked] NA []
9. VOA vials have zero headspace? Yes [] No [] No VOA Vials [checked]
10. Were any sample containers received broken? Yes [] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No []
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No []
13. Is it clear what analyses were requested? Yes [checked] No []
14. Were all holding times able to be met? Yes [checked] No []

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.0, Good, Yes, [], [], []

Chain-of-Custody Record

Client: CTE-perman

Mailing Address: Middland, TX

3360 N. A Street - Bld 103 #1

Phone #: 432-704-5178

email or Fax#: abaker@henv.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time: Standard Rush

Project Name: Golden 8 Federal #1

RP # ZRP-3612

Project #: 30-015-26931

Project Manager: Adnan Baker

Sampler: AC

On Ice: Yes No

Sample Temperature: 10°

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/3	0840	S	SS1	1-462	COOL	1803221
	0850		SS2			001
	0900		SS3			002
	0910		SS4			003
	0920	V	SS5			004
						005

Date: 3/4 Time: 1200

Date: 3/5 Time: 1720

Relinquished by: AC

Relinquished by: [Signature]

Received by: [Signature] Date: 3/4 Time: 1200

Received by: [Signature] Date: 3/5 Time: 1720



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (6021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRC / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	
BTEX 8021	X
TPH 8015	X
Chloride 500.1	X
Air Bubbles (Y or N)	

Remarks:

Analytical Report 578604

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Golden 8 Federal CTB

09-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)



09-MAR-18

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

Reference: XENCO Report No(s): **578604**
Golden 8 Federal CTB
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 578604. 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. 578604 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
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 578604

LT Environmental, Inc., Arvada, CO

Golden 8 Federal CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-06-18 14:00		578604-001
SS02	S	03-06-18 14:10		578604-002
SS03	S	03-06-18 14:20		578604-003
SS04	S	03-06-18 14:30		578604-004
SS05	S	03-06-18 14:40		578604-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal CTB

Project ID:
Work Order Number(s): 578604

Report Date: 09-MAR-18
Date Received: 03/08/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3043201 BTEX by EPA 8021B

Lab Sample ID 578604-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 578604-001, -002, -003, -004, -005.

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

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 578604-005.

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



Certificate of Analysis Summary 578604

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal CTB

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Mar-08-18 09:15 am
Report Date: 09-MAR-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	578604-001	578604-002	578604-003	578604-004	578604-005	
	Field Id:	SS01	SS02	SS03	SS04	SS05	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Mar-06-18 14:00	Mar-06-18 14:10	Mar-06-18 14:20	Mar-06-18 14:30	Mar-06-18 14:40	
BTEX by EPA 8021B	Extracted:	Mar-08-18 16:45	Mar-08-18 16:45	Mar-08-18 16:45	Mar-08-18 16:45	Mar-08-18 16:45	
	Analyzed:	Mar-09-18 10:55	Mar-09-18 10:55	Mar-09-18 10:55	Mar-09-18 10:55	Mar-09-18 10:55	
	Units/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	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
m,p-Xylenes		<0.00402 0.00402	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402	<0.00399 0.00399	
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Inorganic Anions by EPA 300	Extracted:	Mar-08-18 13:00	Mar-08-18 13:00	Mar-08-18 13:00	Mar-08-18 13:00	Mar-08-18 13:00	
	Analyzed:	Mar-08-18 16:11	Mar-08-18 16:29	Mar-08-18 16:34	Mar-08-18 16:39	Mar-08-18 16:45	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		17.3 4.99	<4.95 4.95	<4.91 4.91	<4.93 4.93	<4.92 4.92	
TPH by SW8015 Mod	Extracted:	Mar-08-18 10:00	Mar-08-18 10:00	Mar-08-18 10:00	Mar-08-18 10:00	Mar-08-18 10:00	
	Analyzed:	Mar-08-18 11:56	Mar-08-18 12:22	Mar-08-18 12:49	Mar-08-18 13:17	Mar-08-18 13:45	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<74.9 74.9	<15.0 15.0	<14.9 14.9	<15.0 15.0	<74.8 74.8	
Diesel Range Organics (DRO)		7100 74.9	1540 15.0	1700 14.9	155 15.0	3900 74.8	
Oil Range Hydrocarbons (ORO)		686 74.9	82.7 15.0	89.9 14.9	26.4 15.0	604 74.8	
Total TPH		7790 74.9	1620 15.0	1790 14.9	181 15.0	4500 74.8	

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

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Version: 1.9%

Jessica Kramer

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS01** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-001 Date Collected: 03.06.18 14.00
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.08.18 13.00 Basis: Wet Weight
 Seq Number: 3043151

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.3	4.99	mg/kg	03.08.18 16.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.08.18 10.00 Basis: Wet Weight
 Seq Number: 3043122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	03.08.18 11.56	U	5
Diesel Range Organics (DRO)	C10C28DRO	7100	74.9	mg/kg	03.08.18 11.56		5
Oil Range Hydrocarbons (ORO)	PHCG2835	686	74.9	mg/kg	03.08.18 11.56		5
Total TPH	PHC635	7790	74.9	mg/kg	03.08.18 11.56		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.08.18 11.56	
o-Terphenyl	84-15-1	110	%	70-135	03.08.18 11.56	



Certificate of Analytical Results 578604

LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS01** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-001 Date Collected: 03.06.18 14.00
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 03.08.18 16.45 Basis: Wet Weight
 Seq Number: 3043201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.09.18 10.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111		%	70-130	03.09.18 10.55	
4-Bromofluorobenzene	460-00-4	118		%	70-130	03.09.18 10.55	



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS02** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-002 Date Collected: 03.06.18 14.10
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.08.18 13.00 Basis: Wet Weight
 Seq Number: 3043151

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.18 16.29	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.08.18 10.00 Basis: Wet Weight
 Seq Number: 3043122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.18 12.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	1540	15.0	mg/kg	03.08.18 12.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	82.7	15.0	mg/kg	03.08.18 12.22		1
Total TPH	PHC635	1620	15.0	mg/kg	03.08.18 12.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.08.18 12.22	
o-Terphenyl	84-15-1	129	%	70-135	03.08.18 12.22	



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS02** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-002 Date Collected: 03.06.18 14.10
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 03.08.18 16.45 Basis: Wet Weight
 Seq Number: 3043201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.09.18 10.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	03.09.18 10.55		
1,4-Difluorobenzene	540-36-3	75	%	70-130	03.09.18 10.55		



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS03** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-003 Date Collected: 03.06.18 14.20
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.08.18 13.00 Basis: Wet Weight
 Seq Number: 3043151

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.91	4.91	mg/kg	03.08.18 16.34	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.08.18 10.00 Basis: Wet Weight
 Seq Number: 3043122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.08.18 12.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	1700	14.9	mg/kg	03.08.18 12.49		1
Oil Range Hydrocarbons (ORO)	PHCG2835	89.9	14.9	mg/kg	03.08.18 12.49		1
Total TPH	PHC635	1790	14.9	mg/kg	03.08.18 12.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.08.18 12.49	
o-Terphenyl	84-15-1	130	%	70-135	03.08.18 12.49	



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS03** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-003 Date Collected: 03.06.18 14.20
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 03.08.18 16.45 Basis: Wet Weight
 Seq Number: 3043201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.09.18 10.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.09.18 10.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.09.18 10.55		
1,4-Difluorobenzene	540-36-3	80	%	70-130	03.09.18 10.55		



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS04** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-004 Date Collected: 03.06.18 14.30
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.08.18 13.00 Basis: Wet Weight
 Seq Number: 3043151

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	03.08.18 16.39	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.08.18 10.00 Basis: Wet Weight
 Seq Number: 3043122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.18 13.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	155	15.0	mg/kg	03.08.18 13.17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	26.4	15.0	mg/kg	03.08.18 13.17		1
Total TPH	PHC635	181	15.0	mg/kg	03.08.18 13.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.08.18 13.17	
o-Terphenyl	84-15-1	118	%	70-135	03.08.18 13.17	



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS04** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-004 Date Collected: 03.06.18 14.30
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 03.08.18 16.45 Basis: Wet Weight
 Seq Number: 3043201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.09.18 10.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.09.18 10.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	03.09.18 10.55		
1,4-Difluorobenzene	540-36-3	89	%	70-130	03.09.18 10.55		



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS05** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-005 Date Collected: 03.06.18 14.40
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.08.18 13.00 Basis: Wet Weight
 Seq Number: 3043151

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.92	4.92	mg/kg	03.08.18 16.45	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.08.18 10.00 Basis: Wet Weight
 Seq Number: 3043122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.8	74.8	mg/kg	03.08.18 13.45	U	5
Diesel Range Organics (DRO)	C10C28DRO	3900	74.8	mg/kg	03.08.18 13.45		5
Oil Range Hydrocarbons (ORO)	PHCG2835	604	74.8	mg/kg	03.08.18 13.45		5
Total TPH	PHC635	4500	74.8	mg/kg	03.08.18 13.45		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.08.18 13.45	
o-Terphenyl	84-15-1	79	%	70-135	03.08.18 13.45	



Certificate of Analytical Results 578604



LT Environmental, Inc., Arvada, CO Golden 8 Federal CTB

Sample Id: **SS05** Matrix: Soil Date Received: 03.08.18 09.15
 Lab Sample Id: 578604-005 Date Collected: 03.06.18 14.40
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 03.08.18 16.45 Basis: Wet Weight
 Seq Number: 3043201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.09.18 10.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.09.18 10.55	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	56		%	70-130	03.09.18 10.55	**
4-Bromofluorobenzene	460-00-4	102		%	70-130	03.09.18 10.55	



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal CTB

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043151
MB Sample Id: 7640419-1-BLK

Matrix: Solid
LCS Sample Id: 7640419-1-BKS

Prep Method: E300P
Date Prep: 03.08.18
LCSD Sample Id: 7640419-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	249	100	90-110	0	20	mg/kg	03.08.18 14:25	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043151
Parent Sample Id: 578424-003

Matrix: Soil
MS Sample Id: 578424-003 S

Prep Method: E300P
Date Prep: 03.08.18
MSD Sample Id: 578424-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	103	249	360	103	360	103	90-110	0	20	mg/kg	03.08.18 14:41	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043151
Parent Sample Id: 578425-005

Matrix: Soil
MS Sample Id: 578425-005 S

Prep Method: E300P
Date Prep: 03.08.18
MSD Sample Id: 578425-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.97	249	250	100	250	100	90-110	0	20	mg/kg	03.08.18 15:55	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043122
MB Sample Id: 7640359-1-BLK

Matrix: Solid
LCS Sample Id: 7640359-1-BKS

Prep Method: TX1005P
Date Prep: 03.07.18
LCSD Sample Id: 7640359-1-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	986	99	971	97	70-135	2	35	mg/kg	03.08.18 02:51	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	996	100	70-135	2	35	mg/kg	03.08.18 02:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		110		107		70-135	%	03.08.18 02:51
o-Terphenyl	103		109		104		70-135	%	03.08.18 02:51

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

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

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.
Golden 8 Federal CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043122

Parent Sample Id: 578424-001

Matrix: Soil

MS Sample Id: 578424-001 S

Prep Method: TX1005P

Date Prep: 03.07.18

MSD Sample Id: 578424-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1030	103	1040	104	70-135	1	35		mg/kg	03.08.18 04:10	
Diesel Range Organics (DRO)	<15.0	997	1050	105	1090	109	70-135	4	35		mg/kg	03.08.18 04:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		117		70-135	%	03.08.18 04:10
o-Terphenyl	109		112		70-135	%	03.08.18 04:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043201

MB Sample Id: 7640464-1-BLK

Matrix: Solid

LCS Sample Id: 7640464-1-BKS

Prep Method: SW5030B

Date Prep: 03.08.18

LCSD Sample Id: 7640464-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0883	87	0.0848	84	70-130	4	35		mg/kg	03.09.18 10:55	
Toluene	<0.00201	0.101	0.0900	89	0.0930	92	70-130	3	35		mg/kg	03.09.18 10:55	
Ethylbenzene	<0.00201	0.101	0.0937	93	0.0974	96	70-130	4	35		mg/kg	03.09.18 10:55	
m,p-Xylenes	<0.00402	0.201	0.182	91	0.189	94	70-130	4	35		mg/kg	03.09.18 10:55	
o-Xylene	<0.00201	0.101	0.0921	91	0.0957	95	70-130	4	35		mg/kg	03.09.18 10:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		101		95		70-130	%	03.09.18 10:55
4-Bromofluorobenzene	118		130		122		70-130	%	03.09.18 10:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043201

Parent Sample Id: 578604-005

Matrix: Soil

MS Sample Id: 578604-005 S

Prep Method: SW5030B

Date Prep: 03.08.18

MSD Sample Id: 578604-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0818	82	0.0884	88	70-130	8	35		mg/kg	03.09.18 10:55	
Toluene	<0.00199	0.0996	0.0659	66	0.0780	78	70-130	17	35		mg/kg	03.09.18 10:55	X
Ethylbenzene	<0.00199	0.0996	0.0601	60	0.0745	75	70-130	21	35		mg/kg	03.09.18 10:55	X
m,p-Xylenes	<0.00398	0.199	0.112	56	0.143	72	70-130	24	35		mg/kg	03.09.18 10:55	X
o-Xylene	<0.00199	0.0996	0.0556	56	0.0717	72	70-130	25	35		mg/kg	03.09.18 10:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	78		70		70-130	%	03.09.18 10:55
4-Bromofluorobenzene	124		124		70-130	%	03.09.18 10:55

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

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

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

5786004

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch: LTE / Permian		Project Name/Number: Golden & Federal CTB		Xenco Quote #		Xenco Job #	
Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705		Project Location: NM		Xenco Job #		Xenco Job #	
Email: Abaker@ltenv.com		Invoice To: NM		Xenco Job #		Xenco Job #	
Phone No: 432-704-5178		XTO Energy - Kyle Littrell		Xenco Job #		Xenco Job #	
Project Contact: Adrian Baker		PO Number: 30-015-26931		Xenco Job #		Xenco Job #	
Sampler's Name: Aaron Williamson		Matrix Codes		Xenco Job #		Xenco Job #	
No.		Field ID / Point of Collection		Xenco Job #		Xenco Job #	
1		SS01		Xenco Job #		Xenco Job #	
2		SS02		Xenco Job #		Xenco Job #	
3		SS03		Xenco Job #		Xenco Job #	
4		SS04		Xenco Job #		Xenco Job #	
5		SS05		Xenco Job #		Xenco Job #	
6				Xenco Job #		Xenco Job #	
7				Xenco Job #		Xenco Job #	
8				Xenco Job #		Xenco Job #	
9				Xenco Job #		Xenco Job #	
10				Xenco Job #		Xenco Job #	
Turnaround Time (Business days)		Collection		Number of preserved bottles		Notes	
Sample Depth		Date		Time		Matrix	
1		Surf.		3-6-18		1400	
2						S	
3						1410	
4						1420	
5						1430	
6						1440	
7							
8							
9							
10							
<input checked="" type="checkbox"/> Same Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> STANDARD TAT		<input type="checkbox"/> 5 Day TAT <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Contract TAT <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG 411		<input type="checkbox"/> Level IV (Full Data Pkg / raw data)	
TAT Starts Day received by Lab, if received by 5:00 pm		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY		FED-EX / UPS: Tracking #		Notes: AP1: 30-015-26931	
Relinquished by Sampler:		Date Time:		Received By:		Date Time:	
Relinquished by:		Date Time:		Received By:		Date Time:	
Relinquished by:		Date Time:		Received By:		Date Time:	
Temp: 5.3		IR ID: R-8		On Ice		Cooler Temp.	
CF: (-0.6: -0.2°C)		Corrected Temp: 5.1		Thermo. Corr. Factor			



Client: LT Environmental, Inc.

Date/ Time Received: 03/08/2018 09:15:00 AM

Work Order #: 578604

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

Sample Receipt Checklist

Comments

Table with 3 columns: Question, Answer, and Comments. Contains 18 checklist items regarding sample receipt and custody.

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

Analyst:

PH Device/Lot#:

Checklist completed by: [Signature]
Katie Lowe

Date: 03/08/2018

Checklist reviewed by: [Signature]
Jessica Kramer

Date: 03/08/2018

Analytical Report 578893

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Golden 8 Federal Battery #1

12-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)



12-MAR-18

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

Reference: XENCO Report No(s): **578893**
Golden 8 Federal Battery #1
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 578893. 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. 578893 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
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 578893

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS06	S	03-09-18 13:00	6 In	578893-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal Battery #1

Project ID:
Work Order Number(s): 578893

Report Date: 12-MAR-18
Date Received: 03/10/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3043357 BTEX by EPA 8021B

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



Certificate of Analysis Summary 578893

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal Battery #1

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Mar-10-18 12:21 pm
Report Date: 12-MAR-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	578893-001				
	Field Id:	SS06				
	Depth:	6- In				
	Matrix:	SOIL				
	Sampled:	Mar-09-18 13:00				
BTEX by EPA 8021B	Extracted:	Mar-10-18 12:30				
	Analyzed:	Mar-11-18 09:24				
	Units/RL:	mg/kg RL				
	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00401 0.00401				
	o-Xylene	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Inorganic Anions by EPA 300	Extracted:	Mar-12-18 09:00				
	Analyzed:	Mar-12-18 10:37				
	Units/RL:	mg/kg RL				
Chloride		<4.90 4.90				
TPH by SW8015 Mod	Extracted:	** ** ** **				
	Analyzed:	Mar-11-18 02:31				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0				
	Diesel Range Organics (DRO)	63.6 15.0				
Oil Range Hydrocarbons (ORO)	<15.0 15.0					
Total TPH		63.6 15.0				

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 578893

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery #1

Sample Id: SS06	Matrix: Soil	Date Received: 03.10.18 12.21
Lab Sample Id: 578893-001	Date Collected: 03.09.18 13.00	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: OJS	Date Prep: 03.12.18 09.00	Basis: Wet Weight
Seq Number: 3043446		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	03.12.18 10.37	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 03.10.18 12.00	Basis: Wet Weight
Seq Number: 3043414		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	63.6	15.0	mg/kg	03.11.18 02.31		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 02.31	U	1
Total TPH	PHC635	63.6	15.0	mg/kg	03.11.18 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.11.18 02.31	
o-Terphenyl	84-15-1	97	%	70-135	03.11.18 02.31	



Certificate of Analytical Results 578893

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery #1

Sample Id: SS06	Matrix: Soil	Date Received: 03.10.18 12.21
Lab Sample Id: 578893-001	Date Collected: 03.09.18 13.00	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 03.10.18 12.30	Basis: Wet Weight
Seq Number: 3043357		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.11.18 09.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.11.18 09.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	03.11.18 09.24		
1,4-Difluorobenzene	540-36-3	84	%	70-130	03.11.18 09.24		



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal Battery #1

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043446
MB Sample Id: 7640586-1-BLK

Matrix: Solid
LCS Sample Id: 7640586-1-BKS

Prep Method: E300P
Date Prep: 03.12.18
LCSD Sample Id: 7640586-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	261	104	261	104	90-110	0	20	mg/kg	03.12.18 09:31	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043446
Parent Sample Id: 578266-004

Matrix: Soil
MS Sample Id: 578266-004 S

Prep Method: E300P
Date Prep: 03.12.18
MSD Sample Id: 578266-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	253	101	254	102	90-110	0	20	mg/kg	03.12.18 11:46	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043446
Parent Sample Id: 578891-004

Matrix: Soil
MS Sample Id: 578891-004 S

Prep Method: E300P
Date Prep: 03.12.18
MSD Sample Id: 578891-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.2	246	258	100	258	100	90-110	0	20	mg/kg	03.12.18 10:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043414
MB Sample Id: 7640553-1-BLK

Matrix: Solid
LCS Sample Id: 7640553-1-BKS

Prep Method: TX1005P
Date Prep: 03.10.18
LCSD Sample Id: 7640553-1-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	957	96	954	95	70-135	0	35	mg/kg	03.10.18 16:37	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1020	102	70-135	1	35	mg/kg	03.10.18 16:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		103		108		70-135	%	03.10.18 16:37
o-Terphenyl	97		103		106		70-135	%	03.10.18 16:37

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

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

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.
Golden 8 Federal Battery #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043414

Parent Sample Id: 578129-021

Matrix: Soil

MS Sample Id: 578129-021 S

Prep Method: TX1005P

Date Prep: 03.10.18

MSD Sample Id: 578129-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	964	97	975	98	70-135	1	35	mg/kg	03.10.18 17:56	
Diesel Range Organics (DRO)	<15.0	998	1070	107	1080	108	70-135	1	35	mg/kg	03.10.18 17:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		109		70-135	%	03.10.18 17:56
o-Terphenyl	104		104		70-135	%	03.10.18 17:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043357

MB Sample Id: 7640559-1-BLK

Matrix: Solid

LCS Sample Id: 7640559-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.18

LCSD Sample Id: 7640559-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0790	78	0.0735	74	70-130	7	35	mg/kg	03.10.18 22:25	
Toluene	<0.00202	0.101	0.0845	84	0.0783	78	70-130	8	35	mg/kg	03.10.18 22:25	
Ethylbenzene	<0.00202	0.101	0.0942	93	0.0897	90	70-130	5	35	mg/kg	03.10.18 22:25	
m,p-Xylenes	<0.00403	0.202	0.185	92	0.178	89	70-130	4	35	mg/kg	03.10.18 22:25	
o-Xylene	<0.00202	0.101	0.0937	93	0.0910	91	70-130	3	35	mg/kg	03.10.18 22:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		88		90		70-130	%	03.10.18 22:25
4-Bromofluorobenzene	98		114		111		70-130	%	03.10.18 22:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043357

Parent Sample Id: 578592-004

Matrix: Soil

MS Sample Id: 578592-004 S

Prep Method: SW5030B

Date Prep: 03.10.18

MSD Sample Id: 578592-004 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	0.0663	66	0.0629	63	70-130	5	35	mg/kg	03.10.18 23:03	X
Toluene	<0.00200	0.100	0.0526	53	0.0525	53	70-130	0	35	mg/kg	03.10.18 23:03	X
Ethylbenzene	<0.00200	0.100	0.0272	27	0.0384	38	70-130	34	35	mg/kg	03.10.18 23:03	X
m,p-Xylenes	<0.00401	0.200	0.0530	27	0.0707	35	70-130	29	35	mg/kg	03.10.18 23:03	X
o-Xylene	<0.00200	0.100	0.0283	28	0.0372	37	70-130	27	35	mg/kg	03.10.18 23:03	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		92		70-130	%	03.10.18 23:03
4-Bromofluorobenzene	103		106		70-130	%	03.10.18 23:03

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

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

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

Client / Reporting Information Company Name / Branch: LTE / Perrilan Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705 Email: Abaker@lennu.com Phone No: 432-704-5178 Project Contact: Adrian Baker		Project Information Project Name/Number: Golden 8 Federal Battery #1 Project Location: NM Invoice To: XTO Energy - Kyle Litrell PO Number: 30-015-26931		Xenco Quote # 67088973		Xenco Job # 67088973		Matrix Codes W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface Water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air	
Collection No. 5506 Field ID / Point of Collection: 5506		Number of preserved bottles HCl NaOH/Zn Acetate HNO3 H2SO4 NaOH NaHSO4 MEQH NONE		Analytical Information <input checked="" type="checkbox"/> BTEX EPA Method 8021 <input checked="" type="checkbox"/> TPH EPA Method 8015 <input checked="" type="checkbox"/> Chloride EPA Method 300.1		Notes: AR1-30-015-26931 Temp: 2.1 CF:(0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 1.9 IR ID: R-8		Field Comments	
Data Deliverable Information <input checked="" type="checkbox"/> Same Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 6 Day TAT <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Contract TAT <input type="checkbox"/> STANDARD TAT <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level II Sid QC <input type="checkbox"/> Level III Sid QC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG -411		<input type="checkbox"/> Level IV (Full Data Pkg/raw data)		Turnaround Time (Business days) Turnaround Time (Business days)		Turnaround Time (Business days) Turnaround Time (Business days)	
Relinquished by Sampler: Date Time: 3-19-18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 12:11 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]	
TAT Starts Day received by Lab, if received by 5:00 pm Relinquished by Sampler: [Signature] Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]	
Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]	
Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]		Relinquished by: Date Time: 3/19/18 17:01 Received By: [Signature]	



Client: LT Environmental, Inc.

Date/ Time Received: 03/10/2018 12:21:00 PM

Work Order #: 578893

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

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:
Katie Lowe

Date: 03/10/2018

Checklist reviewed by:
Jessica Kramer

Date: 03/12/2018



Certificate of Analysis Summary 583284

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal Battery

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Apr-21-18 10:00 am
Report Date: 27-APR-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	583284-001	583284-002			
	<i>Field Id:</i>	SS7	SS8			
	<i>Depth:</i>	12- In	12- In			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Apr-16-18 12:30	Apr-16-18 13:00			
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-24-18 13:00	Apr-24-18 13:00			
	<i>Analyzed:</i>	Apr-24-18 21:39	Apr-24-18 21:58			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00198 0.00198	<0.00200 0.00200			
Toluene		<0.00198 0.00198	<0.00200 0.00200			
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200			
m,p-Xylenes		<0.00397 0.00397	<0.00399 0.00399			
o-Xylene		<0.00198 0.00198	<0.00200 0.00200			
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200			
Total BTEX		<0.00198 0.00198	<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	Apr-26-18 16:00	Apr-26-18 16:00			
	<i>Analyzed:</i>	Apr-26-18 20:03	Apr-26-18 20:34			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		18.3 4.97	18.5 4.96			
TPH By SW8015 Mod	<i>Extracted:</i>	Apr-25-18 16:00	Apr-25-18 16:00			
	<i>Analyzed:</i>	Apr-26-18 00:27	Apr-26-18 00:53			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0			
Total TPH		<15.0 15.0	<15.0 15.0			

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

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

Jessica Kramer
 Project Assistant

Analytical Report 583284

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Golden 8 Federal Battery

27-APR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



27-APR-18

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

Reference: XENCO Report No(s): **583284**
Golden 8 Federal Battery
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 583284. 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. 583284 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
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 583284

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS7	S	04-16-18 12:30	12 In	583284-001
SS8	S	04-16-18 13:00	12 In	583284-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Golden 8 Federal Battery*

Project ID:
Work Order Number(s): 583284

Report Date: 27-APR-18
Date Received: 04/21/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3047816 BTEX by EPA 8021B

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



Certificate of Analytical Results 583284



LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: SS7	Matrix: Soil	Date Received: 04.21.18 10.00
Lab Sample Id: 583284-001	Date Collected: 04.16.18 12.30	Sample Depth: 12 In
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 04.26.18 16.00	Basis: Wet Weight
Seq Number: 3048105		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.3	4.97	mg/kg	04.26.18 20.03		1

Analytical Method: TPH By SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 04.25.18 16.00	Basis: Wet Weight
Seq Number: 3047990		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.18 00.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.26.18 00.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.26.18 00.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.26.18 00.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.26.18 00.27	
o-Terphenyl	84-15-1	105	%	70-135	04.26.18 00.27	



Certificate of Analytical Results 583284



LT Environmental, Inc., Arvada, CO Golden 8 Federal Battery

Sample Id: SS7	Matrix: Soil	Date Received: 04.21.18 10.00
Lab Sample Id: 583284-001	Date Collected: 04.16.18 12.30	Sample Depth: 12 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 04.24.18 13.00	Basis: Wet Weight
Seq Number: 3047816		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.24.18 21.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.24.18 21.39	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104		%	70-130	04.24.18 21.39	
1,4-Difluorobenzene	540-36-3	102		%	70-130	04.24.18 21.39	



Certificate of Analytical Results 583284



LT Environmental, Inc., Arvada, CO Golden 8 Federal Battery

Sample Id: **SS8** Matrix: Soil Date Received: 04.21.18 10.00
 Lab Sample Id: 583284-002 Date Collected: 04.16.18 13.00 Sample Depth: 12 In
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: SCM Date Prep: 04.26.18 16.00 Basis: Wet Weight
 Seq Number: 3048105

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.5	4.96	mg/kg	04.26.18 20.34		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 04.25.18 16.00 Basis: Wet Weight
 Seq Number: 3047990

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.18 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.26.18 00.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.26.18 00.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.26.18 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.26.18 00.53	
o-Terphenyl	84-15-1	102	%	70-135	04.26.18 00.53	



Certificate of Analytical Results 583284



LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: SS8	Matrix: Soil	Date Received: 04.21.18 10.00
Lab Sample Id: 583284-002	Date Collected: 04.16.18 13.00	Sample Depth: 12 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 04.24.18 13.00	Basis: Wet Weight
Seq Number: 3047816		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.24.18 21.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.24.18 21.58	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92		%	70-130	04.24.18 21.58	
1,4-Difluorobenzene	540-36-3	95		%	70-130	04.24.18 21.58	



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3048105

MB Sample Id: 7643509-1-BLK

Matrix: Solid

LCS Sample Id: 7643509-1-BKS

Prep Method: E300P

Date Prep: 04.26.18

LCSD Sample Id: 7643509-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	235	94	235	94	90-110	0	20	mg/kg	04.26.18 18:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3048105

Parent Sample Id: 583288-001

Matrix: Soil

MS Sample Id: 583288-001 S

Prep Method: E300P

Date Prep: 04.26.18

MSD Sample Id: 583288-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.2	250	247	89	247	89	90-110	0	20	mg/kg	04.26.18 21:36	X

Analytical Method: Chloride by EPA 300

Seq Number: 3048105

Parent Sample Id: 583452-018

Matrix: Soil

MS Sample Id: 583452-018 S

Prep Method: E300P

Date Prep: 04.26.18

MSD Sample Id: 583452-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	131	249	375	98	373	97	90-110	1	20	mg/kg	04.26.18 19:11	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3047990

MB Sample Id: 7643471-1-BLK

Matrix: Solid

LCS Sample Id: 7643471-1-BKS

Prep Method: TX1005P

Date Prep: 04.25.18

LCSD Sample Id: 7643471-1-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	1010	101	1070	107	70-135	6	20	mg/kg	04.25.18 21:46	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1090	109	70-135	8	20	mg/kg	04.25.18 21:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		114		122		70-135	%	04.25.18 21:46
o-Terphenyl	116		113		121		70-135	%	04.25.18 21:46

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

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

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

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



LT Environmental, Inc.
Golden 8 Federal Battery

Analytical Method: TPH By SW8015 Mod

Seq Number: 3047990

Parent Sample Id: 583282-001

Matrix: Soil

MS Sample Id: 583282-001 S

Prep Method: TX1005P

Date Prep: 04.25.18

MSD Sample Id: 583282-001 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	998	1060	106	1010	101	70-135	5	20	mg/kg	04.25.18 23:06	
Diesel Range Organics (DRO)	24.2	998	1060	104	1020	100	70-135	4	20	mg/kg	04.25.18 23:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		118		70-135	%	04.25.18 23:06
o-Terphenyl	121		115		70-135	%	04.25.18 23:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3047816

MB Sample Id: 7643366-1-BLK

Matrix: Solid

LCS Sample Id: 7643366-1-BKS

Prep Method: SW5030B

Date Prep: 04.24.18

LCSD Sample Id: 7643366-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.115	114	0.114	114	70-130	1	35	mg/kg	04.24.18 17:48	
Toluene	<0.00202	0.101	0.109	108	0.108	108	70-130	1	35	mg/kg	04.24.18 17:48	
Ethylbenzene	<0.00202	0.101	0.110	109	0.108	108	70-130	2	35	mg/kg	04.24.18 17:48	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.224	112	70-130	1	35	mg/kg	04.24.18 17:48	
o-Xylene	<0.00202	0.101	0.114	113	0.112	112	70-130	2	35	mg/kg	04.24.18 17:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		108		109		70-130	%	04.24.18 17:48
4-Bromofluorobenzene	89		102		93		70-130	%	04.24.18 17:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3047816

Parent Sample Id: 583285-001

Matrix: Soil

MS Sample Id: 583285-001 S

Prep Method: SW5030B

Date Prep: 04.24.18

MSD Sample Id: 583285-001 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	0.0998	0.0983	98	0.0878	88	70-130	11	35	mg/kg	04.24.18 18:27	
Toluene	<0.00200	0.0998	0.0934	94	0.0824	82	70-130	13	35	mg/kg	04.24.18 18:27	
Ethylbenzene	<0.00200	0.0998	0.0937	94	0.0796	80	70-130	16	35	mg/kg	04.24.18 18:27	
m,p-Xylenes	<0.00399	0.200	0.192	96	0.162	81	70-130	17	35	mg/kg	04.24.18 18:27	
o-Xylene	<0.00200	0.0998	0.0977	98	0.0834	83	70-130	16	35	mg/kg	04.24.18 18:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	04.24.18 18:27
4-Bromofluorobenzene	106		103		70-130	%	04.24.18 18:27

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

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

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

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



Setting the Standard since 1990
 Stafford, Texas (281-240-4200)
 Dallas Texas (214-902-0300)

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

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page ___ of ___

www.xenco.com

Xenco Quote # Xenco Job # 583284

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes											
Company Name / Branch: LTEMidland		Project Name/Number: Golden 8 Federal Battery		Xenco Quote #		Xenco Job # 583284											
Company Address: 3300 North A Street Building 1, Unit #103 Midland, Texas		Project Location: NM		Date Time:		Date Time:											
Email: abaker@lternv.com		Invoice To: Kyle Littrell XTO Energy		Date Time:		Date Time:											
Phone No: 439-994-5641		PO Number: 30-015-26931 2RP-4601		Date Time:		Date Time:											
Project Contact: Adrian Baker		Sampler's Name: Eric Carnil		Date Time:		Date Time:											
Field ID / Point of Collection		Collection		Number of preserved bottles		Notes:											
No.	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	SS 7	4/16/15	1230	S	1												
2	SS 8	4/16/15	1300	S	1												
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Turnaround Time (Business days)		Data Deliverable Information		Notes:													
<input type="checkbox"/> Same Day TAT		<input type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg /raw data)											
<input type="checkbox"/> Next Day EMERGENCY		<input checked="" type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input type="checkbox"/> TRRP Level IV											
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411											
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist													
TAT Starts Day received by Lab, if received by 5:00 pm		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY		FED-EX / UPS: Tracking #													
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:	
1		4/16 9:30		1 Espinoza Gonzalez		2 Espinoza Gonzalez		4/16 12:55		2							
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:	
3				3		4				4							
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:	
5				5													

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



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/21/2018 10:00:00 AM

Work Order #: 583284

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

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 04/23/2018

Checklist reviewed by:

Jessica Kramer

Date: 04/23/2018

Analytical Report 585761

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Golden 8 Federal #1

3001526931

16-MAY-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-25), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



16-MAY-18

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

Reference: XENCO Report No(s): **585761**
Golden 8 Federal #1
Project Address: 2RP-3612

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 585761. 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. 585761 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
Project Assistant

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

Certified and approved by numerous States and Agencies.

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



Sample Cross Reference 585761

LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01 @ 1'	S	05-08-18 09:30	1 ft	585761-001
BH02 @ 1'	S	05-08-18 09:35	1 ft	585761-002
BH03 @ 1'	S	05-08-18 09:40	1 ft	585761-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal #1

Project ID: 3001526931
Work Order Number(s): 585761

Report Date: 16-MAY-18
Date Received: 05/11/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3050168 BTEX by EPA 8021B

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



Certificate of Analysis Summary 585761

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal #1

Project Id: 3001526931
Contact: Adrian Baker
Project Location: 2RP-3612

Date Received in Lab: Fri May-11-18 10:55 am
Report Date: 16-MAY-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	585761-001	585761-002	585761-003			
	Field Id:	BH01 @ 1'	BH02 @ 1'	BH03 @ 1'			
	Depth:	1- ft	1- ft	1- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	May-08-18 09:30	May-08-18 09:35	May-08-18 09:40			
BTEX by EPA 8021B	Extracted:	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00			
	Analyzed:	May-16-18 04:54	May-16-18 05:15	May-16-18 05:37			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
	Benzene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
	Toluene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
	Ethylbenzene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
	m,p-Xylenes	<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402			
	o-Xylene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201				
Total BTEX	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201				
Inorganic Anions by EPA 300	Extracted:	May-14-18 15:30	May-14-18 15:30	May-14-18 15:30			
	Analyzed:	May-14-18 17:38	May-14-18 17:44	May-14-18 18:02			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride	<5.00 5.00	<5.00 5.00	<4.99 4.99				
TPH by SW8015 Mod	Extracted:	May-12-18 10:00	May-12-18 10:00	May-12-18 10:00			
	Analyzed:	May-13-18 09:47	May-13-18 10:15	May-13-18 10:43			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<14.9 14.9	<15.0 15.0			
	Diesel Range Organics (DRO)	<15.0 15.0	153 14.9	<15.0 15.0			
Oil Range Hydrocarbons (ORO)	<15.0 15.0	34.2 14.9	<15.0 15.0				
Total TPH	<15.0 15.0	187 14.9	<15.0 15.0				

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

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

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 585761



LT Environmental, Inc., Arvada, CO Golden 8 Federal #1

Sample Id: **BH01 @ 1'** Matrix: Soil Date Received: 05.11.18 10.55
 Lab Sample Id: 585761-001 Date Collected: 05.08.18 09.30 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.14.18 15.30 Basis: Wet Weight
 Seq Number: 3050071

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.14.18 17.38	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.12.18 10.00 Basis: Wet Weight
 Seq Number: 3049983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.13.18 09.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.13.18 09.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.13.18 09.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.13.18 09.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	05.13.18 09.47	
o-Terphenyl	84-15-1	81	%	70-135	05.13.18 09.47	



Certificate of Analytical Results 585761



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: **BH01 @ 1'**

Matrix: Soil

Date Received: 05.11.18 10.55

Lab Sample Id: 585761-001

Date Collected: 05.08.18 09.30

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 05.15.18 16.00

Basis: Wet Weight

Seq Number: 3050168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.16.18 04.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.16.18 04.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	05.16.18 04.54		
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.16.18 04.54		



Certificate of Analytical Results 585761

LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: BH02 @ 1'	Matrix: Soil	Date Received: 05.11.18 10.55
Lab Sample Id: 585761-002	Date Collected: 05.08.18 09.35	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 05.14.18 15.30	Basis: Wet Weight
Seq Number: 3050071		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.14.18 17.44	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 05.12.18 10.00	Basis: Wet Weight
Seq Number: 3049983		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.13.18 10.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	153	14.9	mg/kg	05.13.18 10.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	34.2	14.9	mg/kg	05.13.18 10.15		1
Total TPH	PHC635	187	14.9	mg/kg	05.13.18 10.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	05.13.18 10.15	
o-Terphenyl	84-15-1	86	%	70-135	05.13.18 10.15	



Certificate of Analytical Results 585761



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: BH02 @ 1'	Matrix: Soil	Date Received: 05.11.18 10.55
Lab Sample Id: 585761-002	Date Collected: 05.08.18 09.35	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.16.18 05.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.16.18 05.15	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85		%	70-130	05.16.18 05.15	
1,4-Difluorobenzene	540-36-3	83		%	70-130	05.16.18 05.15	



Certificate of Analytical Results 585761

LT Environmental, Inc., Arvada, CO Golden 8 Federal #1

Sample Id: **BH03 @ 1'** Matrix: Soil Date Received: 05.11.18 10.55
 Lab Sample Id: 585761-003 Date Collected: 05.08.18 09.40 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.14.18 15.30 Basis: Wet Weight
 Seq Number: 3050071

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	05.14.18 18.02	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.12.18 10.00 Basis: Wet Weight
 Seq Number: 3049983

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.13.18 10.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.13.18 10.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.13.18 10.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.13.18 10.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.13.18 10.43	
o-Terphenyl	84-15-1	90	%	70-135	05.13.18 10.43	



Certificate of Analytical Results 585761



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: BH03 @ 1'	Matrix: Soil	Date Received: 05.11.18 10.55
Lab Sample Id: 585761-003	Date Collected: 05.08.18 09.40	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.16.18 05.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.16.18 05.37	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	05.16.18 05.37		
4-Bromofluorobenzene	460-00-4	92	%	70-130	05.16.18 05.37		



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal #1

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050071
MB Sample Id: 7644694-1-BLK

Matrix: Solid
LCS Sample Id: 7644694-1-BKS

Prep Method: E300P
Date Prep: 05.14.18
LCSD Sample Id: 7644694-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	230	92	225	90	90-110	2	20	mg/kg	05.14.18 16:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050071
Parent Sample Id: 585760-002

Matrix: Soil
MS Sample Id: 585760-002 S

Prep Method: E300P
Date Prep: 05.14.18
MSD Sample Id: 585760-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.6	250	322	107	314	104	90-110	3	20	mg/kg	05.14.18 16:26	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050071
Parent Sample Id: 585761-002

Matrix: Soil
MS Sample Id: 585761-002 S

Prep Method: E300P
Date Prep: 05.14.18
MSD Sample Id: 585761-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	246	98	90-110	4	20	mg/kg	05.14.18 17:50	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3049983
MB Sample Id: 7644589-1-BLK

Matrix: Solid
LCS Sample Id: 7644589-1-BKS

Prep Method: TX1005P
Date Prep: 05.12.18
LCSD Sample Id: 7644589-1-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	1040	104	991	99	70-135	5	20	mg/kg	05.13.18 04:49	
Diesel Range Organics (DRO)	<15.0	1000	1130	113	1070	107	70-135	5	20	mg/kg	05.13.18 04:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		125		113		70-135	%	05.13.18 04:49
o-Terphenyl	106		116		102		70-135	%	05.13.18 04:49

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.

Golden 8 Federal #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3049983

Parent Sample Id: 585815-001

Matrix: Soil

MS Sample Id: 585815-001 S

Prep Method: TX1005P

Date Prep: 05.12.18

MSD Sample Id: 585815-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	979	98	898	90	70-135	9	20		mg/kg	05.13.18 06:11	
Diesel Range Organics (DRO)	<15.0	997	1070	107	995	100	70-135	7	20		mg/kg	05.13.18 06:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		107		70-135	%	05.13.18 06:11
o-Terphenyl	108		95		70-135	%	05.13.18 06:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3050168

MB Sample Id: 7644770-1-BLK

Matrix: Solid

LCS Sample Id: 7644770-1-BKS

Prep Method: SW5030B

Date Prep: 05.15.18

LCSD Sample Id: 7644770-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.106	106	0.100	100	70-130	6	35		mg/kg	05.15.18 20:03	
Toluene	<0.00201	0.100	0.102	102	0.0970	97	70-130	5	35		mg/kg	05.15.18 20:03	
Ethylbenzene	<0.00201	0.100	0.105	105	0.101	101	70-130	4	35		mg/kg	05.15.18 20:03	
m,p-Xylenes	<0.00402	0.201	0.219	109	0.212	106	70-130	3	35		mg/kg	05.15.18 20:03	
o-Xylene	<0.00201	0.100	0.110	110	0.103	103	70-130	7	35		mg/kg	05.15.18 20:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		98		100		70-130	%	05.15.18 20:03
4-Bromofluorobenzene	92		92		92		70-130	%	05.15.18 20:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3050168

Parent Sample Id: 585932-001

Matrix: Soil

MS Sample Id: 585932-001 S

Prep Method: SW5030B

Date Prep: 05.15.18

MSD Sample Id: 585932-001 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	0.0998	0.0804	81	0.0881	88	70-130	9	35		mg/kg	05.15.18 20:46	
Toluene	<0.00200	0.0998	0.0706	71	0.0808	81	70-130	13	35		mg/kg	05.15.18 20:46	
Ethylbenzene	<0.00200	0.0998	0.0577	58	0.0707	71	70-130	20	35		mg/kg	05.15.18 20:46	X
m,p-Xylenes	<0.00399	0.200	0.117	59	0.145	73	70-130	21	35		mg/kg	05.15.18 20:46	X
o-Xylene	<0.00200	0.0998	0.0605	61	0.0727	73	70-130	18	35		mg/kg	05.15.18 20:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	05.15.18 20:46
4-Bromofluorobenzene	98		96		70-130	%	05.15.18 20:46

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

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

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

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



Client: LT Environmental, Inc.

Date/ Time Received: 05/11/2018 10:55:00 AM

Work Order #: 585761

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

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/11/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/11/2018
Jessica Kramer

Analytical Report 585994

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Golden 8 Federal

012918065

16-MAY-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-25), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

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

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



16-MAY-18

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

Reference: XENCO Report No(s): **585994**
Golden 8 Federal
Project Address: 2RP-3612

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 585994. 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. 585994 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
Project Assistant

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

Certified and approved by numerous States and Agencies.

