COMPLIANCE / ENGINEERING / REMEDIATION

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

March 22, 2018

Ms. Crystal Weaver
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Proposed Work Plan
Golden 8 Federal Central Tank Battery
2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601
XTO Energy, Inc.
Eddy County, New Mexico

Dear Ms. Weaver:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), proposes the following work plan to investigate impacted soil at the Golden 8 Federal Central Tank Battery (Site) in response to multiple historic releases and one recent release of crude oil and produced water. All releases were reported to the New Mexico Oil Conservation Division (NMOCD) on multiple Release Notification and Corrective Action Forms C-141s dating from June 14, 2010 through November 26, 2017. The historic releases (2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017) occurred while the Site was owned by a former operator but were never closed; the more recent release (2RP-4601) occurred after XTO assumed operation of the Site. This work plan is being submitted in response to the conditions of approval from the NMOCD documented on the C-141 for 2RP-4601. However, LTE had already begun investigating historical impact to soil. As such, LTE is presenting the results of preliminary sampling of both historic and new releases in this report. LTE proposes to address all releases concurrently with this work plan that includes additional delineation and subsequent remediation by excavation.

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 New Mexico Oil Conservation Division (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 proposes a site-specific chloride action level of 600 mg/kg or within range (±10%) of background concentrations.

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 earthern 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 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
ft^2 – square feet

PRELIMINARY SOIL SAMPLING

LTE collected a total of 16 soil samples from the Site on the following dates: March 3, 2018, March 6, 2018, and March 9, 2018. LTE has depicted the sample locations on Figure 2, Figure 3, and Figure 4. The sample groups represented on the different figures are based on the location of the source (e.g. samples for releases associated with the tank battery are on Figure 2). During the site visits, LTE confirmed the release footprint based on visual observations of soil staining or used the associated C-141 information to approximate the affected area. To investigate potential impact to soil, LTE collected samples at the surface of the recent release and from approximately 6 inches below ground surface by hand auger at the historic releases. All surface and subsurface soil samples were submitted to a certified laboratory for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021, TPH – gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) by EPA Method 8015, and chloride by EPA Method 300.1.

Laboratory analytical results indicate three of sixteen samples contained concentrations of contaminants that exceeded NMOCD regulatory standards. One sample west of the tank battery, and one sample in the pasture south of the well pad contained TPH concentrations exceeding NMOCD standards. A sample southwest of the tank battery collected just beneath the ground surface contained chloride concentrations exceeding NMOCD regulatory standards, but an additional sample collected at 6 inches bgs did not contain detectable chloride concentrations. Laboratory analytical results are presented on Figures 2, 3, and 4 and on Tables 1, 2, and 3. The complete laboratory analytical reports are attached.

ADDITIONAL DELINEATION

Additional investigation of soil impact will be conducted. LTE proposes to address 2RP-633, 2RP-3612 and 2RP-4017, which involved releases extending east of the well pad, by advancing boreholes via hand auger or pot holing in the locations identified on Figure 2. Continuous soil samples will be logged and

described using the Unified Soil Classification System (USCS) to delineate potential hydrocarbon and saltwater impacts. The intervals from immediately beneath the ground surface and then every five feet thereafter will be screened for volatile aromatic hydrocarbons as well as any soil that is stained or has a hydrocarbon odor using a photo-ionization detector (PID). Soil samples with the highest PID result or from the bottom of each borehole will be submitted to a certified laboratory for analysis of BTEX, TPH –GRO, DRO, and MRO by EPA Method 8015, and chloride by EPA Method 300.1. Additional soil borings will be advanced radially in approximately 50-foot intervals from any soil boring demonstrating significant evidence of impacts. The soil borings will be advanced until field screening suggests the extent of hydrocarbon and chloride soil impact is below NMOCD standards based on site ranking, and laboratory analysis will be used to confirm field results. LTE will require Bureau of Land Management (BLM) clearance to disrupt the off-pad area.

On the well pad, LTE will collect surface samples from inside containments where possible as shown on Figure 2. Additionally, LTE will advance soil borings at the locations on the well pad where concentrations of TPH and/or chloride were previously identified exceeding NMOCD standards to delineate vertical extent of observed impact to soil (Figure 2 and Figure 3). LTE will follow the same sampling methods previously described.

PROPOSED REMEDIATION

Because initial sampling results suggest impact is restricted to certain areas, LTE proposes using heavy equipment in the two soil sampling areas on the well pad that are noncompliant with NMOCD standards to excavate impacted soil. As soil is removed, LTE personnel will conduct field screening of organic vapor concentrations with a photoionization detector (PID) according to New Mexico Oil Conservation Division (NMOCD) headspace techniques and chloride using Hach® chloride test strips to determine if additional excavation is required. Once field screening results indicate impacted soil had been removed, LTE will collect confirmation soil samples of the sidewalls and floor of any excavation. Soil samples will be collected to cover approximately every 50 square feet of floor of the excavation and every 50 linear feet of sidewalls. Soil samples will be stored on ice and delivered to a certified laboratory under strict chain-of-custody procedures. Since benzene and BTEX results in preliminary samples were below detection limits, no BTEX will be analyzed in the confirmation samples. The soil samples will be analyzed for TPH – GRO, DRO, and MRO by EPA Method 8015B and chloride by EPA Method 300.1.

For the area affected by misting south of the well pad, the sample collected from 0.5 feet bgs serves as the confirmation soil sample. Impacted soil above 0.5 feet bgs will be removed and no additional samples will be collected in that area. Once soil delineation sampling is complete east of the well pad, LTE will address that off-pad area via excavation as previously described.

Soil excavation will address the full lateral extent of impact encountered. LTE will attempt to excavate the full vertical extent of impact; however, should impact extend beyond four feet bgs, LTE will provide NMOCD with a status update and request to install a 20-mil impermeable liner over residual impacted soil. LTE will include construction specifications in that request, which will be specific to existing site conditions. All excavated soil will be transported to Lea Land (NMOCD Permit # WM01) for disposal. Upon receipt of samples documenting compliance with NMOCD standards, LTE will backfill the on-site excavated area with new caliche. Should backfill be required in the off-site area, LTE will apply soil that meets blends with the native surroundings.

REPORTING

XTO will prepare a report documenting all field activities and describing results for submittal to the NMOCD. The report will include site maps and a table of laboratory analytical results. A report will be submitted within two weeks of receipt of laboratory analytical reports. Should this work plan need revision based on results of additional delineation or site conditions during remediation work, LTE will submit by email preliminary results to NMOCD with proposed changes and/or requests for modifications.

SCHEDULE

XTO will complete the investigation within four weeks of the date of approval of this work plan by NMOCD.