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



Sample Cross Reference 585994

LT Environmental, Inc., Arvada, CO

Golden 8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	05-11-18 08:40	1.5 ft	585994-001
FS1	S	05-11-18 09:00	7 ft	585994-002
SW1	S	05-11-18 09:40	7 ft	585994-003
SW2	S	05-11-18 09:45	7 ft	585994-004
SW3	S	05-11-18 09:50	7 ft	585994-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal

Project ID: 012918065
Work Order Number(s): 585994

Report Date: 16-MAY-18
Date Received: 05/15/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3050168 BTEX by EPA 8021B

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



Certificate of Analysis Summary 585994

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal

Project Id: 012918065
Contact: Adrian Baker
Project Location: 2RP-3612

Date Received in Lab: Tue May-15-18 10:35 am
Report Date: 16-MAY-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	585994-001	585994-002	585994-003	585994-004	585994-005	
	<i>Field Id:</i>	SS1	FS1	SW1	SW2	SW3	
	<i>Depth:</i>	1.5- ft	7- ft	7- ft	7- ft	7- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	May-11-18 08:40	May-11-18 09:00	May-11-18 09:40	May-11-18 09:45	May-11-18 09:50	
BTEX by EPA 8021B	<i>Extracted:</i>	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	
	<i>Analyzed:</i>	May-15-18 23:14	May-15-18 23:35	May-15-18 23:56	May-16-18 00:18	May-16-18 00:37	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
Toluene		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
Ethylbenzene		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
m,p-Xylenes		<0.00397 0.00397	<0.00402 0.00402	<0.00402 0.00402	<0.00399 0.00399	<0.00398 0.00398	
o-Xylene		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
Total Xylenes		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
Total BTEX		<0.00198 0.00198	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	
Inorganic Anions by EPA 300	<i>Extracted:</i>	May-15-18 13:30	May-15-18 13:30	May-15-18 13:30	May-15-18 13:30	May-15-18 13:30	
	<i>Analyzed:</i>	May-15-18 14:26	May-15-18 14:44	May-15-18 14:50	May-15-18 14:56	May-15-18 15:02	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		<4.99 4.99	121 5.00	331 4.97	97.8 5.00	291 4.95	
TPH by SW8015 Mod	<i>Extracted:</i>	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	May-15-18 16:00	
	<i>Analyzed:</i>	May-15-18 23:31	May-16-18 00:48	May-16-18 01:14	May-16-18 01:41	May-16-18 02:06	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: **SS1** Matrix: Soil Date Received: 05.15.18 10.35
 Lab Sample Id: 585994-001 Date Collected: 05.11.18 08.40 Sample Depth: 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.15.18 13.30 Basis: Wet Weight
 Seq Number: 3050218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	05.15.18 14.26	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.15.18 16.00 Basis: Wet Weight
 Seq Number: 3050201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.18 23.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.15.18 23.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.15.18 23.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.18 23.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.15.18 23.31	
o-Terphenyl	84-15-1	98	%	70-135	05.15.18 23.31	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: SS1	Matrix: Soil	Date Received: 05.15.18 10.35
Lab Sample Id: 585994-001	Date Collected: 05.11.18 08.40	Sample Depth: 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.15.18 23.14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.15.18 23.14	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94		%	70-130	05.15.18 23.14	
4-Bromofluorobenzene	460-00-4	91		%	70-130	05.15.18 23.14	



Certificate of Analytical Results 585994

LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: **FS1** Matrix: Soil Date Received: 05.15.18 10.35
 Lab Sample Id: 585994-002 Date Collected: 05.11.18 09.00 Sample Depth: 7 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.15.18 13.30 Basis: Wet Weight
 Seq Number: 3050218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	5.00	mg/kg	05.15.18 14.44		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.15.18 16.00 Basis: Wet Weight
 Seq Number: 3050201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.16.18 00.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.16.18 00.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.16.18 00.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.18 00.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.16.18 00.48	
o-Terphenyl	84-15-1	96	%	70-135	05.16.18 00.48	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO

Golden 8 Federal

Sample Id: FS1	Matrix: Soil	Date Received: 05.15.18 10.35
Lab Sample Id: 585994-002	Date Collected: 05.11.18 09.00	Sample Depth: 7 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.15.18 23.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.15.18 23.35	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95		%	70-130	05.15.18 23.35	
4-Bromofluorobenzene	460-00-4	96		%	70-130	05.15.18 23.35	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: **SW1** Matrix: Soil Date Received: 05.15.18 10.35
 Lab Sample Id: 585994-003 Date Collected: 05.11.18 09.40 Sample Depth: 7 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.15.18 13.30 Basis: Wet Weight
 Seq Number: 3050218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	331	4.97	mg/kg	05.15.18 14.50		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.15.18 16.00 Basis: Wet Weight
 Seq Number: 3050201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.16.18 01.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.16.18 01.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.16.18 01.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.18 01.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	05.16.18 01.14	
o-Terphenyl	84-15-1	87	%	70-135	05.16.18 01.14	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: SW1	Matrix: Soil	Date Received: 05.15.18 10.35
Lab Sample Id: 585994-003	Date Collected: 05.11.18 09.40	Sample Depth: 7 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.15.18 23.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.15.18 23.56	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93		%	70-130	05.15.18 23.56	
4-Bromofluorobenzene	460-00-4	97		%	70-130	05.15.18 23.56	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: **SW2** Matrix: Soil Date Received: 05.15.18 10.35
 Lab Sample Id: 585994-004 Date Collected: 05.11.18 09.45 Sample Depth: 7 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.15.18 13.30 Basis: Wet Weight
 Seq Number: 3050218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.8	5.00	mg/kg	05.15.18 14.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.15.18 16.00 Basis: Wet Weight
 Seq Number: 3050201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.16.18 01.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.16.18 01.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.16.18 01.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.18 01.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.16.18 01.41	
o-Terphenyl	84-15-1	93	%	70-135	05.16.18 01.41	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: SW2	Matrix: Soil	Date Received: 05.15.18 10.35
Lab Sample Id: 585994-004	Date Collected: 05.11.18 09.45	Sample Depth: 7 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.16.18 00.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.16.18 00.18	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.16.18 00.18		
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.16.18 00.18		



Certificate of Analytical Results 585994

LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: **SW3** Matrix: Soil Date Received: 05.15.18 10.35
 Lab Sample Id: 585994-005 Date Collected: 05.11.18 09.50 Sample Depth: 7 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 05.15.18 13.30 Basis: Wet Weight
 Seq Number: 3050218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	291	4.95	mg/kg	05.15.18 15.02		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.15.18 16.00 Basis: Wet Weight
 Seq Number: 3050201

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.16.18 02.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.16.18 02.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.16.18 02.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.18 02.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.16.18 02.06	
o-Terphenyl	84-15-1	100	%	70-135	05.16.18 02.06	



Certificate of Analytical Results 585994



LT Environmental, Inc., Arvada, CO Golden 8 Federal

Sample Id: SW3	Matrix: Soil	Date Received: 05.15.18 10.35
Lab Sample Id: 585994-005	Date Collected: 05.11.18 09.50	Sample Depth: 7 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 05.15.18 16.00	Basis: Wet Weight
Seq Number: 3050168		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.16.18 00.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.16.18 00.37	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91		%	70-130	05.16.18 00.37	
4-Bromofluorobenzene	460-00-4	95		%	70-130	05.16.18 00.37	



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050218
MB Sample Id: 7644793-1-BLK

Matrix: Solid
LCS Sample Id: 7644793-1-BKS

Prep Method: E300P
Date Prep: 05.15.18
LCSD Sample Id: 7644793-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	230	92	233	93	90-110	1	20	mg/kg	05.15.18 14:14	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050218
Parent Sample Id: 585928-002

Matrix: Soil
MS Sample Id: 585928-002 S

Prep Method: E300P
Date Prep: 05.15.18
MSD Sample Id: 585928-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.96	248	251	101	257	104	90-110	2	20	mg/kg	05.15.18 15:56	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3050218
Parent Sample Id: 585994-001

Matrix: Soil
MS Sample Id: 585994-001 S

Prep Method: E300P
Date Prep: 05.15.18
MSD Sample Id: 585994-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	249	100	251	100	90-110	1	20	mg/kg	05.15.18 14:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3050201
MB Sample Id: 7644778-1-BLK

Matrix: Solid
LCS Sample Id: 7644778-1-BKS

Prep Method: TX1005P
Date Prep: 05.15.18
LCSD Sample Id: 7644778-1-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	1070	107	1090	109	70-135	2	20	mg/kg	05.15.18 22:39	
Diesel Range Organics (DRO)	<15.0	1000	1120	112	1160	116	70-135	4	20	mg/kg	05.15.18 22:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		117		118		70-135	%	05.15.18 22:39
o-Terphenyl	104		115		119		70-135	%	05.15.18 22:39

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.
Golden 8 Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3050201

Parent Sample Id: 585994-001

Matrix: Soil

MS Sample Id: 585994-001 S

Prep Method: TX1005P

Date Prep: 05.15.18

MSD Sample Id: 585994-001 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	1010	101	1060	106	70-135	5	20		mg/kg	05.15.18 23:57	
Diesel Range Organics (DRO)	<15.0	999	1140	114	1190	119	70-135	4	20		mg/kg	05.15.18 23:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		116		70-135	%	05.15.18 23:57
o-Terphenyl	112		115		70-135	%	05.15.18 23:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3050168

MB Sample Id: 7644770-1-BLK

Matrix: Solid

LCS Sample Id: 7644770-1-BKS

Prep Method: SW5030B

Date Prep: 05.15.18

LCSD Sample Id: 7644770-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.106	106	0.100	100	70-130	6	35		mg/kg	05.15.18 20:03	
Toluene	<0.00201	0.100	0.102	102	0.0970	97	70-130	5	35		mg/kg	05.15.18 20:03	
Ethylbenzene	<0.00201	0.100	0.105	105	0.101	101	70-130	4	35		mg/kg	05.15.18 20:03	
m,p-Xylenes	<0.00402	0.201	0.219	109	0.212	106	70-130	3	35		mg/kg	05.15.18 20:03	
o-Xylene	<0.00201	0.100	0.110	110	0.103	103	70-130	7	35		mg/kg	05.15.18 20:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		98		100		70-130	%	05.15.18 20:03
4-Bromofluorobenzene	92		92		92		70-130	%	05.15.18 20:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3050168

Parent Sample Id: 585932-001

Matrix: Soil

MS Sample Id: 585932-001 S

Prep Method: SW5030B

Date Prep: 05.15.18

MSD Sample Id: 585932-001 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	0.0998	0.0804	81	0.0881	88	70-130	9	35		mg/kg	05.15.18 20:46	
Toluene	<0.00200	0.0998	0.0706	71	0.0808	81	70-130	13	35		mg/kg	05.15.18 20:46	
Ethylbenzene	<0.00200	0.0998	0.0577	58	0.0707	71	70-130	20	35		mg/kg	05.15.18 20:46	X
m,p-Xylenes	<0.00399	0.200	0.117	59	0.145	73	70-130	21	35		mg/kg	05.15.18 20:46	X
o-Xylene	<0.00200	0.0998	0.0605	61	0.0727	73	70-130	18	35		mg/kg	05.15.18 20:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	05.15.18 20:46
4-Bromofluorobenzene	98		96		70-130	%	05.15.18 20:46

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

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

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

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



Setting the Standard since 1990
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 Dallas Texas (214-902-0300)

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Page 1 of 1

San Antonio, Texas (210-509-3334)
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Phoenix, Arizona (480-355-0900)

Xenco Quote #

Xenco Job #

085994

Client / Reporting Information			Project Information			Analytical Information			Matrix Codes						
Company Name / Branch: <i>ST Environmental, Inc - Permian Office</i>			Project Name/Number: <i>Solden Federal #1 / 012918065</i>												
Company Address: <i>3300 North 9th Street, Building Unit 103 TX 79705</i>			Project Location: <i>Midland</i>												
Email: <i>abaker@stenv.com (432) 704-5178</i>			Invoice To: <i>XTO Energy - Kyle Littrell</i>												
Project Contact: <i>Adrian Baker</i>			PO Number:												
Sampler's Name: <i>Lynda Lambert</i>															
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	CI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	<i>SSL</i>	<i>1.5'</i>	<i>5/11/18</i>	<i>8:40</i>	<i>Soil</i>	<i>1</i>									<i>Excavation 2</i>
2	<i>FSL</i>	<i>7'</i>		<i>9:00</i>											<i>Excavation 1</i>
3	<i>SW 2</i>	<i>9'</i>		<i>9:40</i>											
4	<i>SW 2</i>	<i>7'</i>		<i>9:45</i>											
5	<i>SW 3</i>	<i>7'</i>		<i>9:50</i>											
6															
7															
8															
9															
10															

Temp: *4.50* IR ID: R-8
 CF: (0.6: -0.2°C)
 (6-23: +0.2°C)
 Corrected Temp: *4.30*

Turnaround Time (Business days) _____
 Data Deliverable Information _____

Same Day TAT
 Next Day EMERGENCY
 2 Day EMERGENCY
 3 Day EMERGENCY
 TAT Starts Day received by Lab, if received by 5:00 pm

Level II Std QC
 Level III Std QC+ Forms
 Level 3 (CLP Forms)
 TRRP Checklist

Level IV (Full Data Pkg /raw data)
 TRRP Level IV
 UST / RG-411

Relinquished by Sampler: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____

Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____

Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____
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Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____

Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____
 Relinquished by: _____ Date Time: _____

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



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/15/2018 10:35:00 AM

Work Order #: 585994

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

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.3	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6*Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	TPH received in bulk container
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:
Katie Lowe

Date: 05/15/2018

Checklist reviewed by:
Jessica Kramer

Date: 05/15/2018

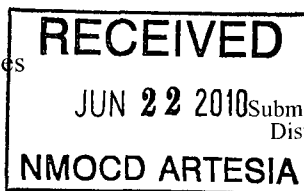
ATTACHMENT 2

FORM C-141s



District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

30-015-26931
in KMW 1035646177

OPERATOR

Initial Report Final Report

Name of Company BOPCO, L.P. <i>260737</i>	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Golden 8 Federal Battery #1	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
-----------------------	-----------------------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E					Eddy

Latitude N 32.491438 Longitude W 104.008147

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 90 Bbbls of Crude oil	Volume Recovered: 80 bbls of crude oil
Source of Release: Drain line connection on the back of a 500 bbl. tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 6/14/10 8:56 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Randy NMOCD on call operator	
By Whom? Tony Savoie	Date and Hour 6/14/10 9:24 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The drain line connection on the back of the tank failed due to internal corrosion, the remaining oil in the tank was removed, the tank was cleaned, inspected and repaired by replacing the connections and coating the tank internally.

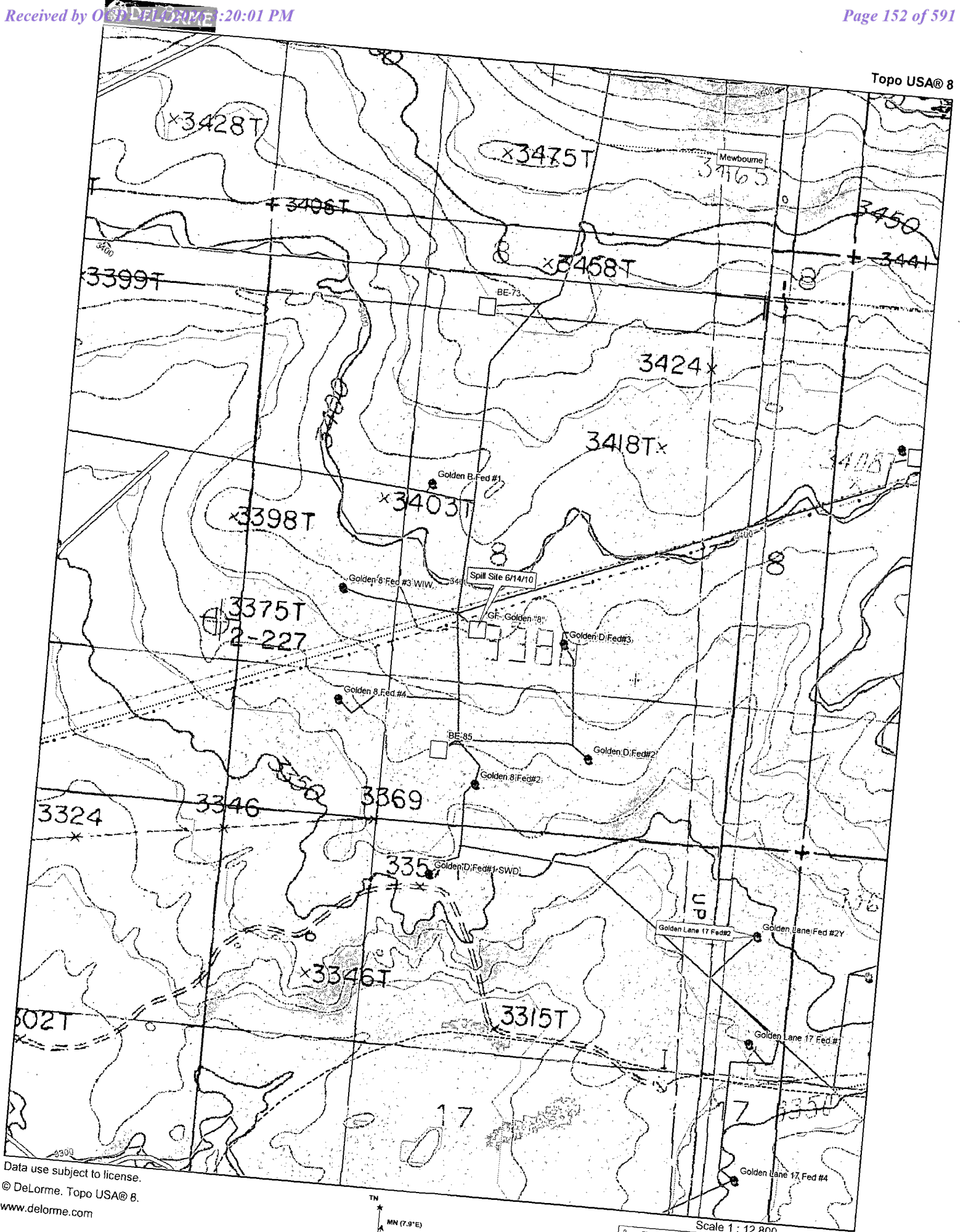
Describe Area Affected and Cleanup Action Taken.*The released fluid affected an area of approximately 2,000 sq. ft inside the earthen containment around the tanks. The free standing fluids were removed. The heavily saturated soil is in the process of being removed and placed on plastic. The area inside the containment area will be sampled to determine vertical extent; a remediation plan along with a new containment plan will be submitted. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

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

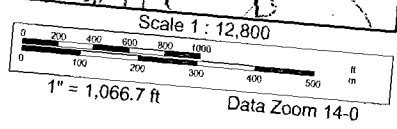
Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By <i>Mike Brannon</i>	
Title: Waste Mgmt. & Remediation Specialist	Approval Date: <i>3/3/11</i>	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	Attached <input type="checkbox"/>
Date: 6/22/10 Phone: 432-556-8730	<i>4/3/11</i>	<i>2 RP-521</i>

* Attach Additional Sheets If Necessary

Topo USA® 8



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 www.delorme.com



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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-0521)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E					

Latitude N 32.491438 Longitude W 104.008147

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 90 bbls of crude oil	Volume Recovered: 80 bbls of crude oil
Source of Release: Drain line connection on the back of a 500 bbl. tank	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 6/14/10 8:56 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Randy NMOCD on call operator	
By Whom? Tony Savoie	Date and Hour: 6/14/10 9:24 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	

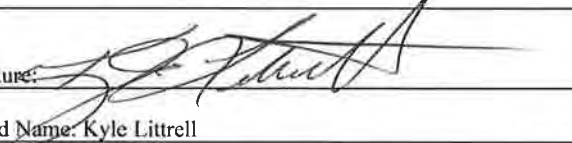
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The drain line connection on the back of the tank failed due to internal corrosion, the remaining oil in the tank was removed, the tank was cleaned, inspected and repaired by replacing the connections and coating the tank internally.

Describe Area Affected and Cleanup Action Taken.* The released fluid affected an area of approximately 2,000 sq. ft inside the earthen containment around the tanks. The free standing fluids were removed. The heavily saturated soil is in the process of being removed and placed on plastic. The area inside the containment area will be sampled to determine vertical extent; a remediation plan along with a new containment plan will be submitted. The site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist:	
Title: SH&E Coordinator	Approval Date:	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:	
Date: 5/25/2018 Phone: 432-221-7331	Attached <input type="checkbox"/>	

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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with Rule 116 on back
side of form

30-015-26931

Release Notification and Corrective Action

NKMW 1106629393

OPERATOR

Initial Report Final Report

Name of Company BOPCO, L.P. <i>260737</i>	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Golden 8 Federal Battery #1	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
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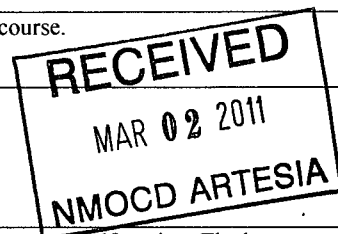
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E					Eddy

Latitude N 32.491352 Longitude W 104.008223

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 310 Bbls Crude oil	Volume Recovered: 290
Source of Release: 500 bbl tank overflow	Date and Hour of Occurrence 2/16/11 hour not known	Date and Hour of Discovery 2/16/11 10:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency reporting. Left message with details.	
By Whom? Tony Savoie	Date and Hour 2/16/11 1:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	



If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A 500 bbl. Oil product tank overflowed due to a heater-treater malfunction. The heater-treater was repaired and put back in service.

Describe Area Affected and Cleanup Action Taken.* An area inside the earthen tank containment measuring approximately 14,100 sq. ft. and an area of pasture land outside the containment measuring approximately 400 sq. ft. The area outside the containment had been affected by a previous flow line spill reported to the NMOCD on 10/6/10. The oil saturated soil outside the containment was removed by Basin Env. using a hydro-vac. Approximately 290 bbls of crude oil was recovered from inside the containment. The area inside the containment was covered with soil to absorb small areas of free product. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

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

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By: <i>Mike Brannon</i>	
Title: Waste Mgmt. & Remediation Specialist	Approval Date: <i>3/7/11</i>	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/3/11 Phone: 432-556-8730	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	

* Attach Additional Sheets If Necessary

PROPOSAL NOT LATER THAN:
4/7/11

2RP 633

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-0633)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E					Eddy

Latitude N 32.491352 Longitude W 104.008223

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release : 310 bbls Crude oil	Volume Recovered: 290 bbls
Source of Release: 500 bbl tank overflow	Date and Hour of Occurrence: 2/16/11 hour not known	Date and Hour of Discovery: 2/16/11 10:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency reporting. Left message with details.	
By Whom? Tony Savoie	Date and Hour: 2/16/11 1:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	

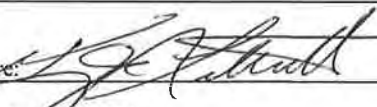
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A 500 bbl. Oil product tank overflowed due to a heater-treater malfunction. The heater-treater was repaired and put back in service.

Describe Area Affected and Cleanup Action Taken.* An area inside the earthen tank containment measuring approximately 14,100 sq. ft. and an area of pasture land outside the containment measuring approximately 400 sq. ft. The area outside the containment had been affected by a previous flow line spill reported to the NMOCD on 10/6/10. The oil saturated soil outside the containment was removed by Basin Env. using a hydro-vac. Approximately 290 bbls of crude oil was recovered from inside the containment. The area inside the containment was covered with soil to absorb small areas of free product. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Kyle Littrell	Approved by Environmental Specialist:		
Title: SH&E Coordinator	Approval Date:	Expiration Date:	
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 5/25/2018	Phone: 432-221-7331		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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Energy Minerals and Natural Resources
NOV 26 2013
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nJMW 1333053660 **OPERATOR** Initial Report Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Golden 8 Federal Battery #1, the Well #1 was P&A 2011	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1650	South	2180	West	Eddy

Latitude N 32.491141 Longitude W 104.007775

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 6 Bbls of crude oil and 15 Bbls water	Volume Recovered: 3 Bbls oil and 2 Bbls water.
Source of Release: Heater-treater fire tube	Date and Hour of Occurrence: Date 11/25/13 Time unknown	Date and Hour of Discovery: Date 11/25/13 Time approximately 9:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The fire tube on the heater-treater developed a leak, the production was switched out of the vessel, a vacuum truck was dispatched to the site to recover the free product.

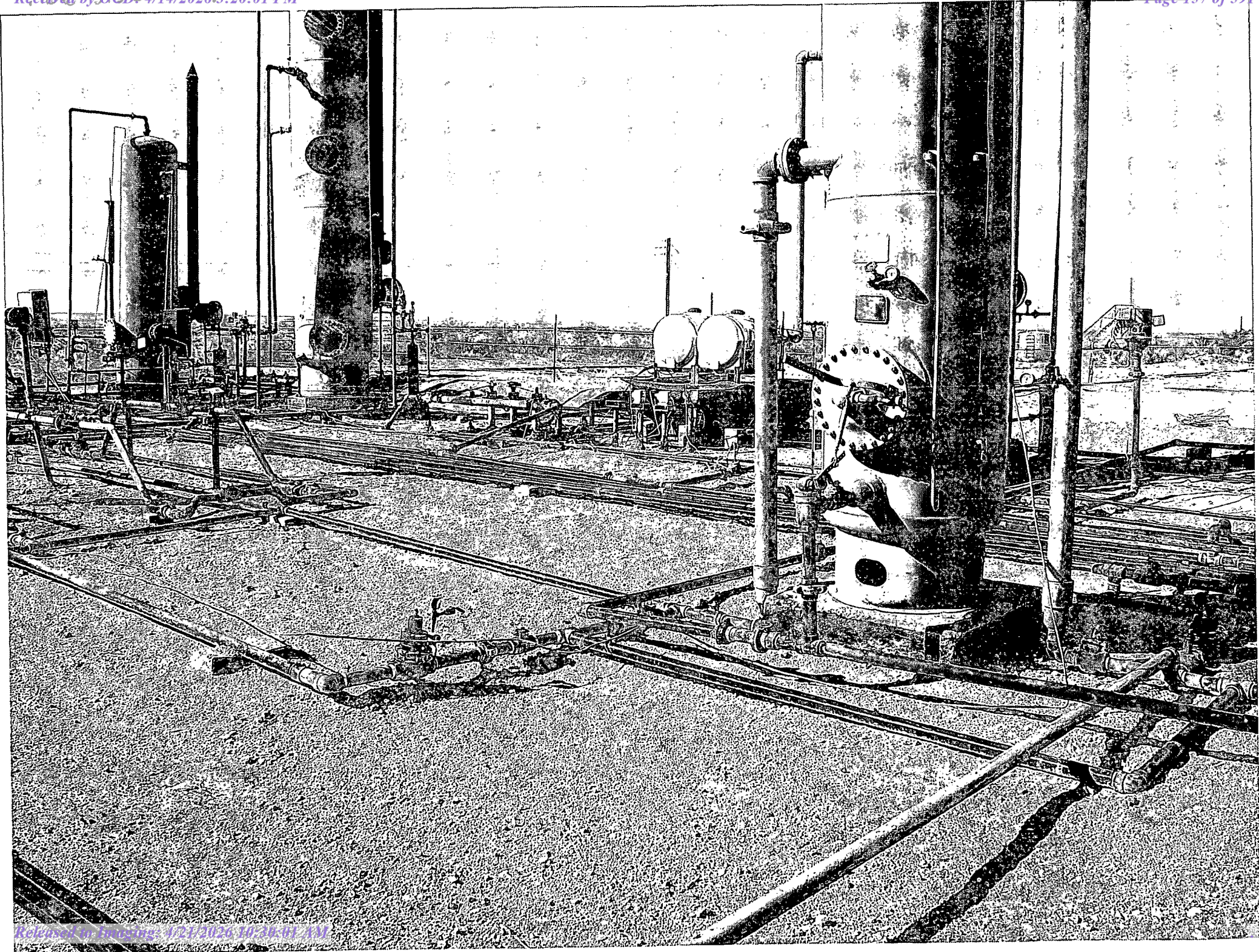
Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 900 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference spill report dated 2/16/11. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous spill.

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

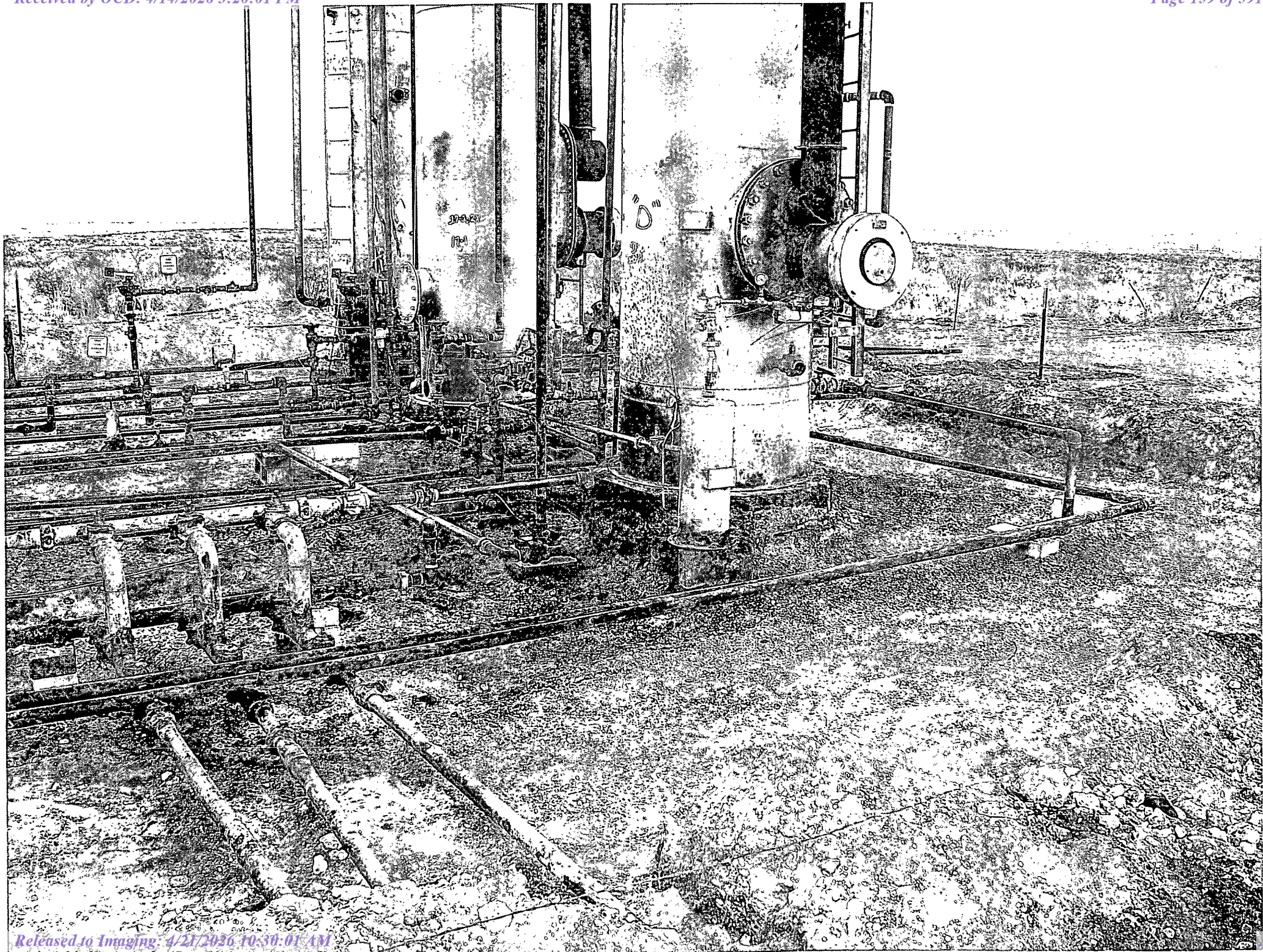
Signature: <i>Tony Savoie</i>		OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie		Approved by Environmental Specialist:	Signed By: <i>Mike Beaudin</i>
Title: Waste Management and Remediation Specialist		Approval Date: NOV 26 2013	Expiration Date:
E-mail Address: tasavoie@basspet.com		Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:	
Date: Phone: 432-556-8730		Attached <input type="checkbox"/>	

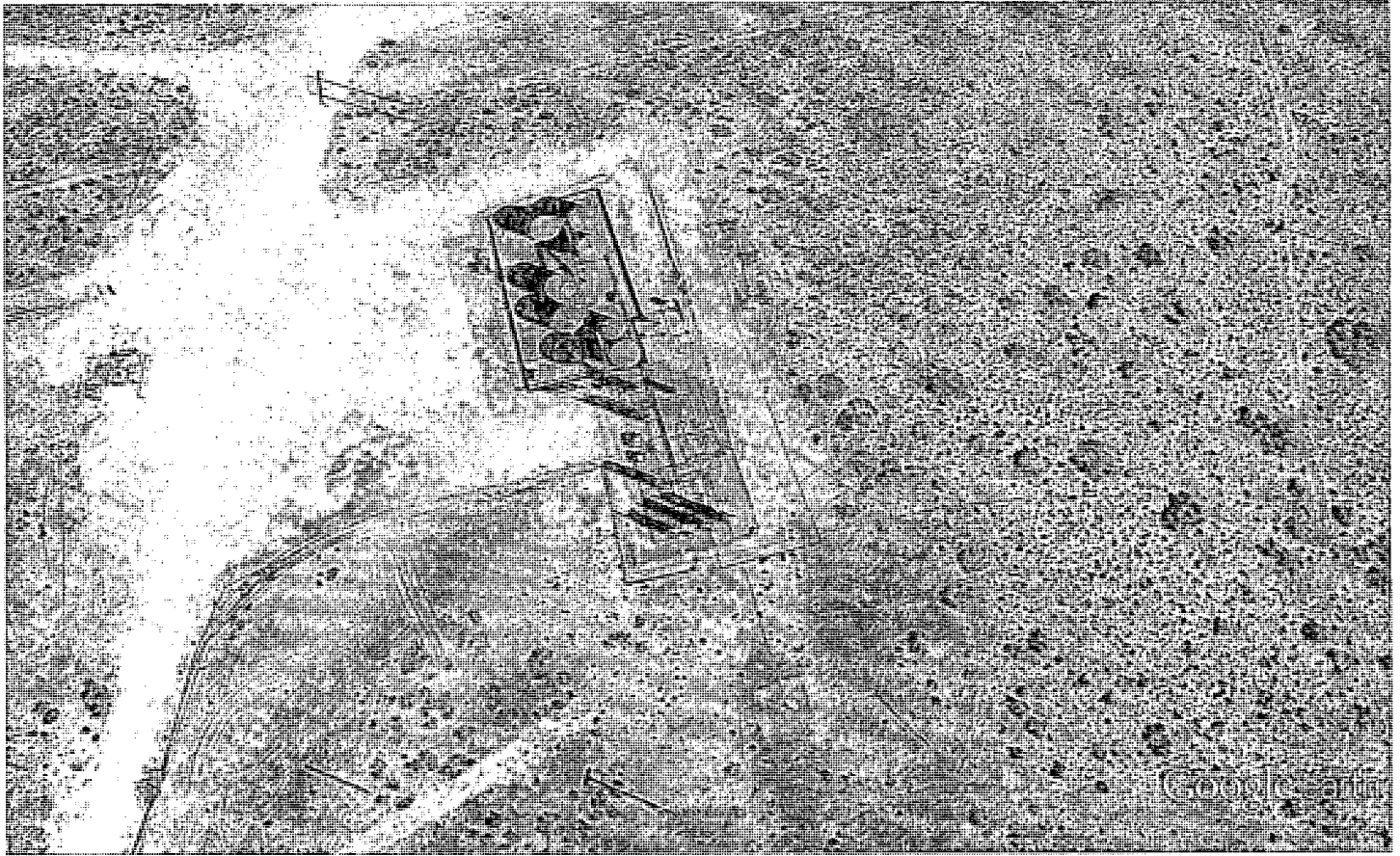
* Attach Additional Sheets If Necessary

PROPOSAL NO LATER THAN:
December 26, 2013 **2RP-2082**









Google earth



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
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-2082)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1650	South	2180	west	Eddy

Latitude N 32.491141 Longitude W 104.007775

NATURE OF RELEASE

Type of Release Crude oil and produced water	Volume of Release: 6 bbls of crude oil and 15 bbls of water	Volume Recovered: 3 bbls oil and 2 bbls of water
Source of Release: Heater-treater fire tube	Date and Hour of Occurrence 11/25/13 time unknown	Date and Hour of Discovery 11/25/13 ~9:00
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	

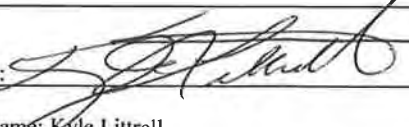
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The fire tube on the heater-treater developed a leak, the production was switched out of the vessel, a vacuum truck was dispatched to the site to recover the free product.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 900 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference spill report dated 2/16/11. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous spill.

LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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

Signature: 	OIL CONSERVATION DIVISION	
	Approved by Environmental Specialist:	
Printed Name: Kyle Littrell	Approval Date:	Expiration Date:
Title: SH&E Coordinator	Conditions of Approval:	
E-mail Address: Kyle.Littrell@xtoenergy.com	Attached <input type="checkbox"/>	
Date: 5/25/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

AUG 13 2014

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

NAB1422637219

OPERATOR		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company: BOPCO, L.P. <i>340737</i>	Contact: Tony Savoie		
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329		
Facility Name: Golden 8 Federal Battery #1, the Well #1 was P&A 2011	Facility Type: Exploration and Production		
Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-26931	

LOCATION OF RELEASE

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the 1650	North/South Line South	Feet from the 2180	East/West Line West	County Eddy
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Latitude N 32.491141 Longitude W 104.007775

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 3 Bbls of crude oil and 38 Bbls water	Volume Recovered: 1 Bbl. oil and 17 Bbls water.
Source of Release: Victaulic fitting on the production header.	Date and Hour of Occurrence: Date 8/12/14 Time unknown	Date and Hour of Discovery: Date 8/12/14 Time approximately 10:30 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104	
By Whom? Tony Savoie	Date and Hour: 8/12/14 at 12:10 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 13 2014

RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A Victaulic gasket failed on the production header due to a normally open valve was shut causing pressure to build up and blow out the gasket. The gasket was replaced and the valve was returned to normal.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 1500 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference 2RP-633. And the same are as impacted by spill reference 2RP-2082. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous two spills.

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

Signature: <i>Tony Savoie</i>		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Tony Savoie		Approved by Environmental Specialist Signed By <i>White Brandon</i>	
Title: Waste Management and Remediation Specialist		Approval Date: <i>8/14/14</i>	Expiration Date: <i>N/A</i>
E-mail Address: <i>tasavoie@basspet.com</i>		Conditions of Approval: Remediation per OCD Rule & Guidelines. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:	
Date: 8/13/14	Phone: 432-556-8730	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

2RP 2439

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-2439)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1650	South	2180	West	Eddy

Latitude N 32.4911141 Longitude W 104.007775

NATURE OF RELEASE

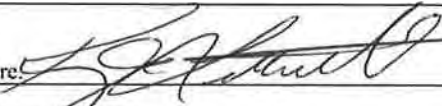
Type of Release: Crude oil and produced water	Volume of Release: 3 bbls of crude oil and 38 bbls water	Volume Recovered: 1 bbl oil and 17 bbls water
Source of Release: Victaulic fitting on the production heater	Date and Hour of Occurrence: Date 8/12/14 time unknown	Date and Hour of Discovery: Date 8/12/14 time approximately 10:30 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour: 8/12/14 time approximately 12:10 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A Victaulic gasket failed on the production header due to a normally open valve that was shut causing pressure to build up and blow out the gasket. The gasket was replaced and the valve was returned to normal.

Describe Area Affected and Cleanup Action Taken.* The spill impacted approximately 1500 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference 2RP-633. And the same are as impacted by spill reference 2RP-2082. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous two spills.
LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist:	
Title: SH&E Coordinator	Approval Date:	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5/25/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

ARTESIA DISTRICT

MAR 15 2016

Form C-141
Revised August 8, 2011

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

RECEIVED

Release Notification and Corrective Action

NAB1107837012 OPERATOR Initial Report Final Report

Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Golden 8 Federal #001	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-26931	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1650	South	2180	West	Eddy

Latitude 32.491242° Longitude -104.008322°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	30 bbls	Volume Recovered	7 bbls
Source of Release	Heater Gasket	Date and Hour of Occurrence	2/1/2016 time unknown	Date and Hour of Discovery	2/1/2016
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)		
By Whom?	Brad Blevins	Date and Hour	2/2/2016 3:26 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.* N/A					
Describe Cause of Problem and Remedial Action Taken.* Gasket seal in heater treater ruptured and released fluids onto location and pasture. Operator switched out vessels until repairs could be made to treater gasket.					
Describe Area Affected and Cleanup Action Taken.* Leak affected 3060 square feet of well pad and approximately 600 square feet of pasture to the east of the battery. Standing fluids were recovered.					

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

Signature: <i>Amy C. Ruth</i>	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: <i>Mike Bratcher</i>	
Title: EHS Remediation Specialist	Approval Date: <i>3/21/16</i>	Expiration Date: <i>NIA</i>
E-mail Address: ACRuth@basspet.com	Conditions of Approval: <input type="checkbox"/> Attached	
Date: <i>3-15-2016</i> Phone: 432-661-0571	Remediation per O.C.D. Rules & Guidelines	
SUBMIT REMEDIATION PROPOSAL NO		
LATER THAN: <u>4/21/16</u>		

* Attach Additional Sheets If Necessary

2RP-3612

Bratcher, Mike, EMNRD

From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Tuesday, March 15, 2016 2:59 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: Biehl, William "Bill"
Subject: RE: Golden 8 Federal 001
Attachments: Initial C-141 Golden 8 Federal Battery 2-1-16.pdf

Hello Mike/Heather,

I've been on medical leave since the beginning of February. Brad would have turned in this C-141 to you, but I stubbornly told him I would get it to you to save him the trouble. I had since been incapacitated and you can see where that has gotten us! My apologies, here is the very late initial C-141 for the spill notified to you on the date below. Please call me with any questions/concerns. I also have one more to submit that is late that was not immediately reportable but occurred on the same day. That was at the JRU 36 and that C-141 will follow this email. As always, thank you for your patience... :)

-----Original Message-----

From: Blevins, Bradley
Sent: Tuesday, February 02, 2016 3:26 PM
To: mike.bratcher@state.nm.us; heather.patterson@state.nm.us; Jim Amos
Cc: Blevins, Bradley; Ruth, Amy C.
Subject: Golden 8 Federal 001

All,
Bopco EHS was notified of a release that occurred on the Golden 8 Federal 001 due to a man way gasket failure on the heater treater. The majority of the heavy saturation remained inside the earthen firewall but there was an overspray area to the east of the production equipment. It is estimated that 29 barrels of oil was released with 7 barrels oil being recovered by vacuum truck. If you have any additional questions please let me know. Thanks

Sent from my iPhone

Bratcher, Mike, EMNRD

From: Blevins, Bradley <BBlevins@BassPet.Com>
Sent: Tuesday, February 02, 2016 3:26 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD; Jim Amos
Cc: Blevins, Bradley; Ruth, Amy C.
Subject: Golden 8 Federal 001

All,

Bopco EHS was notified of a release that occurred on the Golden 8 Federal 001 due to a man way gasket failure on the heater treater. The majority of the heavy saturation remained inside the earthen firewall but there was an overspray area to the east of the production equipment. It is estimated that 29 barrels of oil was released with 7 barrels oil being recovered by vacuum truck. If you have any additional questions please let me know. Thanks

Sent from my iPhone

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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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

Form C-141
Revised April 3, 2017

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

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-3612)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the 1650	North/South Line South	Feet from the 2180	East/West Line West	County Eddy
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Latitude N 32.491242 Longitude W 104.008322

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 30 bbls	Volume Recovered: 7 bbls
Source of Release: Heater Gasket	Date and Hour of Occurrence: 2/1/2016 time unknown	Date and Hour of Discovery 2/1/2016

Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)
--	--

By Whom? Brad Belvins	Date and Hour: 2/2/2016 3:26 p.m.
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Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: N/A
---	--


If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.* Gasket seal in heater treater ruptured and released fluids onto location and pasture. Operator switched out vessels until repairs could be made to treater gasket.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 3060 square feet of well pad and approximately 600 square feet of pasture to the east of the battery. Standing fluids were recovered.

LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist:	
Title: SH&E Coordinator	Approval Date:	Expiration Date:
E-mail Address: Kyle.Littrell@xtoenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5/25/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

NM OIL CONSERVATION

ARTESIA DISTRICT

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NOV 29 2016

Form C-141
Revised August 8, 2011

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

RECEIVED

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company: BOPCO, L.P. *200737* **Contact:** Amy Ruth

Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 **Telephone No.:** 575-887-7329

Facility Name: Golden Federal Battery #1 **Facility Type:** Exploration and Production

Surface Owner: Federal **Mineral Owner:** Federal **API No.:** 30-015-26931

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1667	South	2300	West	Eddy

Latitude 32.491322° Longitude -104.007868°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	32 bbls	Volume Recovered	30 bbls
Source of Release	3 Phase Vessel	Date and Hour of Occurrence	11/26/2016 time unknown	Date and Hour of Discovery	11/26/2016 approx. 10 am by operator
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos/Shelly Tucker (BLM)		
By Whom?	Amy Ruth (within 2 hours of being notified)	Date and Hour	11/28/2016 11:19 am		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Unused 3 phase vessel re-fitted and returned to operation. Fluids released from vessel through pressure relief valve and leaking Vic connections. Fluids escaped mostly into zero permeability containment.

Describe Area Affected and Cleanup Action Taken.*
The leak affected a total of about 3,168 square feet of caliche pad, zero permeability containment, and misted pasture east of the location. Free standing liquids were recovered via vacuum truck and equipment, tanks, and liner were power washed. Vessel was isolated.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Approved by Environmental Specialist:	
Title: EHS Environmental Supervisor	Approval Date: 11/29/16	Expiration Date: N/A
E-mail Address: ACRuth@basspet.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 11/29/2016	Phone: 432-661-0571	

* Attach Additional Sheets If Necessary

2RD-4017

Bratcher, Mike, EMNRD

From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Tuesday, November 29, 2016 2:50 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: jamos@blm.gov; Tucker, Shelly
Subject: RE: Release Notification - Golden Federal Battery 11-26-16
Attachments: Initial C-141 Golden Federal Battery 11-26-16.pdf

Please find the Initial form C-141 for the leak referenced below. Feel free to call me with any questions. Thank you!

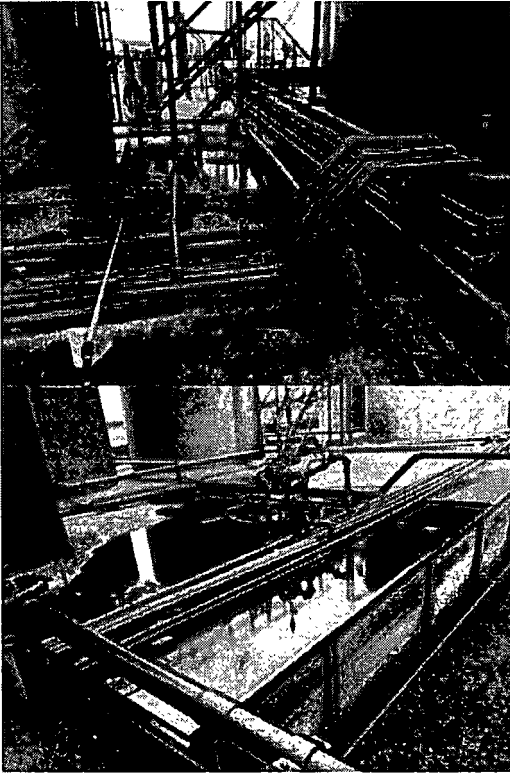
From: Ruth, Amy C.
Sent: Monday, November 28, 2016 11:19 AM
To: 'Mike Bratcher'; 'Heather.Patterson@state.nm.us'
Cc: jamos@blm.gov; Tucker, Shelly
Subject: Release Notification - Golden Federal Battery 11-26-16

Was notified of the leak this morning. Power washing location equipment now and will have final volumes released/recovered in initial form C-141 after estimates finalized. Please call me with any questions. Thanks and have a good day.

Name: golden federal battery bopco, l.p.
Latitude: 32.491241
Longitude: -104.008324

Lease operator reported release on 11/26/2016 due to PRV on three phase vessel popping and Vic connections on vessel leaking. The majority of fluid was released into impervious containment and there was a mist oil & gas that affected soil and equipment. There was a vacuum truck dispatched to recover fluid from containment and ground puddles.





Amy C. Ruth

BOPCO, L.P.

EH&S Department

522 W. Mermod, Suite 704

Carlsbad, NM 88220

O: (575)689-3380

C: (432)661-0571

Bratcher, Mike, EMNRD

From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Monday, November 28, 2016 11:19 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: jamos@blm.gov; Tucker, Shelly
Subject: Release Notification - Golden Federal Battery 11-26-16

BOPCO

Was notified of the leak this morning. Power washing location equipment now and will have final volumes released/recovered in initial form C-141 after estimates finalized. Please call me with any questions. Thanks and have a good day.

Name: golden federal battery bopco, l.p.
Latitude: 32.491241
Longitude: -104.008324

Lease operator reported release on 11/26/2016 due to PRV on three phase vessel popping and Vic connections on vessel leaking. The majority of fluid was released into impervious containment and there was a mist oil & gas that affected soil and equipment. There was a vacuum truck dispatched to recover fluid from containment and ground puddles.



District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-01526931
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LOCATION OF RELEASE


Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1667	South	2300	West	Eddy

Latitude N 32.491322 Longitude W 104.007868

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 32 bbls	Volume Recovered: 30 bbls
Source of Release: 3 phase vessel	Date and Hour of Occurrence: 11/26/2016 time unknown	Date and Hour of Discovery: 11/26/2016 approx. 10 a.m. by operator
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos/Shelly Tucker (BLM)	
By Whom? Amy Ruth	Date and Hour: 11/28/2016 11:19 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* Unused 3 phase vessel re-fitted and returned to operation. Fluids released from vessel through pressure relief valve and leaking Vic connections. Fluids escaped mostly into an impermeable containment.		
Describe Area Affected and Cleanup Action Taken.* The leak affected a total of about 3,168 square feet of caliche pad, lined containment, and misted pasture east of the location. Free standing liquids were recovered via vacuum truck and equipment, tanks, and liner were power washed. Vessel was isolated. LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:	
Printed Name: Kyle Littrell	Approval Date:	Expiration Date:
Title: SH&E Coordinator	Conditions of Approval:	
E-mail Address: Kyle.Littrell@xtoenergy.com	Attached <input type="checkbox"/>	
Date: 5/25/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION

ARTESIA DISTRICT

FEB 02 2018

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

RECEIVED

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

NAB1803638113 OPERATOR Initial Report Final Report

Name of Company: XTO Energy, Inc. <u>BOPTD 210737</u>	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (Well #1 was P&A in 2011)	Facility Type: Exploration and Production

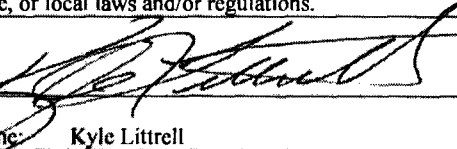
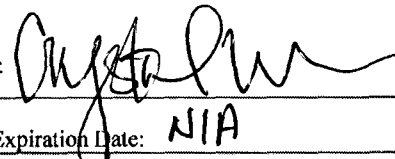
Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-26931
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1530	South	2375	West	Eddy

Latitude 32.490876° Longitude -104.007627°

NATURE OF RELEASE

Type of Release	Fire/Crude Oil	Volume of Release	<1 bbl	Volume Recovered	0 bbl
Source of Release	Flare	Date and Hour of Occurrence	1/18/2018, 10:00 AM	Date and Hour of Discovery	1/18/2018, 10:00 AM
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)		
By Whom?	Kyle Littrell	Date and Hour	1/18/2018 2:03 PM		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.* N/A					
Describe Cause of Problem and Remedial Action Taken.* Fluid meters plugged and dump valve failed causing fluid to exit the facility flare. A small amount of exiting fluids ignited and impacted the ground within flare earthen berm. Dump valve was manually opened and all wells flowing into location were shut in.					
Describe Area Affected and Cleanup Action Taken.* Fire briefly impacted approximately 250 square feet and was extinguished. Oil misted approximately 2600 square feet of surrounding area (mostly to the west and east). An environmental contract company applied MicroBlaze to the affected area and will continue to assist with remediation efforts.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Signature: 		OIL CONSERVATION DIVISION			
Printed Name: Kyle Littrell		Approved by Environmental Specialist: 			
Title: Environmental Coordinator		Approval Date: 2/5/18		Expiration Date: N/A	
E-mail Address: Kyle.Littrell@xtoenergy.com		Conditions of Approval:		Attached <input checked="" type="checkbox"/> <u>ARP-4601</u>	
Date: 2/1/2018 Phone: 432-221-7331		See attached			

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **2/2/18** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4601 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 3/2/18. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Weaver, Crystal, EMNRD

From: Ruth, Amy <Amy_Ruth@xtoenergy.com>
Sent: Friday, February 2, 2018 9:49 AM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Tucker, Shelly; Jim Amos
Cc: Sanders, Toady; McSpadden, Wes; Foust, Bryan; Littrell, Kyle
Subject: Initial C-141 - Golden Fed "D", 8, 17 CTB (API # 30-015-26931)
Attachments: Initial C-141 - Golden Federal D,8,17 CTB 1-18-18.pdf

Good Morning,

Please find attached the initial form C-141 detailing the accidental release of fluids and associated fire at the referenced facility. Thank you and contact us any time with questions or concerns.

Respectfully,

Amy C. Ruth

Delaware Basin Division
Environmental Coordinator
3104 E. Greene Street | Carlsbad, NM 88220 | M: 432.661.0571 | O: 575.689.3380



This document may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the intended recipient, you are notified that any unauthorized disclosure, copying, distribution or action on/of the contents of this document is prohibited.

From: Littrell, Kyle
Sent: Thursday, January 18, 2018 2:03 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Tucker, Shelly; Jim Amos
Cc: Sanders, Toady; McSpadden, Wes; Ruth, Amy; Foust, Bryan
Subject: Release Notification - Golden Fed "D", 8, 17 CTB (API # 30-015-26931)

Good Afternoon,

This is to notify you that this morning at approximately 10:00 am XTO discovered an accidental release of fluid from a flare stack which resulted in a small fire (approximately 25'w X 10'l). There were no injuries. We will provide details with the submission of a form C-141. Please contact me with any questions or concerns. Thanks. --Kyle

Kyle Littrell
EH&S Coordinator
XTO Energy Inc.
Delaware Division
Phone:(432)-221-7331 | Mobile:(970)-317-1867
kyle_littrell@xtoenergy.com

Bratcher, Mike, EMNRD

From: Littrell, Kyle <Kyle_Littrell@xtoenergy.com>
Sent: Thursday, January 18, 2018 2:03 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Tucker, Shelly; Jim Amos
Cc: Sanders, Toady; McSpadden, Wes; Ruth, Amy; Foust, Bryan
Subject: Release Notification - Golden Fed "D", 8, 17 CTB (API # 30-015-26931)

Good Afternoon,

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Kyle Littrell

EH&S Coordinator

XTO Energy Inc.

Delaware Division

Phone:(432)-221-7331 | Mobile:(970)-317-1867

kyle_littrell@xtoenergy.com

An **ExxonMobil** Subsidiary

Bratcher, Mike, EMNRD

From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Tuesday, November 29, 2016 2:50 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: jamos@blm.gov; Tucker, Shelly
Subject: RE: Release Notification - Golden Federal Battery 11-26-16
Attachments: Initial C-141 Golden Federal Battery 11-26-16.pdf

Please find the Initial form C-141 for the leak referenced below. Feel free to call me with any questions. Thank you!

From: Ruth, Amy C.
Sent: Monday, November 28, 2016 11:19 AM
To: 'Mike Bratcher'; 'Heather.Patterson@state.nm.us'
Cc: jamos@blm.gov; Tucker, Shelly
Subject: Release Notification - Golden Federal Battery 11-26-16

Was notified of the leak this morning. Power washing location equipment now and will have final volumes released/recovered in initial form C-141 after estimates finalized. Please call me with any questions. Thanks and have a good day.

Name: golden federal battery bopco, l.p.
Latitude: 32.491241
Longitude: -104.008324

Lease operator reported release on 11/26/2016 due to PRV on three phase vessel popping and Vic connections on vessel leaking. The majority of fluid was released into impervious containment and there was a mist oil & gas that affected soil and equipment. There was a vacuum truck dispatched to recover fluid from containment and ground puddles.





Amy C. Ruth

BOPCO, L.P.

EH&S Department

522 W. Mermod, Suite 704

Carlsbad, NM 88220

O: (575)689-3380

C: (432)661-0571

Bratcher, Mike, EMNRD

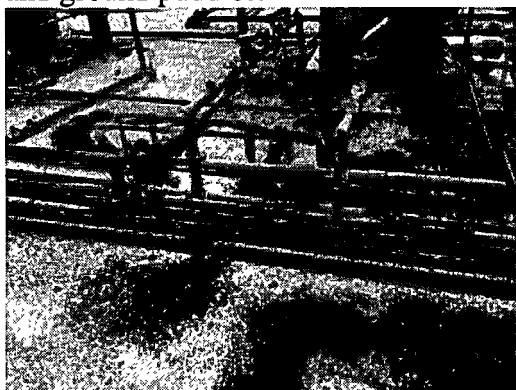
From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Monday, November 28, 2016 11:19 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: jamos@blm.gov; Tucker, Shelly
Subject: Release Notification - Golden Federal Battery 11-26-16

BOPCO

Was notified of the leak this morning. Power washing location equipment now and will have final volumes released/recovered in initial form C-141 after estimates finalized. Please call me with any questions. Thanks and have a good day.

Name: golden federal battery bopco, l.p.
Latitude: 32.491241
Longitude: -104.008324

Lease operator reported release on 11/26/2016 due to PRV on three phase vessel popping and Vic connections on vessel leaking. The majority of fluid was released into impervious containment and there was a mist oil & gas that affected soil and equipment. There was a vacuum truck dispatched to recover fluid from containment and ground puddles.



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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: Golden 8 Federal Battery #1 (2RP-4601)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Federal	API No. 30-01526931
-----------------------	------------------------	---------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1530	South	2375	West	Eddy

Latitude N 32.490876 Longitude W 104.007627

NATURE OF RELEASE


Type of Release: Fire/Crude oil	Volume of Release: <1 bbls	Volume Recovered: 0 bbls
Source of Release: Flare	Date and Hour of Occurrence: 1/18/2018, 10:00AM	Date and Hour of Discovery 1/18/2018, 10:00AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/Crystal Weaver (NMOCD), Jim Amos/Shelly Tucker (BLM)	
By Whom? Kyle Littrell	Date and Hour: 1/18/18 2:03 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.* Fluid meters plugged and dump valve failed to exit the facility flare. A small amount of exiting fluids ignited and impacted the ground within flare earthen berm. Dump valve was manually opened and all wells flowing into location were shut in.

Describe Area Affected and Cleanup Action Taken.* Fire briefly impacted approximately 250 square feet and was extinguished. Oil misted approximately 2,600 feet of surrounding area (mostly to the west and east). An environmental contract company applied Microblaze to the affected area and will continue to assist with remediation efforts.
LT Environmental collected 18 preliminary investigative soil samples between March 3, 2018 and May 11, 2018 to address this release and 6 others at the site. XTO excavated in areas where soil samples exceeded the NMOCD Remediation Action Levels, and LTE collected 8 excavation confirmation soil samples. Laboratory analytical results from the final soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. XTO requests no further action for this site and will backfill and re-contour the excavation.

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

Signature: 	OIL CONSERVATION DIVISION	
	Approved by Environmental Specialist:	
Printed Name: Kyle Littrell	Approval Date:	Expiration Date:
Title: SH&E Coordinator	Conditions of Approval:	
E-mail Address: Kyle.Littrell@xtoenergy.com	Attached <input type="checkbox"/>	
Date: 5/25/2018	Phone: 432-221-7331	

* Attach Additional Sheets If Necessary



APPENDIX B

*January 2, 2020 Deferral Request –
Addendum to the Original Closure Request
(Incident Numbers
nKMW1035646177, nKMW1106629393,
nJMW1333053660, and nAB1422637219)*

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
JUN 22 2010
NMOCD ARTESIA

Form C-141
Revised October 10, 2003
2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

30-015-26931
NKMW 1035646177

OPERATOR

Initial Report Final Report

Name of Company BOPCO, L.P. <u>260737</u>	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Golden 8 Federal Battery #1	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
-----------------------	-----------------------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E					Eddy

Latitude N 32.491438 Longitude W 104.008147

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 90 Bbls of Crude oil	Volume Recovered: 80 bbls of crude oil
Source of Release: Drain line connection on the back of a 500 bbl. tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 6/14/10 8:56 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Randy NMOCD on call operator	
By Whom? Tony Savoie	Date and Hour 6/14/10 9:24 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

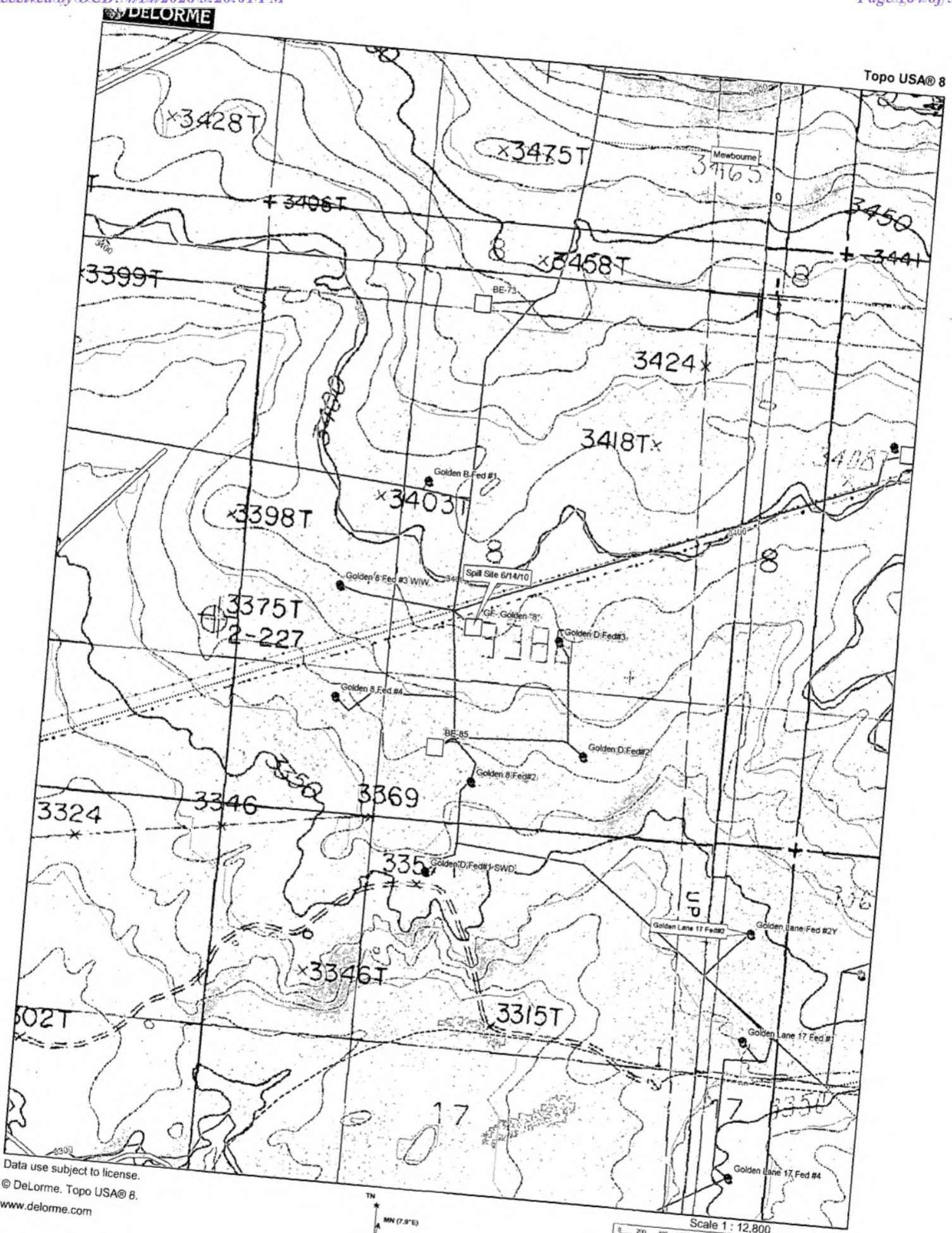
Describe Cause of Problem and Remedial Action Taken.* The drain line connection on the back of the tank failed due to internal corrosion, the remaining oil in the tank was removed, the tank was cleaned, inspected and repaired by replacing the connections and coating the tank internally.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected an area of approximately 2,000 sq. ft inside the earthen containment around the tanks. The free standing fluids were removed. The heavily saturated soil is in the process of being removed and placed on plastic. The area inside the containment area will be sampled to determine vertical extent; a remediation plan along with a new containment plan will be submitted. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

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

Signature: <u>Tony Savoie</u>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By <u>Mike Brannan</u>	
Title: Waste Mgmt. & Remediation Specialist	Approval Date: <u>3/3/11</u>	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	Attached <input type="checkbox"/>
Date: 6/22/10 Phone: 432-556-8730	<u>4/3/11</u>	<u>2 RP-521</u>

* Attach Additional Sheets If Necessary



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1625 N. French Dr., Hobbs, NM 88240
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	2RP-521
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)
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.491438 _____ Longitude -104.008147 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Golden 8 Federal Battery #1	Site Type Exploration and Production
Date Release Discovered 06/14/2010	API# (if applicable) 30-015-26931

Unit Letter	Section	Township	Range	County
K	8	21S	29E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 90	Volume Recovered (bbls) 80
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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

The fire tube on the heater-treater developed a leak, the production was switched out of the vessel, a vacuum truck was dispatched to the site to recover the free product. The spill impacted approximately 900 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practical in the area around the vessels and lines during a remediation at the facility in August of 2011, reference spill report date d2/6/2011. The area will be re-addressed, cleaned up as required, and a new closure report will be submitted including data from the previous spill.

Form C-141

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-0521
Facility ID	
Application ID	

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? Volume of release is greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Tony Savoie (XTO) contacted the on-call NMOCD operator (Randy) on 06/14/2010 at 9:24 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> 12/31/2019 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-0521
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	___ >100 (ft bgs)
Did this release impact groundwater or surface water?	<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 checked="" type="checkbox"/> Yes <input 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input checked="" type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release <input checked="" type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> 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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-0521
Facility ID	
Application ID	

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

Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Supervisor _____

Signature: _____ Date: _____ 12/31/2019 _____

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

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	nKMW1035646177
District RP	2RP-0521
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 12/31/2019

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

OCD Only

Received by: _____ Date: _____

Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: Bradford Billings Date: 07/23/2021

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

30-015-26931

Release Notification and Corrective Action

nKmw 1106629393

OPERATOR

Initial Report Final Report

Name of Company BOPCO, L.P.	260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Telephone No. 432-556-8730
Facility Name: Golden 8 Federal Battery #1		Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
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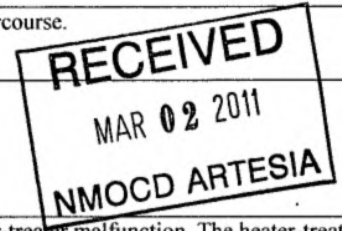
LOCATION OF RELEASE

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.491352 Longitude W 104.008223

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 310 Bbls Crude oil	Volume Recovered: 290
Source of Release: 500 bbl tank overflow	Date and Hour of Occurrence 2/16/11 hour not known	Date and Hour of Discovery 2/16/11 10:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency reporting. Left message with details.	
By Whom? Tony Savoie	Date and Hour 2/16/11 1:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	



If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A 500 bbl. Oil product tank overflowed due to a heater-treater malfunction. The heater-treater was repaired and put back in service.

Describe Area Affected and Cleanup Action Taken.*An area inside the earthen tank containment measuring approximately 14,100 sq. ft. and an area of pasture land outside the containment measuring approximately 400 sq. ft. The area outside the containment had been affected by a previous flow line spill reported to the NMOCD on 10/6/10. The oil saturated soil outside the containment was removed by Basin Env. using a hydro-vac. Approximately 290 bbls of crude oil was recovered from inside the containment. The area inside the containment was covered with soil to absorb small areas of free product. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By: Mike Brannon	
Title: Waste Mgmt. & Remediation Specialist	Approval Date: 3/7/11	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/3/11 Phone: 432-556-8730	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	

* Attach Additional Sheets If Necessary

4/7/11 2RP-633

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

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	2RP-0633
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)
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.491352 _____ Longitude -104.008223 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Golden 8 Federal Battery #1	Site Type Exploration and Production
Date Release Discovered 02/16/2011	API# (if applicable) 30-015-26931

Unit Letter	Section	Township	Range	County
K	8	21S	29E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 310	Volume Recovered (bbls) 290
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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

A 500 bbl oil tank overflowed due to a heater-treater malfunction. The heater treater was repaired and put back into service. An area inside the earthen tank containment measuring approximately 14,100 sq. ft. and an area of pasture land outside the containment measuring approximately 400 sq. ft. was affected. The area outside the containment had been affected by a previous flow line spill reported to the NMOCD on 10/06/2010. The oil saturated soil outside the containment was removed by Basin Env. Using a hydro-vac. Approximately 290 bbls of crude oil was recovered from inside the containment.

Form C-141

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-0633
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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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, Tony Savoie contacted the NMOCD on 2/16/2011 via telephone (NMOCD emergency reporting).	

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> 12/31/2019 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	___ >100 (ft bgs)
Did this release impact groundwater or surface water?	<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 checked="" type="checkbox"/> Yes <input 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input checked="" type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release <input checked="" type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> 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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

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

Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Supervisor _____

Signature: _____ Date: _____ 12/31/2019 _____

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

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 12/31/2019

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

OCD Only

Received by: _____ Date: _____

Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

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

RECEIVED
State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NOV 26 2013
MOC D ARTE

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nJMW 1333053660

OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report	
Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Golden 8 Federal Battery #1, the Well #1 was P&A 2011	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-26931	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	8	21S	29E	1650	South	2180	West	Eddy

Latitude N 32.491141 Longitude W 104.007775

NATURE OF RELEASE

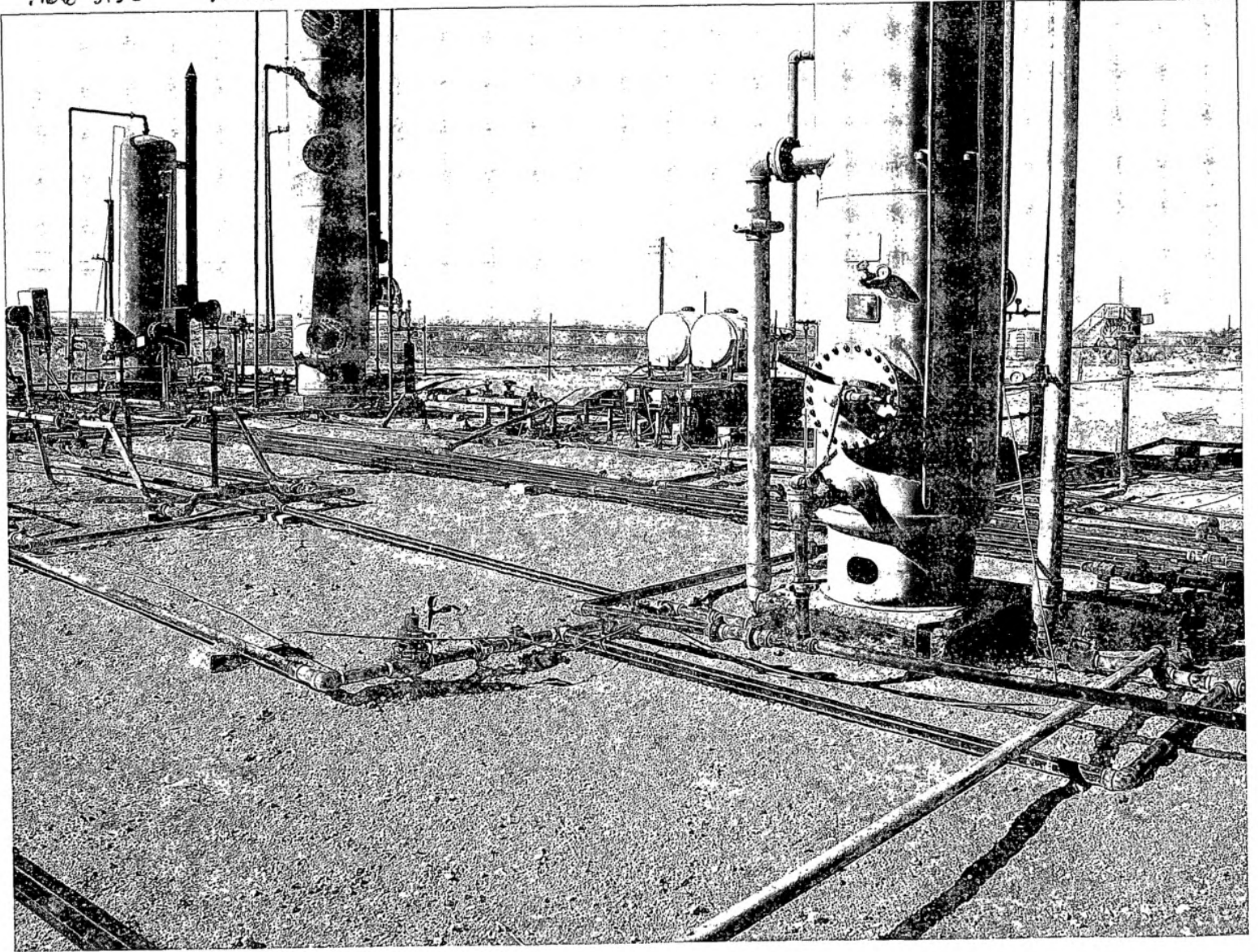
Type of Release: Crude oil and produced water	Volume of Release: 6 Bbls of crude oil and 15 Bbls water	Volume Recovered: 3 Bbls oil and 2 Bbls water.
Source of Release: Heater-treater fire tube	Date and Hour of Occurrence: Date 11/25/13 Time unknown	Date and Hour of Discovery: Date 11/25/13 Time approximately 9:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* The fire tube on the heater-treater developed a leak, the production was switched out of the vessel, a vacuum truck was dispatched to the site to recover the free product.		
Describe Area Affected and Cleanup Action Taken.* The spill impacted approximately 900 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference spill report dated 2/16/11. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous spill.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

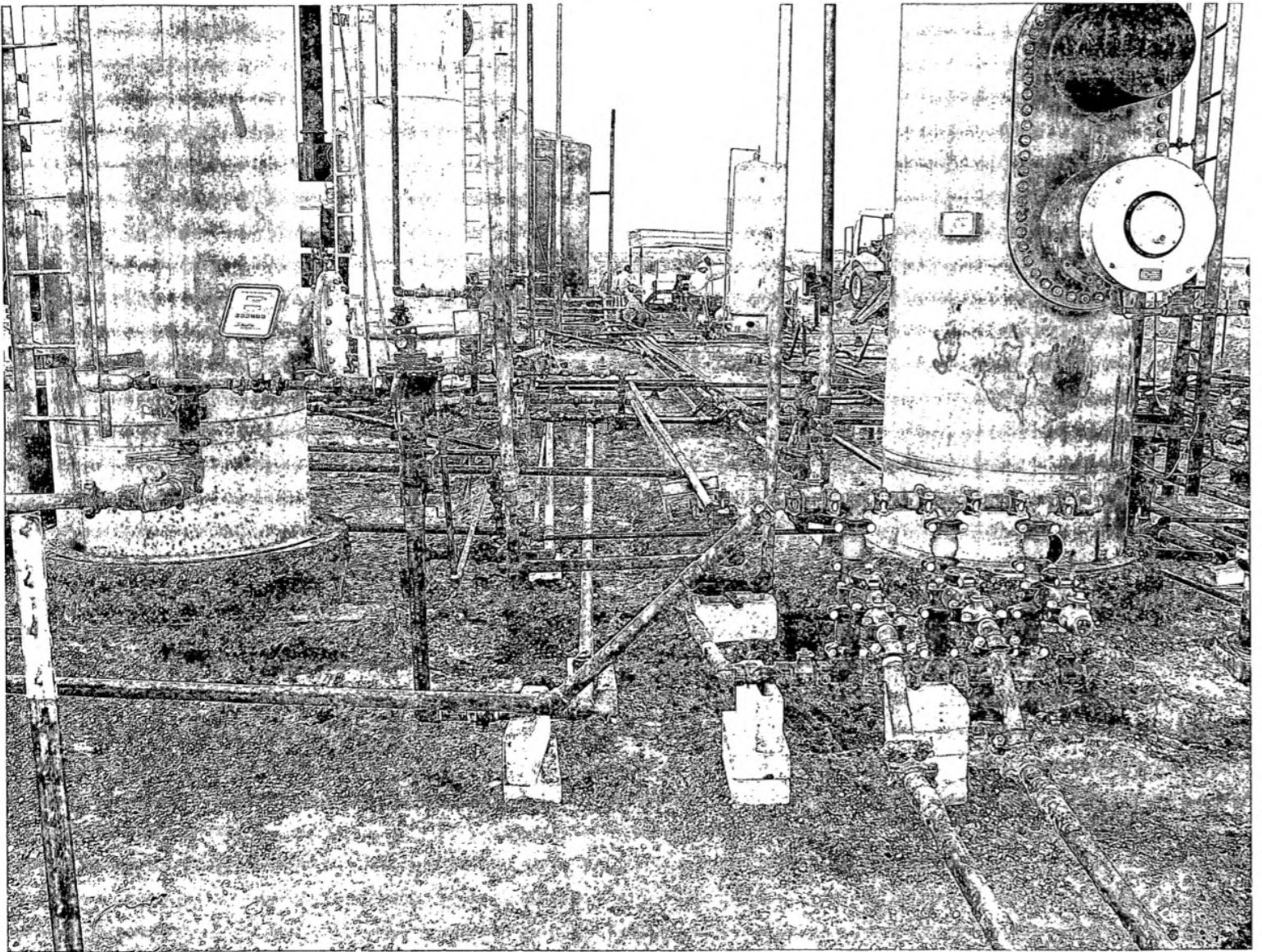
OIL CONSERVATION DIVISION

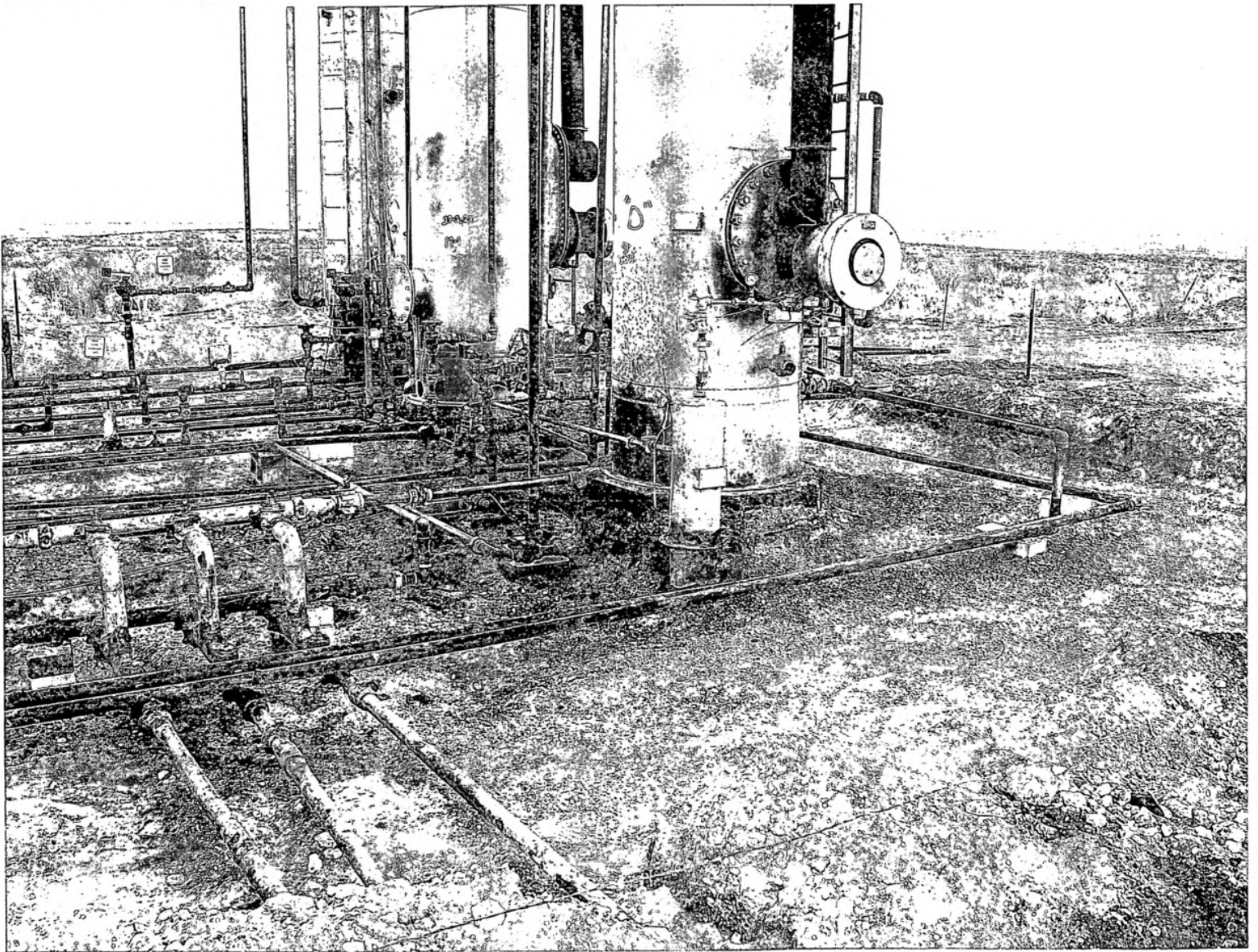
Signature: <i>Tony Savoie</i>	Approved by Environmental Specialist: Signed By <i>Mike Brannan</i>	
Printed Name: Tony Savoie	Approval Date: NOV 26 2013	Expiration Date:
Title: Waste Management and Remediation Specialist	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:	
E-mail Address: tasavoie@basspet.com	Attached <input type="checkbox"/>	
Date: _____ Phone: 432-556-8730		

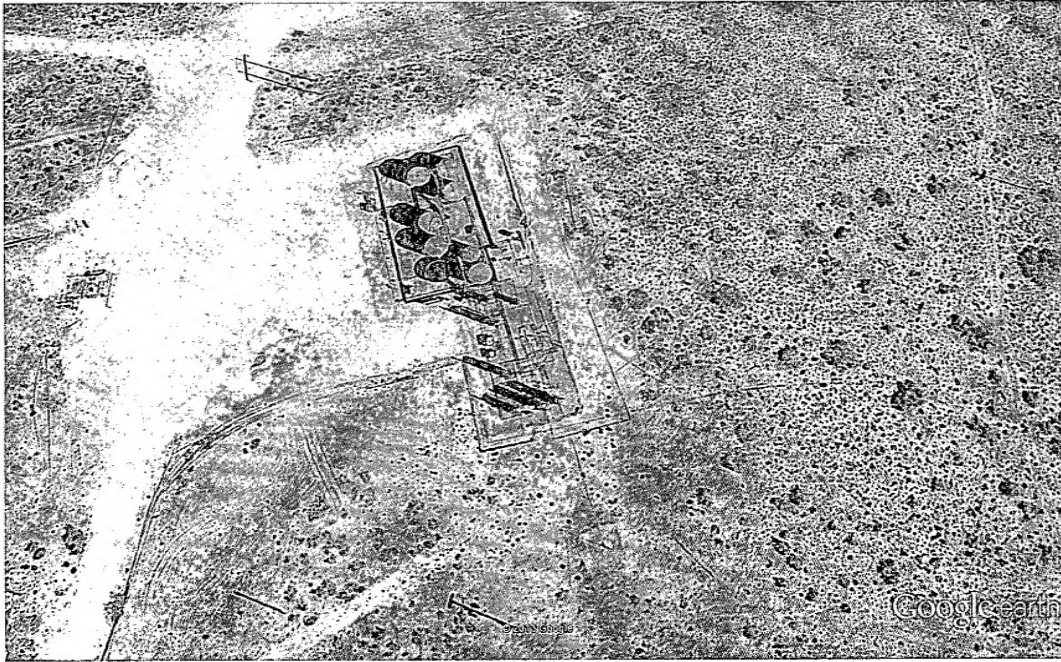
* Attach Additional Sheets If Necessary

PROPOSAL NO LATER THAN:
December 26, 2013 *ZRP-2082*









Google earth



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

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	2RP-2082
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)
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.491141 _____ Longitude -104.007775 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Golden 8 Federal Battery #1	Site Type Exploration and Production
Date Release Discovered 11/25/2013	API# (if applicable) 30-015-26931

Unit Letter	Section	Township	Range	County
K	8	21S	29E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 6	Volume Recovered (bbls) 3
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 15	Volume Recovered (bbls) 2
	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

The fire tube on the heater-treater developed a leak, the production was switched out of the vessel, a vacuum truck was dispatched to the site to recover the free product. The spill impacted approximately 900 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practical in the area around the vessels and lines during a remediation at the facility in August of 2011, reference spill report date d2/6/2011. The area will be re-addressed, cleaned up as required, and a new closure report will be submitted including data from the previous spill.

Form C-141

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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> 12/31/2019 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<p><u>OCD Only</u></p> Received by: _____ Date: _____

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	____ >100 (ft bgs)
Did this release impact groundwater or surface water?	<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 checked="" type="checkbox"/> Yes <input 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input checked="" type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release <input checked="" type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> 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

State of New Mexico
Oil Conservation Division

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Incident ID	
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Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Supervisor _____

Signature: _____ Date: _____ 12/31/2019 _____

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

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 12/31/2019

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

OCD Only

Received by: _____ Date: _____

Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

AUG 13 2014

Form C-141
Revised August 8, 2011

RECEIVED
Submit Copy to Appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1422637219
OPERATOR Initial Report Final Report
Name of Company: BOPCO, L.P. *210737* Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 575-887-7329
Facility Name: Golden 8 Federal Battery #1, the Well #1 was P&A 2011 Facility Type: Exploration and Production
Surface Owner: Federal Mineral Owner: Federal API No. 30-015-26931

LOCATION OF RELEASE

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the 1650	North/South Line South	Feet from the 2180	East/West Line West	County Eddy
------------------	--------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude N 32.491141 Longitude W 104.007775

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 3 Bbls of crude oil and 38 Bbls water	Volume Recovered: 1 Bbl. oil and 17 Bbls water.
Source of Release: Victaulic fitting on the production header.	Date and Hour of Occurrence: Date 8/12/14 Time unknown	Date and Hour of Discovery: Date 8/12/14 Time approximately 10:30 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104	
By Whom? Tony Savoie	Date and Hour: 8/12/14 at 12:10 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 13 2014

RECEIVED

Describe Cause of Problem and Remedial Action Taken.*

A Victaulic gasket failed on the production header due to a normally open valve was shut causing pressure to build up and blow out the gasket. The gasket was replaced and the valve was returned to normal.

Describe Area Affected and Cleanup Action Taken.*

The spill impacted approximately 1500 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practicable in the area around the vessels and lines during a remediation at the facility in August of 2011, reference 2RP-633. And the same area as impacted by spill reference 2RP-2082. The area will be re-addressed, cleaned up as required and a new closure report will be submitted including data from the previous two spills.

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

OIL CONSERVATION DIVISION

Signature: *Tony Savoie*
Printed Name: Tony Savoie
Title: Waste Management and Remediation Specialist
E-mail Address: tasavoie@basspet.com
Date: 8/13/14 Phone: 432-556-8730

Approved by Environmental Specialist
Signed By: *[Signature]*
Approval Date: *8/14/14* Expiration Date: *N/A*
Conditions of Approval: Remediation per OCD Rule & Guidelines. **SUBMIT REMEDIATION PROPOSAL NO LATER THAN:** Attached

* Attach Additional Sheets If Necessary

PROPOSAL NO LATER THAN:

2RP 2439

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

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	2RP-2439
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)
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.491141 _____ Longitude -104.007775 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Golden 8 Federal Battery #1	Site Type Exploration and Production
Date Release Discovered 08/12/2014	API# (if applicable) 30-015-26931

Unit Letter	Section	Township	Range	County
K	8	21S	29E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 3	Volume Recovered (bbls) 1
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 27	Volume Recovered (bbls) 17
	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

A Victaulic gasket failed on the production header due to a normally open valve was shut causing pressure to build up and blow out the gasket. The gasket was replaced and the valve was returned to normal. The spill impacted approximately 1500 sq. ft. of the tank battery earthen containment area. The spill impacted an area that had been cleaned up as far as practical in the area around the vessels and lines during a remediation at the facility in August of 2011, reference 2RP-0633 and the same areas impacted by spill reference 2RP-2082. The area will be re-addressed, cleaned up as required, and a new closure report will be submitted including data from the previous two spills.

Form C-141

State of New Mexico
Oil Conservation Division

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Incident ID	
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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? Volume of release is greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Tony Savoie (XTO) contacted the NMOCD emergency operator #104 on 08/12/2014 at 12:10 pm.	

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> 12/31/2019 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-2439
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	___ >100 (ft bgs)
Did this release impact groundwater or surface water?	<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 checked="" type="checkbox"/> Yes <input 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input checked="" type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release <input checked="" type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> 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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Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Supervisor _____

Signature: _____ Date: _____ 12/31/2019 _____

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

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
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Incident ID	
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Remediation Plan

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

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

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- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 12/31/2019

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

OCD Only

Received by: _____ Date: _____

Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____



LT Environmental, Inc.

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

January 2, 2020

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

**RE: Deferral Request – Addendum to Original Closure Request
Golden 8 Federal Battery #1
Remediation Permit Numbers 2RP-521, 2RP-633, 2RP-2082, and 2RP-2439
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request as an addendum to a previously submitted Closure Request detailing site assessment and soil sampling activities at the Golden 8 Federal Battery #1 (Site) in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The original Closure Request addressed seven historical releases that occurred at the same well pad location. The New Mexico Oil Conservation Division (NMOCD) approved closure of three of the historical releases, but requested additional information for deferral consideration of four releases that occurred around production equipment. The purpose of the site assessment and soil sampling activities documented in this report was to delineate previously identified impacted soil associated with those four historical releases. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request, requesting deferral of final remediation for these release events.

RELEASE BACKGROUND

2RP-521

On June 14, 2010 a drain line connection on a tank failed due to internal corrosion releasing 90 barrels (bbls) of crude oil into the lined earthen tank battery containment. The remaining oil in the tank was removed, the tank was cleaned, inspected and repaired. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 80 bbls of crude oil were recovered. The heavily saturated soils were removed. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on June 22, 2010, and the NMOCD subsequently issued RP Number 2RP-521.





Bratcher, M.
Page 2

2RP-633

On February 12, 2011 a heater-treater malfunction caused an oil product tank to overflow releasing 310 bbls of crude oil to the lined earthen containment and pasture outside the containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 290 bbls of crude oil were recovered.

2RP-2082

On November 25, 2013 a fire tube on the heater-treater developed a leak resulting in a release of 6 bbls of crude oil and 15 bbls of produced water to the lined earthen containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 3 bbls of crude oil and 2 bbls of produced water were recovered.

2RP-2439

On August 12, 2014 a Victaulic gasket failed on the production header due to a blow out on the gasket resulting in a release of 3 bbls of crude oil and 38 bbls of produced water. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 1 bbl of crude oil and 17 bbls of water were recovered. The gasket was replaced.

XTO submitted a Closure Request dated May 25, 2018, for this site addressing seven separate historical releases. The NMOCD approved closure of 2RP-3612, 2RP-4017, and 2RP-4601 via email dated June 6, 2018. In consideration of the other historical releases, which were inside the tank battery, NMOCD responded with a recommendation to attempt a delineation, remediate as much as possible, and defer anything left until final plugging and abandonment.

SITE CLOSURE STANDARDS

The original site work and subsequent sampling occurred prior to promulgation of new spill response requirements listed in Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). As described and approved in the original Closure Request, closure standards were established as follows: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region at the time of sampling and previous reporting, LTE applied a site-specific chloride action level of 600 mg/kg.

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On June 7, 2018 LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected six preliminary soil samples (SS06-SS11) within the lined earthen containment. Soil from the soil sample location was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID)





Bratcher, M.
Page 3

and Hach® chloride QuanTab® test strips, respectively. The preliminary soil sample locations 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 Midland, Texas, 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.

Based on laboratory analytical results for chloride in preliminary soil sample SS09, additional vertical delineation was conducted at that location.

On June 13, 2018 LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the northeastern side of the caliche well pad. The borehole was advanced at SS09 to delineate the impacted soils. Three soil samples were collected at depths ranging from 7 feet and 12.5 feet bgs (BH01A through BH01C). Soil from the soil sample location 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 LTE personnel repaired the liner. The borehole and vertical delineation soil sample location is depicted on Figure 2.

ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS09 and BH01A, collected at depths ranging from 0.5 feet to 7 feet bgs, indicated that chloride concentrations exceeded 600 mg/kg. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the documented closure standards in all other soil samples. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

DEFERRAL REQUEST

LTE personnel advanced one borehole in the location of the SS09 in the lined earthen containment. Delineation soil samples BH01A through BH01C were collected from within the lined tank battery containment from depths ranging from 0.5 foot to 12.5 feet bgs to assess for the presence or absence of soil impacts as a result of the four releases in the lined earthen containment. Laboratory analytical results indicated that chloride concentrations exceeded the the previously documented closure standards in soil samples SS09 and BH01A, collected at





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Page 4

depths ranging from 0.5 feet to 7 feet bgs. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the previously documented closure standards in soil samples SS06 through SS08, SS10, SS11 and BH01B through BH01C at depths of approximately 0.5 feet and 12.5 feet bgs, respectively.

Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined containment in which active operating equipment exists. Vertical delineation was achieved at approximately 10 feet bgs. The lateral extent of impacted soil remaining in place is defined by the other samples documented in this report and the numerous samples collected outside the containment and documented in the original Closure Request. An estimated 555 cubic yards of impacted soil remains in place surrounding borehole BH01 and beneath the lined tank battery containment, assuming a maximum 10-foot depth based on soil sample BH01B collected at a depth of 10 feet bgs.

Because depth to groundwater is estimated to be greater than 200 feet bgs, there no nearby surface features, and the impacted soil exists above and beneath a liner, LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The lined containment was repaired by XTO and will restrict potential vertical migration of residual impacts. XTO requests deferral of final remediation for this release event until final reclamation of the well pad or major construction, whichever comes first. An updated Form C-141 is attached.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Tacoma Morrissey
Staff Geologist

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





Bratcher, M.
Page 5

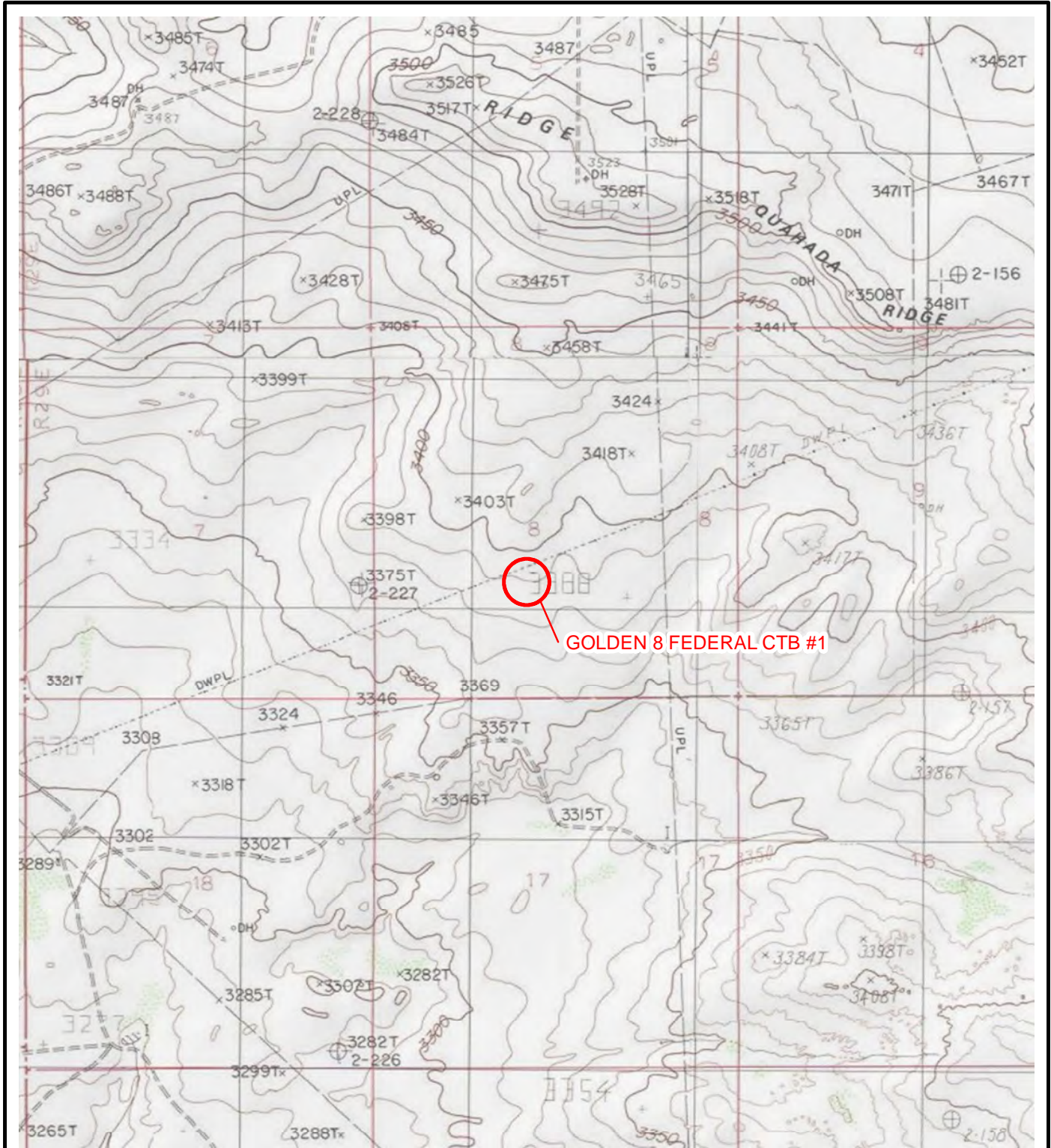
Appendices:

- Figure 1 Site Receptor 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



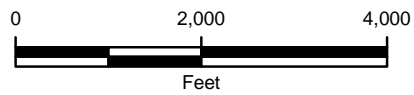


GOLDEN 8 FEDERAL CTB #1

LEGEND

 SITE LOCATION

IMAGE COURTESY OF ESRI/USGS



NOTE: REMEDIATION PERMIT NUMBERS
2RP-521, 2RP-633, 2RP-2082, & 2RP-2439

FIGURE 1
SITE LOCATION MAP
GOLDEN 8 FEDERAL CTB #1
NESW SEC 8 T21S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



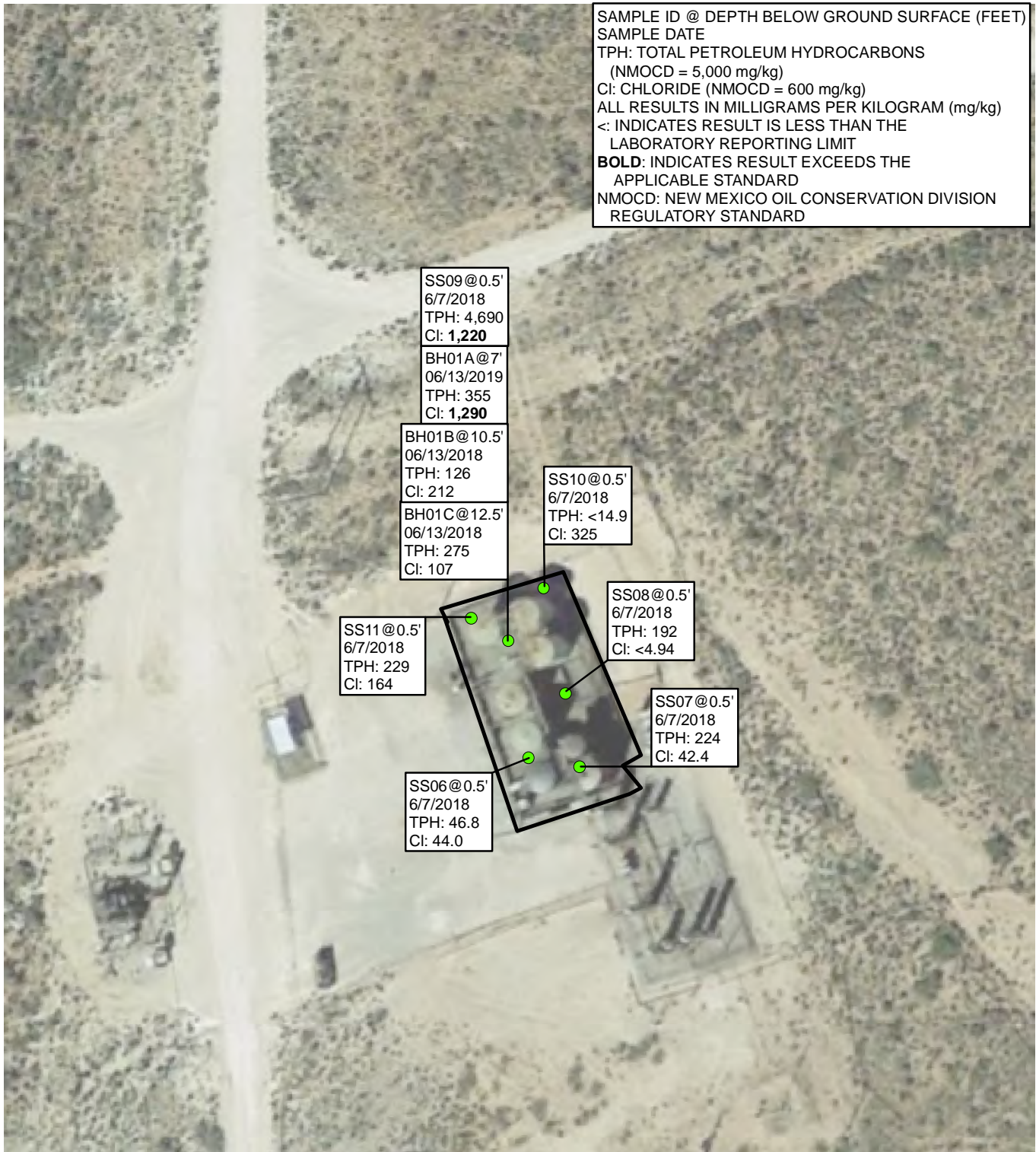
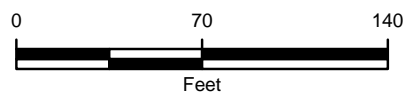


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- CONTAINMENT AREA



NOTE: BENZENE AND TOTAL BTEX NOT INCLUDED BECAUSE ALL RESULTS WERE BELOW LABORATORY DETECTION LIMITS.
 NOTE: REMEDIATION PERMIT NUMBERS 2RP-521, 2RP-633, 2RP-2082, & 2RP-2439

FIGURE 2
SOIL SAMPLE LOCATIONS
GOLDEN 8 FEDERAL CTB #1
NESW SEC 8 T21S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLE



**TABLE 1
SOIL ANALYTICAL RESULTS**

**GOLDEN 8 FEDERAL CENTRAL TANK BATTERY #1
REMEDIATION PERMIT NUMBER 2RP-521, 2RP-633, 2RP-2082, AND 2RP-2439
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	NE	5,000	600
SS06 @ 6" bgs	0.5	06/07/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	46.8	<15.0	46.8	46.8	44.0
SS07	0.5	06/07/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	203	21.3	203	224	42.4
SS08	0.5	06/07/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	172	20.3	172	192	<4.94
SS09	0.5	06/07/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	659	3,900	129	4,550	4,690	1,220
SS10	0.5	06/07/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	325
SS11	0.5	06/07/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	210	19.2	210	229	164
BH01 A	7	06/13/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	331	24.0	331	355	1,290
BH01 B	10.5	06/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	126	<15.0	126	126	212
BH01 C	12.5	06/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	258	17.1	258	275	107

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 LOGS




 <p>LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation</p>		Identifier: BH01	Date: 6/13/2019					
		Project Name: Golden 8 Federal #1	RP Number: 2RP-521, 2RP-633, 2RP-2082, and 2RP-2439					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: L. Laumbach	Method: Hand Auger					
Lat/Long: 32.491438, -104.008147		Field Screening:	Hole Diameter: 3" Total Depth: 12.5'					
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			
985	352				4	4'	S	Caliche/sand light brown- hydrocarbon odor detected
					5			
					6			
1160	215			BH01 A	7	7'	S	sand/ clay brown
					8			
462	95.4				9	9.5'	S	sand/clay brown- no staining or hydrocarbon odor detected
156.4	492			BH01B	10	10.5'		sand/clay brown- no staining or hydrocarbon odor detected
50.1	630				11	11.5'		caliche/sand- no staining or hydrocarbon odor detected
65.1	115			BH01C	12	12.5'		caliche/sand- no staining or hydrocarbon odor detected; auger refusal

ATTACHMENT 2: PHOTOGRAPHIC LOG






Western view of lined tank battery containment.