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.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

Attachments:

Figure 1	Site Location Map
Figure 2	Site Sample Locations (2RP-633, 2RP-521, 2RP-2082, 2RP-2439)
Figure 3	Site Sample Locations (2RP-3612, 2RP-4017)
Figure 4	Site Sample Locations (2RP-4601)
Table 1	Soil Analytical Results (2RP-633, 2RP-521, 2RP-2082, 2RP-2439)
Table 2	Soil Analytical Results (2RP-3612, 2RP-4017)
Table 3	Soil Analytical Results (2RP-4601)
Attachment 1	Initial NMOCD Forms C-141
Attachment 2	Laboratory Analytical Reports

Cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Shelly Tucker, BLM

FIGURES

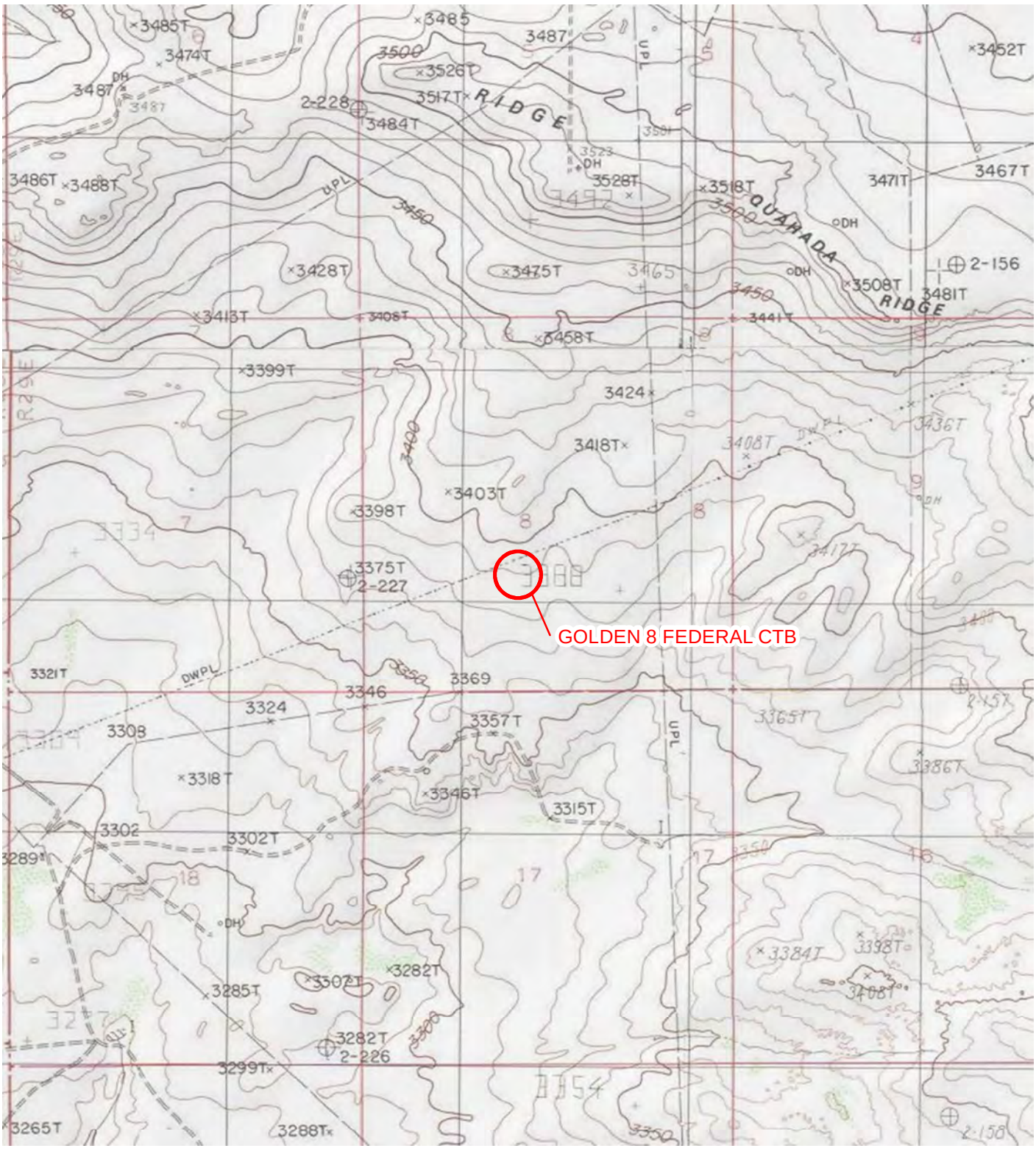

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NOTE:
2RP-633, 2RP-521, 2RP-2028, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601

CTB-Central Tank Battery

NEW MEXICO

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

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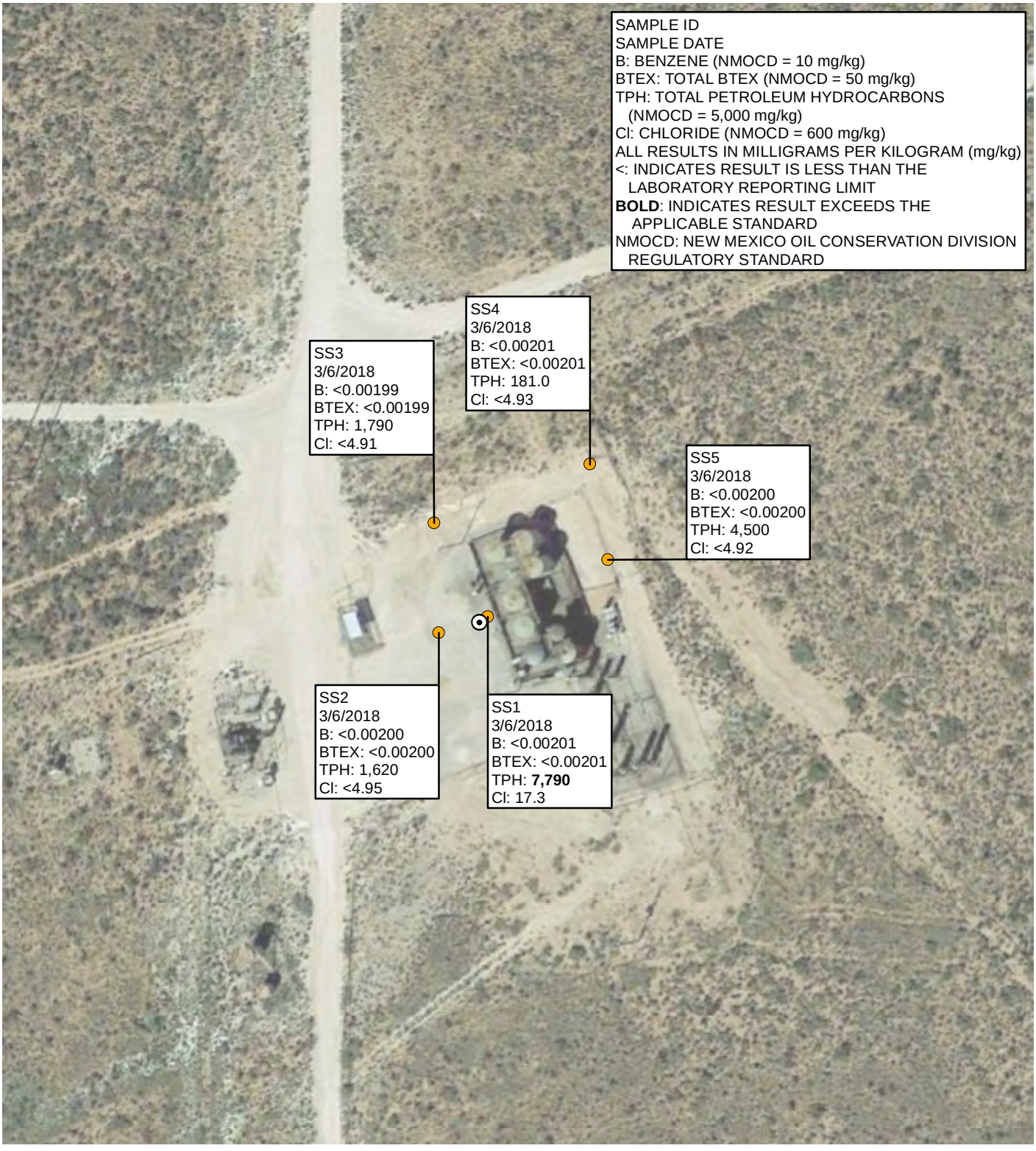