Project: 012918065	XTO Energy, Inc. Golden 8 Federal Battery #1	 <i>Advancing Opportunity</i>
March 3, 2018	Photographic Log	



View of lined tank battery containment and liner hole during soil sampling activities.

Project: 012918065	XTO Energy, Inc. Golden 8 Federal Battery #1	 <i>Advancing Opportunity</i>
March 4, 2018	Photographic Log	

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



Analytical Report 588640

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Golden 8 Federal #1

11-JUN-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



11-JUN-18

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

Reference: XENCO Report No(s): **588640**
Golden 8 Federal #1
Project Address: NM 2RP-2439

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 588640. 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. 588640 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

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 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS06 @ 6"bgs.	S	06-07-18 10:00	6 In	588640-001
SS07	S	06-07-18 10:15	6 In	588640-002
SS08	S	06-07-18 10:35	6 In	588640-003
SS09	S	06-07-18 10:50	6 In	588640-004
SS10	S	06-07-18 11:00	6 In	588640-005
SS11	S	06-07-18 10:20	6 In	588640-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal #1

Project ID:
Work Order Number(s): 588640

Report Date: 11-JUN-18
Date Received: 06/08/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052932 BTEX by EPA 8021B

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

Batch: LBA-3052970 BTEX by EPA 8021B

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



Certificate of Analysis Summary 588640

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal #1



Project Id:

Contact: Adrian Baker

Project Location: NM 2RP-2439

Date Received in Lab: Fri Jun-08-18 10:09 am

Report Date: 11-JUN-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	588640-001	588640-002	588640-003	588640-004	588640-005	588640-006					
	Field Id:	SS06 @ 6"bgs.	SS07	SS08	SS09	SS10	SS11					
	Depth:	6- In	6- In	6- In	6- In	6- In	6- In					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL					
	Sampled:	Jun-07-18 10:00	Jun-07-18 10:15	Jun-07-18 10:35	Jun-07-18 10:50	Jun-07-18 11:00	Jun-07-18 10:20					
BTEX by EPA 8021B	Extracted:	Jun-09-18 07:55	Jun-09-18 07:55	Jun-09-18 07:55	Jun-10-18 08:30	Jun-09-18 07:55	Jun-09-18 07:55					
	Analyzed:	Jun-10-18 00:43	Jun-10-18 01:01	Jun-10-18 01:19	Jun-10-18 21:34	Jun-10-18 01:55	Jun-10-18 02:13					
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL					
Benzene	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
Toluene	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes	<0.00398	0.00398	<0.00397	0.00397	<0.00402	0.00402	<0.00399	0.00399	<0.00401	0.00401		
o-Xylene	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
Total BTEX	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199		
Inorganic Anions by EPA 300	Extracted:	Jun-08-18 15:15	Jun-08-18 15:15	Jun-08-18 15:15	Jun-08-18 15:15	Jun-08-18 15:15	Jun-08-18 15:15					
	Analyzed:	Jun-09-18 01:09	Jun-09-18 01:15	Jun-09-18 01:20	Jun-09-18 01:26	Jun-09-18 01:31	Jun-09-18 01:47					
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL					
Chloride	44.0	4.93	42.4	4.99	<4.94	4.94	1220	24.7	325	4.96	164	4.98
TPH by SW8015 Mod	Extracted:	Jun-08-18 14:00	Jun-08-18 14:00	Jun-08-18 14:00	Jun-08-18 14:00	Jun-08-18 14:00	Jun-08-18 14:00					
	Analyzed:	Jun-09-18 01:03	Jun-09-18 01:23	Jun-09-18 01:44	Jun-09-18 02:04	Jun-09-18 02:25	Jun-09-18 02:45					
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<15.0	15.0	<15.0	15.0	<14.9	14.9	659	74.8	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)	46.8	15.0	203	15.0	172	14.9	3900	74.8	<14.9	14.9	210	15.0
Oil Range Hydrocarbons (ORO)	<15.0	15.0	21.3	15.0	20.3	14.9	129	74.8	<14.9	14.9	19.2	15.0
Total TPH	46.8	15.0	224	15.0	192	14.9	4690	74.8	<14.9	14.9	229	15.0

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS06 @ 6"bgs.	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-001	Date Collected: 06.07.18 10.00	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.0	4.93	mg/kg	06.09.18 01.09		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.09.18 01.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	46.8	15.0	mg/kg	06.09.18 01.03		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.09.18 01.03	U	1
Total TPH	PHC635	46.8	15.0	mg/kg	06.09.18 01.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.09.18 01.03	
o-Terphenyl	84-15-1	96	%	70-135	06.09.18 01.03	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS06 @ 6"bgs.	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-001	Date Collected: 06.07.18 10.00	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.09.18 07.55	Basis: Wet Weight
Seq Number: 3052932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.10.18 00.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.10.18 00.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.10.18 00.43		
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.10.18 00.43		



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS07	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-002	Date Collected: 06.07.18 10.15	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.4	4.99	mg/kg	06.09.18 01.15		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.09.18 01.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	203	15.0	mg/kg	06.09.18 01.23		1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.3	15.0	mg/kg	06.09.18 01.23		1
Total TPH	PHC635	224	15.0	mg/kg	06.09.18 01.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.09.18 01.23	
o-Terphenyl	84-15-1	95	%	70-135	06.09.18 01.23	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS07	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-002	Date Collected: 06.07.18 10.15	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.09.18 07.55	Basis: Wet Weight
Seq Number: 3052932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.10.18 01.01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.10.18 01.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	06.10.18 01.01		
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.10.18 01.01		



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS08	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-003	Date Collected: 06.07.18 10.35	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.94	4.94	mg/kg	06.09.18 01.20	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.09.18 01.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	172	14.9	mg/kg	06.09.18 01.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.3	14.9	mg/kg	06.09.18 01.44		1
Total TPH	PHC635	192	14.9	mg/kg	06.09.18 01.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.09.18 01.44	
o-Terphenyl	84-15-1	93	%	70-135	06.09.18 01.44	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS08	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-003	Date Collected: 06.07.18 10.35	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.09.18 07.55	Basis: Wet Weight
Seq Number: 3052932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.10.18 01.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.10.18 01.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.10.18 01.19		
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.10.18 01.19		



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS09	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-004	Date Collected: 06.07.18 10.50	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1220	24.7	mg/kg	06.09.18 01.26		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	659	74.8	mg/kg	06.09.18 02.04		5
Diesel Range Organics (DRO)	C10C28DRO	3900	74.8	mg/kg	06.09.18 02.04		5
Oil Range Hydrocarbons (ORO)	PHCG2835	129	74.8	mg/kg	06.09.18 02.04		5
Total TPH	PHC635	4690	74.8	mg/kg	06.09.18 02.04		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.09.18 02.04	
o-Terphenyl	84-15-1	117	%	70-135	06.09.18 02.04	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS09	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-004	Date Collected: 06.07.18 10.50	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.10.18 08.30	Basis: Wet Weight
Seq Number: 3052970		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.10.18 21.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.10.18 21.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	06.10.18 21.34		
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.10.18 21.34		



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS10	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-005	Date Collected: 06.07.18 11.00	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	325	4.96	mg/kg	06.09.18 01.31		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.09.18 02.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.09.18 02.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.09.18 02.25	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.09.18 02.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.09.18 02.25	
o-Terphenyl	84-15-1	98	%	70-135	06.09.18 02.25	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS10	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-005	Date Collected: 06.07.18 11.00	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.09.18 07.55	Basis: Wet Weight
Seq Number: 3052932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.10.18 01.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.10.18 01.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.10.18 01.55		
4-Bromofluorobenzene	460-00-4	113	%	70-130	06.10.18 01.55		



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS11	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-006	Date Collected: 06.07.18 10.20	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: SCM	Date Prep: 06.08.18 15.15	Basis: Wet Weight
Seq Number: 3052933		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	164	4.98	mg/kg	06.09.18 01.47		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 06.08.18 14.00	Basis: Wet Weight
Seq Number: 3052902		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.09.18 02.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	210	15.0	mg/kg	06.09.18 02.45		1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.2	15.0	mg/kg	06.09.18 02.45		1
Total TPH	PHC635	229	15.0	mg/kg	06.09.18 02.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.09.18 02.45	
o-Terphenyl	84-15-1	105	%	70-135	06.09.18 02.45	



Certificate of Analytical Results 588640



LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS11	Matrix: Soil	Date Received: 06.08.18 10.09
Lab Sample Id: 588640-006	Date Collected: 06.07.18 10.20	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.09.18 07.55	Basis: Wet Weight
Seq Number: 3052932		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.10.18 02.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.10.18 02.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	87	%	70-130	06.10.18 02.13		
4-Bromofluorobenzene	460-00-4	98	%	70-130	06.10.18 02.13		



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 588640

LT Environmental, Inc.
Golden 8 Federal #1

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3052933
MB Sample Id: 7656302-1-BLK

Matrix: Solid
LCS Sample Id: 7656302-1-BKS

Prep Method: E300P
Date Prep: 06.08.18
LCSD Sample Id: 7656302-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	270	108	267	107	90-110	1	20	mg/kg	06.09.18 00:05	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3052933
Parent Sample Id: 588639-001

Matrix: Soil
MS Sample Id: 588639-001 S

Prep Method: E300P
Date Prep: 06.08.18
MSD Sample Id: 588639-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.6	247	345	120	337	117	90-110	2	20	mg/kg	06.09.18 00:21	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3052933
Parent Sample Id: 588640-005

Matrix: Soil
MS Sample Id: 588640-005 S

Prep Method: E300P
Date Prep: 06.08.18
MSD Sample Id: 588640-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	325	248	583	104	584	104	90-110	0	20	mg/kg	06.09.18 01:36	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3052902
MB Sample Id: 7656356-1-BLK

Matrix: Solid
LCS Sample Id: 7656356-1-BKS

Prep Method: TX1005P
Date Prep: 06.08.18
LCSD Sample Id: 7656356-1-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	943	94	954	95	70-135	1	20	mg/kg	06.08.18 19:37	
Diesel Range Organics (DRO)	<15.0	1000	993	99	1000	100	70-135	1	20	mg/kg	06.08.18 19:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		122		125		70-135	%	06.08.18 19:37
o-Terphenyl	106		108		107		70-135	%	06.08.18 19:37

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



QC Summary 588640

LT Environmental, Inc.
Golden 8 Federal #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3052902

Parent Sample Id: 588620-001

Matrix: Soil
MS Sample Id: 588620-001 S

Prep Method: TX1005P
Date Prep: 06.08.18
MSD Sample Id: 588620-001 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	998	890	89	903	90	70-135	1	20	mg/kg	06.08.18 20:38	
Diesel Range Organics (DRO)	<15.0	998	924	93	942	94	70-135	2	20	mg/kg	06.08.18 20:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		124		70-135	%	06.08.18 20:38
o-Terphenyl	107		107		70-135	%	06.08.18 20:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3052932

MB Sample Id: 7656352-1-BLK

Matrix: Solid
LCS Sample Id: 7656352-1-BKS

Prep Method: SW5030B
Date Prep: 06.09.18
LCSD Sample Id: 7656352-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0866	86	0.0847	85	70-130	2	35	mg/kg	06.09.18 18:38	
Toluene	<0.00202	0.101	0.0902	89	0.0897	90	70-130	1	35	mg/kg	06.09.18 18:38	
Ethylbenzene	<0.00202	0.101	0.0922	91	0.0914	91	70-130	1	35	mg/kg	06.09.18 18:38	
m,p-Xylenes	<0.00403	0.202	0.192	95	0.187	94	70-130	3	35	mg/kg	06.09.18 18:38	
o-Xylene	<0.00202	0.101	0.0929	92	0.0977	98	70-130	5	35	mg/kg	06.09.18 18:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		95		94		70-130	%	06.09.18 18:38
4-Bromofluorobenzene	93		95		99		70-130	%	06.09.18 18:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3052970

MB Sample Id: 7656395-1-BLK

Matrix: Solid
LCS Sample Id: 7656395-1-BKS

Prep Method: SW5030B
Date Prep: 06.10.18
LCSD Sample Id: 7656395-1-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	0.0879	88	0.0862	85	70-130	2	35	mg/kg	06.10.18 19:28	
Toluene	<0.00200	0.100	0.0934	93	0.0907	90	70-130	3	35	mg/kg	06.10.18 19:28	
Ethylbenzene	<0.00200	0.100	0.0917	92	0.0893	88	70-130	3	35	mg/kg	06.10.18 19:28	
m,p-Xylenes	<0.00401	0.200	0.189	95	0.185	92	70-130	2	35	mg/kg	06.10.18 19:28	
o-Xylene	<0.00200	0.100	0.0921	92	0.0897	89	70-130	3	35	mg/kg	06.10.18 19:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		99		94		70-130	%	06.10.18 19:28
4-Bromofluorobenzene	87		98		94		70-130	%	06.10.18 19:28

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

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

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

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



QC Summary 588640

LT Environmental, Inc.
Golden 8 Federal #1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3052932

Parent Sample Id: 588112-021

Matrix: Soil

MS Sample Id: 588112-021 S

Prep Method: SW5030B

Date Prep: 06.09.18

MSD Sample Id: 588112-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0473	47	0.0544	55	70-130	14	35	mg/kg	06.09.18 19:16	X
Toluene	<0.00200	0.100	0.0502	50	0.0567	57	70-130	12	35	mg/kg	06.09.18 19:16	X
Ethylbenzene	<0.00200	0.100	0.0468	47	0.0537	54	70-130	14	35	mg/kg	06.09.18 19:16	X
m,p-Xylenes	<0.00401	0.200	0.0968	48	0.111	56	70-130	14	35	mg/kg	06.09.18 19:16	X
o-Xylene	<0.00200	0.100	0.0465	47	0.0653	66	70-130	34	35	mg/kg	06.09.18 19:16	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		106		70-130	%	06.09.18 19:16
4-Bromofluorobenzene	95		104		70-130	%	06.09.18 19:16

Analytical Method: BTEX by EPA 8021B

Seq Number: 3052970

Parent Sample Id: 588647-004

Matrix: Soil

MS Sample Id: 588647-004 S

Prep Method: SW5030B

Date Prep: 06.10.18

MSD Sample Id: 588647-004 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	0.0756	75	0.0760	75	70-130	1	35	mg/kg	06.10.18 20:04	
Toluene	<0.00202	0.101	0.0813	80	0.0797	79	70-130	2	35	mg/kg	06.10.18 20:04	
Ethylbenzene	<0.00202	0.101	0.0814	81	0.0819	81	70-130	1	35	mg/kg	06.10.18 20:04	
m,p-Xylenes	<0.00404	0.202	0.167	83	0.171	85	70-130	2	35	mg/kg	06.10.18 20:04	
o-Xylene	<0.00202	0.101	0.0767	76	0.0782	77	70-130	2	35	mg/kg	06.10.18 20:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		70-130	%	06.10.18 20:04
4-Bromofluorobenzene	104		106		70-130	%	06.10.18 20:04

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

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

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

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



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
www.xenco.com

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page 1 of 1

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes										
Company Name / Branch: LT Environmental, Inc. - Permian Office		Project Name/Number: Golden & Federal #1		Xenco Quote #		Xenco Job #										
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705		Project Location: MN JRP-2419		Analytical Information		Matrix Codes										
Email: Adriaan Baker		Invoice To: XTO Energy - Kyle Littrell		Xenon Job #		Matrix Codes										
Project Contact: Adrian Baker		Phone No: (432) 704-5178		Xenon Job #		Matrix Codes										
Samples's Name: yada lankach		PO Number:		Xenon Job #		Matrix Codes										
Field ID / Point of Collection		Collection		Analytical Information		Matrix Codes										
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes	Field Comments
1	SS06 @ 6" bgs	6"	08/18	10:00	S	1										ETB-S
2	SS07			10:15	S	1										ETB-N
3	SS08			10:35	S	1										W-MidTB
4	SS09			10:50	S	1										SW-MidTB
5	SS10			11:00	S	1										NW-WTB
6	SS11			11:20	S	1										SW-WTB
7																
8																
9																
10																



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

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

Date/ Time Received: 06/08/2018 10:09:00 AM

Temperature Measuring device used : R8

Work Order #: 588640

Sample Receipt Checklist

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 06/08/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/08/2018

Analytical Report 589277

for
LT Environmental, Inc.

Project Manager: Adrian Baker
Golden 8 Federal 1

15-JUN-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



15-JUN-18

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

Reference: XENCO Report No(s): **589277**
Golden 8 Federal 1
Project Address: NM 2RP-3612

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 589277. 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. 589277 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
Project Assistant

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Sample Cross Reference 589277



LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01 A	S	06-13-18 09:50	7 ft	589277-001
BH01 B	S	06-13-18 10:30	10.5 ft	589277-002
BH01 C	S	06-13-18 11:15	12.5 ft	589277-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal 1

Project ID:
Work Order Number(s): 589277

Report Date: 15-JUN-18
Date Received: 06/14/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3053586 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 589277-001 S.

Batch: LBA-3053603 BTEX by EPA 8021B

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



Certificate of Analysis Summary 589277

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal 1



Project Id:

Contact: Adrian Baker

Project Location: NM 2RP-3612

Date Received in Lab: Thu Jun-14-18 02:00 pm

Report Date: 15-JUN-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	589277-001	589277-002	589277-003			
	<i>Field Id:</i>	BH01 A	BH01 B	BH01 C			
	<i>Depth:</i>	7- ft	10.5- ft	12.5- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jun-13-18 09:50	Jun-13-18 10:30	Jun-13-18 11:15			
BTEX by EPA 8021B	<i>Extracted:</i>	Jun-14-18 16:00	Jun-14-18 16:00	Jun-14-18 16:00			
	<i>Analyzed:</i>	Jun-14-18 19:08	Jun-14-18 19:26	Jun-14-18 19:44			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00400 0.00400			
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200			
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jun-14-18 14:30	Jun-14-18 14:30	Jun-14-18 14:30			
	<i>Analyzed:</i>	Jun-14-18 18:51	Jun-14-18 18:56	Jun-14-18 19:02			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		1290 24.6	212 4.94	107 5.00			
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-15-18 12:00	Jun-15-18 12:00	Jun-15-18 12:00			
	<i>Analyzed:</i>	Jun-15-18 14:06	Jun-15-18 15:06	Jun-15-18 15:27			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		331 15.0	126 15.0	258 15.0			
Oil Range Hydrocarbons (ORO)		24.0 15.0	<15.0 15.0	17.1 15.0			
Total TPH		355 15.0	126 15.0	275 15.0			

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id: BH01 A	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-001	Date Collected: 06.13.18 09.50	Sample Depth: 7 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 06.14.18 14.30	Basis: Wet Weight
Seq Number: 3053433		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1290	24.6	mg/kg	06.14.18 18.51		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: JUM	Date Prep: 06.15.18 12.00	Basis: Wet Weight
Seq Number: 3053586		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.15.18 14.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	331	15.0	mg/kg	06.15.18 14.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	24.0	15.0	mg/kg	06.15.18 14.06		1
Total TPH	PHC635	355	15.0	mg/kg	06.15.18 14.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.15.18 14.06	
o-Terphenyl	84-15-1	88	%	70-135	06.15.18 14.06	



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO Golden 8 Federal 1

Sample Id: BH01 A	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-001	Date Collected: 06.13.18 09.50	Sample Depth: 7 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.14.18 16.00	Basis: Wet Weight
Seq Number: 3053603		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.14.18 19.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.14.18 19.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.14.18 19.08		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.14.18 19.08		



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO Golden 8 Federal 1

Sample Id: BH01 B	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-002	Date Collected: 06.13.18 10.30	Sample Depth: 10.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 06.14.18 14.30	Basis: Wet Weight
Seq Number: 3053433		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	4.94	mg/kg	06.14.18 18.56		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: JUM	Date Prep: 06.15.18 12.00	Basis: Wet Weight
Seq Number: 3053586		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.15.18 15.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	126	15.0	mg/kg	06.15.18 15.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.15.18 15.06	U	1
Total TPH	PHC635	126	15.0	mg/kg	06.15.18 15.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	06.15.18 15.06	
o-Terphenyl	84-15-1	79	%	70-135	06.15.18 15.06	



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO Golden 8 Federal 1

Sample Id: BH01 B	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-002	Date Collected: 06.13.18 10.30	Sample Depth: 10.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.14.18 16.00	Basis: Wet Weight
Seq Number: 3053603		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.14.18 19.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.14.18 19.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	06.14.18 19.26		
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.14.18 19.26		



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO Golden 8 Federal 1

Sample Id: BH01 C	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-003	Date Collected: 06.13.18 11.15	Sample Depth: 12.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 06.14.18 14.30	Basis: Wet Weight
Seq Number: 3053433		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	5.00	mg/kg	06.14.18 19.02		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: JUM	Date Prep: 06.15.18 12.00	Basis: Wet Weight
Seq Number: 3053586		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.15.18 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	258	15.0	mg/kg	06.15.18 15.27		1
Oil Range Hydrocarbons (ORO)	PHCG2835	17.1	15.0	mg/kg	06.15.18 15.27		1
Total TPH	PHC635	275	15.0	mg/kg	06.15.18 15.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.15.18 15.27	
o-Terphenyl	84-15-1	99	%	70-135	06.15.18 15.27	



Certificate of Analytical Results 589277



LT Environmental, Inc., Arvada, CO
Golden 8 Federal 1

Sample Id: BH01 C	Matrix: Soil	Date Received: 06.14.18 14.00
Lab Sample Id: 589277-003	Date Collected: 06.13.18 11.15	Sample Depth: 12.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 06.14.18 16.00	Basis: Wet Weight
Seq Number: 3053603		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.14.18 19.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.14.18 19.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.14.18 19.44		
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.14.18 19.44		



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 589277

LT Environmental, Inc.
Golden 8 Federal 1

Analytical Method: Inorganic Anions by EPA 300
Seq Number: 3053433
MB Sample Id: 7656636-1-BLK

Matrix: Solid
LCS Sample Id: 7656636-1-BKS

Prep Method: E300P
Date Prep: 06.14.18
LCSD Sample Id: 7656636-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	257	103	90-110	0	20	mg/kg	06.14.18 12:29	

Analytical Method: Inorganic Anions by EPA 300
Seq Number: 3053433
Parent Sample Id: 588898-002

Matrix: Soil
MS Sample Id: 588898-002 S

Prep Method: E300P
Date Prep: 06.14.18
MSD Sample Id: 588898-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	321	250	558	95	559	95	90-110	0	20	mg/kg	06.14.18 17:57	

Analytical Method: Inorganic Anions by EPA 300
Seq Number: 3053433
Parent Sample Id: 589043-001

Matrix: Soil
MS Sample Id: 589043-001 S

Prep Method: E300P
Date Prep: 06.14.18
MSD Sample Id: 589043-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.35	247	270	106	264	104	90-110	2	20	mg/kg	06.14.18 12:46	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3053586
MB Sample Id: 7656745-1-BLK

Matrix: Solid
LCS Sample Id: 7656745-1-BKS

Prep Method: TX1005P
Date Prep: 06.15.18
LCSD Sample Id: 7656745-1-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	837	84	847	85	70-135	1	20	mg/kg	06.15.18 13:26	
Diesel Range Organics (DRO)	<15.0	1000	827	83	854	85	70-135	3	20	mg/kg	06.15.18 13:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		107		109		70-135	%	06.15.18 13:26
o-Terphenyl	84		86		83		70-135	%	06.15.18 13:26

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

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

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

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



QC Summary 589277

LT Environmental, Inc.
Golden 8 Federal 1

Analytical Method: TPH by SW8015 Mod
Seq Number: 3053586
Parent Sample Id: 589277-001

Matrix: Soil
MS Sample Id: 589277-001 S

Prep Method: TX1005P
Date Prep: 06.15.18
MSD Sample Id: 589277-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	820	82	871	87	70-135	6	20	mg/kg	06.15.18 14:26	
Diesel Range Organics (DRO)	331	999	1140	81	1160	83	70-135	2	20	mg/kg	06.15.18 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		102		70-135	%	06.15.18 14:26
o-Terphenyl	54	**	90		70-135	%	06.15.18 14:26

Analytical Method: BTEX by EPA 8021B
Seq Number: 3053603
MB Sample Id: 7656667-1-BLK

Matrix: Solid
LCS Sample Id: 7656667-1-BKS

Prep Method: SW5030B
Date Prep: 06.14.18
LCSD Sample Id: 7656667-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0941	94	0.0871	87	70-130	8	35	mg/kg	06.14.18 17:19	
Toluene	<0.00200	0.100	0.101	101	0.0930	93	70-130	8	35	mg/kg	06.14.18 17:19	
Ethylbenzene	<0.00200	0.100	0.0993	99	0.0925	93	70-130	7	35	mg/kg	06.14.18 17:19	
m,p-Xylenes	<0.00401	0.200	0.208	104	0.194	97	70-130	7	35	mg/kg	06.14.18 17:19	
o-Xylene	<0.00200	0.100	0.106	106	0.0910	91	70-130	15	35	mg/kg	06.14.18 17:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		92		99		70-130	%	06.14.18 17:19
4-Bromofluorobenzene	89		100		122		70-130	%	06.14.18 17:19

Analytical Method: BTEX by EPA 8021B
Seq Number: 3053603
Parent Sample Id: 588822-002

Matrix: Soil
MS Sample Id: 588822-002 S

Prep Method: SW5030B
Date Prep: 06.14.18
MSD Sample Id: 588822-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0578	58	0.0661	65	70-130	13	35	mg/kg	06.14.18 17:55	X
Toluene	<0.00201	0.100	0.0592	59	0.0663	66	70-130	11	35	mg/kg	06.14.18 17:55	X
Ethylbenzene	<0.00201	0.100	0.0519	52	0.0592	59	70-130	13	35	mg/kg	06.14.18 17:55	X
m,p-Xylenes	<0.00402	0.201	0.107	53	0.120	60	70-130	11	35	mg/kg	06.14.18 17:55	X
o-Xylene	<0.00201	0.100	0.0520	52	0.0572	57	70-130	10	35	mg/kg	06.14.18 17:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		97		70-130	%	06.14.18 17:55
4-Bromofluorobenzene	106		123		70-130	%	06.14.18 17:55

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

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

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

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



Setting the Standard since 1990
 Stafford, Texas (281-240-4200)
 Dallas, Texas (214-902-0300)

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

www.xenco.com

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page 1 of 1

Xenco Quote # 589277 Xenco Job #

Client / Reporting Information			Project Information			Analytical Information		Matrix Codes			
Company Name / Branch: LT Environmental, Inc. - Permian Office			Project Name/Number: Golden & Federa 11								
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705			Project Location: NM								
Email: Abaker@LTENV.com			Invoice To: XTO Energy - Kyle Litrell								
Project Contact: Adrian Baker			Phone No: (432) 704-5178								
Sampler's Name: Lynda Lambeth			PO Number:								
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	Number of preserved bottles	Notes		
1	BH01A	7'	04/18/18	9:50	S	1					
2	BH01B	10.5'		10:30	S	1					
3	BH01C	12.5'		11:15	S	1					
4											
5											
6											
7											
8											
9											
10											
Turnaround Time (Business days) _____ Date Deliverable Information _____											
<input checked="" type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT <input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Plg / raw data)											
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV											
<input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411											
<input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> TRRP Checklist											
TAT Starts Day received by Lab, if received by 5:00 pm											
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY											
Relinquished by Sampler:			Date/Time: 06/15/18 13:00			Relinquished By: [Signature]		Date/Time: 06/13/10 15:30		Received By: [Signature]	
Relinquished by:			Date/Time: 06/18/14:00			Received By: [Signature]		Date/Time: 06/13/10 15:30		Received By: [Signature]	
Relinquished by:			Date/Time: 06/18/14:00			Received By: [Signature]		Date/Time: 06/13/10 15:30		Received By: [Signature]	
Relinquished by:			Date/Time: 06/18/14:00			Received By: [Signature]		Date/Time: 06/13/10 15:30		Received By: [Signature]	
Relinquished by:			Date/Time: 06/18/14:00			Received By: [Signature]		Date/Time: 06/13/10 15:30		Received By: [Signature]	

BTEX 8021 (only BTEX)
 TPH (MRO, GRO, DRO) 8015
 Chloride (300.0)

SS09
 ↓

- W = Water
- S = Soil/Sed/Solid
- GW = Ground Water
- DW = Drinking Water
- P = Product
- SW = Surface Water
- SL = Sludge
- OW = Ocean/Sea Water
- WI = Wipe
- O = Oil
- WW = Waste Water
- A = Air

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

6/13/2018

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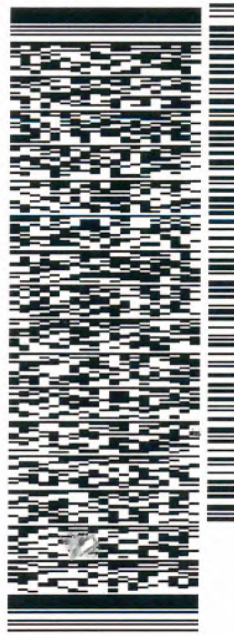
ORIGIN ID:MAFA (806) 794-1296
XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 13 JUN 18
ACTWGT: 33.00 LB
CAD: 101813706/NET3980
DIMS: 26x14x14 IN
BILL RECIPIENT

TO XENCO
XENCO
1211 W. FLORIDA AVE

MIDLAND TX 79701
REF: (806) 794-1296
INV: PO: DEPT:

552J293DF/DCA5



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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

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

Date/ Time Received: 06/14/2018 02:00:00 PM

Temperature Measuring device used : R8

Work Order #: 589277

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 06/14/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/14/2018



APPENDIX C

September 2, 2020 *Deferral Request*
(Incident Number NAB1929041495)

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	NAB1929041495
District RP	2RP-5672
Facility ID	
Application ID	pAB1929041013

Release Notification GEJ4N-190927-C-1410

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)	NAB1929041495
Contact mailing address	522 W. Mermod, Calsbad, NM 88220		

Location of Release Source

Latitude 32.4912491 Longitude -104.0083542
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Golden 8 Federal Battery 1	Site Type	Battery
Date Release Discovered	09/12/2019	API# (if applicable)	30-015-26931 (Golden 8 Federal #001)

Unit Letter	Section	Township	Range	County
K	08	21S	29E	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 checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 0.01	Volume Recovered (bbls) 0.01
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 5.79	Volume Recovered (bbls) 4.99
	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: Produced water leaked from bottom of the Heater Treater due to internal corrosion. Release was contained inside dirt berm of the Battery. Additional third party resources have been retained to assist in the remediation.

Incident ID	NAB1929041495
District RP	2RP-5672
Facility ID	
Application ID	pAB1929041013

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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>9-27-19</u> email: <u>Kyle.Littrell@xtoenergy.com</u> Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>10/17/2019</u>

Incident ID	NAB1929041495
District RP	2RP-5672
Facility ID	
Application ID	pAB1929041013

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 1/2-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.



LT Environmental, Inc.

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

August 31, 2020

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

**RE: Deferral Request
Golden 8 Federal Battery 1
Remediation Permit Number 2RP-5672
Incident Number NAB1929041495
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment, soil sampling and remediation activities at the Golden 8 Federal Battery 1 (Site) in Unit K, Section 8, Township 21 South, Range 29 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 impacts to soil following the release of crude oil and produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling following excavation activities, XTO is submitting this Deferral Request, and requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5672 and Incident Number NAB1929041495 until the Site is reconstructed and/or the pad is abandoned.

RELEASE BACKGROUND

On September 12, 2019, internal corrosion from the bottom of the heater treater resulted in the release of approximately 0.01 barrels (bbls) of crude oil and approximately 5.79 bbls of produced water into the earthen berm surrounding the battery. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 0.01 bbls of crude oil and approximately 4.99 bbls of produced water were recovered from within the dirt berm area. 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 September 27, 2019, and subsequently assigned RP Number 2RP-5672 and Incident Number NAB1929041495.

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 nearest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well



Bratcher, M.
Page 2

322850104014201, located approximately 1.43 miles southwest of the Site. The groundwater well has a depth to groundwater of 134 feet bgs and a total depth of 160 feet bgs. Ground surface elevation at the groundwater well location is 3,289 feet above mean sea level (AMSL), which is approximately 113 feet lower in elevation than the Site. There are 7 water wells within a 2.5-mile radius of the Site with data indicating depth to water is greater than 100 feet bgs, indicating the regional groundwater aquifer, including beneath the Site, is greater than 100 feet bgs. These water wells are depicted on Figure 1 and referenced well records are in Attachment 1. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 4,223 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology based on being located in a medium potential karst designation area by the Bureau of Land Management (BLM). The Site receptors are identified on Figure 1.

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 September 17, 2019, LTE personnel evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected four preliminary soil samples (SS01 through SS04) within and around the release extent at a depth of approximately 0.5 feet bgs to assess for the presence or absence of soil impacts at the ground surface. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a photo-ionization detector (PID) and Hach[®] chloride QuanTab[®] test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during the Site visit, and a photographic log is included in Attachment 2.



Bratcher, M.
Page 3

The preliminary 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 transported 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.

The laboratory analytical results indicated preliminary soil samples SS01, SS02, and SS04 were in compliance with the Closure Criteria. Based on field screening results and laboratory analytical results for preliminary soil sample SS03, excavation activities appeared to be warranted at the Site. The laboratory analytical results are summarized in Table 1 and the laboratory data reports are provided in Attachment 3.

INITIAL DELINEATION ACTIVITIES

LTE personnel oversaw the advancement of three potholes (PH01 through PH03) within the release extent between December 3 and December 4, 2019 in coordination with excavation activities. Two discrete soil samples were collected from each pothole utilizing a backhoe to a depth of approximately 1-foot and 3 feet bgs.

Due to limitations of mechanical means to collect additional delineation soils samples in the vicinity of processing equipment, three boreholes (BH01 through BH03) were advanced via hand-auger within the release area. Boreholes BH01 and BH02 were advanced within the southern and western portion of the release extent, respectively, to a depth of approximately 0.5 feet bgs and 2 feet bgs; BH03 was advanced within the west-central portion of the release extent to a depth of 0.5 feet bgs before encountering auger refusal.

Soil from all potholes and boreholes were field screened for volatile aromatic hydrocarbons and chloride. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. Field screening results and observations for each pothole and borehole location were logged on lithologic/soil sampling logs, which are included in Attachment 4. The delineation soil sample locations are depicted on Figure 3.

Delineation soil samples from pothole PH03 and boreholes BH01 and BH02 were below the Closure Criteria for benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride. The shallow (0.5 feet) soil samples from PH01, PH02, and BH03 exceeded the Closure Criteria for TPH-GRO, TPH-DRO and/or TPH. All samples collected at the depth in the potholes and boreholes met Closure Criteria.

Laboratory analytical results for all delineation samples are summarized in Table 1 and the laboratory data reports are provided in Attachment 3.



EXCAVATION ACTIVITIES

From December 4, 2019 through February 20, 2020, LTE oversaw excavation of impacted soil, where possible, as indicated by visual observations, field screening results, and preliminary and delineation soil sample results. Excavation activities were performed in three areas using a track-mounted backhoe and hand shoveling as illustrated on Figure 4.

Following removal of impacted soil from the excavations, LTE collected 5-point composite soil samples following the required 200 square foot frequency from sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The samples were handled and analyzed as described above at Xenco in Carlsbad, New Mexico.

The three excavation extents totaled approximately 240 square feet in area and ranged in depth from 0.5 feet in the west to 3.5 feet in the south. A total of approximately 27 cubic yards of impacted soil were removed from the Site. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Carlsbad, New Mexico.

All excavation confirmation samples met Closure Criteria, except for two sidewall samples collected from the southern-most excavation. Sidewall samples SW03 and SW04 contained 1,860 mg/kg and 1,400 mg/kg TPH-GRO + TPH-DRO, respectively. Laboratory analytical results for all excavation samples are summarized in Table 1 and the laboratory data reports are provided in Attachment 3.

Additional soil was removed from the sidewall at sample SW03 and soil sample SW05 was collected for confirmation. The new sample met Closure Criteria. Additional excavation at SW04 was not possible due to XTO safety policy regarding soil disturbing activities within 2 feet of any above ground production equipment and active pipelines.

LTE personnel returned to the Site to collect a delineation pothole sample, PH04, to attempt to delineate impacts identified in SW04. Three discrete soil samples were collected from PH04 utilizing a backhoe at depths of approximately 1 foot, 3 feet, and 5 feet bgs. All samples from pothole PH04 met Closure Criteria.

DEFERRAL REQUEST

The release occurred in an area of active production equipment. Elevated concentrations of TPH identified during delineation activities were remediated to the maximum extent practical in coordination with XTO safety policy regarding earth moving activities near active production equipment. Approximately 27 cubic yards of impacted soil were excavated from the Site via track hoe, hand shoveling, and a hydrovac truck. Impacted soil between the active aboveground equipment, as indicated by laboratory analytical results for confirmation sidewall soil sample



Bratcher, M.
Page 5

SW04, could not be excavated further due to these safety limitations. The area of deferral is depicted in Figure 5.

The residual soil has been delineated. Soil samples from PH03, BH01, and BH02 confirm no impacted soil in other areas of the release footprint. Soil represented by SW04 is delineated vertically by the clean excavation floor sample (FS02) and pothole soil samples collected from total depths. Excavation and delineation samples from the release footprint delineate the impacted soil laterally to the south, east, and west. Soil samples collected from PH04 delineate the remaining impacted soil to the north. An estimated 4 cubic yards of impacted soil remains within 2 feet of active production equipment.

XTO respectfully requests NFA and deferral of final remediation for RP Number 2RP-5672 and Incident Number NAB192904149. XTO requests permission to backfill the excavation extents and complete remediation of the remaining impacted soil in the area immediately surrounding the containment during any future major construction, final facility abandonment, or when the structure is removed, whichever occurs first. LTE and XTO do not believe deferment will result in an imminent risk to human health, the environment, or groundwater. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kalei Jennings
Project Environmental Scientist

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



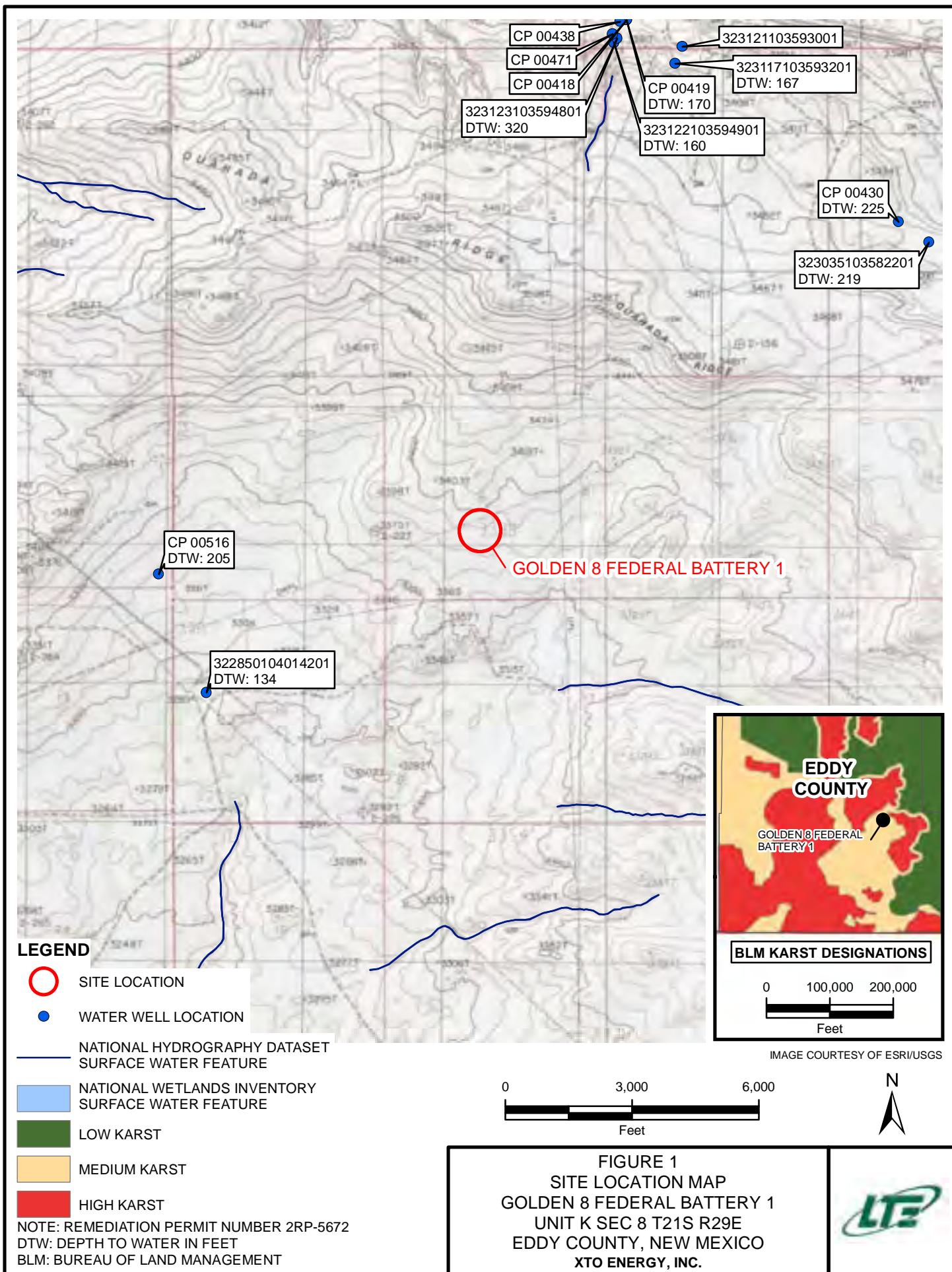
Bratcher, M.
Page 6

Attachments:

- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Figure 4 Excavation Soil Sample Locations
- Figure 5 Deferral Area
- Table 1 Soil Analytical Report
- Attachment 1 Referenced Well Logs
- Attachment 2 Photographic Log
- Attachment 3 Laboratory Analytical Reports
- Attachment 4 Lithologic/Soil Sample Logs

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
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE REGULATORY CLOSURE CRITERIA

SS01@0.5'
 09/17/2019
 B: 0.0306
 BTEX: 16.3
 GRO+DRO: 475
 TPH: 537
 Cl: 2,230

SS04@0.5'
 09/17/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: 233
 TPH: 296
 Cl: 232

SS03@0.5'
 09/17/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: **1,230**
 TPH: 1,450
 Cl: 857

SS02@0.5'
 09/17/2019
 B: <0.00200
 BTEX: 0.00549
 GRO+DRO: 182
 TPH: 182
 Cl: 1,330

LEGEND

- X** RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

▭ RELEASE 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
 NOTE: REMEDIATION PERMIT NUMBER 2RP-5672

IMAGE COURTESY OF ESRI

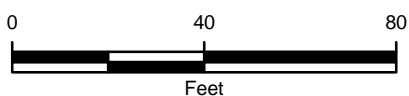
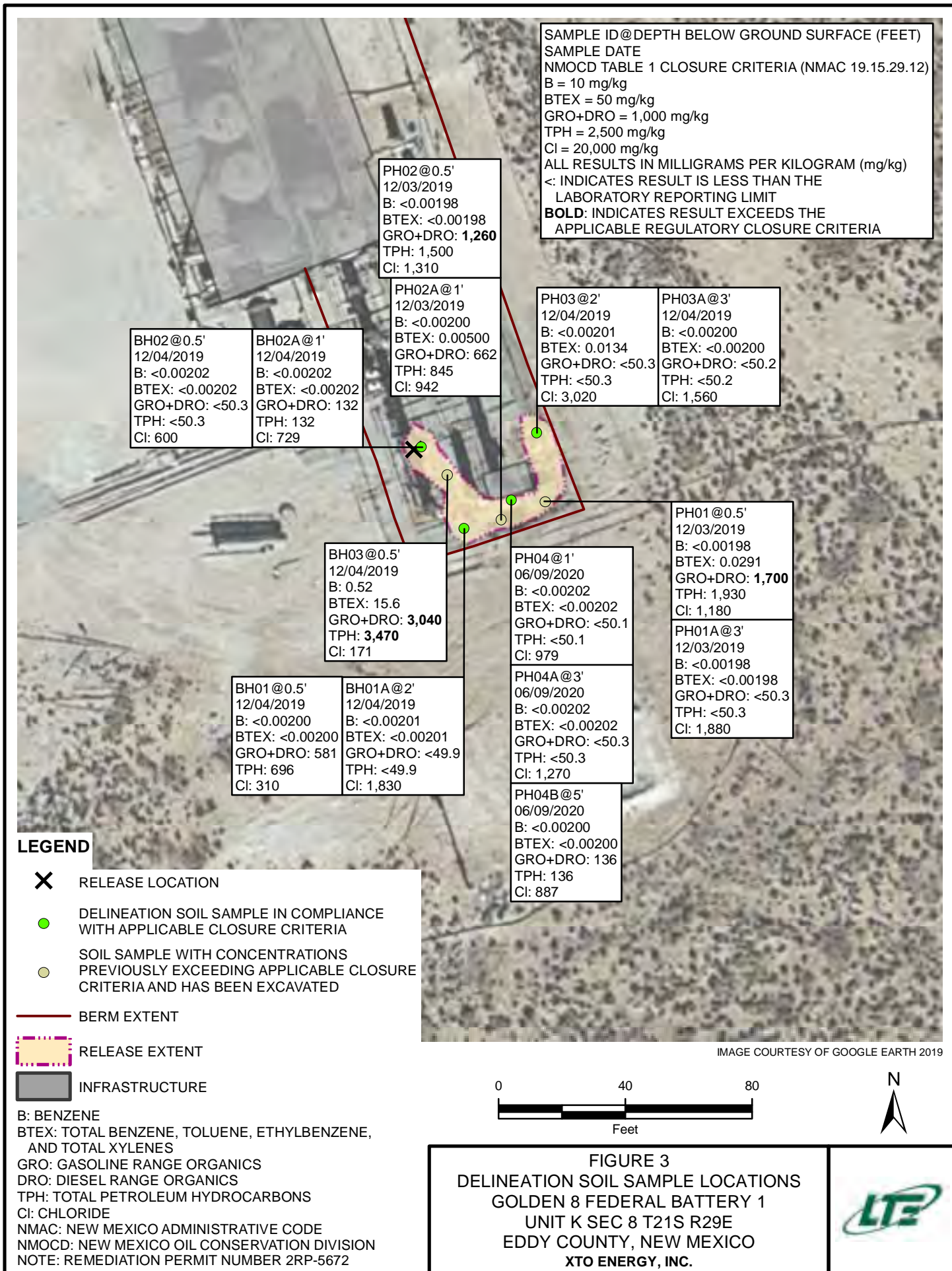


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 GOLDEN 8 FEDERAL BATTERY 1
 UNIT K SEC 8 T21S R29E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





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 REGULATORY CLOSURE CRITERIA

PH02@0.5'
 12/03/2019
 B: <0.00198
 BTEX: <0.00198
GRO+DRO: 1,260
 TPH: 1,500
 Cl: 1,310

PH02A@1'
 12/03/2019
 B: <0.00200
 BTEX: 0.00500
GRO+DRO: 662
 TPH: 845
 Cl: 942

PH03@2'
 12/04/2019
 B: <0.00201
 BTEX: 0.0134
GRO+DRO: <50.3
 TPH: <50.3
 Cl: 3,020

PH03A@3'
 12/04/2019
 B: <0.00200
 BTEX: <0.00200
GRO+DRO: <50.2
 TPH: <50.2
 Cl: 1,560

BH02@0.5'
 12/04/2019
 B: <0.00202
 BTEX: <0.00202
GRO+DRO: <50.3
 TPH: <50.3
 Cl: 600

BH02A@1'
 12/04/2019
 B: <0.00202
 BTEX: <0.00202
GRO+DRO: 132
 TPH: 132
 Cl: 729

BH03@0.5'
 12/04/2019
 B: 0.52
 BTEX: 15.6
GRO+DRO: 3,040
 TPH: 3,470
 Cl: 171

PH04@1'
 06/09/2020
 B: <0.00202
 BTEX: <0.00202
GRO+DRO: <50.1
 TPH: <50.1
 Cl: 979

PH01@0.5'
 12/03/2019
 B: <0.00198
 BTEX: 0.0291
GRO+DRO: 1,700
 TPH: 1,930
 Cl: 1,180

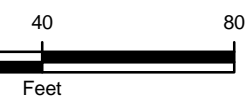
PH01A@3'
 12/03/2019
 B: <0.00198
 BTEX: <0.00198
GRO+DRO: <50.3
 TPH: <50.3
 Cl: 1,880

BH01@0.5'
 12/04/2019
 B: <0.00200
 BTEX: <0.00200
GRO+DRO: 581
 TPH: 696
 Cl: 310

BH01A@2'
 12/04/2019
 B: <0.00201
 BTEX: <0.00201
GRO+DRO: <49.9
 TPH: <49.9
 Cl: 1,830

PH04A@3'
 06/09/2020
 B: <0.00202
 BTEX: <0.00202
GRO+DRO: <50.3
 TPH: <50.3
 Cl: 1,270

PH04B@5'
 06/09/2020
 B: <0.00200
 BTEX: <0.00200
GRO+DRO: 136
 TPH: 136
 Cl: 887



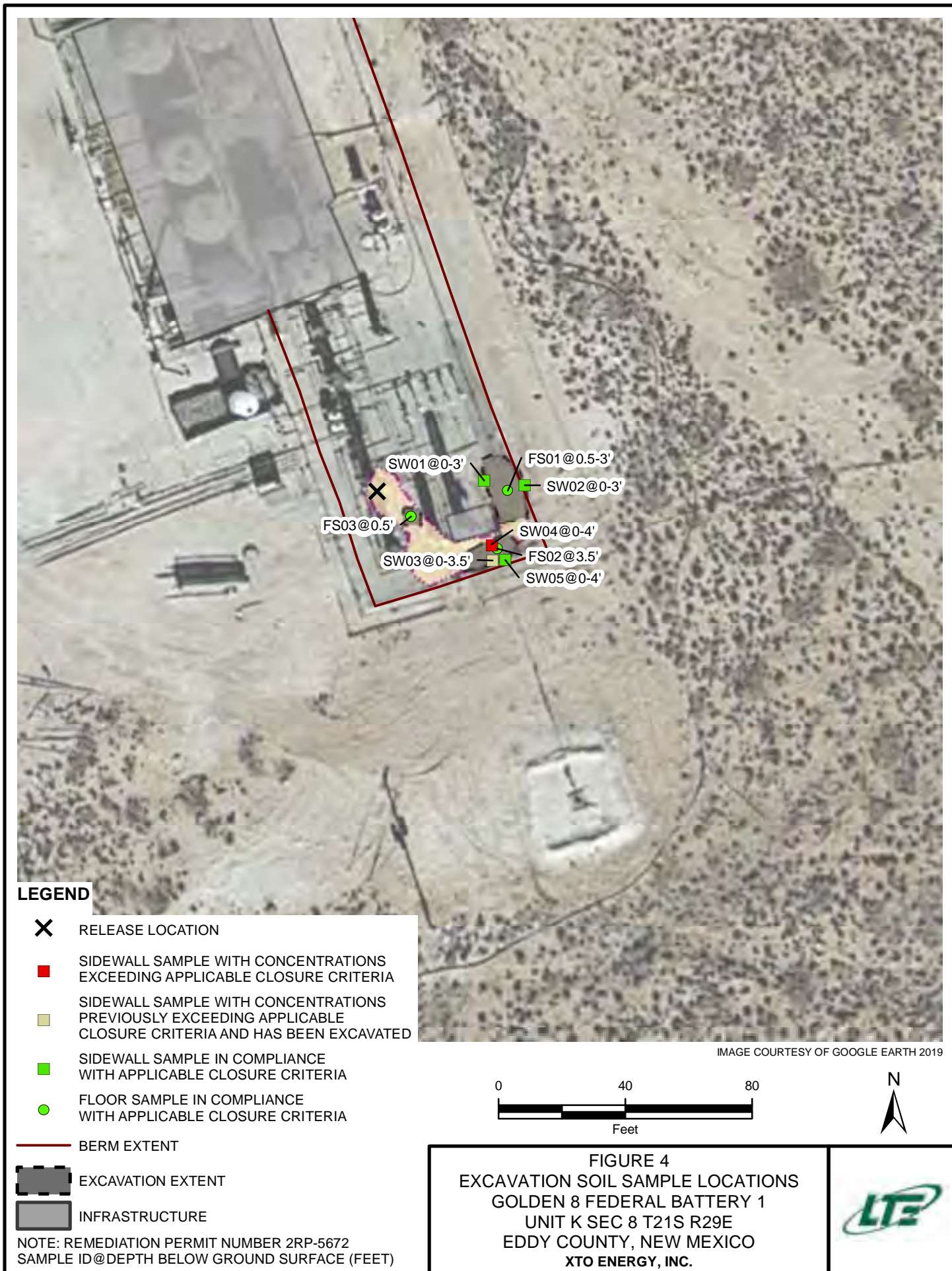







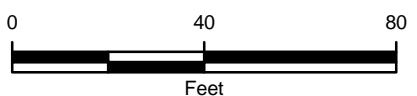




IMAGE COURTESY OF GOOGLE EARTH 2019

LEGEND

-  RELEASE LOCATION
-  SIDEWALL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
-  DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
-  BERM EXTENT
-  EXCAVATION EXTENT
-  INFRASTRUCTURE
-  DEFERRAL AREA



NOTE: REMEDIATION PERMIT NUMBER 2RP-5672
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 5
 DEFERRAL AREA
 GOLDEN 8 FEDERAL BATTERY 1
 UNIT K SEC 8 T21S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012919219_GOLDEN 8 FED BATTERY\012919219_FIG05_DEFERRAL_2020.mxd

TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**GOLDEN 8 FEDERAL BATTERY 1
REMEDATION PERMIT NUMBER 2RP-5672
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
SS01	0.5	9/17/2019	0.0306	5.79	1.51	8.96	16.3	83.1	392	61	475	537	2,230
SS02	0.5	9/17/2019	<0.00200	0.00549	<0.00200	<0.00200	0.00549	<49.9	182	<49.9	182	182	1,330
SS03	0.5	9/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	1,230	215	1,230	1,450	857
SS04	0.5	9/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	233	62.7	233	296	232
PH01	0.5	12/3/2019	<0.00198	<0.00198	0.00843	0.0207	0.0291	<49.8	1,700	232	1,700	1,930	1,180
PH01A	3	12/3/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	1,880
PH02	0.5	12/3/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	1,260	243	1,260	1,500	1,310
PH02A	1	12/3/2019	<0.00200	<0.00200	<0.00200	0.005	0.005	<50.3	662	183	662	845	942
PH03	2	12/4/2019	<0.00201	<0.00201	<0.00201	0.0134	0.0134	<50.3	<50.3	<50.3	<50.3	<50.3	3,020
PH03A	3	12/4/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	1,560
PH04	1	06/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	979
PH04A	3	06/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	1,270
PH04B	5	06/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	136	<50.3	136	136	887
BH01	0.5	12/4/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	581	115	581	696	310
BH01A	2	12/4/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	1,830
BH02	0.5	12/4/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	600
BH02A	1	12/4/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	132	<50.2	132	132	729
BH03	0.5	12/4/2019	0.52	6.3	1.26	7.54	15.6	383	2,660	424	3,040	3,470	171
SW01	0 - 3	12/4/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	686	88.6	686	775	1,090
SW02	0 - 3	12/4/2019	<0.00203	<0.00203	<0.00203	<0.00203	<0.00203	<50.2	95.5	<50.2	95.5	95.5	1,290
SW03	0 - 3.5	12/4/2019	<0.00199	0.00287	0.287	0.75	1.04	281	1,580	151	1,860	2,010	707
SW04	0 - 4	1/31/2020	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<49.9	1400	159	1,400	1,560	2,050
SW04	0 - 4	06/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<250	3460	461	3,460	3,920	5,650



**TABLE 1
SOIL ANALYTICAL RESULTS**

**GOLDEN 8 FEDERAL BATTERY 1
REMEDATION PERMIT NUMBER 2RP-5672
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (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)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
SW05	0 - 4	1/31/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	395
FS01	0.5 - 3	12/3/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	155	<50.2	155	155	567
FS02	3.5	12/4/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	155	<49.9	155	155	969
FS03	0.5	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	371	66.9	371	438	487

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
 NMOCDC - 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
 TEXT - indicates soil was removed during remediation activities



ATTACHMENT 1: REFERENCED WELL LOGS



New Mexico Office of the State Engineer

Water Right Summary



WR File Number: CP 00516 **Subbasin:** CP **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: PERRY R. BASS INC.

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
473794	72121	1973-06-04	PMT	LOG	CP 00516	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
CP 00516		Shallow	4	4	4	12 21S 28E	590901	3594984*	

An () after northing value indicates UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/31/20 2:45 PM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
Well Tag	POD Number	(quarters are smallest to largest)	Q64 Q16 Q4 Sec Tws Rng	X	Y	
	CP 00516		4 4 4 12 21S 28E	590901	3594984*	

Driller License: 46	Driller Company: ABBOTT BROTHERS COMPANY	
Driller Name: ABBOTT, MURRELL		
Drill Start Date: 05/30/1973	Drill Finish Date: 06/06/1973	Plug Date:
Log File Date: 06/14/1973	PCW Rev Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size: 7.00	Depth Well: 275 feet	Depth Water: 205 feet

Water Bearing Stratifications:	Top	Bottom	Description
	260	275	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	253	275

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/31/20 2:45 PM

POINT OF DIVERSION SUMMARY




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 Contact USGS
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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category: Geographic Area:

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

USGS 322850104014201 21S.29E.18.13320

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°28'50", Longitude 104°01'42" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 160 feet
 Land surface altitude: 3,289 feet above NAVD88.
 Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1948-12-30	2015-12-16	6
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
 Email questions about this site to [New Mexico Water Science Center Water-Data Inquiries](#)

[Questions about sites/data?](#)
[Feedback on this web site](#)

[Automated retrievals](#)

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: NWIS Site Information for USA: Site Inventory

URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=322850104014201)

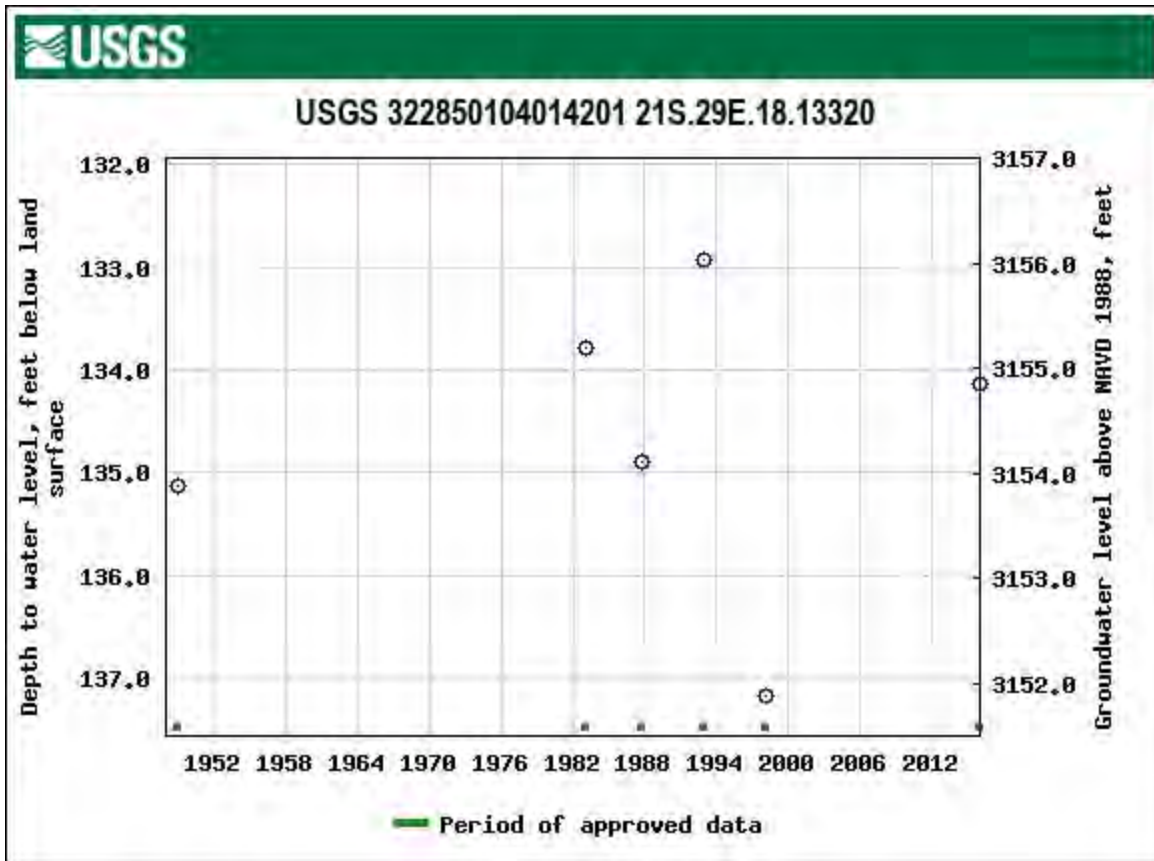
[agency_code=USGS&site_no=322850104014201](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=322850104014201)



Page Contact Information: [New Mexico Water Data Support Team](#)

Page Last Modified: 2020-08-31 16:46:30 EDT

0.28 0.28 caww01





New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: CP 00430 **Subbasin:** CP **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: PAN AMERICAN PETROLEUM COMPANY

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
get images	473385	72121	1989-12-20	EXP	EXP	CP 00430	T			3	
get images	473378	COWNF	1967-04-26	CHG	PRC	CP 00430	T			0	
get images	473326	72121	1967-04-07	PMT	LOG	CP 00430	T			3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
CP 00430		Shallow	1	4	1	03 21S 29E	596221	3597558*	

An () after northing value indicates UTM location was derived from PLSS - see Help

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8/31/20 2:47 PM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)				
Well Tag	POD Number	(quarters are smallest to largest)	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00430		1	4	1	03	21S	29E	596221	3597558*

Driller License:	46	Driller Company:	ABBOTT BROTHERS COMPANY		
Driller Name:	ABBOTT, MURRELL				
Drill Start Date:	04/04/1967	Drill Finish Date:	04/06/1967	Plug Date:	06/27/1967
Log File Date:	04/21/1967	PCW Rev Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:	7.00	Depth Well:	360 feet	Depth Water:	225 feet

Water Bearing Stratifications:	Top	Bottom	Description
	175	205	Other/Unknown
	345	350	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	310	360

*UTM location was derived from PLSS - see Help

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8/31/20 2:48 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)				
Well Tag	POD Number	(quarters are smallest to largest)	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00419		4	3	32	20S	30E	594250	3599003*	

Driller License:	46	Driller Company:	ABBOTT BROTHERS COMPANY		
Driller Name:	ABBOTT, MURRELL				
Drill Start Date:	11/18/1966	Drill Finish Date:	11/19/1966	Plug Date:	
Log File Date:	12/01/1966	PCW Rev Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:	7.00	Depth Well:	262 feet	Depth Water:	170 feet

Water Bearing Stratifications:	Top	Bottom	Description
	195	256	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	198	262

*UTM location was derived from PLSS - see Help

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USGS 323035103582201 21S.29E.03.14413

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°30'35", Longitude 103°58'22" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 360 feet
 Land surface altitude: 3,425 feet above NAVD88.
 Well completed in "Seven Rivers Formation" (313SVRV) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1983-01-18	1987-10-14	2
Revisions	Unavailable (site:0) (timeseries:0)		

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Title: NWIS Site Information for USA: Site Inventory

URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323035103582201)

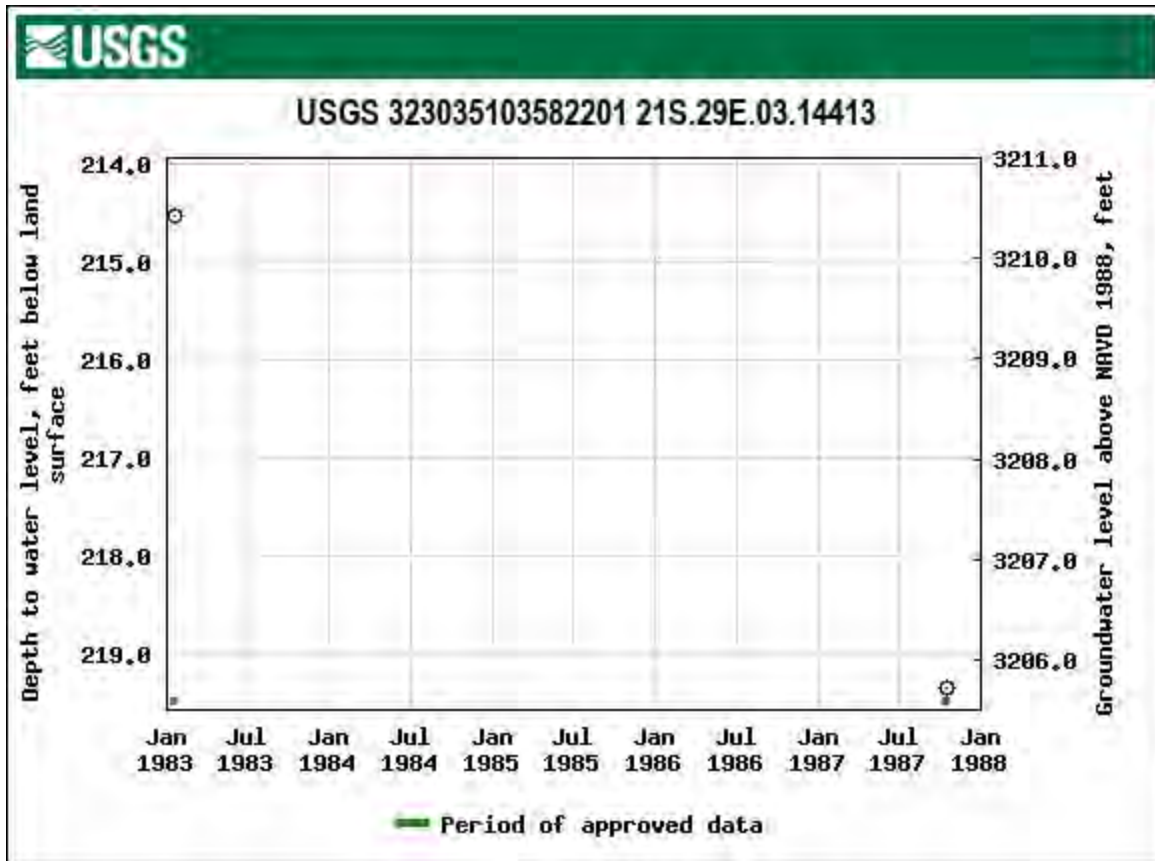
agency_code=USGS&site_no=323035103582201



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USGS 323117103593201 20S.30E.32.433342

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°31'17", Longitude 103°59'32" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 302 feet
 Land surface altitude: 3,393 feet above NAVD88.
 Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1968-05-27	1994-03-02	13
Revisions	Unavailable (site:0) (timeseries:0)		

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Title: NWIS Site Information for USA: Site Inventory

URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323117103593201)

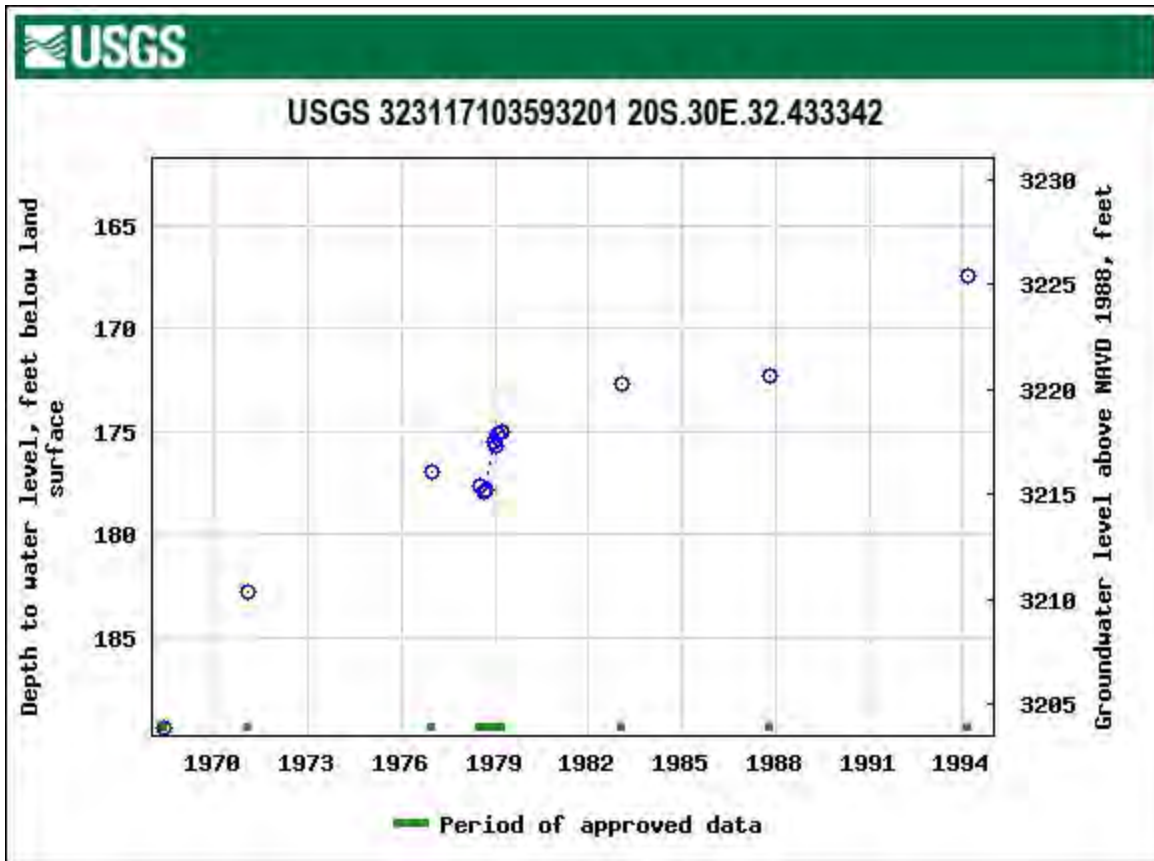
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USGS 323123103594801 20S.30E.32.341344

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°31'23", Longitude 103°59'48" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 2515 feet
 Land surface altitude: 3,379 feet above NAVD88.
 Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1967-09-19	1994-03-02	12
Revisions	Unavailable (site:0) (timeseries:0)		

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Title: NWIS Site Information for USA: Site Inventory

URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323123103594801)

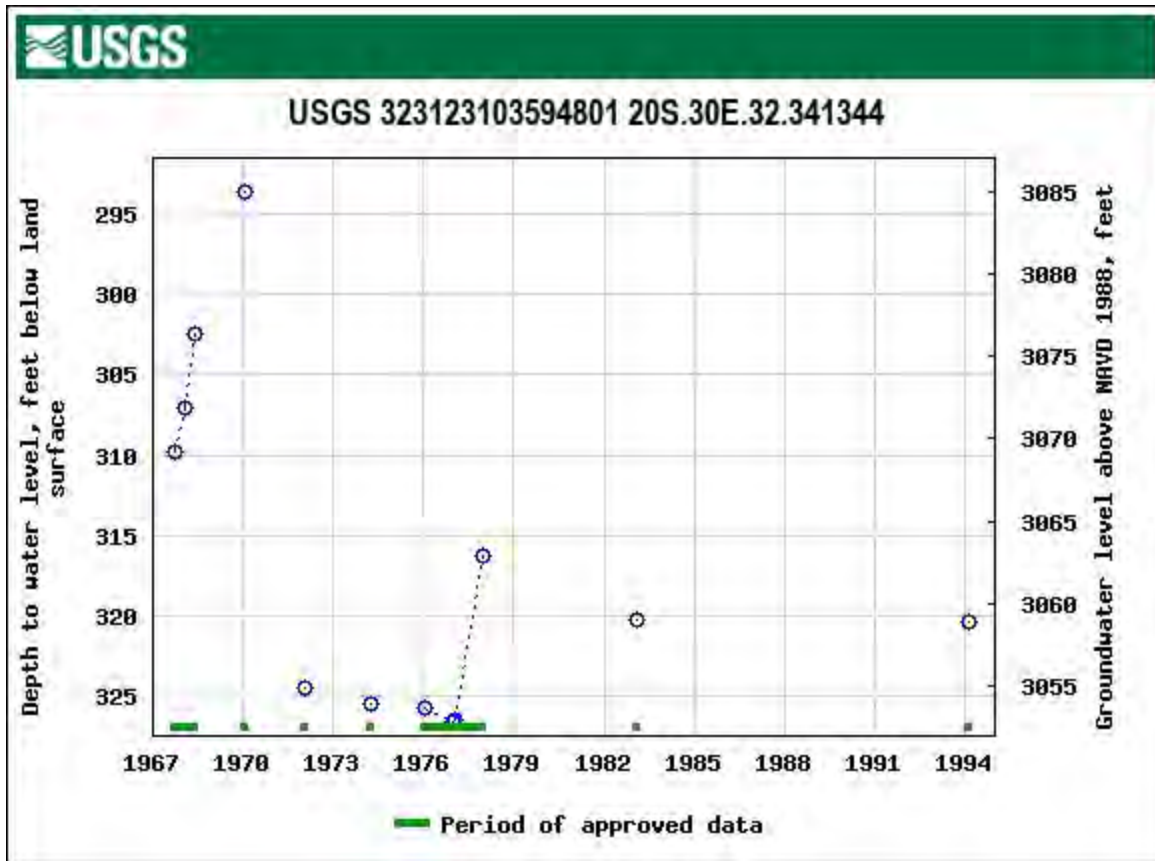
agency_code=USGS&site_no=323123103594801



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USGS 323122103594901 20S.30E.32.343123

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°31'22", Longitude 103°59'49" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 262 feet
 Land surface altitude: 3,392 feet above NAVD88.
 Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1970-09-03	1994-03-02	5
Revisions	Unavailable (site:0) (timeseries:0)		

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Title: NWIS Site Information for USA: Site Inventory

URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323122103594901)

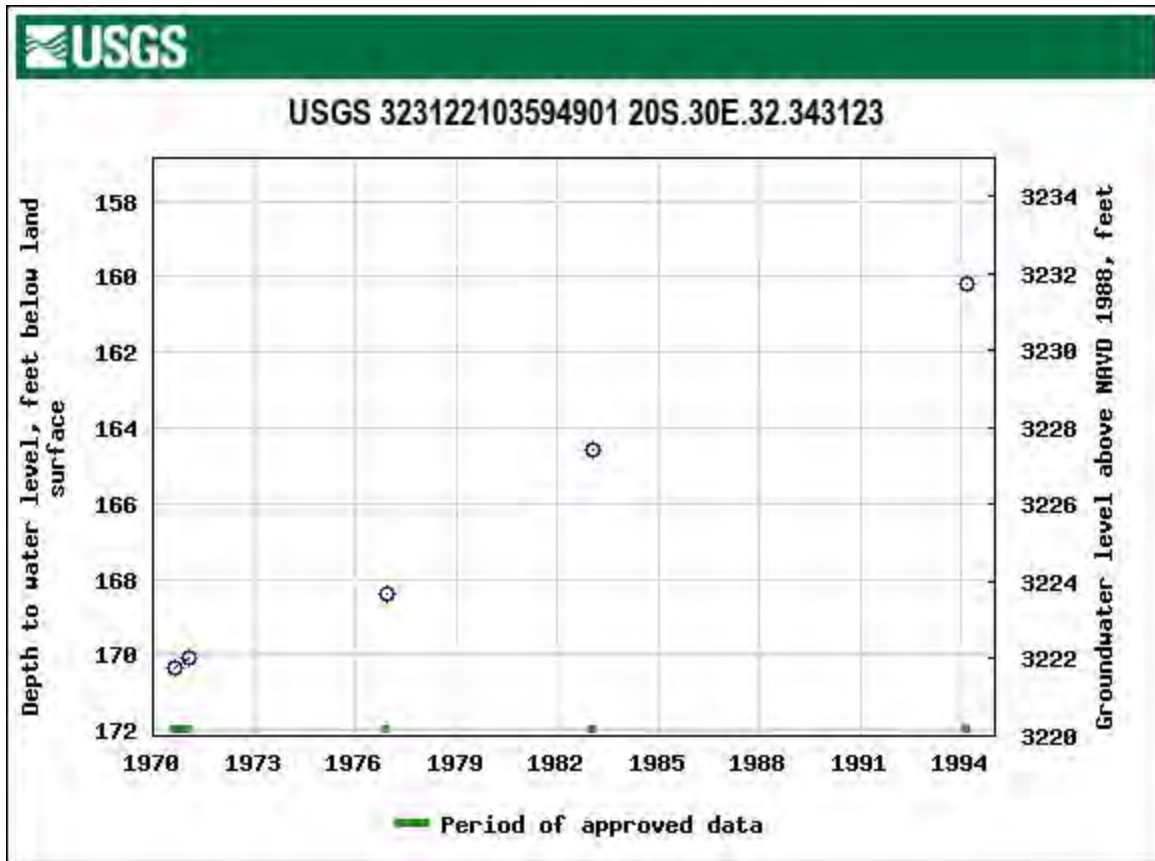
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ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: Northwest view of release staining between equipment.



Photograph 2: Northern view of surficial staining within release extent.



Photograph 3: Surficial staining between equipment.



Photograph 4: View of equipment after hand shoveling activities.

PHOTOGRAPHIC LOG



Photograph 5: Northern view of eastern excavation activities.



Photograph 6: Southern view of eastern excavation activities.



Photograph 7: View north of southern excavation activities.



Photograph 8: Surficial staining before hand shoveling activities.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



Analytical Report 637435

for

LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Fed Battery

012919219

25-SEP-19

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 (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



25-SEP-19

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

Reference: XENCO Report No(s): **637435**
Golden 8 Fed Battery
Project Address: Eddy County

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) 637435. 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. 637435 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
Project Assistant

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



Sample Cross Reference 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09-17-19 10:22	0.5 ft	637435-001
SS02	S	09-17-19 10:23	0.5 ft	637435-002
SS03	S	09-17-19 10:24	0.5 ft	637435-003
SS04	S	09-17-19 10:25	0.5 ft	637435-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Fed Battery

Project ID: 012919219
Work Order Number(s): 637435

Report Date: 25-SEP-19
Date Received: 09/19/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102203 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 637435-001.

Batch: LBA-3102246 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected;
Samples affected are: 637435-004.



Certificate of Analysis Summary 637435

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Fed Battery

Project Id: 012919219
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 25-SEP-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637435-001	637435-002	637435-003	637435-004		
	<i>Field Id:</i>	SS01	SS02	SS03	SS04		
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft	0.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Sep-17-19 10:22	Sep-17-19 10:23	Sep-17-19 10:24	Sep-17-19 10:25		
BTEX by EPA 8021B SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 11:30	Sep-20-19 11:30	Sep-20-19 11:30	Sep-20-19 11:30		
	<i>Analyzed:</i>	Sep-21-19 09:30	Sep-21-19 10:49	Sep-21-19 11:09	Sep-21-19 11:29		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	0.0306 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198		
	Toluene	5.79 D 0.503	0.00549 0.00200	<0.00198 0.00198	<0.00198 0.00198		
	Ethylbenzene	1.51 D 0.503	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198		
	m,p-Xylenes	6.39 D 1.01	<0.00400 0.00400	<0.00397 0.00397	<0.00396 0.00396		
	o-Xylene	2.57 D 0.503	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198		
	Total Xylenes	8.96 0.503	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198		
Total BTEX	16.3 0.00201	0.00549 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Chloride by EPA 300 SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 13:20	Sep-20-19 13:20	Sep-20-19 13:20	Sep-20-19 13:20		
	<i>Analyzed:</i>	Sep-20-19 16:31	Sep-20-19 16:39	Sep-20-19 17:01	Sep-20-19 17:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride	2230 24.8	1330 4.97	857 4.95	232 4.95			
TPH by SW8015 Mod SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 13:00	Sep-20-19 13:00	Sep-20-19 13:00	Sep-20-19 13:00		
	<i>Analyzed:</i>	Sep-21-19 00:08	Sep-21-19 00:50	Sep-21-19 01:11	Sep-21-19 01:32		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	83.1 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		
	Diesel Range Organics (DRO)	392 50.0	182 49.9	1230 50.0	233 49.8		
	Motor Oil Range Hydrocarbons (MRO)	61.4 50.0	<49.9 49.9	215 50.0	62.7 49.8		
	Total GRO-DRO	475 50.0	182 49.9	1230 50.0	233 49.8		
Total TPH	537 50.0	182 49.9	1450 50.0	296 49.8			

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS01	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-001	Date Collected: 09.17.19 10.22	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 09.20.19 13.20	Basis: Wet Weight
Seq Number: 3102109		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2230	24.8	mg/kg	09.20.19 16.31		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 09.20.19 13.00	Basis: Wet Weight
Seq Number: 3102246		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	83.1	50.0	mg/kg	09.21.19 00.08		1
Diesel Range Organics (DRO)	C10C28DRO	392	50.0	mg/kg	09.21.19 00.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	61.4	50.0	mg/kg	09.21.19 00.08		1
Total GRO-DRO	PHC628	475	50.0	mg/kg	09.21.19 00.08		1
Total TPH	PHC635	537	50.0	mg/kg	09.21.19 00.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	09.21.19 00.08	**
o-Terphenyl	84-15-1	138	%	70-135	09.21.19 00.08	**



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS01	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-001	Date Collected: 09.17.19 10.22	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 09.20.19 11.30	Basis: Wet Weight
Seq Number: 3102203		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0306	0.00201	mg/kg	09.21.19 09.30		1
Toluene	108-88-3	5.79	0.503	mg/kg	09.23.19 23.50	D	250
Ethylbenzene	100-41-4	1.51	0.503	mg/kg	09.23.19 23.50	D	250
m,p-Xylenes	179601-23-1	6.39	1.01	mg/kg	09.23.19 23.50	D	250
o-Xylene	95-47-6	2.57	0.503	mg/kg	09.23.19 23.50	D	250
Total Xylenes	1330-20-7	8.96	0.503	mg/kg	09.23.19 23.50		250
Total BTEX		16.3	0.00201	mg/kg	09.23.19 23.50		250
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	139	%	70-130	09.21.19 09.30	**	
4-Bromofluorobenzene	460-00-4	120	%	70-130	09.21.19 09.30		



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS02	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-002	Date Collected: 09.17.19 10.23	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 09.20.19 13.20	Basis: Wet Weight
Seq Number: 3102109		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1330	4.97	mg/kg	09.20.19 16.39		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 09.20.19 13.00	Basis: Wet Weight
Seq Number: 3102246		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.21.19 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	182	49.9	mg/kg	09.21.19 00.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.21.19 00.50	U	1
Total GRO-DRO	PHC628	182	49.9	mg/kg	09.21.19 00.50		1
Total TPH	PHC635	182	49.9	mg/kg	09.21.19 00.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	09.21.19 00.50	
o-Terphenyl	84-15-1	136	%	70-135	09.21.19 00.50	**



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS02	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-002	Date Collected: 09.17.19 10.23	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 09.20.19 11.30	Basis: Wet Weight
Seq Number: 3102203		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 10.49	U	1
Toluene	108-88-3	0.00549	0.00200	mg/kg	09.21.19 10.49		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 10.49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.21.19 10.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 10.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 10.49	U	1
Total BTEX		0.00549	0.00200	mg/kg	09.21.19 10.49		1
			% Recovery				
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		101	%	70-130	09.21.19 10.49	
1,4-Difluorobenzene	540-36-3		100	%	70-130	09.21.19 10.49	



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: SS03	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-003	Date Collected: 09.17.19 10.24	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 09.20.19 13.20	Basis: Wet Weight
Seq Number: 3102109		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	857	4.95	mg/kg	09.20.19 17.01		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 09.20.19 13.00	Basis: Wet Weight
Seq Number: 3102246		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 01.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	1230	50.0	mg/kg	09.21.19 01.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	215	50.0	mg/kg	09.21.19 01.11		1
Total GRO-DRO	PHC628	1230	50.0	mg/kg	09.21.19 01.11		1
Total TPH	PHC635	1450	50.0	mg/kg	09.21.19 01.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	135	%	70-135	09.21.19 01.11	
o-Terphenyl	84-15-1	146	%	70-135	09.21.19 01.11	**



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS03	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-003	Date Collected: 09.17.19 10.24	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 09.20.19 11.30	Basis: Wet Weight
Seq Number: 3102203		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.21.19 11.09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.21.19 11.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	09.21.19 11.09		
4-Bromofluorobenzene	460-00-4	76	%	70-130	09.21.19 11.09		



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS04	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-004	Date Collected: 09.17.19 10.25	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 09.20.19 13.20	Basis: Wet Weight
Seq Number: 3102109		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	232	4.95	mg/kg	09.20.19 17.09		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 09.20.19 13.00	Basis: Wet Weight
Seq Number: 3102246		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.21.19 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	233	49.8	mg/kg	09.21.19 01.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	62.7	49.8	mg/kg	09.21.19 01.32		1
Total GRO-DRO	PHC628	233	49.8	mg/kg	09.21.19 01.32		1
Total TPH	PHC635	296	49.8	mg/kg	09.21.19 01.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	21	%	70-135	09.21.19 01.32	**
o-Terphenyl	84-15-1	22	%	70-135	09.21.19 01.32	**



Certificate of Analytical Results 637435

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: SS04	Matrix: Soil	Date Received: 09.19.19 10.50
Lab Sample Id: 637435-004	Date Collected: 09.17.19 10.25	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 09.20.19 11.30	Basis: Wet Weight
Seq Number: 3102203		SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.21.19 11.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.21.19 11.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	09.21.19 11.29		
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.21.19 11.29		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: Chloride by EPA 300

Seq Number:	3102109	Matrix:	Solid	Prep Method:	E300P
MB Sample Id:	7686607-1-BLK	LCS Sample Id:	7686607-1-BKS	Date Prep:	09.20.19
		LCSD Sample Id:	7686607-1-BSD		

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	242	97	242	97	90-110	0	20	mg/kg	09.20.19 14:09	

Analytical Method: Chloride by EPA 300

Seq Number:	3102109	Matrix:	Soil	Prep Method:	E300P
Parent Sample Id:	637438-001	MS Sample Id:	637438-001 S	Date Prep:	09.20.19
		MSD Sample Id:	637438-001 SD		

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.3	250	275	96	275	96	90-110	0	20	mg/kg	09.20.19 16:16	

Analytical Method: Chloride by EPA 300

Seq Number:	3102109	Matrix:	Soil	Prep Method:	E300P
Parent Sample Id:	637510-001	MS Sample Id:	637510-001 S	Date Prep:	09.20.19
		MSD Sample Id:	637510-001 SD		

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	192	252	415	88	415	88	90-110	0	20	mg/kg	09.20.19 14:32	X

Analytical Method: TPH by SW8015 Mod

Seq Number:	3102246	Matrix:	Solid	Prep Method:	SW8015P
MB Sample Id:	7686628-1-BLK	LCS Sample Id:	7686628-1-BKS	Date Prep:	09.20.19
		LCSD Sample Id:	7686628-1-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	1070	107	1060	106	70-135	1	20	mg/kg	09.20.19 19:35	
Diesel Range Organics (DRO)	<15.0	1000	1050	105	1050	105	70-135	0	20	mg/kg	09.20.19 19:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		125		131		70-135	%	09.20.19 19:35
o-Terphenyl	120		126		125		70-135	%	09.20.19 19:35

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	



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3102246

Parent Sample Id: 637427-006

Matrix: Soil

MS Sample Id: 637427-006 S

Prep Method: SW8015P

Date Prep: 09.20.19

MSD Sample Id: 637427-006 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	1080	108	1080	108	70-135	0	20		mg/kg	09.20.19 20:38	
Diesel Range Organics (DRO)	89.8	999	1140	105	1130	104	70-135	1	20		mg/kg	09.20.19 20:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		128		70-135	%	09.20.19 20:38
o-Terphenyl	128		126		70-135	%	09.20.19 20:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3102203

MB Sample Id: 7686580-1-BLK

Matrix: Solid

LCS Sample Id: 7686580-1-BKS

Prep Method: SW5030B

Date Prep: 09.20.19

LCSD Sample Id: 7686580-1-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	0.0962	96	0.0917	92	70-130	5	35		mg/kg	09.21.19 04:29	
Toluene	<0.00200	0.100	0.0982	98	0.0938	94	70-130	5	35		mg/kg	09.21.19 04:29	
Ethylbenzene	<0.00200	0.100	0.109	109	0.103	103	70-130	6	35		mg/kg	09.21.19 04:29	
m,p-Xylenes	<0.00400	0.200	0.220	110	0.206	103	70-130	7	35		mg/kg	09.21.19 04:29	
o-Xylene	<0.00200	0.100	0.114	114	0.108	108	70-130	5	35		mg/kg	09.21.19 04:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		96		95		70-130	%	09.21.19 04:29
4-Bromofluorobenzene	105		120		115		70-130	%	09.21.19 04:29

Analytical Method: BTEX by EPA 8021B

Seq Number: 3102203

Parent Sample Id: 637427-001

Matrix: Soil

MS Sample Id: 637427-001 S

Prep Method: SW5030B

Date Prep: 09.20.19

MSD Sample Id: 637427-001 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	0.0998	0.0806	81	0.0858	86	70-130	6	35		mg/kg	09.21.19 05:10	
Toluene	<0.00200	0.0998	0.0785	79	0.0822	83	70-130	5	35		mg/kg	09.21.19 05:10	
Ethylbenzene	<0.00200	0.0998	0.0808	81	0.0834	84	70-130	3	35		mg/kg	09.21.19 05:10	
m,p-Xylenes	<0.00399	0.200	0.158	79	0.162	81	70-130	3	35		mg/kg	09.21.19 05:10	
o-Xylene	<0.00200	0.0998	0.0796	80	0.0819	82	70-130	3	35		mg/kg	09.21.19 05:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	09.21.19 05:10
4-Bromofluorobenzene	108		110		70-130	%	09.21.19 05:10

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

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

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

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

Chain of Custody

Work Order No: 637435

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 109-3334
Midland, TX (432-704-5440) El Paso, TX (915) 685-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

www.xenico.com Page _____ of _____



Project Manager: Dan Mair	Bill To (if address): Kyle Litrel
Company Name: LT Environmental, Inc., Permian office	Company Name: XTO Energy
Address: 3300 North A Street	Address:
City, State ZIP: Midland, TX 79705	City, State ZIP:
Phone: (432) 236-3849	Email: kmair@ltenv.com

Project Name: Golden 8 Fed Battery	Turn Around:
Project Number: 012919219	Routine: <input checked="" type="checkbox"/>
P.O. Number: Eddy County	Rush:
Sampler's Name: William Mathor	Due Date:

SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wet Ice: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Temperature (°C): 22 th	Thermometer ID: T-NM-007	
Received Intact: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Correction Factor: 0.2	
Cooler Custody Seals: Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Total Containers: 4	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
SS01	S	9/17/2019	10:22	0.5
SS02	S	9/17/2019	10:23	0.5
SS03	S	9/17/2019	10:24	0.5
SS04	S	9/17/2019	10:25	0.5

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 S/02 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 of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>
Date/Time: 9/17/19 10:50	Date/Time:



Inter-Office Shipment

IOS Number 48408

Date/Time: 09/19/19 14:07

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

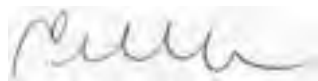
Lab# To: **Midland**

Air Bill No.: 776288782636


F-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637435-001	S	SS01	09/17/19 10:22	SW8015MOD_NM	TPH by SW8015 Mod	09/25/19	10/01/19	JKR	GRO-DRO PHCC10C28 PF	
637435-001	S	SS01	09/17/19 10:22	SW8021B	BTEX by EPA 8021B	09/25/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637435-001	S	SS01	09/17/19 10:22	E300_CL	Chloride by EPA 300	09/25/19	03/15/20	JKR	CL	
637435-002	S	SS02	09/17/19 10:23	SW8021B	BTEX by EPA 8021B	09/25/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637435-002	S	SS02	09/17/19 10:23	SW8015MOD_NM	TPH by SW8015 Mod	09/25/19	10/01/19	JKR	GRO-DRO PHCC10C28 PF	
637435-002	S	SS02	09/17/19 10:23	E300_CL	Chloride by EPA 300	09/25/19	03/15/20	JKR	CL	
637435-003	S	SS03	09/17/19 10:24	SW8021B	BTEX by EPA 8021B	09/25/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637435-003	S	SS03	09/17/19 10:24	SW8015MOD_NM	TPH by SW8015 Mod	09/25/19	10/01/19	JKR	GRO-DRO PHCC10C28 PF	
637435-003	S	SS03	09/17/19 10:24	E300_CL	Chloride by EPA 300	09/25/19	03/15/20	JKR	CL	
637435-004	S	SS04	09/17/19 10:25	SW8021B	BTEX by EPA 8021B	09/25/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637435-004	S	SS04	09/17/19 10:25	E300_CL	Chloride by EPA 300	09/25/19	03/15/20	JKR	CL	
637435-004	S	SS04	09/17/19 10:25	SW8015MOD_NM	TPH by SW8015 Mod	09/25/19	10/01/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Relinquished By: 
 Elizabeth McClellan

Date Relinquished: 09/19/2019

Received By: 
 Brianna Teel

Date Received: 09/20/2019 11:34

Cooler Temperature: 0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48408

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 09/19/2019 02:07 PM

Received By: Brianna Teel

Date Received: 09/20/2019 11:34 AM

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? .4
- #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
Brianna Teel

Date: 09/20/2019



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/19/2019 10:50:00 AM

Work Order #: 637435

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)?	Yes	Subbed to Midland
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 09/19/2019

Checklist reviewed by:

Jessica Kramer

Date: 09/23/2019

Analytical Report 644985

for

LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Fed Battery

012919219

05-DEC-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



05-DEC-19

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

Reference: XENCO Report No(s): **644985**
Golden 8 Fed Battery
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) 644985. 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. 644985 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'. The signature is written in a cursive, slightly slanted style.

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 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-03-19 11:30	0.5 - 3 ft	644985-001
PH01	S	12-03-19 13:37	0.5 ft	644985-002
PH01A	S	12-03-19 13:20	3 ft	644985-003
PH02	S	12-03-19 14:00	0.5 ft	644985-004
PH02A	S	12-03-19 14:02	1 ft	644985-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Fed Battery

Project ID: 012919219
Work Order Number(s): 644985

Report Date: 05-DEC-19
Date Received: 12/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109452 BTEX by EPA 8021B

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

Batch: LBA-3109453 TPH by SW8015 Mod

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

Samples affected are: 644985-001.