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- SOIL SAMPLE
- PROPOSED SOIL SAMPLE

0 100 200

Feet

N

NOTE:
2RP-633, 2RP-521, 2RP-2082, 2RP-2439
CTB-Central Tank Battery

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

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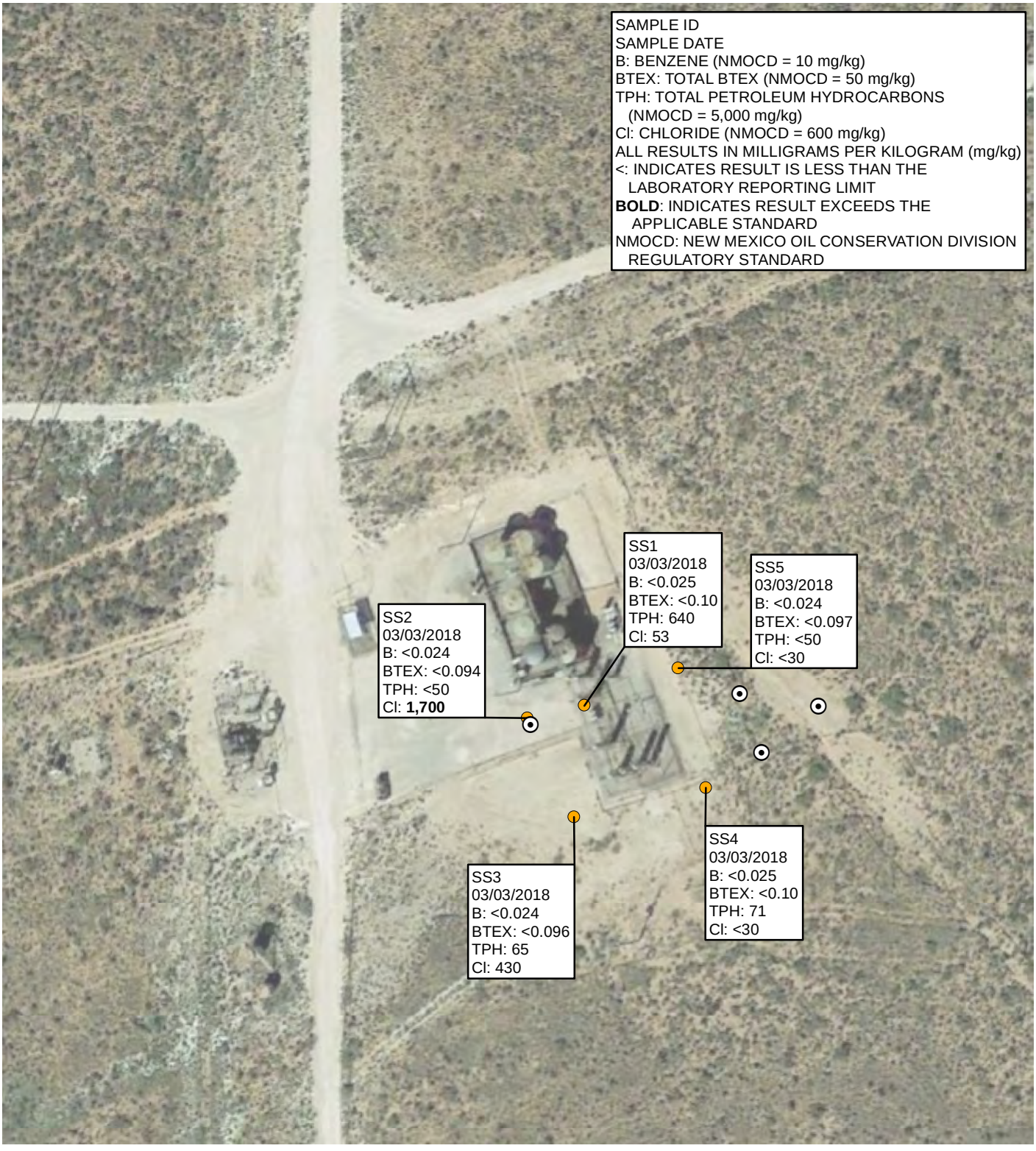

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- SOIL SAMPLE
- PROPOSED SAMPLE LOCATION

0 100 200
Feet

N

FIGURE 3
SITE SAMPLE LOCATIONS
GOLDEN 8 FEDERAL #1
NESW SEC 8 T21S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: 2RP-3612

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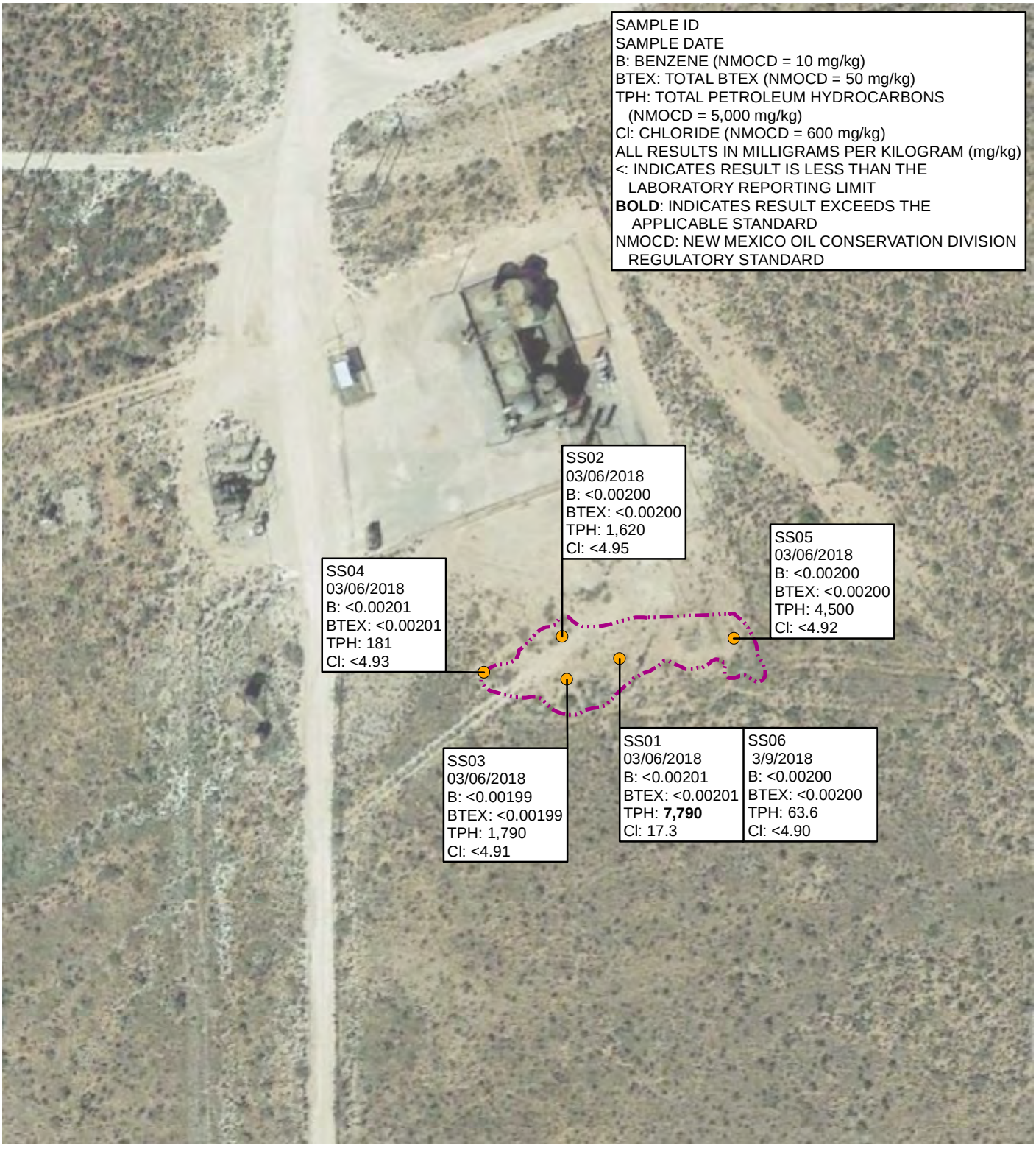