Certificate of Analysis Summary 644985

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Fed Battery

Project Id: 012919219
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-04-19 08:45 am
Report Date: 05-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644985-001	644985-002	644985-003	644985-004	644985-005	
	<i>Field Id:</i>	FS01	PH01	PH01A	PH02	PH02A	
	<i>Depth:</i>	0.5-3 ft	0.5- ft	3- ft	0.5- ft	1- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Dec-03-19 11:30	Dec-03-19 13:37	Dec-03-19 13:20	Dec-03-19 14:00	Dec-03-19 14:02	
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-04-19 10:00	Dec-04-19 10:00	Dec-04-19 10:00	Dec-04-19 10:00	Dec-04-19 10:00	
	<i>Analyzed:</i>	Dec-04-19 13:38	Dec-04-19 13:57	Dec-04-19 14:41	Dec-04-19 15:10	Dec-04-19 15:29	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	
Toluene		<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	
Ethylbenzene		<0.00201 0.00201	0.00843 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	
m,p-Xylenes		<0.00402 0.00402	0.0127 0.00395	<0.00395 0.00395	<0.00397 0.00397	<0.00399 0.00399	
o-Xylene		<0.00201 0.00201	0.00798 0.00198	<0.00198 0.00198	<0.00198 0.00198	0.00500 0.00200	
Total Xylenes		<0.00201 0.00201	0.0207 0.00198	<0.00198 0.00198	<0.00198 0.00198	0.00500 0.00200	
Total BTEX		<0.00201 0.00201	0.0291 0.00198	<0.00198 0.00198	<0.00198 0.00198	0.00500 0.00200	
Chloride by EPA 300	<i>Extracted:</i>	Dec-04-19 13:00	Dec-04-19 13:00	Dec-04-19 13:00	Dec-04-19 13:00	Dec-04-19 13:00	
	<i>Analyzed:</i>	Dec-04-19 17:26	Dec-04-19 17:32	Dec-04-19 17:38	Dec-04-19 17:44	Dec-04-19 17:51	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		567 9.94	1180 49.8	1880 49.9	1310 49.6	942 49.9	
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-04-19 13:30	Dec-04-19 13:30	Dec-04-19 13:30	Dec-04-19 13:30	Dec-04-19 13:30	
	<i>Analyzed:</i>	Dec-04-19 16:56	Dec-04-19 16:56	Dec-04-19 17:16	Dec-04-19 17:36	Dec-04-19 17:36	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<49.8 49.8	<50.3 50.3	<50.0 50.0	<50.3 50.3	
Diesel Range Organics (DRO)		155 50.2	1700 49.8	<50.3 50.3	1260 50.0	662 50.3	
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	232 49.8	<50.3 50.3	243 50.0	183 50.3	
Total GRO-DRO		155 50.2	1700 49.8	<50.3 50.3	1260 50.0	662 50.3	
Total TPH		155 50.2	1930 49.8	<50.3 50.3	1500 50.0	845 50.3	

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: FS01	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-001	Date Collected: 12.03.19 11.30	Sample Depth: 0.5 - 3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 13.00	Basis: Wet Weight
Seq Number: 3109466		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	567	9.94	mg/kg	12.04.19 17.26		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 12.04.19 13.30	Basis: Wet Weight
Seq Number: 3109453		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.04.19 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	155	50.2	mg/kg	12.04.19 16.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.04.19 16.56	U	1
Total GRO-DRO	PHC628	155	50.2	mg/kg	12.04.19 16.56		1
Total TPH	PHC635	155	50.2	mg/kg	12.04.19 16.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	12.04.19 16.56	
o-Terphenyl	84-15-1	136	%	70-135	12.04.19 16.56	**



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: FS01	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-001	Date Collected: 12.03.19 11.30	Sample Depth: 0.5 - 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109452		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.04.19 13.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.04.19 13.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	12.04.19 13.38		
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.04.19 13.38		



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **PH01** Matrix: Soil Date Received: 12.04.19 08.45
 Lab Sample Id: 644985-002 Date Collected: 12.03.19 13.37 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 13.00 Basis: Wet Weight
 Seq Number: 3109466

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1180	49.8	mg/kg	12.04.19 17.32		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 13.30 Basis: Wet Weight
 Seq Number: 3109453

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.04.19 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	1700	49.8	mg/kg	12.04.19 16.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	232	49.8	mg/kg	12.04.19 16.56		1
Total GRO-DRO	PHC628	1700	49.8	mg/kg	12.04.19 16.56		1
Total TPH	PHC635	1930	49.8	mg/kg	12.04.19 16.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.04.19 16.56	
o-Terphenyl	84-15-1	122	%	70-135	12.04.19 16.56	



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: PH01	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-002	Date Collected: 12.03.19 13.37	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109452		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 13.57	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 13.57	U	1
Ethylbenzene	100-41-4	0.00843	0.00198	mg/kg	12.04.19 13.57		1
m,p-Xylenes	179601-23-1	0.0127	0.00395	mg/kg	12.04.19 13.57		1
o-Xylene	95-47-6	0.00798	0.00198	mg/kg	12.04.19 13.57		1
Total Xylenes	1330-20-7	0.0207	0.00198	mg/kg	12.04.19 13.57		1
Total BTEX		0.0291	0.00198	mg/kg	12.04.19 13.57		1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.04.19 13.57		
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.04.19 13.57		



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **PH01A** Matrix: Soil Date Received: 12.04.19 08.45
 Lab Sample Id: 644985-003 Date Collected: 12.03.19 13.20 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 13.00 Basis: Wet Weight
 Seq Number: 3109466

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1880	49.9	mg/kg	12.04.19 17.38		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 13.30 Basis: Wet Weight
 Seq Number: 3109453

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.04.19 17.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.04.19 17.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.04.19 17.16	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.04.19 17.16	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.04.19 17.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	12.04.19 17.16	
o-Terphenyl	84-15-1	121	%	70-135	12.04.19 17.16	



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: PH01A	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-003	Date Collected: 12.03.19 13.20	Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109452		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.04.19 14.41	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 14.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.04.19 14.41		
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.04.19 14.41		



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **PH02** Matrix: Soil Date Received: 12.04.19 08.45
 Lab Sample Id: 644985-004 Date Collected: 12.03.19 14.00 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 13.00 Basis: Wet Weight
 Seq Number: 3109466

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1310	49.6	mg/kg	12.04.19 17.44		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 13.30 Basis: Wet Weight
 Seq Number: 3109453

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.04.19 17.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	1260	50.0	mg/kg	12.04.19 17.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	243	50.0	mg/kg	12.04.19 17.36		1
Total GRO-DRO	PHC628	1260	50.0	mg/kg	12.04.19 17.36		1
Total TPH	PHC635	1500	50.0	mg/kg	12.04.19 17.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	12.04.19 17.36	
o-Terphenyl	84-15-1	127	%	70-135	12.04.19 17.36	



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: PH02	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-004	Date Collected: 12.03.19 14.00	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109452		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.04.19 15.10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 15.10	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.04.19 15.10		
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.04.19 15.10		



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **PH02A** Matrix: Soil Date Received: 12.04.19 08.45
 Lab Sample Id: 644985-005 Date Collected: 12.03.19 14.02 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 13.00 Basis: Wet Weight
 Seq Number: 3109466

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	942	49.9	mg/kg	12.04.19 17.51		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 13.30 Basis: Wet Weight
 Seq Number: 3109453

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.04.19 17.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	662	50.3	mg/kg	12.04.19 17.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	183	50.3	mg/kg	12.04.19 17.36		1
Total GRO-DRO	PHC628	662	50.3	mg/kg	12.04.19 17.36		1
Total TPH	PHC635	845	50.3	mg/kg	12.04.19 17.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.04.19 17.36	
o-Terphenyl	84-15-1	119	%	70-135	12.04.19 17.36	



Certificate of Analytical Results 644985

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: PH02A	Matrix: Soil	Date Received: 12.04.19 08.45
Lab Sample Id: 644985-005	Date Collected: 12.03.19 14.02	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109452		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 15.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 15.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 15.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.04.19 15.29	U	1
o-Xylene	95-47-6	0.00500	0.00200	mg/kg	12.04.19 15.29		1
Total Xylenes	1330-20-7	0.00500	0.00200	mg/kg	12.04.19 15.29		1
Total BTEX		0.00500	0.00200	mg/kg	12.04.19 15.29		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.04.19 15.29		
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.04.19 15.29		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3109466 Matrix: Solid Prep Method: E300P
 MB Sample Id: 7691688-1-BLK LCS Sample Id: 7691688-1-BKS Date Prep: 12.04.19
 LCSD Sample Id: 7691688-1-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	262	105	266	106	90-110	2	20	mg/kg	12.04.19 15:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3109466 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 644979-001 MS Sample Id: 644979-001 S Date Prep: 12.04.19
 MSD Sample Id: 644979-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	202	219	103	217	103	90-110	1	20	mg/kg	12.04.19 16:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3109466 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 644985-005 MS Sample Id: 644985-005 S Date Prep: 12.04.19
 MSD Sample Id: 644985-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	942	198	1140	100	1160	109	90-110	2	20	mg/kg	12.04.19 17:57	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109453 Matrix: Solid Prep Method: SW8015P
 MB Sample Id: 7691711-1-BLK LCS Sample Id: 7691711-1-BKS Date Prep: 12.04.19
 LCSD Sample Id: 7691711-1-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	914	91	940	94	70-135	3	35	mg/kg	12.04.19 15:37	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1140	114	70-135	9	35	mg/kg	12.04.19 15:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		124		130		70-135	%	12.04.19 15:37
o-Terphenyl	108		123		128		70-135	%	12.04.19 15:37

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109453 Matrix: Solid Prep Method: SW8015P
 MB Sample Id: 7691711-1-BLK Date Prep: 12.04.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.04.19 15:17	

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 MS = Matrix Spike
 A = Parent Result B = Spike Added
 C = MS/LCS Result D = MSD/LCSD % Rec
 E = MSD/LCSD Result



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109453

Parent Sample Id: 644983-001

Matrix: Soil

MS Sample Id: 644983-001 S

Prep Method: SW8015P

Date Prep: 12.04.19

MSD Sample Id: 644983-001 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	902	90	916	91	70-135	2	35	mg/kg	12.04.19 15:57	
Diesel Range Organics (DRO)	62.4	1000	1090	103	1080	101	70-135	1	35	mg/kg	12.04.19 15:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		126		70-135	%	12.04.19 15:57
o-Terphenyl	132		126		70-135	%	12.04.19 15:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109452

MB Sample Id: 7691694-1-BLK

Matrix: Solid

LCS Sample Id: 7691694-1-BKS

Prep Method: SW5030B

Date Prep: 12.04.19

LCSD Sample Id: 7691694-1-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	0.0892	89	0.0958	96	70-130	7	35	mg/kg	12.04.19 10:39	
Toluene	<0.00200	0.100	0.0913	91	0.0974	97	70-130	6	35	mg/kg	12.04.19 10:39	
Ethylbenzene	<0.00200	0.100	0.0913	91	0.0970	97	71-129	6	35	mg/kg	12.04.19 10:39	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.205	103	70-135	6	35	mg/kg	12.04.19 10:39	
o-Xylene	<0.00200	0.100	0.0970	97	0.103	103	71-133	6	35	mg/kg	12.04.19 10:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		102		70-130	%	12.04.19 10:39
4-Bromofluorobenzene	109		115		115		70-130	%	12.04.19 10:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109452

Parent Sample Id: 644979-001

Matrix: Soil

MS Sample Id: 644979-001 S

Prep Method: SW5030B

Date Prep: 12.04.19

MSD Sample Id: 644979-001 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	0.0903	90	0.0737	74	70-130	20	35	mg/kg	12.04.19 11:18	
Toluene	<0.00200	0.100	0.0910	91	0.0740	74	70-130	21	35	mg/kg	12.04.19 11:18	
Ethylbenzene	<0.00200	0.100	0.0904	90	0.0720	72	71-129	23	35	mg/kg	12.04.19 11:18	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.154	77	70-135	22	35	mg/kg	12.04.19 11:18	
o-Xylene	<0.00200	0.100	0.0963	96	0.0760	76	71-133	24	35	mg/kg	12.04.19 11:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		105		70-130	%	12.04.19 11:18
4-Bromofluorobenzene	119		118		70-130	%	12.04.19 11:18

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) 802-0900, San Antonio, TX (210) 555-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 565-3443, Lubbock, TX (806) 794-1206
 Hazlet, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 265-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (904) 756-0747, Dairv Beach, FL (904) 699-0701
 Atlanta, GA (770) 449-8800

Work Order No: 64465

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to (if different):	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	kmohr@xencolab.com, dmohr@xencolab.com

Work Order Comments	Program: UST/PT <input type="checkbox"/> PRP <input type="checkbox"/> Brownfield <input type="checkbox"/> RRR <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project	Reporting Level <input type="checkbox"/> Level <input type="checkbox"/> PSTD <input type="checkbox"/> TRR <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other <input type="checkbox"/>

Project Name:	Golden & Ford Pottery	Turn Around	Routine: <input type="checkbox"/>
Project Number:	012919219	Rush: 24 hrs	
PO #:	ZRP-5672	Due Date:	
Sampler's Name:	Falma Smith	Temperature (°C):	1-2
Received label:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	THM001
Cooler Custody Seal:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet for:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sanitary Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Number of Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	TPH (EPA 8015)	BTEX (EPA 9-9021)	Chloride (EPA 305.0)
FSO1	S	12/3/19	1130	0.5-3'	X	X	X
PHO1	S	12/3/19	1817	0.5'	X	X	X
PHO1A	S	12/3/19	1320	3'	X	X	X
PHO2	S	12/3/19	1400	0.5'	X	X	X
PHO2A	S	12/3/19	1402	1'	X	X	X

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A maximum charge of \$15.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	12-4-2019	<i>[Signature]</i>	<i>[Signature]</i>	12/4/19 08:45



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/04/2019 08:45:00 AM

Work Order #: 644985

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : TNM 07

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	No
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	Yes
#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
Martha Castro

Date: 12/04/2019

Checklist reviewed by: Jessica Kramer
Jessica Kramer

Date: 12/05/2019

Analytical Report 645129

for
LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Fed Battery

012919219

06-DEC-19

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)



06-DEC-19

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

Reference: XENCO Report No(s): **645129**
Golden 8 Fed Battery
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) 645129. 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. 645129 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
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 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	12-04-19 08:35	0 - 3 ft	645129-001
SW02	S	12-04-19 10:15	0 - 3 ft	645129-002
BH01	S	12-04-19 10:34	0.5 ft	645129-003
BH01A	S	12-04-19 10:39	2 ft	645129-004
BH02	S	12-04-19 12:09	0.5 ft	645129-005
BH02A	S	12-04-19 12:11	1 ft	645129-006
FS02	S	12-04-19 12:27	3.5 ft	645129-007
SW03	S	12-04-19 12:34	0 - 3.5 ft	645129-008
PH03	S	12-04-19 13:21	2 ft	645129-009
PH03A	S	12-04-19 13:22	3 ft	645129-010



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Fed Battery

Project ID: 012919219
Work Order Number(s): 645129

Report Date: 06-DEC-19
Date Received: 12/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109459 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3109484 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 645106-003 S.

Batch: LBA-3109529 BTEX by EPA 8021B
Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 645129-001, -007, -008, -009, -010
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 645129-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 645129-001, -007, -008, -009, -010.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 645129

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Fed Battery

Project Id: 012919219
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-04-19 04:42 pm
Report Date: 06-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	645129-001	645129-002	645129-003	645129-004	645129-005	645129-006
	<i>Field Id:</i>	SW01	SW02	BH01	BH01A	BH02	BH02A
	<i>Depth:</i>	0-3 ft	0-3 ft	0.5- ft	2- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-04-19 08:35	Dec-04-19 10:15	Dec-04-19 10:34	Dec-04-19 10:39	Dec-04-19 12:09	Dec-04-19 12:11
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-04-19 22:00	** ** ** *	** ** ** *	** ** ** *	** ** ** *	** ** ** *
	<i>Analyzed:</i>	Dec-05-19 08:42	Dec-05-19 04:20	Dec-05-19 04:40	Dec-05-19 04:59	Dec-05-19 05:18	Dec-05-19 05:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
Toluene	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
Ethylbenzene	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
m,p-Xylenes	<0.00399 0.00399	<0.00406 0.00406	<0.00401 0.00401	<0.00402 0.00402	<0.00403 0.00403	<0.00403 0.00403	
o-Xylene	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
Total Xylenes	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
Total BTEX	<0.00200 0.00200	<0.00203 0.00203	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	
Chloride by EPA 300	<i>Extracted:</i>	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58
	<i>Analyzed:</i>	Dec-05-19 10:11	Dec-05-19 10:17	Dec-05-19 10:34	Dec-05-19 11:23	Dec-05-19 11:29	Dec-05-19 11:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride	1090 49.7	1290 50.4	310 10.0	1830 100	600 9.98	729 49.6	
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00
	<i>Analyzed:</i>	Dec-05-19 06:44	Dec-05-19 06:44	Dec-05-19 07:23	Dec-05-19 07:23	Dec-05-19 07:43	Dec-05-19 08:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.3 50.3	<50.2 50.2	
Diesel Range Organics (DRO)	686 50.0	95.5 50.2	581 50.0	<49.9 49.9	<50.3 50.3	132 50.2	
Motor Oil Range Hydrocarbons (MRO)	88.6 50.0	<50.2 50.2	115 50.0	<49.9 49.9	<50.3 50.3	<50.2 50.2	
Total GRO-DRO	686 50.0	95.5 50.2	581 50.0	<49.9 49.9	<50.3 50.3	132 50.2	
Total TPH	775 50.0	95.5 50.2	696 50.0	<49.9 49.9	<50.3 50.3	132 50.2	

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 645129

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Fed Battery

Project Id: 012919219
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Dec-04-19 04:42 pm
Report Date: 06-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	645129-007	645129-008	645129-009	645129-010		
	<i>Field Id:</i>	FS02	SW03	PH03	PH03A		
	<i>Depth:</i>	3.5- ft	0-3.5 ft	2- ft	3- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-04-19 12:27	Dec-04-19 12:34	Dec-04-19 13:21	Dec-04-19 13:22		
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-04-19 22:00	Dec-04-19 22:00	Dec-04-19 22:00	Dec-04-19 22:00		
	<i>Analyzed:</i>	Dec-05-19 09:39	Dec-05-19 09:58	Dec-05-19 09:04	Dec-05-19 09:20		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200		
	Toluene	<0.00202 0.00202	0.00287 0.00199	<0.00201 0.00201	<0.00200 0.00200		
	Ethylbenzene	<0.00202 0.00202	0.287 0.199	<0.00201 0.00201	<0.00200 0.00200		
	m,p-Xylenes	<0.00404 0.00404	0.750 0.398	<0.00402 0.00402	<0.00401 0.00401		
	o-Xylene	<0.00202 0.00202	<0.199 0.199	0.0134 0.00201	<0.00200 0.00200		
Total Xylenes	<0.00202 0.00202	0.750 0.199	0.0134 0.00201	<0.00200 0.00200			
Total BTEX	<0.00202 0.00202	1.04 0.00199	0.0134 0.00201	<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58	Dec-04-19 20:58		
	<i>Analyzed:</i>	Dec-05-19 11:40	Dec-05-19 11:47	Dec-05-19 11:52	Dec-05-19 11:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		969 50.4	707 49.9	3020 99.4	1560 50.0		
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00	Dec-04-19 17:00		
	<i>Analyzed:</i>	Dec-05-19 08:23	Dec-05-19 08:43	Dec-05-19 08:43	Dec-05-19 09:02		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9	281 50.1	<50.3 50.3	<50.2 50.2		
	Diesel Range Organics (DRO)	155 49.9	1580 50.1	<50.3 50.3	<50.2 50.2		
	Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9	151 50.1	<50.3 50.3	<50.2 50.2		
	Total GRO-DRO	155 49.9	1860 50.1	<50.3 50.3	<50.2 50.2		
Total TPH	155 49.9	2010 50.1	<50.3 50.3	<50.2 50.2			

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **SW01** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-001 Date Collected: 12.04.19 08.35 Sample Depth: 0 - 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1090	49.7	mg/kg	12.05.19 10.11		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.05.19 06.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	686	50.0	mg/kg	12.05.19 06.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	88.6	50.0	mg/kg	12.05.19 06.44		1
Total GRO-DRO	PHC628	686	50.0	mg/kg	12.05.19 06.44		1
Total TPH	PHC635	775	50.0	mg/kg	12.05.19 06.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.05.19 06.44	
o-Terphenyl	84-15-1	117	%	70-135	12.05.19 06.44	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: SW01	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-001	Date Collected: 12.04.19 08.35	Sample Depth: 0 - 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 22.00	Basis: Wet Weight
Seq Number: 3109529		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.05.19 08.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.05.19 08.42	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92		%	70-130	12.05.19 08.42	
4-Bromofluorobenzene	460-00-4	110		%	70-130	12.05.19 08.42	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **SW02** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-002 Date Collected: 12.04.19 10.15 Sample Depth: 0 - 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1290	50.4	mg/kg	12.05.19 10.17		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.05.19 06.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	95.5	50.2	mg/kg	12.05.19 06.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.05.19 06.44	U	1
Total GRO-DRO	PHC628	95.5	50.2	mg/kg	12.05.19 06.44		1
Total TPH	PHC635	95.5	50.2	mg/kg	12.05.19 06.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.05.19 06.44	
o-Terphenyl	84-15-1	124	%	70-135	12.05.19 06.44	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: SW02	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-002	Date Collected: 12.04.19 10.15	Sample Depth: 0 - 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 16.32	Basis: Wet Weight
Seq Number: 3109459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
Toluene	108-88-3	<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
Ethylbenzene	100-41-4	<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
m,p-Xylenes	179601-23-1	<0.00406	0.00406	mg/kg	12.05.19 04.20	U	1
o-Xylene	95-47-6	<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
Total Xylenes	1330-20-7	<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
Total BTEX		<0.00203	0.00203	mg/kg	12.05.19 04.20	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118		%	70-130	12.05.19 04.20	
1,4-Difluorobenzene	540-36-3	102		%	70-130	12.05.19 04.20	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **BH01** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-003 Date Collected: 12.04.19 10.34 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	310	10.0	mg/kg	12.05.19 10.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.05.19 07.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	581	50.0	mg/kg	12.05.19 07.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	115	50.0	mg/kg	12.05.19 07.23		1
Total GRO-DRO	PHC628	581	50.0	mg/kg	12.05.19 07.23		1
Total TPH	PHC635	696	50.0	mg/kg	12.05.19 07.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	12.05.19 07.23	
o-Terphenyl	84-15-1	125	%	70-135	12.05.19 07.23	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: BH01	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-003	Date Collected: 12.04.19 10.34	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 16.32	Basis: Wet Weight
Seq Number: 3109459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.05.19 04.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.05.19 04.40	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	12.05.19 04.40		
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.05.19 04.40		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **BH01A** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-004 Date Collected: 12.04.19 10.39 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1830	100	mg/kg	12.05.19 11.23		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.05.19 07.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.05.19 07.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.05.19 07.23	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.05.19 07.23	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.05.19 07.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.05.19 07.23	
o-Terphenyl	84-15-1	123	%	70-135	12.05.19 07.23	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: BH01A	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-004	Date Collected: 12.04.19 10.39	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 16.32	Basis: Wet Weight
Seq Number: 3109459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.05.19 04.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.05.19 04.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.05.19 04.59		
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.05.19 04.59		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **BH02** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-005 Date Collected: 12.04.19 12.09 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	600	9.98	mg/kg	12.05.19 11.29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.05.19 07.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.05.19 07.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.05.19 07.43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.05.19 07.43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.05.19 07.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.05.19 07.43	
o-Terphenyl	84-15-1	120	%	70-135	12.05.19 07.43	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: BH02	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-005	Date Collected: 12.04.19 12.09	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 16.32	Basis: Wet Weight
Seq Number: 3109459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.05.19 05.18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.05.19 05.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	12.05.19 05.18		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.05.19 05.18		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **BH02A** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-006 Date Collected: 12.04.19 12.11 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	729	49.6	mg/kg	12.05.19 11.35		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.05.19 08.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	132	50.2	mg/kg	12.05.19 08.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.05.19 08.03	U	1
Total GRO-DRO	PHC628	132	50.2	mg/kg	12.05.19 08.03		1
Total TPH	PHC635	132	50.2	mg/kg	12.05.19 08.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.05.19 08.03	
o-Terphenyl	84-15-1	124	%	70-135	12.05.19 08.03	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: BH02A	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-006	Date Collected: 12.04.19 12.11	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 16.32	Basis: Wet Weight
Seq Number: 3109459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.05.19 05.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.05.19 05.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.05.19 05.37		
4-Bromofluorobenzene	460-00-4	119	%	70-130	12.05.19 05.37		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **FS02** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-007 Date Collected: 12.04.19 12.27 Sample Depth: 3.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	969	50.4	mg/kg	12.05.19 11.40		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.05.19 08.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	155	49.9	mg/kg	12.05.19 08.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.05.19 08.23	U	1
Total GRO-DRO	PHC628	155	49.9	mg/kg	12.05.19 08.23		1
Total TPH	PHC635	155	49.9	mg/kg	12.05.19 08.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.05.19 08.23	
o-Terphenyl	84-15-1	121	%	70-135	12.05.19 08.23	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: FS02	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-007	Date Collected: 12.04.19 12.27	Sample Depth: 3.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 22.00	Basis: Wet Weight
Seq Number: 3109529		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.05.19 09.39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.05.19 09.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	12.05.19 09.39		
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.05.19 09.39		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **SW03** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-008 Date Collected: 12.04.19 12.34 Sample Depth: 0 - 3.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	707	49.9	mg/kg	12.05.19 11.47		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	281	50.1	mg/kg	12.05.19 08.43		1
Diesel Range Organics (DRO)	C10C28DRO	1580	50.1	mg/kg	12.05.19 08.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	151	50.1	mg/kg	12.05.19 08.43		1
Total GRO-DRO	PHC628	1860	50.1	mg/kg	12.05.19 08.43		1
Total TPH	PHC635	2010	50.1	mg/kg	12.05.19 08.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	12.05.19 08.43	
o-Terphenyl	84-15-1	120	%	70-135	12.05.19 08.43	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **SW03** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-008 Date Collected: 12.04.19 12.34 Sample Depth: 0 - 3.5 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 22.00 Basis: Wet Weight
 Seq Number: 3109529

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.05.19 14.30	U	1
Toluene	108-88-3	0.00287	0.00199	mg/kg	12.05.19 14.30		1
Ethylbenzene	100-41-4	0.287	0.199	mg/kg	12.05.19 09.58		100
m,p-Xylenes	179601-23-1	0.750	0.398	mg/kg	12.05.19 09.58		100
o-Xylene	95-47-6	<0.199	0.199	mg/kg	12.05.19 09.58	U	100
Total Xylenes	1330-20-7	0.750	0.199	mg/kg	12.05.19 09.58		100
Total BTEX		1.04	0.00199	mg/kg	12.05.19 14.30		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.05.19 09.58		
4-Bromofluorobenzene	460-00-4	124	%	70-130	12.05.19 09.58		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: **PH03** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-009 Date Collected: 12.04.19 13.21 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3020	99.4	mg/kg	12.05.19 11.52		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.05.19 08.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.05.19 08.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.05.19 08.43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.05.19 08.43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.05.19 08.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.05.19 08.43	
o-Terphenyl	84-15-1	118	%	70-135	12.05.19 08.43	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: PH03	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-009	Date Collected: 12.04.19 13.21	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 22.00	Basis: Wet Weight
Seq Number: 3109529		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.05.19 09.04	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.05.19 09.04	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.05.19 09.04	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.05.19 09.04	U	1
o-Xylene	95-47-6	0.0134	0.00201	mg/kg	12.05.19 09.04		1
Total Xylenes	1330-20-7	0.0134	0.00201	mg/kg	12.05.19 09.04		1
Total BTEX		0.0134	0.00201	mg/kg	12.05.19 09.04		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.05.19 09.04		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.05.19 09.04		



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **PH03A** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645129-010 Date Collected: 12.04.19 13.22 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.04.19 20.58 Basis: Wet Weight
 Seq Number: 3109487

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1560	50.0	mg/kg	12.05.19 11.58		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.05.19 09.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.05.19 09.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.05.19 09.02	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.05.19 09.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.05.19 09.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.05.19 09.02	
o-Terphenyl	84-15-1	114	%	70-135	12.05.19 09.02	



Certificate of Analytical Results 645129

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id: PH03A	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645129-010	Date Collected: 12.04.19 13.22	Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 22.00	Basis: Wet Weight
Seq Number: 3109529		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.05.19 09.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.05.19 09.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.05.19 09.20		
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.05.19 09.20		



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3109487

MB Sample Id: 7691691-1-BLK

Matrix: Solid

LCS Sample Id: 7691691-1-BKS

Prep Method: E300P

Date Prep: 12.04.19

LCSD Sample Id: 7691691-1-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	264	106	264	106	90-110	0	20	mg/kg	12.05.19 08:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3109487

Parent Sample Id: 645024-001

Matrix: Soil

MS Sample Id: 645024-001 S

Prep Method: E300P

Date Prep: 12.04.19

MSD Sample Id: 645024-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	753	202	960	102	959	102	90-110	0	20	mg/kg	12.05.19 08:56	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484

MB Sample Id: 7691735-1-BLK

Matrix: Solid

LCS Sample Id: 7691735-1-BKS

Prep Method: SW8015P

Date Prep: 12.04.19

LCSD Sample Id: 7691735-1-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	933	93	964	96	70-135	3	35	mg/kg	12.05.19 05:25	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1200	120	70-135	11	35	mg/kg	12.05.19 05:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		127		133		70-135	%	12.05.19 05:25
o-Terphenyl	112		128		132		70-135	%	12.05.19 05:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484

Matrix: Solid

MB Sample Id: 7691735-1-BLK

Prep Method: SW8015P

Date Prep: 12.04.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.05.19 05:05	

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

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

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

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



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484

Parent Sample Id: 645106-003

Matrix: Soil

MS Sample Id: 645106-003 S

Prep Method: SW8015P

Date Prep: 12.04.19

MSD Sample Id: 645106-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	987	99	929	93	70-135	6	35	mg/kg	12.05.19 05:45	
Diesel Range Organics (DRO)	<50.2	1000	1220	122	1080	108	70-135	12	35	mg/kg	12.05.19 05:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	136	**	130		70-135	%	12.05.19 05:45
o-Terphenyl	147	**	130		70-135	%	12.05.19 05:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109459

MB Sample Id: 7691696-1-BLK

Matrix: Solid

LCS Sample Id: 7691696-1-BKS

Prep Method: SW5030B

Date Prep: 12.04.19

LCSD Sample Id: 7691696-1-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	0.0906	91	0.0926	93	70-130	2	35	mg/kg	12.04.19 21:07	
Toluene	<0.00200	0.100	0.0925	93	0.0955	96	70-130	3	35	mg/kg	12.04.19 21:07	
Ethylbenzene	<0.00200	0.100	0.0917	92	0.0949	95	71-129	3	35	mg/kg	12.04.19 21:07	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.202	101	70-135	4	35	mg/kg	12.04.19 21:07	
o-Xylene	<0.00200	0.100	0.0988	99	0.102	102	71-133	3	35	mg/kg	12.04.19 21:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		102		70-130	%	12.04.19 21:07
4-Bromofluorobenzene	108		114		115		70-130	%	12.04.19 21:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109529

MB Sample Id: 7691697-1-BLK

Matrix: Solid

LCS Sample Id: 7691697-1-BKS

Prep Method: SW5030B

Date Prep: 12.04.19

LCSD Sample Id: 7691697-1-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	0.0855	86	0.0900	90	70-130	5	35	mg/kg	12.05.19 07:00	
Toluene	<0.00200	0.100	0.0887	89	0.0938	94	70-130	6	35	mg/kg	12.05.19 07:00	
Ethylbenzene	<0.00200	0.100	0.0876	88	0.0930	93	71-129	6	35	mg/kg	12.05.19 07:00	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.199	100	70-135	7	35	mg/kg	12.05.19 07:00	
o-Xylene	<0.00200	0.100	0.0960	96	0.102	102	71-133	6	35	mg/kg	12.05.19 07:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		100		70-130	%	12.05.19 07:00
4-Bromofluorobenzene	108		119		116		70-130	%	12.05.19 07:00

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.
Golden 8 Fed Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109459

Parent Sample Id: 644999-001

Matrix: Soil

MS Sample Id: 644999-001 S

Prep Method: SW5030B

Date Prep: 12.04.19

MSD Sample Id: 644999-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0815	82	0.0818	81	70-130	0	35	mg/kg	12.04.19 21:45	
Toluene	<0.00201	0.100	0.0830	83	0.0830	82	70-130	0	35	mg/kg	12.04.19 21:45	
Ethylbenzene	<0.00201	0.100	0.0817	82	0.0812	80	71-129	1	35	mg/kg	12.04.19 21:45	
m,p-Xylenes	<0.00402	0.201	0.173	86	0.171	85	70-135	1	35	mg/kg	12.04.19 21:45	
o-Xylene	<0.00201	0.100	0.0875	88	0.0871	86	71-133	0	35	mg/kg	12.04.19 21:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	12.04.19 21:45
4-Bromofluorobenzene	120		118		70-130	%	12.04.19 21:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109529

Parent Sample Id: 645129-001

Matrix: Soil

MS Sample Id: 645129-001 S

Prep Method: SW5030B

Date Prep: 12.04.19

MSD Sample Id: 645129-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0662	67	0.0527	53	70-130	23	35	mg/kg	12.05.19 07:38	X
Toluene	<0.00199	0.0994	0.0543	55	0.0352	35	70-130	43	35	mg/kg	12.05.19 07:38	XF
Ethylbenzene	<0.00199	0.0994	0.0380	38	0.0214	21	71-129	56	35	mg/kg	12.05.19 07:38	XF
m,p-Xylenes	<0.00398	0.199	0.0773	39	0.0412	21	70-135	61	35	mg/kg	12.05.19 07:38	XF
o-Xylene	<0.00199	0.0994	0.0396	40	0.0234	23	71-133	51	35	mg/kg	12.05.19 07:38	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	12.05.19 07:38
4-Bromofluorobenzene	122		123		70-130	%	12.05.19 07:38

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) 242-4200, Dallas, TX (214) 922-0200, San Antonio, TX (210) 650-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 791-1296
 Hobbs, NM (575) 392-7350, Carlsbad, NM (505) 888-3199, Phoenix, AZ (480) 305-0300
 Tampa, FL (813) 620-3000, Tallahassee, FL (904) 756-0747, Dade City, FL (352) 650-6701
 Atlanta, GA (770) 440-8800

Work Order No: 10451029

www.xenco.com Page 1 of 1

Project Manager	Dan Mott	Site to be analyzed	Kyle Librell
Company Name	LT Environmental, Inc., Permian Office	Company Name	XTO Energy, Inc.
Address	3300 North A Street	Address	3104 E Groves St
City, State ZIP	Midland, TX 79705	City, State ZIP	Carlsbad, NM 88220
Phone	(432) 236-3849	Email	librell@xtoenergy.com, dimond@xtoenergy.com

Program: UST/PST PRF Brownfield RRR Superfund
 State of Project: _____
 Reporting Level: Level PSTRAG TRF Level
 Derivatives: EDD ADAPT Other _____

Project Name: Golden's Fed Battery
 Project Number: D12919219
 PO #: ZRP-5672
 Sampler's Name: Fatima Smith
 Turn Around: Routine Rush 24 HRS
 Due Date: _____

SAMPLE RECEIPT
 Temp Blank: Yes No
 Temperature (°C): 9.0
 Received Initial: No Yes
 Cooler/Outbody Seals: Yes No N/A
 Sample Custody Seals: Yes No N/A

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST			Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-6021)	
SW01	S	12/4/17	0835	0-3'	1	X	X	
GW02				1015				
RH01				1034				
RH01A				1034				
RH02				1209				
RH02A				1211				
FR02				1227				
GW03				1243				
PH03				1321				
PH03A				1322				

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

Notice: Signature of this document and introduction of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$8 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously requested.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	12/19/17	<i>[Signature]</i>	<i>[Signature]</i>	

Analytical Report 645131

for
LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Fed Battery

012919219

06-APR-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)



06-APR-20

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

Reference: XENCO Report No(s): **645131**
Golden 8 Fed Battery
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) 645131. 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. 645131 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
Project Manager

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

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



Sample Cross Reference 645131

LT Environmental, Inc., Arvada, CO

Golden 8 Fed Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH03	S	12-04-19 12:55	0.5 ft	645131-001
BH03A	S	12-04-19 13:01	1.5 ft	Not Analyzed



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Fed Battery

Project ID: 012919219
Work Order Number(s): 645131

Report Date: 06-APR-20
Date Received: 12/04/2019

Sample receipt non conformances and comments:

V1.001 Revision (client email) Changed sample names. JK 04/06/20
SS01 --> BH03
SS01A --> BH03A

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109484 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 645106-003 S.

Batch: LBA-3109512 Chloride by EPA 300
Lab Sample ID 645131-001 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: 645131-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3109529 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 645131

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Fed Battery

Project Id: 012919219

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Dec-04-19 04:42 pm

Report Date: 06-APR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	645131-001				
	Field Id:	BH03				
	Depth:	0.5- ft				
	Matrix:	SOIL				
	Sampled:	Dec-04-19 12:55				
BTEX by EPA 8021B	Extracted:	Dec-04-19 22:00				
	Analyzed:	Dec-05-19 10:17				
	Units/RL:	mg/kg RL				
	Benzene	0.520 0.499				
	Toluene	6.30 0.998				
	Ethylbenzene	1.26 0.998				
	m,p-Xylenes	5.44 2.00				
	o-Xylene	2.10 0.998				
Total Xylenes	7.54 0.998					
Total BTEX	15.6 0.499					
Chloride by EPA 300	Extracted:	Dec-05-19 07:30				
	Analyzed:	Dec-05-19 12:39				
Units/RL:	mg/kg RL					
Chloride	171 10.0					
TPH by SW8015 Mod	Extracted:	Dec-04-19 17:00				
	Analyzed:	Dec-05-19 11:19				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	383 50.1				
	Diesel Range Organics (DRO)	2660 50.1				
	Motor Oil Range Hydrocarbons (MRO)	424 50.1				
	Total GRO-DRO	3040 50.1				
Total TPH	3470 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

Jessica Kramer
Project Manager



Certificate of Analytical Results 645131

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: **BH03** Matrix: Soil Date Received: 12.04.19 16.42
 Lab Sample Id: 645131-001 Date Collected: 12.04.19 12.55 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 12.05.19 07.30 Basis: Wet Weight
 Seq Number: 3109512

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	171	10.0	mg/kg	12.05.19 12.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 12.04.19 17.00 Basis: Wet Weight
 Seq Number: 3109484

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	383	50.1	mg/kg	12.05.19 11.19		1
Diesel Range Organics (DRO)	C10C28DRO	2660	50.1	mg/kg	12.05.19 11.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	424	50.1	mg/kg	12.05.19 11.19		1
Total GRO-DRO	PHC628	3040	50.1	mg/kg	12.05.19 11.19		1
Total TPH	PHC635	3470	50.1	mg/kg	12.05.19 11.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	12.05.19 11.19	
o-Terphenyl	84-15-1	124	%	70-135	12.05.19 11.19	



Certificate of Analytical Results 645131

LT Environmental, Inc., Arvada, CO Golden 8 Fed Battery

Sample Id: BH03	Matrix: Soil	Date Received: 12.04.19 16.42
Lab Sample Id: 645131-001	Date Collected: 12.04.19 12.55	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.04.19 22.00	Basis: Wet Weight
Seq Number: 3109529		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.520	0.499	mg/kg	12.05.19 10.17		500
Toluene	108-88-3	6.30	0.998	mg/kg	12.05.19 10.17		500
Ethylbenzene	100-41-4	1.26	0.998	mg/kg	12.05.19 10.17		500
m,p-Xylenes	179601-23-1	5.44	2.00	mg/kg	12.05.19 10.17		500
o-Xylene	95-47-6	2.10	0.998	mg/kg	12.05.19 10.17		500
Total Xylenes	1330-20-7	7.54	0.998	mg/kg	12.05.19 10.17		500
Total BTEX		15.6	0.499	mg/kg	12.05.19 10.17		500
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.05.19 10.17		
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.05.19 10.17		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3109512 Matrix: Solid Prep Method: E300P
 MB Sample Id: 7691692-1-BLK LCS Sample Id: 7691692-1-BKS Date Prep: 12.05.19
 LCSD Sample Id: 7691692-1-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	263	105	266	106	90-110	1	20	mg/kg	12.05.19 12:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3109512 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 645018-006 MS Sample Id: 645018-006 S Date Prep: 12.05.19
 MSD Sample Id: 645018-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	295	200	487	96	487	96	90-110	0	20	mg/kg	12.05.19 15:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3109512 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 645131-001 MS Sample Id: 645131-001 S Date Prep: 12.05.19
 MSD Sample Id: 645131-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	171	2000	1950	89	1930	88	90-110	1	20	mg/kg	12.05.19 12:45	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484 Matrix: Solid Prep Method: SW8015P
 MB Sample Id: 7691735-1-BLK LCS Sample Id: 7691735-1-BKS Date Prep: 12.04.19
 LCSD Sample Id: 7691735-1-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	933	93	964	96	70-135	3	35	mg/kg	12.05.19 05:25	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1200	120	70-135	11	35	mg/kg	12.05.19 05:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		127		133		70-135	%	12.05.19 05:25
o-Terphenyl	112		128		132		70-135	%	12.05.19 05:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484 Matrix: Solid Prep Method: SW8015P
 MB Sample Id: 7691735-1-BLK Date Prep: 12.04.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.05.19 05:05	

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 MS = Matrix Spike
 A = Parent Result B = Spike Added
 C = MS/LCS Result D = MSD/LCSD % Rec
 E = MSD/LCSD Result



LT Environmental, Inc.
Golden 8 Fed Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109484

Parent Sample Id: 645106-003

Matrix: Soil

MS Sample Id: 645106-003 S

Prep Method: SW8015P

Date Prep: 12.04.19

MSD Sample Id: 645106-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	987	99	929	93	70-135	6	35	mg/kg	12.05.19 05:45	
Diesel Range Organics (DRO)	<50.2	1000	1220	122	1080	108	70-135	12	35	mg/kg	12.05.19 05:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	136	**	130		70-135	%	12.05.19 05:45
o-Terphenyl	147	**	130		70-135	%	12.05.19 05:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109529

MB Sample Id: 7691697-1-BLK

Matrix: Solid

LCS Sample Id: 7691697-1-BKS

Prep Method: SW5030B

Date Prep: 12.04.19

LCSD Sample Id: 7691697-1-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	0.0855	86	0.0900	90	70-130	5	35	mg/kg	12.05.19 07:00	
Toluene	<0.00200	0.100	0.0887	89	0.0938	94	70-130	6	35	mg/kg	12.05.19 07:00	
Ethylbenzene	<0.00200	0.100	0.0876	88	0.0930	93	71-129	6	35	mg/kg	12.05.19 07:00	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.199	100	70-135	7	35	mg/kg	12.05.19 07:00	
o-Xylene	<0.00200	0.100	0.0960	96	0.102	102	71-133	6	35	mg/kg	12.05.19 07:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		100		70-130	%	12.05.19 07:00
4-Bromofluorobenzene	108		119		116		70-130	%	12.05.19 07:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109529

Parent Sample Id: 645129-001

Matrix: Soil

MS Sample Id: 645129-001 S

Prep Method: SW5030B

Date Prep: 12.04.19

MSD Sample Id: 645129-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0662	67	0.0527	53	70-130	23	35	mg/kg	12.05.19 07:38	X
Toluene	<0.00199	0.0994	0.0543	55	0.0352	35	70-130	43	35	mg/kg	12.05.19 07:38	XF
Ethylbenzene	<0.00199	0.0994	0.0380	38	0.0214	21	71-129	56	35	mg/kg	12.05.19 07:38	XF
m,p-Xylenes	<0.00398	0.199	0.0773	39	0.0412	21	70-135	61	35	mg/kg	12.05.19 07:38	XF
o-Xylene	<0.00199	0.0994	0.0396	40	0.0234	23	71-133	51	35	mg/kg	12.05.19 07:38	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	12.05.19 07:38
4-Bromofluorobenzene	122		123		70-130	%	12.05.19 07:38

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



Houston, TX (281) 240-4200, Dallas, TX (214) 902-0500, San Antonio, TX (210) 508-3304
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 Helder, NM (575) 392-7500, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 305-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (904) 795-0747, Ocala, FL (352) 269-8701
 Atlanta, GA (770) 449-8900

Chain of Custody

Work Order No:

445131
 FGH5124
 04/14/24

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to (if different):	Kyle Litrell
Company Name:	LT Environmental Inc, Permian Office	Company Name:	XTO Energy, Inc
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@xenco.com, gmcg@xenco.com

Program: <input type="checkbox"/> USTRST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfield <input type="checkbox"/> RRD <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project:	
Reporting level:	<input type="checkbox"/> Level <input type="checkbox"/> PSTRUD <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/> <input type="checkbox"/> Deliverable: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other

Project Name:	Golden 8 Fed Refinery	Turn Around:	
Project Number:	012919219	Route:	<input type="checkbox"/>
PO #:	ZPD-5677	Rush:	<input checked="" type="checkbox"/> 24hrs
Sampler's Name:	Fallma Smith	Due Date:	
SAMPLE RECEIPT Temperature (°C): 9.0 Received Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Custody Seal: Yes <input checked="" type="checkbox"/> No Sample Custody Seals: Yes <input checked="" type="checkbox"/> No		Temp Blank: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Wet log: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Thermometer ID: T-PL-007 Correction Factor: -0.2 Total Containers: 2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			
					TPH (EPA 8015)	BTEX (EPA 9-0921)	Chloride (EPA 300.0)	
B501	S	12/4/16	1255	0.5	1	X	X	X
B501A	S	12/4/16	1301	1.5	1	X	X	X

Total 200.7 / 6010 200.8 / 6020: SRCRA 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: SRCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	12/4/16 12:55			

Analytical Report 651048

for

LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Federal Battery

012919141

03-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)



03-FEB-20

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

Reference: XENCO Report No(s): **651048**
Golden 8 Federal Battery
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) 651048. 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. 651048 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'. The signature is written in a cursive, slightly slanted style.