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

SOIL SAMPLE

MIST EXTENT

0 100 200

Feet

N

NOTE:
2RP-4601
CTB: Central Tank Battery

FIGURE 4
SITE SAMPLE LOCATIONS
GOLDEN 8 FEDERAL BATTERY #1
NESW SEC 8 T21S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS
GOLDEN 8 FEDERAL CTB
2RP-633, 2RP-521, 2RP-2082, 2RP-2439
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)
SS01	0.5	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<74.9	7,100	686	**7,790**	17.3
SS02	0.5	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1,540	82.7	1,620	<4.95
SS03	0.5	3/6/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	1,700	89.9	1,790	<4.91
SS04	0.5	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	155	26.4	181.0	<4.93
SS05	0.5	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.8	3,900	604	4,500	<4.92
NMOCD Regulatory Standard		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.

TABLE 2
SOIL ANALYTICAL RESULTS
GOLDEN 8 FEDERAL #1
2RP-3612
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)
SS01	0.5	03/03/2018	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	230	410	640	53
SS02	0.5	03/03/2018	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<10	<50	<50	**1,700**
SS03	0.5	03/03/2018	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	11	54	65	430
SS04	0.5	03/03/2018	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.9	71	71	<30
SS05	0.5	03/03/2018	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<10	<50	<50	<30
NMOCD Regulatory Standard		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.

TABLE 3
SOIL ANALYTICAL RESULTS
GOLDEN 8 FEDERAL BATTERY #1
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)
SS01	Surface	03/06/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<74.9	7100	686	**7,790**	17.3
SS02	Surface	03/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1540	82.7	1620	<4.95
SS03	Surface	03/06/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	1700	89.9	1790	<4.91
SS04	Surface	03/06/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	155	26.4	181	<4.93
SS05	Surface	03/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.8	3900	604	4500	<4.92
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
NMOCD Regulatory Standard		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

ATTACHMENT 1

ORIGINAL FORMS C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
FEB 02 2018
RECEIVED

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

nAB1803638613 BOPCO 2100737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy, Inc.	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

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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: See attached Attached ☒ 2RP-4601
Date: 2/1/2018 Phone: 432-221-7331	

* 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; C_6 thru C_{36}), 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; C_6 thru C_{36}), 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

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,

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

An **ExxonMobil** Subsidiary

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

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

30-015-26931
nKMW 1035646177

Release Notification and Corrective Action

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.

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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Mgmt.& Remediation Specialist

E-mail Address: TASavoie@BassPet.com

Date: 6/22/10 Phone:432-556-8730

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Signed By Mike Bratcher

Approval Date: 3/3/11 Expiration Date:

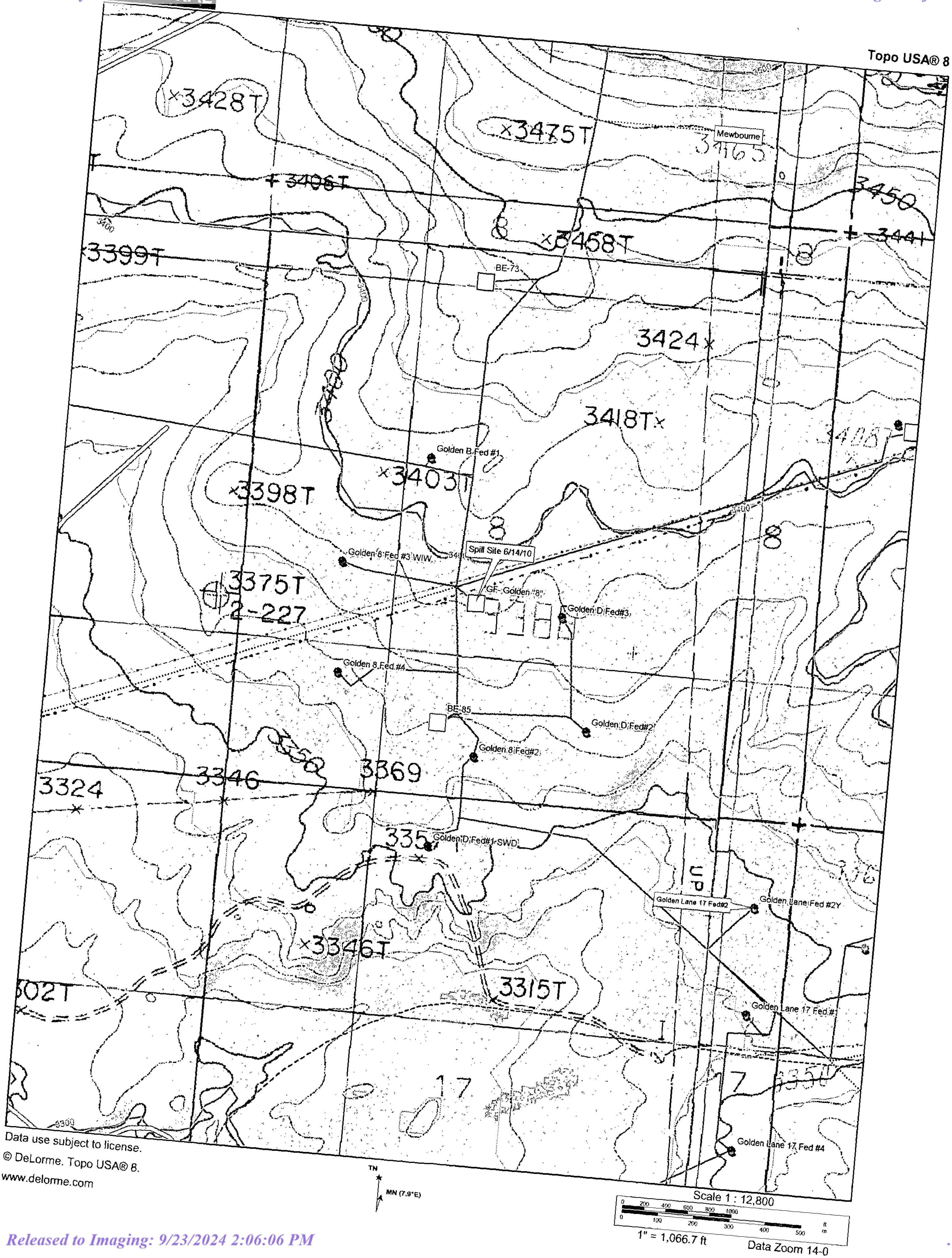
Conditions of Approval:

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 4/3/11

Attached ☐

2RP-521

* Attach Additional Sheets If Necessary


Topo USA® 8
×3428T
×3475T
Mewbourne
3406T
3450
3399T
×3468T
3441
BE-73
3424×
3418T×
Golden B Fed #1
×3403T
×3398T
Golden 8 Fed #3 WIW
Spill Site 6/14/10
GF- Golden "8"
3375T
2-227
Golden D Fed#3
Golden 8 Fed #4
BE-85
Golden D Fed#2
Golden 8 Fed#2
3324
3346
3369
Golden D Fed#1 SWD
Golden Lane 17 Fed#2
Golden Lane Fed #2Y
×3346T
3315T
Golden Lane 17 Fed #1
17
Golden Lane 17 Fed #4
Data use subject to license.
© DeLorme. Topo USA® 8.
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TN
MN (7.9°E)
Scale 1 : 12,800
1" = 1,066.7 ft
Data Zoom 14-0

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
nKMW1106629393

Release Notification and Corrective Action

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.

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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
MAR 02 2011
NMOCD ARTESIA

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

Printed Name: Tony Savoie

Title: Waste Mgmt.& Remediation Specialist

E-mail Address: TASavoie@BassPet.com

Date: 3/3/11 Phone:432-556-8730

* Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Approved by District Supervisor:
Signed By Mike Bratcher

Approval Date: 3/7/11 Expiration Date:

Conditions of Approval:

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 4/7/11

Attached ☐

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

RECEIVED
NOV 26 2013
NMOCD ARTESIA

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nJMW 13330536660

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

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? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ 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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

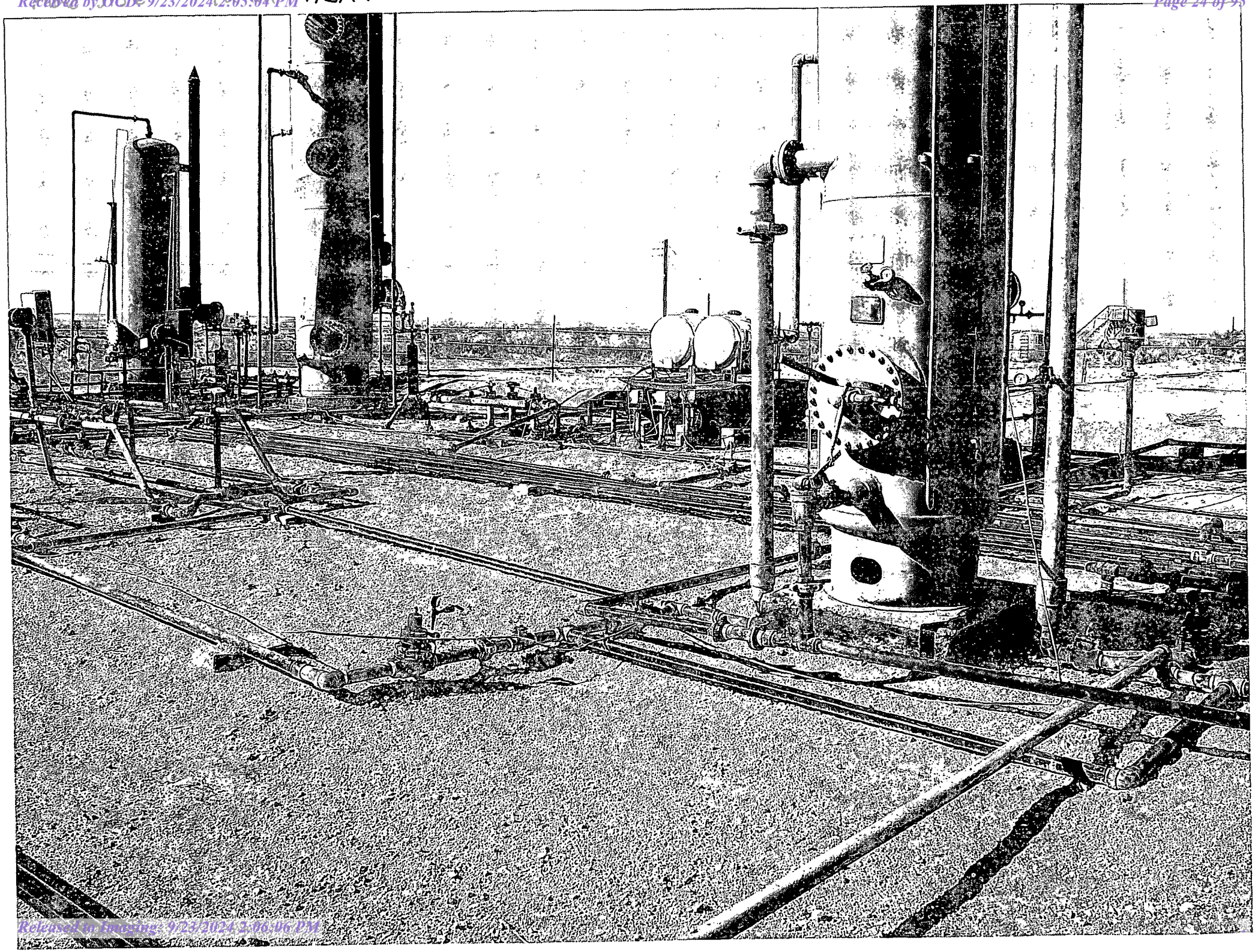
Approval Date: NOV 26 2013 Expiration Date:

Conditions of Approval:
Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: December 26, 2013