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 651048

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW04	S	01-31-20 13:50	0 - 4 ft	651048-001
SW05	S	01-31-20 13:55	0 - 4 ft	651048-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal Battery

Project ID: 012919141
Work Order Number(s): 651048

Report Date: 03-FEB-20
Date Received: 01/31/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115251 BTEX by EPA 8021B

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



Certificate of Analysis Summary 651048

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal Battery

Project Id: 012919141

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Jan-31-20 04:03 pm

Report Date: 03-FEB-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	651048-001	651048-002			
	<i>Field Id:</i>	SW04	SW05			
	<i>Depth:</i>	0-4 ft	0-4 ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Jan-31-20 13:50	Jan-31-20 13:55			
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-31-20 20:00	Jan-31-20 20:00			
	<i>Analyzed:</i>	Feb-01-20 04:13	Feb-01-20 20:33			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.0200 0.0200	<0.00201 0.00201			
Toluene		<0.0200 0.0200	<0.00201 0.00201			
Ethylbenzene		<0.0200 0.0200	<0.00201 0.00201			
m,p-Xylenes		<0.0400 0.0400	<0.00402 0.00402			
o-Xylene		<0.0200 0.0200	<0.00201 0.00201			
Total Xylenes		<0.0200 0.0200	<0.00201 0.00201			
Total BTEX		<0.0200 0.0200	<0.00201 0.00201			
Chloride by EPA 300	<i>Extracted:</i>	Jan-31-20 18:00	Jan-31-20 18:00			
	<i>Analyzed:</i>	Jan-31-20 23:15	Jan-31-20 23:21			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		2050 50.3	395 9.90			
TPH by SW8015 Mod	<i>Extracted:</i>	Jan-31-20 17:00	Jan-31-20 17:00			
	<i>Analyzed:</i>	Feb-01-20 00:23	Feb-03-20 12:22			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8			
Diesel Range Organics (DRO)		1400 49.9	<49.8 49.8			
Motor Oil Range Hydrocarbons (MRO)		159 49.9	<49.8 49.8			
Total GRO-DRO		1400 49.9	<49.8 49.8			
Total TPH		1560 49.9	<49.8 49.8			

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 651048

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: **SW04** Matrix: Soil Date Received: 01.31.20 16.03
 Lab Sample Id: 651048-001 Date Collected: 01.31.20 13.50 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.31.20 18.00 Basis: Wet Weight
 Seq Number: 3115294

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2050	50.3	mg/kg	01.31.20 23.15		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.31.20 17.00 Basis: Wet Weight
 Seq Number: 3115292

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.01.20 00.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	1400	49.9	mg/kg	02.01.20 00.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	159	49.9	mg/kg	02.01.20 00.23		1
Total GRO-DRO	PHC628	1400	49.9	mg/kg	02.01.20 00.23		1
Total TPH	PHC635	1560	49.9	mg/kg	02.01.20 00.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.01.20 00.23	
o-Terphenyl	84-15-1	97	%	70-135	02.01.20 00.23	



Certificate of Analytical Results 651048

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: SW04	Matrix: Soil	Date Received: 01.31.20 16.03
Lab Sample Id: 651048-001	Date Collected: 01.31.20 13.50	Sample Depth: 0 - 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.31.20 20.00	Basis: Wet Weight
Seq Number: 3115251		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
m,p-Xylenes	179601-23-1	<0.0400	0.0400	mg/kg	02.01.20 04.13	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
Total BTEX		<0.0200	0.0200	mg/kg	02.01.20 04.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.01.20 04.13		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.01.20 04.13		



Certificate of Analytical Results 651048

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: **SW05** Matrix: Soil Date Received: 01.31.20 16.03
 Lab Sample Id: 651048-002 Date Collected: 01.31.20 13.55 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 01.31.20 18.00 Basis: Wet Weight
 Seq Number: 3115294

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	395	9.90	mg/kg	01.31.20 23.21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 01.31.20 17.00 Basis: Wet Weight
 Seq Number: 3115292

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.03.20 12.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.03.20 12.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.03.20 12.22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.03.20 12.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.03.20 12.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.03.20 12.22	
o-Terphenyl	84-15-1	90	%	70-135	02.03.20 12.22	



Certificate of Analytical Results 651048

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery

Sample Id: SW05	Matrix: Soil	Date Received: 01.31.20 16.03
Lab Sample Id: 651048-002	Date Collected: 01.31.20 13.55	Sample Depth: 0 - 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 01.31.20 20.00	Basis: Wet Weight
Seq Number: 3115251		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.01.20 20.33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.01.20 20.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	02.01.20 20.33		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.01.20 20.33		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Golden 8 Federal Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3115294

MB Sample Id: 7695746-1-BLK

Matrix: Solid

LCS Sample Id: 7695746-1-BKS

Prep Method: E300P

Date Prep: 01.31.20

LCSD Sample Id: 7695746-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	255	102	90-110	0	20	mg/kg	01.31.20 21:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3115294

Parent Sample Id: 651013-028

Matrix: Soil

MS Sample Id: 651013-028 S

Prep Method: E300P

Date Prep: 01.31.20

MSD Sample Id: 651013-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.4	201	251	104	253	105	90-110	1	20	mg/kg	02.03.20 11:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3115294

Parent Sample Id: 651046-003

Matrix: Soil

MS Sample Id: 651046-003 S

Prep Method: E300P

Date Prep: 01.31.20

MSD Sample Id: 651046-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.8	199	236	105	236	104	90-110	0	20	mg/kg	01.31.20 23:02	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115292

MB Sample Id: 7695777-1-BLK

Matrix: Solid

LCS Sample Id: 7695777-1-BKS

Prep Method: SW8015P

Date Prep: 01.31.20

LCSD Sample Id: 7695777-1-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	950	95	883	88	70-135	7	35	mg/kg	01.31.20 20:26	
Diesel Range Organics (DRO)	<50.0	1000	781	78	747	75	70-135	4	35	mg/kg	01.31.20 20:26	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		113		105		70-135	%	01.31.20 20:26
o-Terphenyl	112		105		99		70-135	%	01.31.20 20:26

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115292

MB Sample Id: 7695777-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.31.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.31.20 20:26	

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

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

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

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



LT Environmental, Inc.
Golden 8 Federal Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115292

Parent Sample Id: 651025-018

Matrix: Soil

MS Sample Id: 651025-018 S

Prep Method: SW8015P

Date Prep: 01.31.20

MSD Sample Id: 651025-018 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	997	1110	111	1100	109	70-135	1	35	mg/kg	01.31.20 21:06	
Diesel Range Organics (DRO)	<49.9	997	1140	114	1100	109	70-135	4	35	mg/kg	01.31.20 21:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		116		70-135	%	01.31.20 21:06
o-Terphenyl	111		102		70-135	%	01.31.20 21:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115251

MB Sample Id: 7695742-1-BLK

Matrix: Solid

LCS Sample Id: 7695742-1-BKS

Prep Method: SW5030B

Date Prep: 01.31.20

LCSD Sample Id: 7695742-1-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	0.0920	92	0.102	102	70-130	10	35	mg/kg	02.01.20 01:10	
Toluene	<0.00200	0.100	0.0892	89	0.0987	99	70-130	10	35	mg/kg	02.01.20 01:10	
Ethylbenzene	<0.00200	0.100	0.0859	86	0.0950	95	71-129	10	35	mg/kg	02.01.20 01:10	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.195	98	70-135	10	35	mg/kg	02.01.20 01:10	
o-Xylene	<0.00200	0.100	0.0884	88	0.0978	98	71-133	10	35	mg/kg	02.01.20 01:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		104		70-130	%	02.01.20 01:10
4-Bromofluorobenzene	95		95		95		70-130	%	02.01.20 01:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115251

Parent Sample Id: 651046-001

Matrix: Soil

MS Sample Id: 651046-001 S

Prep Method: SW5030B

Date Prep: 01.31.20

MSD Sample Id: 651046-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0755	76	0.0870	88	70-130	14	35	mg/kg	02.01.20 01:51	
Toluene	<0.00199	0.0994	0.0785	79	0.0754	76	70-130	4	35	mg/kg	02.01.20 01:51	
Ethylbenzene	0.00507	0.0994	0.0815	77	0.0804	76	71-129	1	35	mg/kg	02.01.20 01:51	
m,p-Xylenes	0.0134	0.199	0.190	89	0.187	88	70-135	2	35	mg/kg	02.01.20 01:51	
o-Xylene	0.0126	0.0994	0.0865	74	0.0903	78	71-133	4	35	mg/kg	02.01.20 01:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	02.01.20 01:51
4-Bromofluorobenzene	114		123		70-130	%	02.01.20 01:51

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

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
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: 051048

051048

Houston, TX (281) 240-4200 Dallas, TX (214) 802-0300 San Antonio, TX (210) 508-3334
Midland, TX (432-704-5440) El Paso, TX (915) 925-3443 Lubbock, TX (806) 794-1296

Head, MA (578-302-7550) Phoenix, AZ (480-355-0000) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 1 of 1

Project Manager: **Duan Moor**

Company Name: **L1 Environmental, Inc. - Permian office**

Address: **3300 North A Street**

City, State ZIP: **Midland, TX 79705**

Phone: **432.704.5178**

Bill to: (if different) **Kyle Litrel**

Company Name: **XTO-Energy**

Address: **Cartersville, GA**

City, State ZIP: **Cartersville, GA**

Email: **duanmoor@l1env.com**

Program: **UST/PST** **PRP** **Investigative** **RC** **Superfund**

State of Project: **PRP** **Investigative** **RC** **Superfund**

Reporting Level: **Level II** **Level III** **Level IV**

Deliverables: **EDD** **ADAPT** **Other:**

Project Name: **Golden S Federal Bakery**

Project Number: **012919141**

P.O. Number: **012919141**

Sampler's Name: **Robert McAlister**

Turn Around: **Routine**

Rush: **2 day**

Due Date:

Temperature (°C): **1.2**

Received Inland: **No**

Cooler Custody Seals: **N/A**

Sample Custody Seals: **Yes**

Thermometer ID: **T-NM-001**

Correction Factor: **-0.2**

Total Containers: **2**

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers
SW04	S	04/18/06	1350	0-4'	1
SW05	S	01/31/06	1355	0-4'	1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																	
					TPH (EPA 8015)	BTEX (EPA 0-6021)	Chloride (EPA 300.6)															
SW04	S	04/18/06	1350	0-4'	X	X	X															
SW05	S	01/31/06	1355	0-4'	X	X	X															

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 to the client. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A release of change of \$75.00 will be applied to each project and a charge of \$4 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

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 to the client. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A release of change of \$75.00 will be applied to each project and a charge of \$4 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Requesting by: (Signature) **[Signature]** Received by: (Signature) **[Signature]**

Date/Time: **4/13/06 10:03** Date/Time: **4/13/06**

Relinquished by: (Signature) **[Signature]** Received by: (Signature) **[Signature]**

Date/Time: **4/13/06** Date/Time: **4/13/06**

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.31.2020 04.03.00 PM

Work Order #: 651048

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#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:

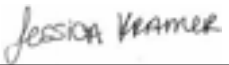
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 01.31.2020

Checklist reviewed by:


Jessica Kramer

Date: 02.03.2020



Analytical Report 653135

for

LT Environmental, Inc.

Project Manager: Dan Moir

Golden 8 Federal Battery 1

012919219

02.21.2020

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)



02.21.2020

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

Reference: XENCO Report No(s): **653135**
Golden 8 Federal Battery 1
Project Address: Eddy

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) 653135. 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. 653135 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,

John Builes
Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 653135

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	02.20.2020 10:23	0.5 ft	653135-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Golden 8 Federal Battery 1

Project ID: 012919219
Work Order Number(s): 653135

Report Date: 02.21.2020
Date Received: 02.20.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117186 BTEX by EPA 8021B

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



Certificate of Analysis Summary 653135

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal Battery 1

Project Id: 012919219
Contact: Dan Moir
Project Location: Eddy

Date Received in Lab: Thu 02.20.2020 12:40
Report Date: 02.21.2020 13:45
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	653135-001				
	Field Id:	FS03				
	Depth:	0.5- ft				
	Matrix:	SOIL				
	Sampled:	02.20.2020 10:23				
BTEX by EPA 8021B	Extracted:	** ** *				
	Analyzed:	02.20.2020 21:23				
	Units/RL:	mg/kg RL				
	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00401 0.00401				
	o-Xylene	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Chloride by EPA 300	Extracted:	02.20.2020 14:30				
	Analyzed:	02.20.2020 15:23				
	Units/RL:	mg/kg RL				
Chloride	487 10.0					
TPH by SW8015 Mod	Extracted:	02.20.2020 17:00				
	Analyzed:	02.21.2020 03:01				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9				
	Diesel Range Organics (DRO)	371 49.9				
	Motor Oil Range Hydrocarbons (MRO)	66.9 49.9				
Total GRO-DRO	371 49.9					
Total TPH	438 49.9					

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

John Builes
Project Manager



Certificate of Analytical Results 653135

LT Environmental, Inc., Arvada, CO
 Golden 8 Federal Battery 1

Sample Id: FS03	Matrix: Soil	Date Received: 02.20.2020 12:40
Lab Sample Id: 653135-001	Date Collected: 02.20.2020 10:23	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.20.2020 14:30	Basis: Wet Weight
Seq Number: 3117209		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	487	10.0	mg/kg	02.20.2020 15:23		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 02.20.2020 17:00	Basis: Wet Weight
Seq Number: 3117215		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 03:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	371	49.9	mg/kg	02.21.2020 03:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	66.9	49.9	mg/kg	02.21.2020 03:01		1
Total GRO-DRO	PHC628	371	49.9	mg/kg	02.21.2020 03:01		1
Total TPH	PHC635	438	49.9	mg/kg	02.21.2020 03:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 03:01	
o-Terphenyl	84-15-1	99	%	70-135	02.21.2020 03:01	



Certificate of Analytical Results 653135

LT Environmental, Inc., Arvada, CO

Golden 8 Federal Battery 1

Sample Id: **FS03**
Lab Sample Id: 653135-001

Matrix: Soil
Date Collected: 02.20.2020 10:23

Date Received: 02.20.2020 12:40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 11:30

Basis: Wet Weight

Seq Number: 3117186

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.20.2020 21:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.20.2020 21:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.20.2020 21:23	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.20.2020 21:23	



LT Environmental, Inc.
Golden 8 Federal Battery 1

Analytical Method: Chloride by EPA 300

Seq Number: 3117209

MB Sample Id: 7697118-1-BLK

Matrix: Solid

LCS Sample Id: 7697118-1-BKS

Prep Method: E300P

Date Prep: 02.20.2020

LCSD Sample Id: 7697118-1-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	265	106	90-110	0	20	mg/kg	02.20.2020 12:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3117209

Parent Sample Id: 653094-001

Matrix: Soil

MS Sample Id: 653094-001 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653094-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.02	200	207	102	209	103	90-110	1	20	mg/kg	02.20.2020 12:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3117209

Parent Sample Id: 653094-011

Matrix: Soil

MS Sample Id: 653094-011 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653094-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.80	200	218	107	217	107	90-110	0	20	mg/kg	02.20.2020 14:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117215

MB Sample Id: 7697186-1-BLK

Matrix: Solid

LCS Sample Id: 7697186-1-BKS

Prep Method: SW8015P

Date Prep: 02.20.2020

LCSD Sample Id: 7697186-1-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	906	91	873	87	70-135	4	35	mg/kg	02.20.2020 23:07	
Diesel Range Organics (DRO)	<50.0	1000	997	100	898	90	70-135	10	35	mg/kg	02.20.2020 23:07	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		121		110		70-135	%	02.20.2020 23:07
o-Terphenyl	106		115		106		70-135	%	02.20.2020 23:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117215

Matrix: Solid

MB Sample Id: 7697186-1-BLK

Prep Method: SW8015P

Date Prep: 02.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.20.2020 23:07	

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



LT Environmental, Inc.
Golden 8 Federal Battery 1

Analytical Method: TPH by SW8015 Mod
Seq Number: 3117215
Parent Sample Id: 653098-022

Matrix: Soil
MS Sample Id: 653098-022 S

Prep Method: SW8015P
Date Prep: 02.20.2020
MSD Sample Id: 653098-022 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	1070	107	936	94	70-135	13	35	mg/kg	02.20.2020 23:46	
Diesel Range Organics (DRO)	<50.2	1000	1110	111	1050	105	70-135	6	35	mg/kg	02.20.2020 23:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		121		70-135	%	02.20.2020 23:46
o-Terphenyl	133		121		70-135	%	02.20.2020 23:46

Analytical Method: BTEX by EPA 8021B
Seq Number: 3117186
MB Sample Id: 7697112-1-BLK

Matrix: Solid
LCS Sample Id: 7697112-1-BKS

Prep Method: SW5030B
Date Prep: 02.20.2020
LCSD Sample Id: 7697112-1-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	0.103	103	0.101	101	70-130	2	35	mg/kg	02.20.2020 12:33	
Toluene	<0.00200	0.100	0.101	101	0.0984	98	70-130	3	35	mg/kg	02.20.2020 12:33	
Ethylbenzene	<0.00200	0.100	0.0983	98	0.0951	95	71-129	3	35	mg/kg	02.20.2020 12:33	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.196	98	70-135	4	35	mg/kg	02.20.2020 12:33	
o-Xylene	<0.00200	0.100	0.101	101	0.0978	98	71-133	3	35	mg/kg	02.20.2020 12:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		104		70-130	%	02.20.2020 12:33
4-Bromofluorobenzene	93		93		94		70-130	%	02.20.2020 12:33

Analytical Method: BTEX by EPA 8021B
Seq Number: 3117186
Parent Sample Id: 652839-003

Matrix: Soil
MS Sample Id: 652839-003 S

Prep Method: SW5030B
Date Prep: 02.20.2020
MSD Sample Id: 652839-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.102	101	0.124	124	70-130	19	35	mg/kg	02.20.2020 13:14	
Toluene	<0.00202	0.101	0.110	109	0.121	121	70-130	10	35	mg/kg	02.20.2020 13:14	
Ethylbenzene	<0.00202	0.101	0.107	106	0.117	117	71-129	9	35	mg/kg	02.20.2020 13:14	
m,p-Xylenes	<0.00404	0.202	0.224	111	0.240	120	70-135	7	35	mg/kg	02.20.2020 13:14	
o-Xylene	<0.00202	0.101	0.111	110	0.118	118	71-133	6	35	mg/kg	02.20.2020 13:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		104		70-130	%	02.20.2020 13:14
4-Bromofluorobenzene	96		92		70-130	%	02.20.2020 13:14

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

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

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

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



Chain of Custody

Work Order No: LS3135

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0390 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1298
 Hobbs, NM (505) 392-7355 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 416-8300 Tampa, FL (813) 620-2000

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Project Manager:	Dan Moul	Bill to: (if different):	Kyle Larrick
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State Zip:	Midland, TX 79705	City, State Zip:	
Phone:	(432) 236-3849	Email:	lms@lmsenergy.com, lms@xenco.com

Project Name:	Golden B Federal Battery 1	Turn Amount:	
Project Number:	D12919219	Routine:	<input type="checkbox"/>
P.O. Number:	Eddy	Rush:	<input checked="" type="checkbox"/> RHR
Sampler's Name:	William Mather	Due Date:	

Temperature (°C):	0.8	Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received Insect:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	T-NH2007		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Correction Factor:	-0.2		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:	1		

ANALYSIS REQUEST	
Number of Containers:	1
THI (EPA 8015)	X
BTEX (EPA 0+8021)	X
Chloride (EPA 300.0)	X

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
FS03	S	2/20/2020	10:23	5'

Work Order Notes
TAT starts the day received by the lab, if received by 4:30pm
Sample Comments
Composite


Total 200.7 / 6010		200.8 / 6020:		BRORA 13PM 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		BRORA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	

1631 / 245.1 / 7470 / 7471 - Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/20/20 12:40			

ATTACHMENT 4: LITHOLOGIC / SOIL SAMPLING LOG




 A proud member of WSP	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	BH or PH Name: PH01	Date: 12/3/2019
	Site Name: Golden 8 Federal Battery 1		
	RP or Incident Number: 2RP-5672		
	LTE Job Number: 12919219		

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: Chloride, PID	Logged By: FS	Method: Hole Diameter: Total Depth:
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Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	907	63.5	N	PH01	0.5'	0.5		SC, SL, SP, earthy brown
D	1,988	61.7	N	PH01A	1'	1		SC, SL, SP, earthy brown
						2		
D	2,290	2.0	N	PH01B	3'	3		SC, SL, SP, earthy brown
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		


 A proud member of WSP	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	BH or PH Name: PH02	Date: 12/3/2019
	Site Name: Golden 8 Federal Battery 1		
	RP or Incident Number: 2RP-5672		
	LTE Job Number: 12919219		

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: Chloride, PID	Logged By: FS	Method: Hole Diameter: Total Depth:
-----------	-----------------------------------	---------------	---

Comments:


Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	991	416.5	Y	PH02	0.5'	0.5		Black staining, strong odor
D	1,372	2.1	N	PH02A	1'	1		SC, SL, SP, earthy brown
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 A proud member of WSP	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	BH or PH Name: PH03	Date: 12/4/2019	
	Site Name: Golden 8 Federal Battery 1		RP or Incident Number: 2RP-5672	
	LTE Job Number: 12919219		Logged By: FS	Method:
	LITHOLOGIC / SOIL SAMPLING LOG		Hole Diameter:	Total Depth:

Lat/Long:	Field Screening: Chloride, PID	Hole Diameter:	Total Depth:
-----------	-----------------------------------	----------------	--------------

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	907	0.9	N	PH03	1'	1		SC, SL, SP, reddish brown
D	554	1.2	N	PH03A	2'	2		SC, SL, SP, reddish brown
D	1,372	1.3	N	PH03B	3'	3		GW, tan, caliche, no odor
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		


 <p>LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220</p> <p>A proud member of WSP</p> <p>Compliance · Engineering · Remediation</p>	BH or PH Name:	Date:
	BH01	12/4/2019
	Site Name: Golden 8 Federal Battery 1	
	RP or Incident Number: 2RP-5672	
LTE Job Number: 12919219		

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: Chloride, PID	Logged By: FS	Method:
		Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	285	4.0	N	BH01	0.5'			SC, SL, SP, reddish brown
D	207	0.7	N	BH01A	1'	1		SC, SL, SP, reddish brown
D	1,450	0.5	N	BH01B	2'	2		SC, SL, SP, reddish brown
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		


 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation	BH or PH Name: BH02	Date: 12/4/2019
	Site Name: Golden 8 Federal Battery 1	
	RP or Incident Number: 2RP-5672	
	LTE Job Number: 12919219	

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: Chloride, PID	Logged By: FS	Method:
		Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	554	0.1	N	BH02	0.5'			SC, SL, SP, reddish brown
D	683	0.4	N	BH01A	1'	1		SC, SL, SP, reddish brown
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 <p>LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220</p> <p>A proud member of WSP</p> <p>Compliance · Engineering · Remediation</p>		BH or PH Name:		Date:				
		BH03		12/4/2019				
		Site Name: Golden 8 Federal Battery 1						
		RP or Incident Number: 2RP-5672						
LITHOLOGIC / SOIL SAMPLING LOG				LTE Job Number: 012919219				
Lat/Long:		Field Screening:		Logged By: FS				
		Chloride, PID		Method:				
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	554	561.0	N	BH03	0.5'	0		SC, SL, SP, reddish brown, grey staining
						1		Auger refusal at 0.5'
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		



APPENDIX D

May 7, 2021 *Deferral Request Addendum*
(Incident Number NAB1929041495)



WSP USA

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

May 7, 2021

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Deferral Request Addendum
Golden 8 Federal Battery 1
Remediation Permit Number 2RP-5672/Incident Number NAB1929041495
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following addendum to the original Deferral Request submitted on September 2, 2020. This addendum provides an update to the depth to groundwater determination activities at the Golden 8 Federal Battery 1 (Site) in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (Figure 1) in response to the denial of the Deferral Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD expressed concern that the depth to groundwater assessment may not be sufficient. Based on the additional depth to groundwater determination activities described below, XTO is requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5672/Incident Number NAB1929041495.

BACKGROUND

On September 2, 2020, WSP submitted a Deferral Request to the NMOCD for the September 12, 2019 release of crude oil and produced water at the Site. Approximately 0.01 barrels (bbls) of crude oil and 5.79 bbls of produced water were released within the earthen berm surrounding the battery. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 0.01 bbls of crude oil and approximately 4.99 bbls of produced water were recovered from within the earthen berm. 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 September 27, 2019. The release was assigned RP Number 2RP-5672 and Incident Number NAB1929041495.

The Deferral Request detailed site characterization 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). Based on the site characterization, the following Closure Criteria were applied:

- 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

Deferral was requested due to TPH-impacted soil left in place immediately surrounding active production equipment. XTO safety policy restricts earth-moving activities within two feet of active production equipment. An estimated 4 cubic yards of residual impacted soil remains in-place. The residual impacted soil is delineated vertically and laterally by excavation and delineation soil samples as presented in the original Deferral Request.

On November 9, 2020, the NMOCD denied the Deferral Request for RP Number 2RP-5672/ Incident Number NAB1929041495 for the following reason:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. The responsible party may choose to delineate to the most stringent levels listed in Table 1 in lieu of drilling to determine the depth to groundwater.*

ADDITIONAL SITE ACTIVITIES

In an effort to confirm the depth to groundwater determination, WSP installed a soil boring (C-4507) at the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4507 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The Well Record and Log are included in Attachment 2. The borehole is located at the Site, the borehole location is shown on Figure 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Based on the confirmed depth to water greater than 110 feet bgs, the Table 1 Closure Criteria identified in the original Deferral Request are applicable and appropriate for protection of groundwater at this Site.

DEFERRAL REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the September 12, 2019 release of crude oil and produced water. An estimated 4 cubic yards of residual impacted soil remains in-place beneath or adjacent to the active



District II
Page 3

production equipment. The impacted soil remaining in-place is laterally and vertically delineated to below the Site Closure Criteria.

Based on the confirmed depth to water greater than 110 feet bgs and laboratory analytical results for the lateral and vertical delineation soil samples below the Site Closure Criteria, XTO respectfully requests deferral of final remediation for RP Number 2RP-5672/Incident Number NAB1929041495 until the Site is reconstructed, and/or the well pad is abandoned.

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

Sincerely,

WSP USA Inc.

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

Elizabeth Naka
Assistant Consultant, Environmental Scientist

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

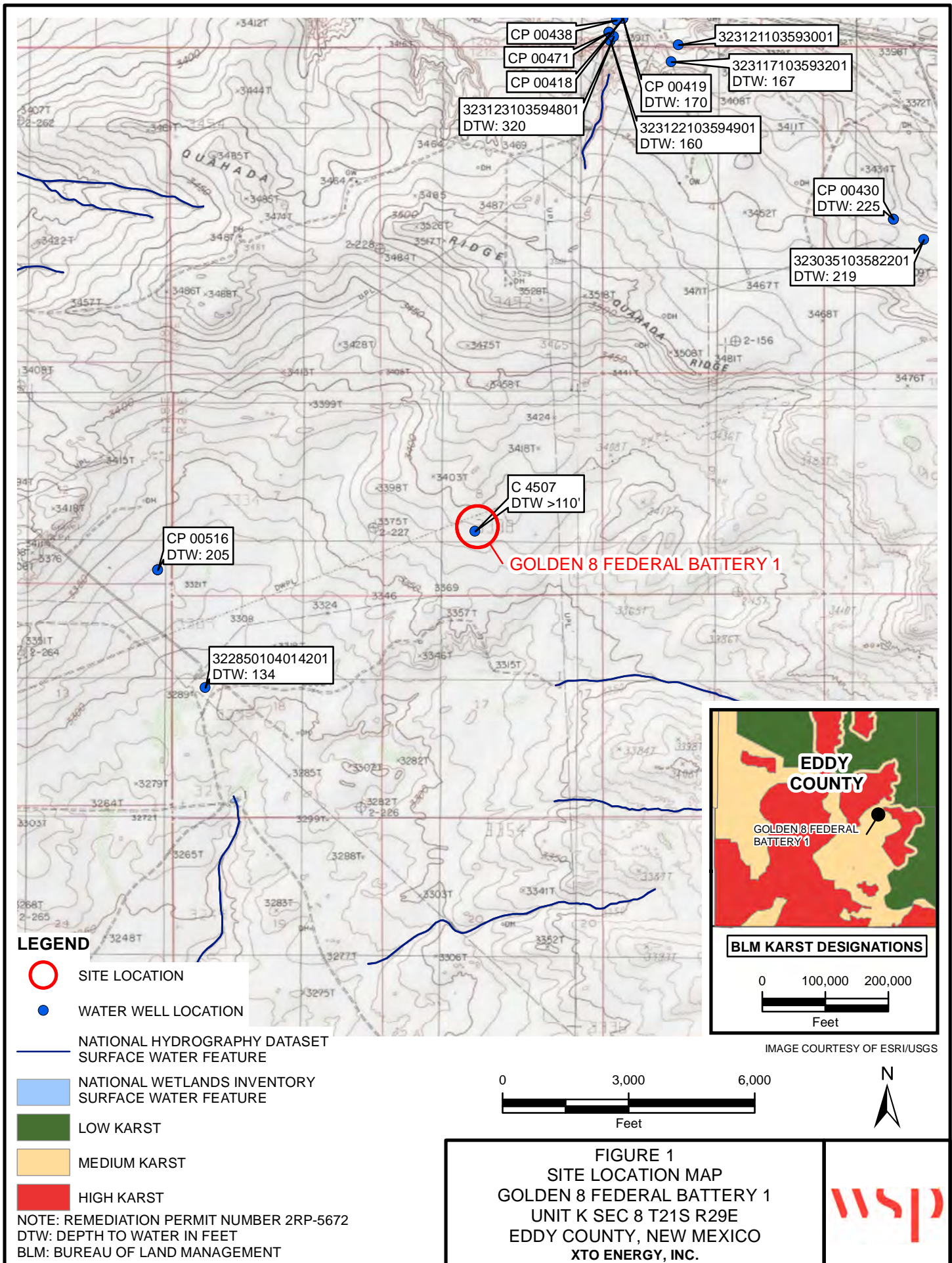
Ashley L. Ager, P.G.
Managing Director, Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management

Attachments:

Figure 1 Site Location Map
Attachment 1 Well Record and Log

FIGURES





2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

05/05/2021

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4507 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4507

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

A handwritten signature in black ink that reads "Lucas Middleton". The signature is written in a cursive style.

Lucas Middleton

Enclosures: as noted above

OCD BY TRNG 2021 NMOSE



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4507- POD1
Well owner: XTO ENERGY (Kyle Littrell) Phone No.: 432.682.8873
Mailing address: 6401 Holiday Hill Dr.
City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge
- 4) Date well plugging began: 04/27/2021 Date well plugging concluded: 04/27/2021
- 5) GPS Well Location: Latitude: 32 deg, 29 min, 28.44 sec
Longitude: 104 deg, 0 min, 28.00 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 110 ft below ground level (bgl),
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 01/29/2021
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

USE OF 4/15/2021 10:01

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15.8 gallons	16 gallons	Augers	
10'-110'	Drill Cuttings	Approx. 172 gallons	172 gallons	Boring	

MULTIPLY	BY	AND OBTAIN
cubic feet x	7.4805	= gallons
cubic yards x	201.97	= gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins

Signature of Well Driller

05/05/2021

Date






2021-05-04_C-4507_Plugging Record_golden-forsign

Final Audit Report

2021-05-05

Created:	2021-05-05
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAusM-6cPyH0hTk&dumyZPnasZJw9Df5Tw

"2021-05-04_C-4507_Plugging Record_golden-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2021-05-05 - 8:55:06 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-05-05 - 8:55:20 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2021-05-05 - 9:28:36 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-05-05 - 9:29:02 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2021-05-05 - 9:29:02 PM GMT



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us


1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4507			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 29	28.44	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE	104	0	28.00	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE SW Sec. 8 T21S R29E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 04/21/2021	DRILLING ENDED 04/21/2021	DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 110	DEPTH WATER FIRST ENCOUNTERED (FT) n/a			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	110	±6.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)		ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
	FROM	TO			Y	N	
	0	4	4	Sand w/ caliche, brown, no odor, no stain, m-f, well sorted, low consolidation	Y	✓ N	
	4	9	5	Caliche, tan, low consolidation, brown sand, m-f grained, moderately sorted	Y	✓ N	
	9	11	--	Sand w/ caliche, light brown, low consolidation, moderateley sorted,	Y	✓ N	
	--	11	2	small tan caliche gravel	Y	✓ N	
	11	110	99	Sand w/ caliche, light brown, low consolidation, moderateley sorted,	Y	✓ N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
					Y	N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm):		
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					0.00		

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION:	Golden 8 Fed Battery .Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge	

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 Jackie D. Atkins	05/05/2021
	SIGNATURE OF DRILLER / PRINT SIGNEE NAME	DATE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/2017)	
FILE NO.	POD NO.	TRN NO.	
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2	






2021-05-04_C-4507_OSE_Well Record and Log_golden-forsign

Final Audit Report

2021-05-05

Created:	2021-05-05
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAawFWBSMHf8LZfeG-H9rfrRsallPfQ_tG4

"2021-05-04_C-4507_OSE_Well Record and Log_golden-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2021-05-05 - 8:54:35 PM GMT- IP address: 69.21.248.123
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2021-05-05 - 9:27:55 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-05-05 - 9:28:26 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2021-05-05 - 9:28:26 PM GMT

OSE 07 MAY 5 2021 09:58





APPENDIX E
Photographic Log



Photographic Log
XTO Energy, Inc.
Golden 8 Federal 001



Photograph 1 Date :5/3/2024
Description: North portion of northern excavation
View: East



Photograph 2 Date :5/3/2024
Description: Northern excavation
View: Northeast



Photograph 3 Date :5/3/2024
Description: South portion of northern excavation
View: Northeast



Photograph 4 Date :5/3/2024
Description: Southern excavation
View: Northeast



Photographic Log
XTO Energy, Inc.
Golden 8 Federal 001

Date & Time: Mon, Jun 03, 2024 at 09:06:32 MDT
Position: +032.491315° / -104.007985° (±11.6ft)
Altitude: 3396ft (±9.8ft)
Datum: WGS-84
Azimuth/Bearing: 005° N05E 0089mils True (±14°)
Elevation Angle: -02.9°
Horizon Angle: +01.3°
Zoom: 0.5X
Golden 8



Photograph : 5 Date :6/3/2024
Description: Northern excavation
View: North

Date & Time: Mon, Jun 03, 2024 at 09:11:37 MDT
Position: +032.491479° / -104.007996° (±52.7ft)
Altitude: 3387ft (±39.4ft)
Datum: WGS-84
Azimuth/Bearing: 026° N26E 0462mils True (±12°)
Elevation Angle: -20.1°
Horizon Angle: -01.6°
Zoom: 0.5X
Golden 8



Photograph : 6 Date :6/3/2024
Description: Northern excavation
View: Northeast



Photograph : 7 Date :10/16/2024
Description: Reclaimed well pad
View: Southeast



Photograph : 8 Date :10/16/2024
Description: Reclaimed well pad
View: Northwest



Photographic Log
XTO Energy, Inc.
Golden 8 Federal 001



Photograph : 9 Date :10/16/2024
Description: Reclaimed well pad
View: Southwest



Photograph : 10 Date :10/16/2024
Description: Reclaimed well pad
View: Northwest



Photograph : 11 Date :10/16/2024
Description: Reclaimed well pad
View: North



Photograph : 12 Date :10/16/2024
Description: Bermed and fenced well pad
View: Southeast



APPENDIX F

2024 Laboratory Analytical Reports and Chain of Custody Documentation



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 28, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/22/24 11:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/22/2024	Sampling Date:	03/21/2024
Reported:	03/28/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 01 10' (H241511-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/26/2024	ND	2.23	112	2.00	2.02	
Toluene*	<0.050	0.050	03/26/2024	ND	2.18	109	2.00	1.89	
Ethylbenzene*	<0.050	0.050	03/26/2024	ND	2.12	106	2.00	2.10	
Total Xylenes*	<0.150	0.150	03/26/2024	ND	6.16	103	6.00	2.07	
Total BTEX	<0.300	0.300	03/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/25/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/25/2024	ND	202	101	200	2.65	
DRO >C10-C28*	<10.0	10.0	03/25/2024	ND	194	96.9	200	0.0155	
EXT DRO >C28-C36	<10.0	10.0	03/25/2024	ND					

Surrogate: 1-Chlorooctane 96.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE	
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						ACID/BASE:
H241511	F501	10	C	1	<input checked="" type="checkbox"/>							3/21/21	1315	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Relinquished By: *CSA*
 Date: 3-22-21
 Time: 1145
 Received By: *Benjamin Delatorre*
 Date:
 Time:
 Received By:
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, TMorrissey@ensolum.com
 REMARKS: NKMW1035646177 NAB1422637219, nKMW1106629393, NKMW1333053660 NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, Cost Center: 1080881001 NAB1633656856
 Turnaround Time:
 Standard Bacteria (only) Sample Condition
 Cool Intact Cool Intact Observed Temp. °C
 Corrected Temp. °C
 Corrected Temp. °C

Delivered By: (Circle One) Observed Temp. °C 4.4
 Corrected Temp. °C
 Sample Condition Cool Intact Yes No
 CHECKED BY: *(Signature)*
 Thermometer ID #11410
 Corrected Factor *3p2p14*
 Cardinal cannot accept verbal changes. Please email changes to cely.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 01, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/25/24 9:32.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/25/2024	Sampling Date:	03/22/2024
Reported:	04/01/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW01 4-10' (H241532-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/27/2024	ND	1.99	99.4	2.00	8.74	
Toluene*	<0.050	0.050	03/27/2024	ND	2.13	106	2.00	3.40	
Ethylbenzene*	<0.050	0.050	03/27/2024	ND	2.24	112	2.00	2.35	
Total Xylenes*	<0.150	0.150	03/27/2024	ND	6.86	114	6.00	1.59	
Total BTEX	<0.300	0.300	03/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	03/27/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/26/2024	ND	221	110	200	3.05	
DRO >C10-C28*	<10.0	10.0	03/26/2024	ND	225	112	200	1.12	
EXT DRO >C28-C36	<10.0	10.0	03/26/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/25/2024	Sampling Date:	03/22/2024
Reported:	04/01/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: FS 02 10' (H241532-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/27/2024	ND	1.99	99.4	2.00	8.74	
Toluene*	<0.050	0.050	03/27/2024	ND	2.13	106	2.00	3.40	
Ethylbenzene*	<0.050	0.050	03/27/2024	ND	2.24	112	2.00	2.35	
Total Xylenes*	<0.150	0.150	03/27/2024	ND	6.86	114	6.00	1.59	
Total BTEX	<0.300	0.300	03/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	03/27/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/26/2024	ND	221	110	200	3.05	
DRO >C10-C28*	351	10.0	03/26/2024	ND	225	112	200	1.12	
EXT DRO >C28-C36	88.6	10.0	03/26/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/25/2024	Sampling Date:	03/22/2024
Reported:	04/01/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW02 0-4' (H241532-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/27/2024	ND	1.99	99.4	2.00	8.74	
Toluene*	<0.050	0.050	03/27/2024	ND	2.13	106	2.00	3.40	
Ethylbenzene*	<0.050	0.050	03/27/2024	ND	2.24	112	2.00	2.35	
Total Xylenes*	<0.150	0.150	03/27/2024	ND	6.86	114	6.00	1.59	
Total BTEX	<0.300	0.300	03/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/27/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/26/2024	ND	221	110	200	3.05	
DRO >C10-C28*	937	10.0	03/26/2024	ND	225	112	200	1.12	
EXT DRO >C28-C36	556	10.0	03/26/2024	ND					

Surrogate: 1-Chlorooctane 79.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/25/2024	Sampling Date:	03/22/2024
Reported:	04/01/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW03 0-4' (H241532-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/27/2024	ND	1.99	99.4	2.00	8.74	
Toluene*	<0.050	0.050	03/27/2024	ND	2.13	106	2.00	3.40	
Ethylbenzene*	<0.050	0.050	03/27/2024	ND	2.24	112	2.00	2.35	
Total Xylenes*	<0.150	0.150	03/27/2024	ND	6.86	114	6.00	1.59	
Total BTEX	<0.300	0.300	03/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/27/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/26/2024	ND	221	110	200	3.05	
DRO >C10-C28*	971	10.0	03/26/2024	ND	225	112	200	1.12	
EXT DRO >C28-C36	603	10.0	03/26/2024	ND					

Surrogate: 1-Chlorooctane 97.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/25/2024	Sampling Date:	03/22/2024
Reported:	04/01/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW04 4-10' (H241532-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/27/2024	ND	1.99	99.4	2.00	8.74	
Toluene*	<0.050	0.050	03/27/2024	ND	2.13	106	2.00	3.40	
Ethylbenzene*	<0.050	0.050	03/27/2024	ND	2.24	112	2.00	2.35	
Total Xylenes*	<0.150	0.150	03/27/2024	ND	6.86	114	6.00	1.59	
Total BTEX	<0.300	0.300	03/27/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/27/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/26/2024	ND	221	110	200	3.05	
DRO >C10-C28*	1920	10.0	03/26/2024	ND	225	112	200	1.12	
EXT DRO >C28-C36	523	10.0	03/26/2024	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad State: NM Zip: 88220
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H201532	SV01	4-10	C	1							3/22/24	915			
	SV02	10										1035			
	SV02	0-4										1240			
	SV03	0-4										1245			
	SV04	4-10										1250			

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Relinquished By: *CHH*
 Date: 3/25/24
 Time: 09:32
 Received By: *Shelley Keene*
 Date:
 Time:
 Verbal Results: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, T.Morrissey@ensolum.com
 REMARKS: NKMW1035646177, NAB1422637219, NKMW1106629393, NJMW1333053660, NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, Cost Center: 1080881001, NAB1833656856

Delivered By: (Circle One) UPS Bus Other:
 Observed Temp.: 4.4°C
 Corrected Temp.:
 Sample Condition: Cool Intact Yes No Yes No
 CHECKED BY: *SK* (Initials)
 Turnaround Time: Standard Rush
 Thermometer ID: #113 #140
 Correction Factor:
 Bacteria (only) Sample Condition: Cool Intact Yes No Yes No
 Corrected Temp.: °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 04, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/28/24 13:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 03 4' (H241623-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	1.88	94.1	2.00	6.87	
Toluene*	<0.050	0.050	04/01/2024	ND	1.94	96.9	2.00	5.76	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	1.92	95.9	2.00	6.30	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	5.69	94.9	6.00	6.13	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	04/01/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 91.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 04 4' (H241623-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	1.88	94.1	2.00	6.87	
Toluene*	<0.050	0.050	04/01/2024	ND	1.94	96.9	2.00	5.76	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	1.92	95.9	2.00	6.30	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	5.69	94.9	6.00	6.13	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	04/01/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.9 % 49.1-148

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*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 05 2' (H241623-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/01/2024	ND	1.88	94.1	2.00	6.87		
Toluene*	<0.050	0.050	04/01/2024	ND	1.94	96.9	2.00	5.76		
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	1.92	95.9	2.00	6.30		
Total Xylenes*	<0.150	0.150	04/01/2024	ND	5.69	94.9	6.00	6.13		
Total BTEX	<0.300	0.300	04/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	04/01/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62		
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71		
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND						

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 06 0-4' (H241623-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70		
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	QR-03	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	QR-03	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	QR-03	
Total BTEX	<0.300	0.300	04/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/01/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62		
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71		
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND						

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 06 4' (H241623-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/01/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 76.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.0 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/26/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 05 0-2' (H241623-06)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70		
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65		
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94		
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05		
Total BTEX	<0.300	0.300	04/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/01/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62		
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71		
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND						

Surrogate: 1-Chlorooctane 87.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.1 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #: Project Owner: XTO
 Project #: 03C1558291 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #: Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad State: NM Zip: 88220
 Phone #: Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP. # CONTAINERS	MATRIX						PRESERV. ICE / COOL	DATE	TIME	BTEX	TPH	CHLORIDE
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						
H241023	ES03	4	1							3/26/24	1210				
	ES04	4	1								1215				
	ES05	2	1								1255				
	SW06	0-4	1								1400				
	ES06	4	1								1410				
	SW05	0-2	1								1245				

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Relinquished By: CWH
 Date: 8-28-24
 Received By: [Signature]
 Date: 8-28-24
 Turnaround Time: Standard Rush
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address:
 REMARKS: NKMWW1035546177, NAB1422637219, NKMWW1106628393, NJMWW1333053660
 NAB1815749653, NAB1929041495, NAB1807837012, NAB1803638613,
 NAB1633956856
 Cost Center: 1080881001

Delivered By: (Circle One) Observed Temp. °C 0.3 Sample Condition Cool Intact Yes No
 Corrected Temp. °C Yes No
 Checked By: [Signature]
 Turnaround Time: Standard Rush
 Bacteria (only) Sample Condition Cool Intact Yes No
 Corrected Temp. °C Yes No

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 04, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/28/24 13:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 07 4' (H241625-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.2 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 08 4' (H241625-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.9 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 09 4' (H241625-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	0.166	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	853	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	234	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 95.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.6 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 10 4' (H241625-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	54.4	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	41.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 11 4' (H241625-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70		
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65		
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94		
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05		
Total BTEX	<0.300	0.300	04/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	04/01/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62		
DRO >C10-C28*	25.0	10.0	04/01/2024	ND	229	114	200	5.71		
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND						

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.2 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 12 4' (H241625-06)

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	0.137	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	0.336	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	6.28	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	6.75	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 140 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	74.9	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	2250	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	411	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 13 4' (H241625-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	706	50.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	336	50.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 14 4' (H241625-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	141	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	28.0	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 96.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.5 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 15 4' (H241625-09)

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	0.896	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	0.950	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	10.2	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	12.1	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 140 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	52.8	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	1480	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	225	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 67.1 % 49.1-148

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 16 4' (H241625-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62	
DRO >C10-C28*	60.2	10.0	04/01/2024	ND	229	114	200	5.71	
EXT DRO >C28-C36	49.8	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 88.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.0 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 17 4' (H241625-11)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70		
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65		
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94		
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05		
Total BTEX	<0.300	0.300	04/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	04/01/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	237	118	200	5.62		
DRO >C10-C28*	<10.0	10.0	04/01/2024	ND	229	114	200	5.71		
EXT DRO >C28-C36	<10.0	10.0	04/01/2024	ND						

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.0 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 18 4' (H241625-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	16.3	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	16.8	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 19 4' (H241625-13)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	378	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	119	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 07 0-4' (H241625-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	19.4	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	17.2	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 99.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 08 0-4' (H241625-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	04/01/2024	ND	2.10	105	2.00	4.65	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.12	106	2.00	4.94	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.18	103	6.00	6.05	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/02/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	422	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	187	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 84.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 09 0-4' (H241625-16)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.18	109	2.00	3.94	
Toluene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	4.07	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.08	104	2.00	3.99	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.04	101	6.00	4.16	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/02/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	243	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	206	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 99.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/27/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 10 0-4' (H241625-17)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/01/2024	ND	2.18	109	2.00	3.94	
Toluene*	<0.050	0.050	04/01/2024	ND	2.14	107	2.00	4.07	
Ethylbenzene*	<0.050	0.050	04/01/2024	ND	2.08	104	2.00	3.99	
Total Xylenes*	<0.150	0.150	04/01/2024	ND	6.04	101	6.00	4.16	
Total BTEX	<0.300	0.300	04/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	04/02/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	6.94	
DRO >C10-C28*	37.0	10.0	04/01/2024	ND	246	123	200	14.3	
EXT DRO >C28-C36	37.2	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 98.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC Project Manager: Wes Weichert <wweichert@ensolum.com> Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: 337 257-8307 Fax #: Project #: 03C1558291 Project Owner: XTO Project Name: Golden 8-D-B-17 Federal Battery Project Location: Sampler Name: Connor Whitman		P.O. #: Company: XTO Energy Inc. Attn: Amy Ruth Address: 3104 E. Green St. City: Carlsbad State: NM Zip: 88220 Phone #: Fax #:	
FOR LAB USE ONLY		BILL TO	
Lab I.D. H241625-1 Sample I.D. ES07 ES08 ES09 ES10 ES11 ES12 ES13 ES14 ES15 ES16		Sample Depth (feet) 4' (G)RAB OR (C)COMP. # CONTAINERS 1 MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL ✓ OTHER : DATE 3/27/24 TIME 10:15 10:20 10:25 10:30 10:35 10:40 10:45 10:50 12:05 12:10	
Relinquished By: CWH Date: 3-28-24 Time: 1342 Received By: [Signature] Date: Time:		ANALYSIS REQUEST BTEX TPH CHLORIDE	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C 0.3 Corrected Temp. °C Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes CHECKED BY: [Signature] (Initials)	
Turnaround Time: Standard Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Corrected Temp. °C		REMARKS: NKMW1035646177, NAB1422637219, nKMW1106629393, NJMW133053660 NAB1815749653, NAB1929041495, NAB1607837012, NAB1803639613, Cost Center: 1080881001 NAB1633958656	

† Cardinal cannot accept verbal changes. Please email changes to cely.keene@cardinallabsnm.com



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 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H241625	PS17	4	C	1							3/22/24	1215			
	FS18	4										1220			
	FS19	4										1255			
	SW07	0-4										1305			
	SW08	0-4										1310			
	SW09	0-4										1315			
	SW10	0-4										1320			

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Relinquished By: *CSH*
 Date: 3-28-24
 Time: 1342
 Received By: *Connor Whitman*
 Date:
 Time:
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, T.Morrissey@ensolum.com
 REMARKS: NKMW1035646177, NAB1422637219, nKMW1106629393, NJMW1333053680, NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, NAB1633656856
 Cost Center: 1080881001
 Turnaround Time: Standard Rush
 Thermometer ID: ~~443~~ #1140
 Correction Factor: ~~0.02~~ 0.02
 Bacteria (only) Sample Condition: Cool Intact Yes No No No
 Corrected Temp. °C:
 Checked By: *CSH*

Delivered By: (Circle One) Observed Temp. °C: 0.3 Corrected Temp. °C:
 Sampler - UPS - Bus - Other: Sample Condition: Cool Intact Yes No No No
 FORM 000 REV. 02/10/12
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 04, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/28/24 13:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 11 0-4' (H241634-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/02/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	150	10.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	103	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 78.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 12 0-4' (H241634-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/01/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	1070	10.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	382	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 13 0-4' (H241634-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	04/01/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	129	10.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	168	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 88.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 14 0-4' (H241634-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	04/01/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	597	10.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	197	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 93.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 15 0-4' (H241634-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	04/01/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	1340	10.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	508	10.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	03/28/2024	Sampling Date:	03/28/2024
Reported:	04/04/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: SW 16 0-4' (H241634-06)

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	2.83	
Toluene*	<0.050	0.050	04/02/2024	ND	2.14	107	2.00	3.16	
Ethylbenzene*	<0.050	0.050	04/02/2024	ND	2.09	105	2.00	3.40	GC-NC
Total Xylenes*	<0.150	0.150	04/02/2024	ND	6.34	106	6.00	3.28	
Total BTEX	<0.300	0.300	04/02/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 165 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/01/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	04/01/2024	ND	229	115	200	4.88	
DRO >C10-C28*	2980	50.0	04/01/2024	ND	235	117	200	7.61	
EXT DRO >C28-C36	1300	50.0	04/01/2024	ND					

Surrogate: 1-Chlorooctane 80.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #: Project Owner: XTO
 Project #: 03C1558291
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Connor Whitman
 P.O. #: Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
H2411234	Sw11	0-4	C	1								3/24/24	1030			
	Sw12												1035			
	Sw13												1040			
	Sw14												1115			
	Sw15												1105			
	Sw16												1150			