Attached ☐

2RP-2082

* Attach Additional Sheets If Necessary



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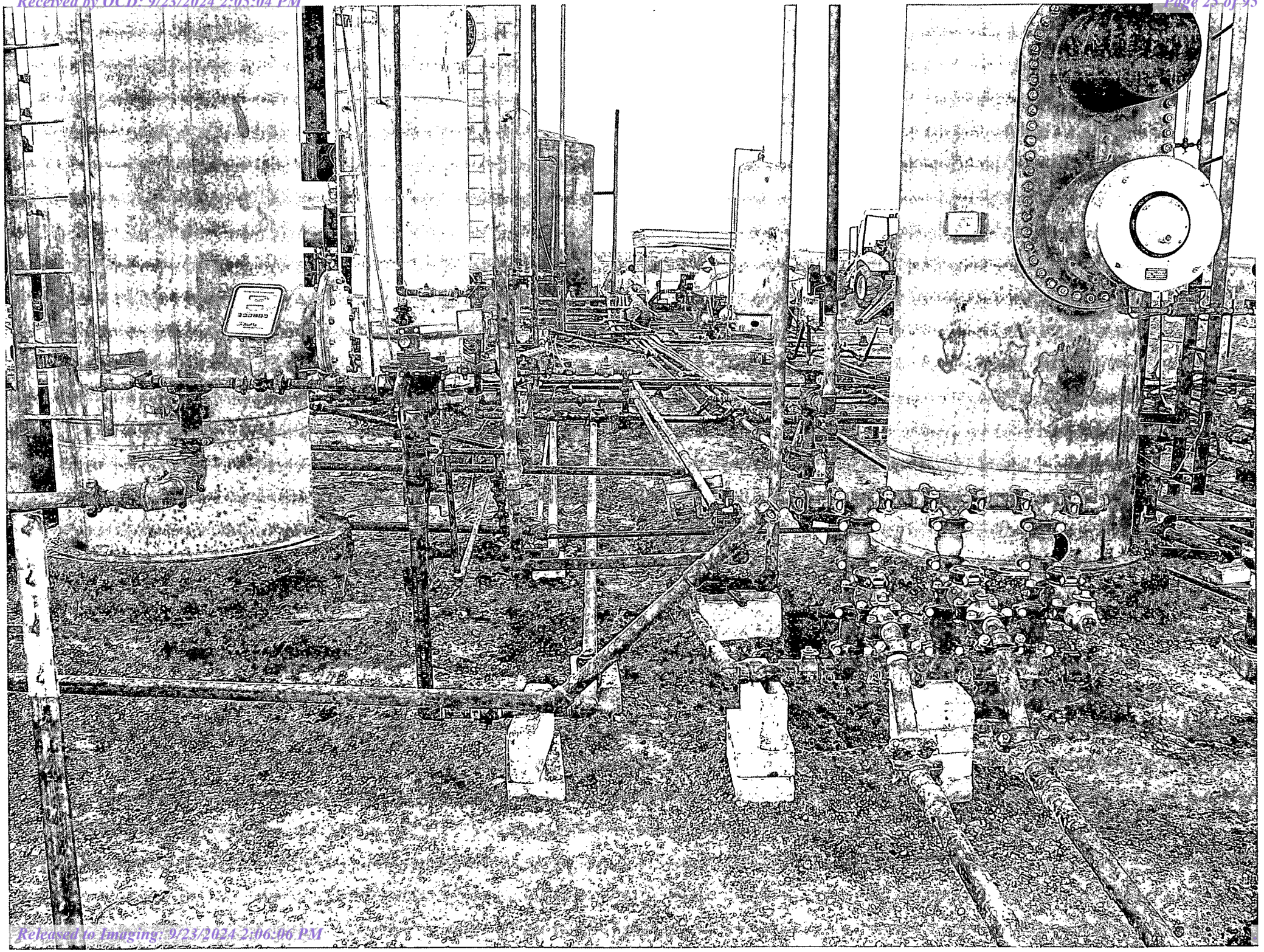
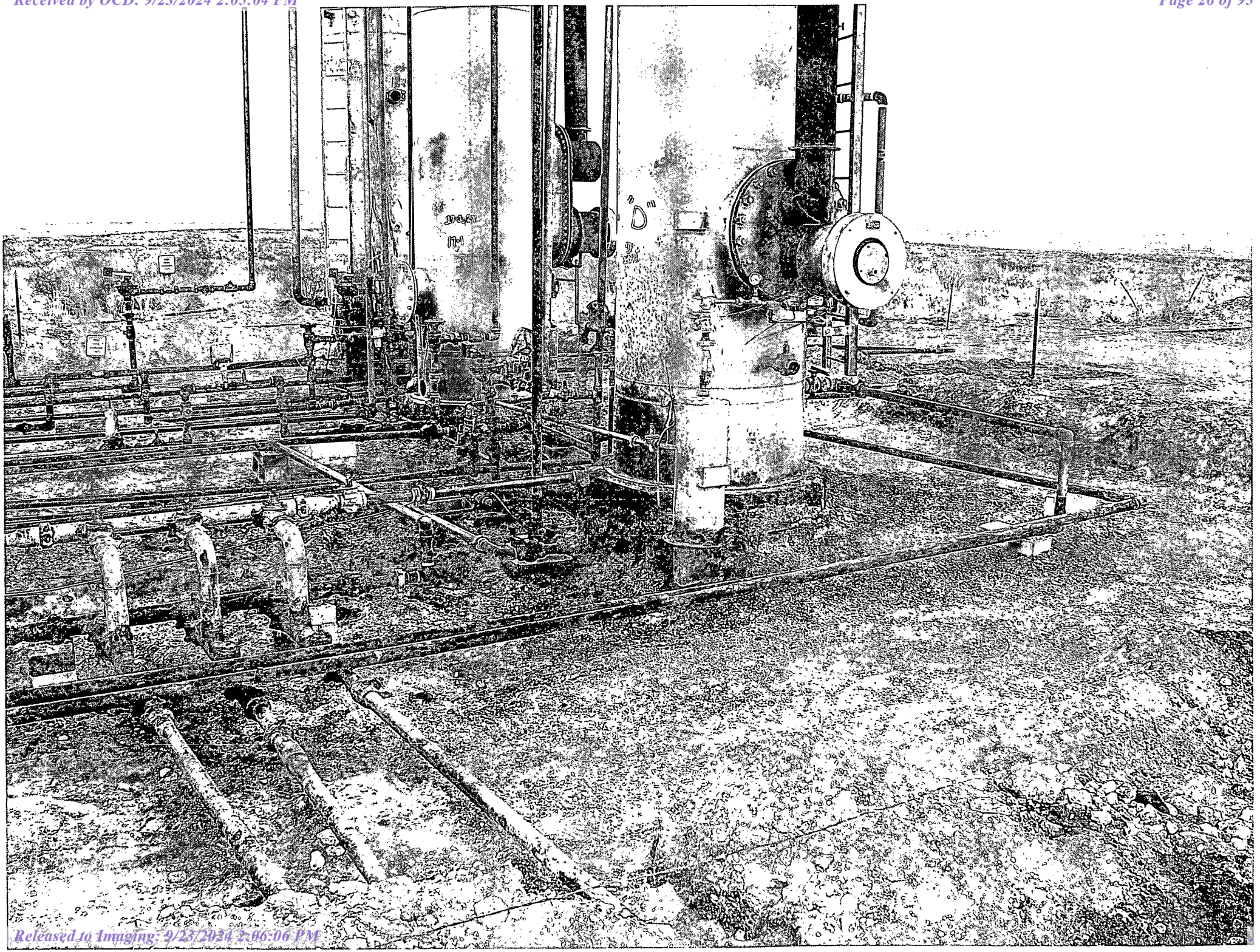
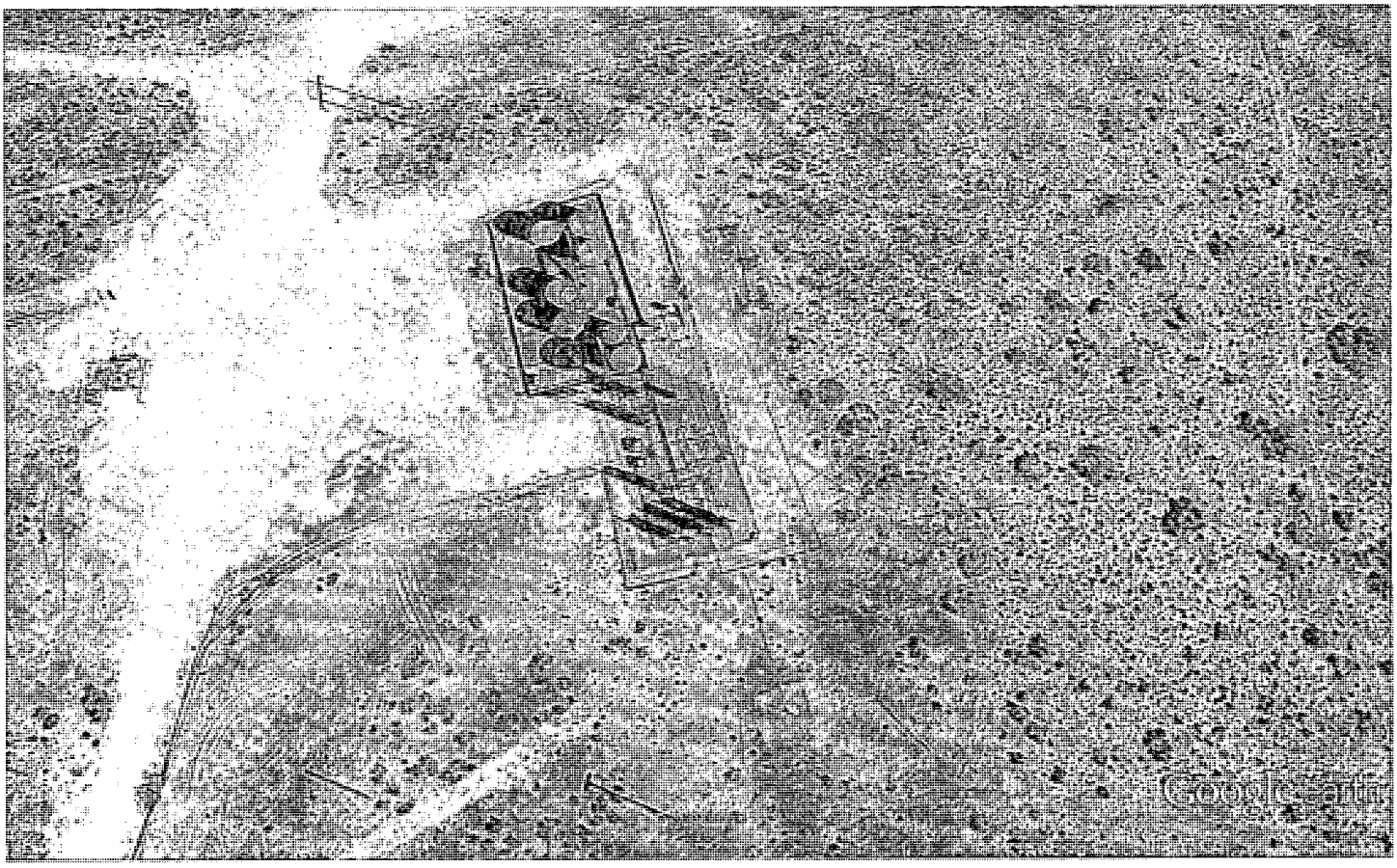


Photo 2981 Taken 8/3/11




Google earth
feet
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ARTESIA DISTRICT
AUG 13 2014
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1422637219

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

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: 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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

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 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: Tony Savoie	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: Signed By Mike Bratcher	
Title: Waste Management and Remediation Specialist	Approval Date: 8/14/14	Expiration Date: N/A
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Remediation per OCD Rule & Guidelines. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:	Attached ☐
Date: 8/13/14 Phone: 432-556-8730		

* Attach Additional Sheets If Necessary

2RP-2439

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 15 2016
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1607837012 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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:
Printed Name: Amy C. Ruth
Title: EHS Remediation Specialist
E-mail Address: ACRuth@basspet.com
Date: 3-15-2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By: Mike Bratcher

Approval Date: 3/21/16 Expiration Date: N/A

Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/21/16

2RP-3612

* Attach Additional Sheets If Necessary

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

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 29 2016
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1633656856 2000737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: Amy Ruth

Printed Name: Amy C. Ruth

Title: EHS Environmental Supervisor

E-mail Address: ACRuth@basspet.com

Date: 11/29/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Shelly Bratcher

Approval Date: 11/29/16 Expiration Date: N/A

Conditions of Approval: Attached ☑

* Attach Additional Sheets If Necessary

2RP-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

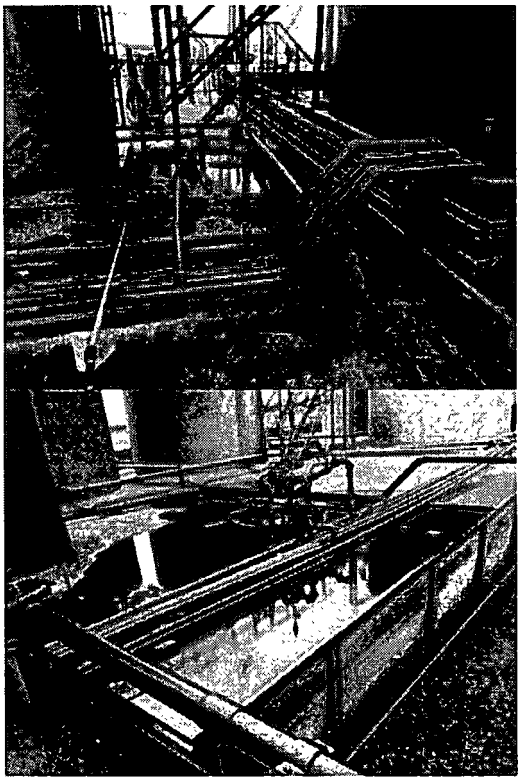
Please find the Initial form C-141 for the leak referenced below. Feel free to call me with any questions. Thank you!

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

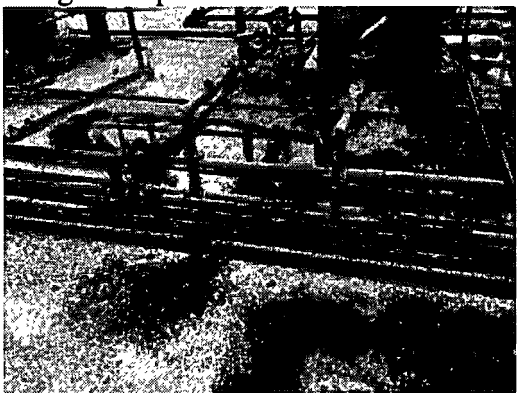
From: Ruth, Amy C. <ACRuth@BassPet.Com>
Sent: Monday, November 28, 2016 11:19 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: jamos@blm.gov; Tucker, Shelly
Subject: Release Notification - Golden Federal Battery 11-26-16

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.



ATTACHMENT 2

LABORATORY ANALTYICAL 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,

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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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.	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 Quanitative 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	**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.	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 Quanitative 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-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.	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 Quanitative 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-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.	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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BRE 03/06/18

Labeled By: DDS 3/6/18 DDS

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0		Yes			

Chain-of-Custody Record

Client: CTE-permian

Mailing Address: Midland, TX

3300 N. A Street. Bld 105 #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 Tank Battery (See Notes)

Project #: 30-015-26931

Project Manager: Adnan Baker

Sampler: AC

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803223	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / 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	TPH 8015	Chlorides 300.1		Air Bubbles (Y or N)
3/3	0930	S	~~SS~~ SS1	1-4oz	Cool	001												X	X	X		
	0940		SS2			002																
	0950		SS3			003																
	1000		SS4			004																
	1010		SS5			005																

Date	Time	Relinquished by:	Received by:	Date	Time
3/4	1700	AC			
3/5	1726			3/4	1200
				3/5/18	1720

Remarks:
RP# 2RP-0633 # 2RP-7439
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 1827 Chad Walker

03/06/18 0655 Courier

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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,

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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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:	**lcs**	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:	**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.	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 Quanitative 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	**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.	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 Quanitative 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-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.	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 Quanitative 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-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.	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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Completed By: Isaiah Ortiz 3/6/2018 8:25:04 AM

Reviewed By: SRC 03/06/18

LB: DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: CTE-permian

Mailing Address: Midland, TX
3300 N. A Street · Bld 103 #1

Phone #: 432-704-5178

email or Fax#: abaker@ltenv.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# 2RP-3612

Project #:
30-015-26931

Project Manager:
Adnan Baker

Sampler: AC

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE – Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803221	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / 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	TPH 8015	Chloride 300.1		Air Bubbles (Y or N)
3/3	0840	S	SS1	1-4oz	cool	001												X	X	X		
	0850		SS2			002																
	0900		SS3			003																
	0910		SS4			004																
↓	0920	↓	SS5	↓	↓	005												↓	↓	↓		

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/4	1200	AC		3/4	1200
3/5	1220			3/5	1720

Remarks:

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.