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Relinquished By: *[Signature]*
 Date: 3/28/24
 Received By: *[Signature]*
 Date: 3/31/24
 Remarks: NKMW1035646177, NAB1422637219, nKMMW1106629393, N.JMMW1333053660, NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, NAB1633658856
 Cost Center: 1080881001
 Turnaround Time: Standard Rush
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, T.Morrissey@ensolum.com

Delivered By: (Circle One) Observed Temp. °C Corrected Temp. °C
 Sampler - UPS - Bus - Other: Cool Intact Yes No
 Sample Condition: Checked By: (Initials)
 Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 09, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/03/24 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, prominent "C" at the beginning.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 17 0-4 (H241744-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.14	107	2.00	3.37	
Toluene*	<0.050	0.050	04/05/2024	ND	2.09	105	2.00	3.38	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.01	101	2.00	3.27	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	5.83	97.2	6.00	3.51	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/05/2024	ND	218	109	200	2.45	
DRO >C10-C28*	142	10.0	04/05/2024	ND	224	112	200	0.883	
EXT DRO >C28-C36	45.3	10.0	04/05/2024	ND					

Surrogate: 1-Chlorooctane 88.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 18 0-4 (H241744-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.14	107	2.00	3.37	
Toluene*	<0.050	0.050	04/05/2024	ND	2.09	105	2.00	3.38	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.01	101	2.00	3.27	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	5.83	97.2	6.00	3.51	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/05/2024	ND	218	109	200	2.45	
DRO >C10-C28*	1090	10.0	04/05/2024	ND	224	112	200	0.883	
EXT DRO >C28-C36	595	10.0	04/05/2024	ND					

Surrogate: 1-Chlorooctane 79.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 19 4-10 (H241744-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.14	107	2.00	3.37	
Toluene*	<0.050	0.050	04/05/2024	ND	2.09	105	2.00	3.38	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.01	101	2.00	3.27	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	5.83	97.2	6.00	3.51	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	214	107	200	6.64	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	208	104	200	2.99	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					

Surrogate: 1-Chlorooctane 69.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 20 4-10 (H241744-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	4.33	
Toluene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	3.86	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	1.98	98.9	2.00	3.71	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.01	100	6.00	3.90	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	214	107	200	6.64	
DRO >C10-C28*	107	10.0	04/04/2024	ND	208	104	200	2.99	
EXT DRO >C28-C36	18.4	10.0	04/04/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 21 10' (H241744-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	4.33	
Toluene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	3.86	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	1.98	98.9	2.00	3.71	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.01	100	6.00	3.90	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	214	107	200	6.64	
DRO >C10-C28*	760	10.0	04/04/2024	ND	208	104	200	2.99	
EXT DRO >C28-C36	170	10.0	04/04/2024	ND					

Surrogate: 1-Chlorooctane 85.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 22 4' (H241744-06)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	4.33		
Toluene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	3.86		
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	1.98	98.9	2.00	3.71		
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.01	100	6.00	3.90		
Total BTEX	<0.300	0.300	04/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	04/08/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/05/2024	ND	214	107	200	6.64		
DRO >C10-C28*	56.0	10.0	04/05/2024	ND	208	104	200	2.99		
EXT DRO >C28-C36	17.0	10.0	04/05/2024	ND						

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/03/2024	Sampling Date:	04/03/2024
Reported:	04/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	** (See Notes)
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 23 10' (H241744-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	4.33	
Toluene*	<0.050	0.050	04/05/2024	ND	2.04	102	2.00	3.86	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	1.98	98.9	2.00	3.71	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.01	100	6.00	3.90	
Total BTEX	<0.300	0.300	04/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	04/08/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/05/2024	ND	214	107	200	6.64	
DRO >C10-C28*	283	10.0	04/05/2024	ND	208	104	200	2.99	
EXT DRO >C28-C36	70.3	10.0	04/05/2024	ND					

Surrogate: 1-Chlorooctane 82.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:
Project Manager: Wes Weichert <wweichert@ensolum.com>		Company: XTO Energy Inc.
Address: 3122 National Parks Hwy		Attn: Amy Ruth
City: Carlsbad	State: NM Zip: 88220	Address: 3104 E. Green St.
Phone #: 337 257-8307	Fax #:	City: Carlsbad
Project #: 03C1558291	Project Owner: XTO	State: NM Zip: 88220
Project Name: Golden 8-D-B-17 Federal Battery	Phone #:	
Project Location:	Fax #:	
Sampler Name: Omar Handy		

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H241744	1 SW 17	0-4								4/3/24	8:50				
	2 SW 18	0-4									10:40				
	3 SW 19	4-10									9:40				
	4 SW 20	4-10									12:35				
	5 ES 21	10'									12:50				
	6 ES 22	4'									12:55				
	7 ES 23	10'									13:20				

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising from this contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Dmg</i>	Date: 4/3/24	Received By: <i>[Signature]</i>
Time: 7:00		
Date:		
Time:		

Delivered By: (Circle One)	Observed Temp. °C	15.9	Sample Condition	Checked By: <i>[Signature]</i>
Sampler - UPS - Bus - Other:	Corrected Temp. °C		Cool Intact	(Initials)
			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 11, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/05/24 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/04/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 27 10' (H241795-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	1260	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	245	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/04/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 29 4' (H241795-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	240	120	200	2.92	
DRO >C10-C28*	56.5	10.0	04/09/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/04/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 31 18' (H241795-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	259	129	200	7.50	
DRO >C10-C28*	11.0	10.0	04/09/2024	ND	255	127	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 93.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Omar Hamdy
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM zip: 88220
 Phone #:
 Fax #:
 MATRIX: GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER:
 PRESERV: ACID/BASE, ICE / COOL, OTHER:
 SAMPLING: DATE, TIME

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	BTEX	TPH	CHLORIDE
H241785	1 ES27	10'					4/4/24 8:45	/	/	/
	2 ES29	4'					4/4/24 8:55	/	/	/
	3 ES31	18'					4/4/24 13:00	/	/	/

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Relinquished By: Omar Hamdy
 Date: 4/5/24
 Received By: [Signature]
 Date: 4/5/24
 Time: 14:00
 Checked By: [Signature]
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com> TMorrissey@ensolum.com
 REMARKS: NKMW1035646177, NAB1422637219, NKMW1106629393, NJMMW1333053660, NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, NAB1633656896
 Cost Center: 1080881001

Delivered By: (Circle One) Observed Temp. °C: 44.1
 Sampler - UPS - Bus - Other: Corrected Temp. °C:
 Sample Condition: Cool Intact Yes No
 Turnaround Time: Standard Rush
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Thermometer ID #140
 Correction Factor 0.5°C @ 4/5/24
 Corrected Temp. °C:
 † Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 11, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/05/24 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/05/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 11 0-4' (H241794-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	102	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	30.5	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 77.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/05/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 21 0-4' (H241794-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	<10.0	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 85.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/05/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 23 0-4' (H241794-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	51.7	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 84.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/05/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 22 0-4' (H241794-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	17.9	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/05/2024	Sampling Date:	04/05/2024
Reported:	04/11/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: F I5 A 10' (H241794-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.04	102	2.00	2.53	
Toluene*	<0.050	0.050	04/09/2024	ND	2.18	109	2.00	2.79	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.23	112	2.00	3.81	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.68	111	6.00	3.64	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	04/09/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	240	120	200	2.92	
DRO >C10-C28*	<10.0	10.0	04/08/2024	ND	222	111	200	2.59	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					

Surrogate: 1-Chlorooctane 93.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.0 % 49.1-148

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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Omar Hamdy
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #:
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :					
HB41794	OH 4/5/24	18'											4/4/24	8:45				
		0-4'											4/4/24	8:55				
		0-4'											4/4/24	8:55				
		0-4'											4/5/24	8:25				
		0-4'											4/5/24	8:55				
		0-4'											4/5/24	9:40				
		10'											4/5/24	10:50				
													4/5/24	12:20				

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Relinquished By: Omar Hamdy
 Date: 4/5/24
 Received By: *[Signature]*
 Date: 4/5/24
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, TMorrissey@ensolum.com
 REMARKS: NKMW1035646177, NAB1422637219, nKMW1106629393, NJMW133053660, NAB1815749653, NAB1929041495, NAB1607837012, NAB1803638613, NAB1633658585
 Cost Center: 1080881001

Delivered By: (Circle One) Observed Temp. °C 13.4
 Sampler - UPS - Bus - Other: Corrected Temp. °C
 Sample Condition: Intact Cool Yes No
 CHECKED BY: (Initials) *[Signature]*
 Turnaround Time: Standard Rush
 Thermometer ID #115-#140
 Correction Factor 0.56
 Bacteria (only) Sample Condition Observed Temp. °C
 Cool Intact Yes No
 Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 18, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/12/24 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/11/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 12A 15' (H241940-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.16	108	2.00	3.91	
Toluene*	<0.050	0.050	04/15/2024	ND	2.17	109	2.00	3.43	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.23	111	2.00	1.50	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.74	112	6.00	0.737	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/11/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 24 0-4' (H241940-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.16	108	2.00	3.91	
Toluene*	<0.050	0.050	04/15/2024	ND	2.17	109	2.00	3.43	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.23	111	2.00	1.50	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.74	112	6.00	0.737	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/11/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 27A 15' (H241940-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50	
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	<10.0	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 78.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 34 4' (H241940-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50	
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	36.6	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	10.9	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 35 4' (H241940-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50		
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620		
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892		
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84		
Total BTEX	<0.300	0.300	04/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	04/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889		
DRO >C10-C28*	71.5	10.0	04/15/2024	ND	185	92.7	200	1.70		
EXT DRO >C28-C36	19.5	10.0	04/15/2024	ND						

Surrogate: 1-Chlorooctane 84.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 11 0-4' (H241940-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50	
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	382	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	264	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 88.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: FS 33 18' (H241940-07)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50		
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620		
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892		
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84		
Total BTEX	<0.300	0.300	04/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	04/15/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889		
DRO >C10-C28*	12.9	10.0	04/15/2024	ND	185	92.7	200	1.70		
EXT DRO >C28-C36	<10.0	10.0	04/15/2024	ND						

Surrogate: 1-Chlorooctane 79.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	04/12/2024	Sampling Date:	04/12/2024
Reported:	04/18/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: SW 13 0-4' (H241940-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.50	
Toluene*	<0.050	0.050	04/15/2024	ND	2.15	108	2.00	0.620	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.09	105	2.00	0.892	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.25	104	6.00	1.84	
Total BTEX	<0.300	0.300	04/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/15/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/15/2024	ND	187	93.4	200	0.0889	
DRO >C10-C28*	179	10.0	04/15/2024	ND	185	92.7	200	1.70	
EXT DRO >C28-C36	184	10.0	04/15/2024	ND					

Surrogate: 1-Chlorooctane 81.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #: 337 257-8307
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sampler Name: Omar Hamdy
 P.O. #: _____
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: _____
 Fax #: _____

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H34940	1 ES 12A	15'			X	X	X	X	X	X	4/11/24	9:50			
	2 SW 24	0-4'			X	X	X	X	X	X	4/11/24	12:50			
	3 ES 27A	15'			X	X	X	X	X	X	4/11/24	13:10			
	4 ES 34	4'			X	X	X	X	X	X	4/12/24	9:20			
	5 ES 35	4'			X	X	X	X	X	X	4/12/24	9:25			
	6 SW 11	0-4'			X	X	X	X	X	X	4/12/24	12:05			
	7 ES 33	18'			X	X	X	X	X	X	4/12/24	10:30			
	8 SW 13	0-4'			X	X	X	X	X	X	4/12/24	12:20			

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Relinquished By: Omar
 Date: 4/11/24
 Time: 14:50
 Received By: [Signature]
 Date: _____
 Time: _____

Delivered By: (Circle One) Observed Temp. °C: 11 Corrected Temp. °C: _____
 Sampler - UPS - Bus - Other: _____
 Sample Condition: Cool Intact Yes [X] No []
 Checked By: [Signature]
 Turnaround Time: Standard [X] Bacteria (only) Sample Condition: Cool Intact Yes [X] No []
 Thermometer ID #443-4140 Corrected Temp. °C: 4/12/24
 Cost Center: 1080881001

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 09, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/03/24 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 25 0-4' (H242405-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.87	93.6	2.00	0.698	
Toluene*	<0.050	0.050	05/04/2024	ND	1.93	96.4	2.00	0.238	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.97	98.5	2.00	0.288	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.73	95.5	6.00	0.146	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	66.3	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 26 0-4' (H242405-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.87	93.6	2.00	0.698	
Toluene*	<0.050	0.050	05/04/2024	ND	1.93	96.4	2.00	0.238	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.97	98.5	2.00	0.288	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.73	95.5	6.00	0.146	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 27 0-4' (H242405-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.87	93.6	2.00	0.698	
Toluene*	<0.050	0.050	05/04/2024	ND	1.93	96.4	2.00	0.238	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.97	98.5	2.00	0.288	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.73	95.5	6.00	0.146	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 28 0-4' (H242405-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.87	93.6	2.00	0.698	
Toluene*	<0.050	0.050	05/04/2024	ND	1.93	96.4	2.00	0.238	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.97	98.5	2.00	0.288	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.73	95.5	6.00	0.146	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 29 0-4' (H242405-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.87	93.6	2.00	0.698	
Toluene*	<0.050	0.050	05/04/2024	ND	1.93	96.4	2.00	0.238	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.97	98.5	2.00	0.288	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.73	95.5	6.00	0.146	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	<10.0	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.3 % 49.1-148

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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

BILL TO

ANALYSIS REQUEST

Project Manager: Wes Weichert
 Address: 601 N Marientfeld Street, Suite 400
 City: Midland State: TX Zip: 79701
 Phone #: 816-266-8738 Fax #: 816-266-8738
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location: 32.491441, -104.00799
 Sampler Name: Tracy Hillard

P.O. #: _____
 Company: XTO Energy
 Attn: Amy Ruth
 Address: 3104 E. Green St
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: 432-461-0571
 Fax #: _____

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
<u>1222465</u>	<u>SW25</u>	<u>0-4</u>	<u>C</u>	<u>1</u>								<u>5-24</u>	<u>1030</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>SW26</u>	<u>0-4</u>	<u>1</u>										<u>1240</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>SW27</u>	<u>0-4</u>	<u>1</u>										<u>1250</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>SW28</u>	<u>0-4</u>	<u>1</u>										<u>1255</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>SW29</u>	<u>0-4</u>	<u>1</u>										<u>1330</u>	<u>X</u>	<u>X</u>	<u>X</u>

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Relinquished By: [Signature]
 Date: 5/3/24
 Time: 0700

Received By: [Signature]
 Date: 5/3/24
 Time: 1150

Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: Wweichert@ensl
 Bell@ensolium.com, TMorrissey@ensolium.com, THillard@ensolium.com

Delivered By: (Circle One) UPS
 Sampler - UPS - Bus - Other:
 Observed Temp. °C: 4.2
 Corrected Temp. °C: _____
 Sample Condition: Intact
 Cool Intact: Yes No
 Checked By: [Signature] (Initials)
 Turbidity Time: 1080881001
 Thermometer ID: 1443
 Correction Factor: 0.00
 Bacteria (only) Sample Condition: Standard
 Cool Intact: Yes No
 Corrected Temp. °C: _____



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 09, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/03/24 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 05 4' (H242406-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.94	97.0	2.00	1.33	
Toluene*	<0.050	0.050	05/04/2024	ND	1.96	97.9	2.00	1.56	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.94	97.2	2.00	2.08	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.71	95.2	6.00	2.17	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	43.0	10.0	05/03/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	48.5	10.0	05/03/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 25 15' (H242406-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.94	97.0	2.00	1.33	
Toluene*	<0.050	0.050	05/04/2024	ND	1.96	97.9	2.00	1.56	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.94	97.2	2.00	2.08	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.71	95.2	6.00	2.17	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	05/07/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	25.0	10.0	05/04/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/04/2024	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 26 10' (H242406-03)

BTEX 8021B		mg/kg		Analyzed By: JH				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/05/2024	ND	1.94	97.0	2.00	1.33		
Toluene*	<0.050	0.050	05/05/2024	ND	1.96	97.9	2.00	1.56		
Ethylbenzene*	<0.050	0.050	05/05/2024	ND	1.94	97.2	2.00	2.08	GC-NC	
Total Xylenes*	<0.150	0.150	05/05/2024	ND	5.71	95.2	6.00	2.17		
Total BTEX	<0.300	0.300	05/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 170 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	05/07/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	37.1	10.0	05/04/2024	ND	196	98.2	200	2.76		
DRO >C10-C28*	2430	10.0	05/04/2024	ND	195	97.3	200	0.380		
EXT DRO >C28-C36	548	10.0	05/04/2024	ND						

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 24 10' (H242406-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/04/2024	ND	1.94	97.0	2.00	1.33		
Toluene*	<0.050	0.050	05/04/2024	ND	1.96	97.9	2.00	1.56		
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.94	97.2	2.00	2.08		
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.71	95.2	6.00	2.17		
Total BTEX	<0.300	0.300	05/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	816	16.0	05/07/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/04/2024	ND	196	98.2	200	2.76		
DRO >C10-C28*	360	10.0	05/04/2024	ND	195	97.3	200	0.380		
EXT DRO >C28-C36	122	10.0	05/04/2024	ND						

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 32 10' (H242406-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.94	97.0	2.00	1.33	
Toluene*	<0.050	0.050	05/04/2024	ND	1.96	97.9	2.00	1.56	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.94	97.2	2.00	2.08	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.71	95.2	6.00	2.17	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/07/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	246	10.0	05/04/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	70.0	10.0	05/04/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/03/2024	Sampling Date:	05/02/2024
Reported:	05/09/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 30 10' (H242406-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2024	ND	1.94	97.0	2.00	1.33	
Toluene*	<0.050	0.050	05/04/2024	ND	1.96	97.9	2.00	1.56	
Ethylbenzene*	<0.050	0.050	05/04/2024	ND	1.94	97.2	2.00	2.08	
Total Xylenes*	<0.150	0.150	05/04/2024	ND	5.71	95.2	6.00	2.17	
Total BTEX	<0.300	0.300	05/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	05/07/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2024	ND	196	98.2	200	2.76	
DRO >C10-C28*	<10.0	10.0	05/04/2024	ND	195	97.3	200	0.380	
EXT DRO >C28-C36	<10.0	10.0	05/04/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert
 Address: 601 N. Manenfield St. STE 400
 City: Midland State: TX Zip: 79701
 Phone #: 810-266-8732 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-B-17 Federal Battery
 Project Location: 32.491441, -104.00799
 Sampler Name: Tracy Hillard
 P.O. #:
 Company: XTO Energy
 Attn: Amy Ruth
 Address: 3104 E. Street
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: 432-661-0571
 Fax #:
 MATRIX: GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:
 PRESERV: ACID/BASE: ICE / COOL OTHER:
 SAMPLING: DATE: TIME:
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH	BTEX	Chloride
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:					
H242040	FS05	4	C	1			X				5-2-24	1115	X	X	X
	FS25	15													
	FS26	10													
	FS24	10													
	FS32	10													
	FS30	10													

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Relinquished By: *[Signature]* Date: 5/3/24
 Received By: *[Signature]* Date: 5/3/24
 Relinquished By: *[Signature]* Date: 5/3/24
 Received By: *[Signature]* Date: 5/3/24

Delivered By: (Circle One) UPS Bus Other:
 Observed Temp. °C: 4.2°C
 Corrected Temp. °C:
 Sample Condition: Cool Intact Yes No No No
 CHECKED BY: *[Signature]*
 Remarks: *Cost Center: 1080881001*
 Turnaround Time: Standard Rush
 Thermometer ID: *440* *440*
 Corrosion Factor: *45°C*
 Bacteria (only) Sample Condition: Cool Intact Yes No Yes No
 Corrected Temp. °C:
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: *stammings@ensolum.com*
 Email: *weichert@ensolum.com*
 Hillard & Ensolum.com

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 10, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/06/24 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 28 4 (H242432-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	187	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	73.4	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 92.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 36 4 (H242432-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	<10.0	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 32 0-4 (H242432-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	<10.0	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 91.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 31 0-4 (H242432-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	<10.0	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 98.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: SW 30 0-4 (H242432-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	<10.0	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 98.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	05/06/2024	Sampling Date:	05/03/2024
Reported:	05/10/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 20 4 (H242432-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2024	ND	2.04	102	2.00	0.955	
Toluene*	<0.050	0.050	05/07/2024	ND	2.10	105	2.00	1.58	
Ethylbenzene*	<0.050	0.050	05/07/2024	ND	2.06	103	2.00	1.99	
Total Xylenes*	<0.150	0.150	05/07/2024	ND	6.33	106	6.00	1.28	
Total BTEX	<0.300	0.300	05/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/08/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2024	ND	203	102	200	5.26	
DRO >C10-C28*	<10.0	10.0	05/07/2024	ND	199	99.5	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	05/07/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Wes Weichert <wweichert@ensolum.com>
 Address: 3122 National Parks Hwy
 City: Carlsbad State: NM Zip: 88220
 Phone #: 337 257-8307 Fax #:
 Project #: 03C1558291 Project Owner: XTO
 Project Name: Golden 8-D-B-17 Federal Battery
 Project Location:
 Sample Name: ~~General Wastewater~~ Tracy Hilliard
 P.O. #:
 Company: XTO Energy Inc.
 Attn: Amy Ruth
 Address: 3104 E. Green St.
 City: Carlsbad
 State: NM Zip: 88220
 Phone #: 432-661-0571
 Fax #:

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	CHLORIDE
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H242452	FS 28	4	C	1			X								
	FS 36	4	C	1			X			5-3-24	0820	X	X	X	
	SW32	0-4	C	1							1105				
	SW31	0-4	C	1							1110				
	SW30	0-4	C	1							1115				
	FS20	4	C	1							1120				

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Relinquished By: *[Signature]* Date: 4/14/24
 Received By: *[Signature]* Date: 4/14/24
 Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address: <wweichert@ensolum.com>, T.Morrissey@ensolum.com
 REMARKS: NKMW1035646177 NAB1422637219, NKMW1106629393 NJMW1333053660 NAB1815749653, NAB1929041495, NAB1803638613, Cost Center: 1080881001 NAB1633656856
 Turnaround Time: Standard Bacteria (only)
 Thermometer ID: *140* Cool Intact Observed Temp. °C
 Corrosion Factor: 0.5°C No Yes No No No

Delivered By: (Circle One) UPS Bus Other:
 Observed Temp. °C: *44.8*
 Corrected Temp. °C: *44.8*
 Sample Condition: Cool Intact Yes No No
 CHECKED BY: *[Signature]*
 Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 05, 2024

WES WEICHERT

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDEN 8-D-B-17 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 06/04/24 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
 WES WEICHERT
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	06/04/2024	Sampling Date:	06/03/2024
Reported:	06/05/2024	Sampling Type:	Soil
Project Name:	GOLDEN 8-D-B-17 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558291	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.491441,-104.00799		

Sample ID: FS 26 13' (H243139-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/04/2024	ND	2.06	103	2.00	1.40	
Toluene*	<0.050	0.050	06/04/2024	ND	2.21	111	2.00	0.368	
Ethylbenzene*	<0.050	0.050	06/04/2024	ND	2.23	112	2.00	1.64	
Total Xylenes*	<0.150	0.150	06/04/2024	ND	6.83	114	6.00	2.00	
Total BTEX	<0.300	0.300	06/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	06/05/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	95.0	200	0.789	
DRO >C10-C28*	39.7	10.0	06/04/2024	ND	184	91.9	200	0.999	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 85.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.3 % 49.1-148

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



APPENDIX G

October 21, 2024
Reclamation Summary



October 21, 2024

Bureau of Land Management

Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico, 88220

**Re: Reclamation Summary
Golden 8 Federal 001
Eddy County, New Mexico**

To Whom It May Concern,

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Reclamation Summary* for the Golden 8 Federal 001 well pad (Site; Figure 1). This *Reclamation Summary* documents the Site history and completed reclamation activities, and proposes vegetation monitoring activities.

SITE INFORMATION

Operator: XTO Energy, Inc.

Well Name: Golden 8 Federal 001

API Number: 30-015-26931

GPS Coordinates: 32.4912491, -104.0083542

Location: Unit K, Section 8, Township 21S, Range 29E, Eddy County, New Mexico

Landowner: Federal – Bureau of Land Management (BLM)

SITE HISTORY

- The Golden 8 Federal 001 well is an oil and gas well that was in production between December 1992 and December 2009.
- The well was plugged and abandoned on July 29, 2011, in accordance with the procedures provided in the approved Form C-103, *Sundry Notices and Reports on Wells*.
- A review of the New Mexico Oil Conservation Division (NMOCD) well records and available historical satellite imagery was completed.
 - No pits were documented in the NMOCD well records. No pits were identified during a review of historical satellite imagery.
 - The following releases at the Site were reported to the NMOCD between 2010 and 2018:
 - Incident Number NKMW1035646177 occurred on June 14, 2010, and has a current NMOCD status of: Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator.

XTO Energy, Inc.
Reclamation Plan
Golden 8 Federal 001

- Incident Number NMLB1031249564 occurred on October 6, 2010, and was approved for closure by the NMOCD on January 16, 2015.
 - Incident Number NKMW1106629393 occurred on February 16, 2011, and has a current NMOCD status of: Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NJMW1333053660 occurred on November 25, 2013, and has a current NMOCD status of: Deferral Request Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NAB1422637219 occurred on August 12, 2014, and has a current NMOCD status of: Deferral Request Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NAB1607837012 occurred on February 1, 2016, and has a current NMOCD status of: Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NAB1633656856 occurred on November 26, 2016, and has a current NMOCD status of: Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NAB1803638613 occurred on January 18, 2018, and has a current NMOCD status of: Remediation Plan Approved, Pending submission of Remediation Closure Report from the operator.
 - Incident Number NAB1815749653 occurred on May 14, 2018, and has a current NMOCD status of: Initial C-141 Approved, Pending submission of Site Characterization / Remediation Plan OR Remediation Closure Report from the operator.
- A copy of the NMOCD Site summary is included in Appendix A.

2024 REMEDIATION ACTIVITIES

To address outstanding deferrals and releases at the site, soil excavation was completed between March and June 2024. Two separate excavations were completed: one measured approximately 2,500 square feet and the other measured approximately 1,200 square feet. Both excavations reached depths of up to 20 feet. In total, approximately 2,750 cubic yards of impacted soil were removed from the Site and disposed of at an NMOCD approved-landfill.

A *Closure Request* report for the above-listed releases is in process and will be submitted to the NMOCD and BLM. The *Closure Request* will detail the remediation activities completed at the Site and provide confirmation soil sample analytical results.

RECLAMATION ACTIVITIES

- Upon completion of remediation activities, Site reclamation proceeded. Photographs of the Site reclamation activities are included in Appendix B.
 - The reclaimed well pad area is presented on Figure 2.
 - The Site is accessed by an active lease road that will remain in-place to access other wells in the area.
 - All surface production equipment, trash, and debris were removed from the Site.

XTO Energy, Inc.
 Reclamation Plan
 Golden 8 Federal 001

- The plugged and abandoned well bore was marked with a steel well marker.
- The African Rue identified at the Site was pushed into the bottom of the open remediation excavation.
- The remaining caliche was stripped from the well pad and removed from the Site or used as backfill in the deeper portions of the remediation excavation.
- The top four feet of the remediation excavations were backfilled with locally procured topsoil.
- The well pad was recontoured to match the surrounding topography.
- The well pad will be seeded during October 2024 with the below BLM sandy sites seed mix #2 at the rate specified in pounds of pure live seed (PLS) per acre. Seed species will include:

Species/Cultivar	PLS/Acre
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

- The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled and the seed will be raked in by chaining or dragging the Site.
- The reclaimed areas were fenced to prevent livestock and wildlife from impacting vegetation establishment.
- The well pad was bermed at the entrance to discourage vehicles from entering the reclaimed areas. Seed will be broadcast on the berm to encourage stabilization.
- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Reclamation activities were documented with photographs that were timestamped with Global Positioning System (GPS) data in decimal degrees.

RECLAMATION MONITORING

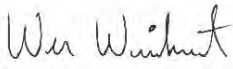
- The Site will be monitored for vegetation growth to verify that reclamation activities were successful. Focus for this phase will be to prevent erosion and Site degradation, and to monitor for and treat invasive and noxious weed species.
 - In the event erosion control management is necessary to support vegetation growth and minimize erosion until the root structures take hold, the following best management practices (BMPs) may be applied:
 - Placement of waddles in areas with a propensity for high run off rates;
 - Straw cover, if high winds are anticipated, to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
 - Other erosional control BMPs as necessary to support timely and healthy regrowth of vegetation in disturbed areas.
 - Noxious and invasive weeds will be identified and treated by a licensed contracted herbicide applicator or mechanically removed.
- Annual inspections (at a minimum) will take place at the location until revegetation is consistent with local natural vegetation density.

XTO Energy, Inc.
Reclamation Plan
Golden 8 Federal 001

- Upon completion of revegetation, a Final Abandonment Notice (FAN), Form 3160-5, will be submitted to the BLM for final inspection and release.

If you have any questions or comments regarding this document, please contact the undersigned.

Sincerely,
Ensolum, LLC



Wesley Weichert, PG
Project Geologist
(816) 266-8732
wweichert@ensolum.com



Tacoma Morrissey
Senior Managing Geologist
(337) 257-8307
tmorrissey@ensolum.com

cc: Amy Ruth, XTO Energy, Inc.

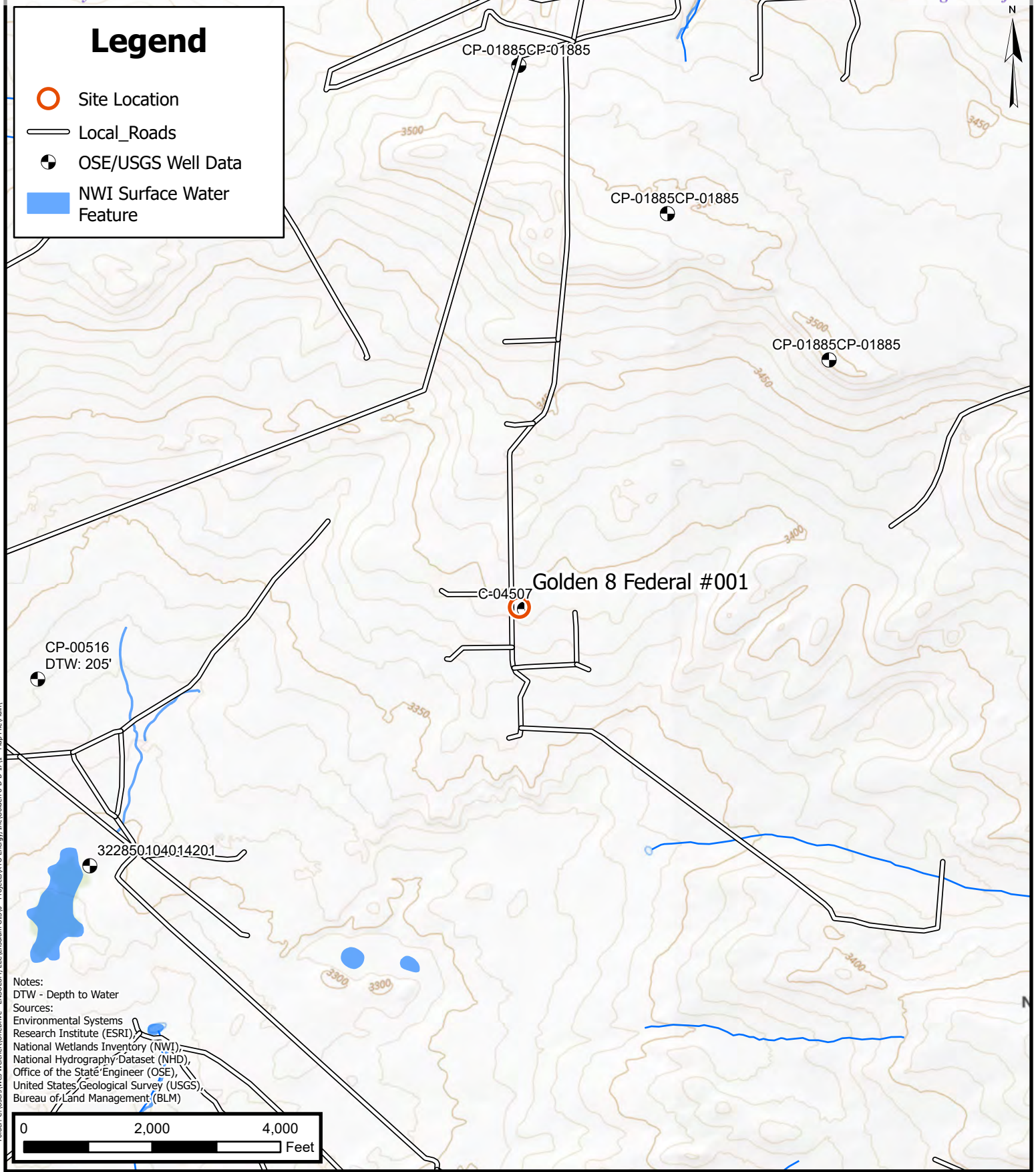
Appendices:

Figure 1 Site Location Map
Figure 2 Well Pad Reclamation Area

Appendix A NMOCD Site Summary
Appendix B Photographic Log



FIGURES



Legend

- Site Location
- Local_Roads
- OSE/USGS Well Data
- NWI Surface Water Feature

Golden 8 Federal #001

CP-01885CP-01885

CP-01885CP-01885

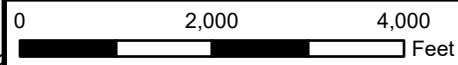
CP-01885CP-01885

CP-00516
DTW: 205'

3228501040.1420.1

Notes:
DTW - Depth to Water

Sources:
Environmental Systems
Research Institute (ESRI),
National Wetlands Inventory (NWI),
National Hydrography Dataset (NHD),
Office of the State Engineer (OSE),
United States Geological Survey (USGS),
Bureau of Land Management (BLM)



Folder: C:\Users\Wes.Weichert\OneDrive - ENSOLUM, LLC\Ensolium GIS\0 - Projects\XTO Energy, Inc\Golden 8-D-B-17 - Map File\Main

Site Location Map

XTO Energy, Inc
Golden 8-D-B-17 Federal Battery
API: 30-015-26931
32.491441, -104.00799
Eddy Co, New Mexico, United States

FIGURE



1

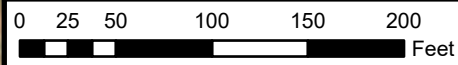


Golden 8
Federal #001



Legend

-  Site Location
-  Reclamation Area



Sources: Environmental Systems Research Institute (ESRI)



Well Pad Reclamation Area

XTO Energy, Inc
 Golden 8 Federal #001
 Unit K, Section 08, T 21S, R 29E
 Eddy County, New Mexico

FIGURE
2



APPENDIX A

OCD Permitting

Home Searches Wells Well Details

30-015-26931 GOLDEN 8 FEDERAL #001 [306396]

General Well Information

Operator:	[260737] BOPCO, L.P.	Direction:	Vertical
Status:	Plugged, Site Released	Multi-Lateral:	No
Well Type:	Oil	Mineral Owner:	Federal
Work Type:	New	Surface Owner:	Federal
Surface Location:	K-08-21S-29E 1650 FSL 2180 FWL		
Lat/Long:	32.4912491,-104.0083542 NAD83		
GL Elevation:	3390	Sing/Mult Compl:	Single
KB Elevation:		Potash Waiver:	False
DF Elevation:			

Proposed Formation and/or Notes

PA 07/29/11 BLM

Depths

Proposed:	0	True Vertical Depth:	6800
Measured Vertical Depth:	6800	Plugback Measured:	0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval:	05/01/1992	Current APD Expiration:	05/01/1994
Most Recent APD Approval:	01/01/2009		
APD Cancellation:			
APD Extension Approval:			
Spud:		Gas Capture Plan Received:	
Approved Temporary Abandonment:		TA Expiration:	
Shut In:			
Plug and Abandoned Intent Received:		PNR Expiration:	
Well Plugged:	07/29/2011	Last MIT/BHT:	
Site Release:			
Last Inspection:	03/02/2010		

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
01/01/2009	[306396] GOLDEN 8 FEDERAL	#001	[260737] BOPCO, L.P.	New	Oil	Plugged, Site Released		07/29/2011
05/01/1992	[1781] GOLDEN 8 FEDERAL	#001	[1801] BEPCO, LP	New	Oil	Active		

- Quic
- [Gene](#)
- [Histor](#)
- [Comm](#)
- [Oper](#)
- [Pits](#)
- [Casin](#)
- [Well C](#)
- [Finan](#)
- [Comp](#)
- [Repor](#)
- [Order](#)
- [Produ](#)
- [Trans](#)
- [Point](#)
- [Actior](#)

- Asso
- [Well F](#)
- [Well L](#)
- [Well L](#)
- New
- [New f](#)
- [New I](#)
- [New C](#)
- [New f](#)
- [New s](#)
- [New T](#)
- [New \](#)

Searches Operator Data Hearing Fee Application

No Pits Found

Casing

String/Hole Type	Taper	Date Set	Boreholes, Strings and Equipment Specifications			Specifications for Strings and Tubing			Strings Cemented and Intervals			Cement and Plug Description		
			Diameter	Top	Bottom (Depth)	Grade	Length	Weight	Bot of Cem	Top of Cem	Meth	Class of Cement	Sacks	Pressure Test (Y/N)
Hole 1	1		8.625	0	810		0	0.0	0	0			0	No
Surface Casing	1		8.625	0	810		810	24.0	810	0		Class C Cement	480	No
Hole 2	1		7.000	0	3165		0	0.0	0	0			0	No
Intermediate 1 Casing	1		7.000	0	3165		3165	29.0	3165	0		Class C Cement	200	No
Hole 3	1		4.500	0	6800		0	0.0	0	0			0	No
Production Casing	1		4.500	0	6800		6800	11.6	6800	0		Class C Cement	1225	No
Packer	1		4.500	4195	4200		5	0.0	0	0			0	No
Tubing 1	1		2.375	0	4195		4195	0.0	0	0			0	No

Well Completions

[28340] GOLDEN LANE, DELAWARE, SOUTH

Status: Zone Permanently Plugged Last Produced: 12/01/2009
 Bottomhole Location: K-08-21S-29E 1650 FSL 2180 FWL
 Lat/Long:
 Acreage:
 DHC: No Consolidation Code:
 Production Method: Flowing

Well Test Data

Production Test: Test Length: 0 hours
 Flowing Tubing Pressure: 0 psi Flowing Casing Pressure: 0 psi
 Choke Size: 0.000 inches Testing Method:
 Gas Volume: 0.0 MCF Oil Volume: 0.0 bbls
 Gas-Oil Ratio: 0 Kcf / bbl Oil Gravity: 0.0 Corr. API
 Disposition of Gas: Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth
	3842	6550	0	0

Notes

Event Dates

Initial Effective/Approval:	05/01/1992	TA Expiration:	
Most Recent Approval:	07/29/2011	Confidential Until:	
Confidential Requested On:		Test Allowable End:	
Test Allowable Approval:		DHC:	
TD Reached:		Rig Released:	
Deviation Report Received:	No	Logs Received:	No
Directional Survey Run:	No	Closure Pit Plat Received:	
Directional Survey Received:	No	First Gas Production:	05/01/1992
First Oil Production:	05/01/1992	Completion Report Received:	
First Injection:		New Well C-104 Approval:	
Ready to Produce:		Revoked Until:	
C-104 Approval:			
Plug Back:			
Authorization Revoked Start:			

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
07/29/2011	[306396] GOLDEN 8 FEDERAL	#001	[260737] BOPCO, L.P.	Zone Permanently Plugged	
01/01/2009	[306396] GOLDEN 8 FEDERAL	#001	[260737] BOPCO, L.P.	Active	
02/24/1994	[1781] GOLDEN 8 FEDERAL	#001	[1801] BEPCO, LP	Active	
05/01/1992	[1781] GOLDEN 8 FEDERAL	#001	[1801] BEPCO, LP	Active	

Financial Assurance

Please login to review the financial assurance associated with this well.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

cAB1815752954

Violation Source:	Incident, Spill or Release	Resolved:	
Date of Violation:	06/06/2018		
Compliance Required:	07/06/2018		

Notes

C-141 tracking 2RP-4776

Actions/Events

Event Date	Category	Type
06/06/2018	Enforcements	Pollution and Contamination

C-141 tracking 2RP-3612

Actions/Events

Event Date	Category	Type
03/18/2016	Enforcements	Pollution and Contamination

cJMW1333054861

Violation Source: Incident, Spill or Release
 Date of Violation: 11/26/2013
 Compliance Required: 12/26/2013 Resolved:

Notes

C-141 tracking, 2RP-2082

Actions/Events

Event Date	Category	Type
11/26/2013	Enforcements	Pollution and Contamination

cAB1422637994

Violation Source: Incident, Spill or Release
 Date of Violation: 08/14/2014
 Compliance Required: 09/14/2014 Resolved:

Notes

2RP-2439 tracking C-141

Actions/Events

Event Date	Category	Type
08/14/2014	Enforcements	Pollution and Contamination

cKMW1106635572

Violation Source: Incident, Spill or Release
 Date of Violation: 03/07/2011
 Compliance Required: 06/10/2011 Resolved:

Notes

C-141 tracking

Actions/Events

Event Date	Category	Type
03/07/2011	Enforcements	Pollution and Contamination

cAB1633657160

Violation Source: Incident, Spill or Release
 Date of Violation: 12/01/2016
 Compliance Required: 01/01/2017 Resolved:

Notes

Searches Operator Data Hearing Fee Application

12/01/2010	Enforcements	Pollution and Contamination
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cMLB1031249940

Violation Source: Incident, Spill or Release
 Date of Violation: 11/08/2010
 Compliance Required: 12/08/2010
 Resolved: 01/16/2015

Notes

C-141 tracking 2RP-466 closed 1/16/15

Actions/Events

Event Date	Category	Type
01/16/2015	Corrective Actions	Approved Plan (Remediation/Compliance)
11/08/2010	Enforcements	Pollution and Contamination

cKMW1035646496

Violation Source: Incident, Spill or Release
 Date of Violation: 12/22/2010
 Compliance Required: 03/27/2011
 Resolved:

Notes

C-141 tracking

Actions/Events

Event Date	Category	Type
12/22/2010	Enforcements	Pollution and Contamination

cAB1803639032

Violation Source: Incident, Spill or Release
 Date of Violation: 02/05/2018
 Compliance Required: 03/05/2018
 Resolved:

Notes

C-141 tracking 2RP-4601

Actions/Events

Event Date	Category	Type
02/05/2018	Enforcements	Pollution and Contamination

Reported Releases

The reported release volumes are sourced from C-141 submissions.

Earliest Reported Release in OCD Records: Last: 05/14/2018 [Show All Reported Releases](#)

	Release Volumes				Additional Details			
	BBLS	LBS	MCF	UNK	Type	Product	Severity	Status
2018 (2)	18	0	0	0				

Searches Operator Data Hearing Fee Application

2014 (1)	41	0	0	0
2013 (1)	21	0	0	0
2011 (1)	310	0	0	0
2010 (2)	100	0	0	0
2006 (1)	0	0	0	0
1800 (1)	0	0	0	0
Grand Total:	552	0	0	0

Orders

Please login to review the orders associated with this well.

Production / Injection

The production & injection volumes are sourced from monthly production reports (C-115) submissions.

Time Frame	12/1992 Last				12/2009				Pressure
	Oil (BBLs)	Gas (MCF)	Water (BBLs)	Days P/I	Water (BBLs)	Co2 (MCF)	Gas (MCF)	Other	
1992 Cumulative	12,570	11,988	90	99	0	0	0	0	N/A
1993	17,711	11,505	1,044	322	0	0	0	0	N/A
1994	11,446	7,491	1,750	253	0	0	0	0	N/A
1995	23,668	10,564	6,655	364	0	0	0	0	N/A
1996	12,917	6,378	8,657	362	0	0	0	0	N/A
1997	4,922	4,658	7,152	323	0	0	0	0	N/A
1998	9,189	3,697	13,625	365	0	0	0	0	N/A
1999	2,008	2,768	17,956	362	0	0	0	0	N/A
2000	5,742	1,506	31,023	358	0	0	0	0	N/A
2001	5,317	1,029	25,025	336	0	0	0	0	N/A
2002	7,184	2,192	28,680	354	0	0	0	0	N/A
2003	4,842	1,406	32,117	357	0	0	0	0	N/A
2004	3,730	1,359	28,515	355	0	0	0	0	N/A
2005	2,771	920	28,077	339	0	0	0	0	N/A
2006	1,271	891	27,008	336	0	0	0	0	N/A
2007	680	461	24,564	337	0	0	0	0	N/A

Searches Operator Data Hearing Fee Application

2009	174	927	29,634	343	0	0	0	0	N/A
2010	0	0	0	0	0	0	0	0	N/A
2011	0	0	0	0	0	0	0	0	N/A
Grand Total:	127,403	70,506	337,195	5,908	0	0	0	0	N/A

Transporters

Transporter	Product	Most Recent for Property
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Points of Disposition

ID	Type	Description	Pool(s)
514150	Water		[28340] GOLDEN LANE;DELAWARE, SOUTH
514130	Gas		[28340] GOLDEN LANE;DELAWARE, SOUTH
514110	Oil		[28340] GOLDEN LANE;DELAWARE, SOUTH

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APPENDIX B



Photographic Log
XTO Energy, Inc.
Golden 8 Federal 001



Photograph 1 Date :10/16/2024
Description: Reclaimed well pad
View: Southeast



Photograph 2 Date :10/16/2024
Description: Reclaimed well pad
View: Northwest



Photograph 3 Date :10/16/2024
Description: Reclaimed well pad
View: Southwest



Photograph 4 Date :10/16/2024
Description: Reclaimed well pad
View: Northwest

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Santa Fe, NM 87505

QUESTIONS

Action 575279

QUESTIONS

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1607837012
Incident Name	NAB1607837012 GOLDEN 8 FEDERAL #001 @ 30-015-26931
Incident Type	Oil Release
Incident Status	Reclamation Report Received
Incident Well	[30-015-26931] GOLDEN 8 FEDERAL #001

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	GOLDEN 8 FEDERAL #001
Date Release Discovered	02/01/2016
Surface Owner	Federal

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Cause: Equipment Failure Treating Tower Crude Oil Released: 30 BBL Recovered: 7 BBL Lost: 23 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEEnvNotifications@exxonmobil.com Date: 04/14/2026
--	--

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QUESTIONS, Page 3

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Site Characterization
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Between ½ and 1 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	5650
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	7790
GRO+DRO (EPA SW-846 Method 8015M)	7100
BTEX (EPA SW-846 Method 8021B or 8260B)	16.3
Benzene (EPA SW-846 Method 8021B or 8260B)	0.5

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	02/01/2016
On what date will (or did) the final sampling or liner inspection occur	06/03/2024
On what date will (or was) the remediation complete(d)	06/03/2024
What is the estimated surface area (in square feet) that will be reclaimed	7075
What is the estimated volume (in cubic yards) that will be reclaimed	2860
What is the estimated surface area (in square feet) that will be remediated	7075
What is the estimated volume (in cubic yards) that will be remediated	2860

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	No
OR is the off-site disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 04/14/2026
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Deferral Requests Only	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	561977
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/19/2026
What was the (estimated) number of samples that were to be gathered	1
What was the sampling surface area in square feet	2700

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7075
What was the total volume (cubic yards) remediated	2860
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	7075
What was the total volume (in cubic yards) reclaimed	2860

Summarize any additional remediation activities not included by answers (above)	Site assessment, delineation soil sampling, excavation, excavation soil sampling activities were conducted at the Site to address impacted soil from multiple crude oil and produced water releases that occurred between 2010 and 2019. Following the decommissioning of the site a total of approximately 2,860 cubic yards of soil were removed from the site during the excavation of the impacted area, 7,075 sq ft. Impacted soil was excavated to the reclamation requirement within the top four feet of soil and to Closure Criteria at depths greater than 4 feet bgs. The excavation was backfilled, the well pad was recontoured to match the surrounding topography, and the well pad was reseeded with BLM sandy sites seed mix #2 in October 2024.
---	---

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 04/14/2026
--	---

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Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	3080
What was the total volume of replacement material (in cubic yards) for this site	590
<i>Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.</i>	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeded commence(d)	05/19/2026
Summarize any additional reclamation activities not included by answers (above)	The excavation was backfilled, the well pad was recontoured to match the surrounding topography, and the well pad was reseeded with BLM sandy sites seed mix #2 in May 2026.
<i>The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeded plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 04/14/2026

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 8

Action 575279

QUESTIONS (continued)

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
<i>Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.</i>	
Requesting a restoration complete approval with this submission	No
<i>Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.</i>	

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CONDITIONS

Action 575279

CONDITIONS

Operator: XTO ENERGY, INC 3617 North Big Spring Street Midland, TX 79705	OGRID: 5380
	Action Number: 575279
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The reclamation report has been approved pursuant to 19.15.29.13 E. NMAC. The acceptance of this 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; or if the location fails to revegetate properly. In addition, the OCD approval does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.	4/21/2026