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

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

Version: 1.%

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

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

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

QC Summary 578604

LT Environmental, Inc.

Golden 8 Federal CTB

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3043151 — Matrix: Solid — Date Prep: 03.08.18
MB Sample Id: 7640419-1-BLK — LCS Sample Id: 7640419-1-BKS — 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 — Prep Method: E300P
Seq Number: 3043151 — Matrix: Soil — Date Prep: 03.08.18
Parent Sample Id: 578424-003 — MS Sample Id: 578424-003 S — 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 — Prep Method: E300P
Seq Number: 3043151 — Matrix: Soil — Date Prep: 03.08.18
Parent Sample Id: 578425-005 — MS Sample Id: 578425-005 S — 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 — Prep Method: TX1005P
Seq Number: 3043122 — Matrix: Solid — Date Prep: 03.07.18
MB Sample Id: 7640359-1-BLK — LCS Sample Id: 7640359-1-BKS — 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 — [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
E = MSD/LCSD Result

QC Summary 578604

LT Environmental, Inc.

Golden 8 Federal CTB

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3043122 | Matrix: Soil | Date Prep: 03.07.18
Parent Sample Id: 578424-001 | MS Sample Id: 578424-001 S | 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 | Prep Method: SW5030B
Seq Number: 3043201 | Matrix: Solid | Date Prep: 03.08.18
MB Sample Id: 7640464-1-BLK | LCS Sample Id: 7640464-1-BKS | 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 | Prep Method: SW5030B
Seq Number: 3043201 | Matrix: Soil | Date Prep: 03.08.18
Parent Sample Id: 578604-005 | MS Sample Id: 578604-005 S | 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

Final 1.000

CHAIN OF CUSTODY

Page ___ Of ___

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Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 578604

Client / Reporting Information

Company Name / Branch: LTE / Permian
Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705
Email: Abaker@ltenv.com | Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Aaron Williamson

Project Information

Project Name/Number: Golden 8 Federal CTB
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 30-015-26931

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Btex EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1
1	SS01	surf.	3-6-18	1400	S	1								X	X	X	X
2	SS02			1410													
3	SS03			1420													
4	SS04			1430													
5	SS05			1440													
6																	
7																	
8																	
9																	
10																	

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

Field Comments

Turnaround Time (Business days)

- [X] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [ ] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT
- [ ] STANDARD TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] 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

Notes: API: 30-015-26931

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time: 3.7.18	Received By: 1	Relinquished By: 2	Date Time: 3/8 915	Received By: 2
	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
	Relinquished by:	Date Time:	Received By: 5	Cust		

Temp: 5.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 5.1

On Ice | Cooler Temp. | Thermo. Corr. Factor

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

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
#1 *Temperature of cooler(s)?	5.1	
#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 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)?	**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: Katie Lowe Date: 03/08/2018

Checklist reviewed by: Jessica Kramer Date: 03/08/2018

Jessica Kramer

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

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 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					

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

Jessica Kramer
Project Assistant

Final 1.000

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

QC Summary 578893

LT Environmental, Inc.

Golden 8 Federal Battery #1

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3043446 — Matrix: Solid — Date Prep: 03.12.18
MB Sample Id: 7640586-1-BLK — LCS Sample Id: 7640586-1-BKS — 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 — Prep Method: E300P
Seq Number: 3043446 — Matrix: Soil — Date Prep: 03.12.18
Parent Sample Id: 578266-004 — MS Sample Id: 578266-004 S — 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 — Prep Method: E300P
Seq Number: 3043446 — Matrix: Soil — Date Prep: 03.12.18
Parent Sample Id: 578891-004 — MS Sample Id: 578891-004 S — 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 — Prep Method: TX1005P
Seq Number: 3043414 — Matrix: Solid — Date Prep: 03.10.18
MB Sample Id: 7640553-1-BLK — LCS Sample Id: 7640553-1-BKS — 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

Final 1.000

QC Summary 578893

LT Environmental, Inc.

Golden 8 Federal Battery #1

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3043414 | Matrix: Soil | Date Prep: 03.10.18
Parent Sample Id: 578129-021 | MS Sample Id: 578129-021 S | 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 | Prep Method: SW5030B
Seq Number: 3043357 | Matrix: Solid | Date Prep: 03.10.18
MB Sample Id: 7640559-1-BLK | LCS Sample Id: 7640559-1-BKS | 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 | Prep Method: SW5030B
Seq Number: 3043357 | Matrix: Soil | Date Prep: 03.10.18
Parent Sample Id: 578592-004 | MS Sample Id: 578592-004 S | 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

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Phoenix, Arizona (480-355-0900)

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CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 578893

Client / Reporting Information

Company Name / Branch: LTE / Permian

Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705

Email: Abaker@ltenv.com

Phone No: 432-704-5178

Project Contact: Adrian Baker

Samplers's Name: Aaron Williamson

Project Information

Project Name/Number: Golden 8 Federal Battery #1

Project Location: NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 30-015-26931

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Btex EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1
1	SS06	6"	3.9.18	1300	S	1								X	X	X	X
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

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

Field Comments

Turnaround Time (Business days)

- [X] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [ ] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT
- [ ] STANDARD TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] 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

Notes: API - 30-015-26931

Temp: 2.1 IR ID:R-8

CF:(0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 1.9

FED-EX

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time: 3-19-18 1700	Received By: 1	Relinquished By: 2	Date Time: 3.19.18 1700	Received By: 2
Relinquished by:	Date Time: 3/19 12:21	Received By: 3 Julian M	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: 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 loses 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 shall 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: 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

Jessica Kramer

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Monday, May 14, 2018 2:00 PM
To: 'Ashley Ager'; Weaver, Crystal, EMNRD
Cc: stucker@blm.gov; Adrian Baker; Littrell, Kyle
Subject: RE: Golden 8 Federal Central Tank Battery/2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601

RE: XTO * Golden 8 Fed 1 (CTB) * 2RP-521,633,2018,2439,3612,4017, & 4601 * DOR: 1/14/10, 2/16/11, 11/25/13, 8/12/14, 2/1/16, 11/26/16, & 1/18/18

Ashley,

Your proposal for additional delineation and remediation is approved. Federal sites will require like approval from BLM.

Thank you,

Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210
575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Ashley Ager <aager@ltenv.com>
Sent: Friday, March 23, 2018 4:56 PM
To: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: stucker@blm.gov; Adrian Baker <abaker@ltenv.com>; Littrell, Kyle <Kyle_Littrell@xtoenergy.com>
Subject: Golden 8 Federal Central Tank Battery/2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601

Crystal,

Please find attached a work plan for addressing historic and recent releases at the Golden 8 Federal Central Tank Battery. The report includes preliminary results from initial surface sampling and proposes additional sampling and remediation work.

The work plan covers the following releases at the location:
2RP-521, 2RP-633, 2RP-2082, 2RP-2439, 2RP-3612, 2RP-4017, 2RP-4601

Please let me know if you have any questions and have a nice weekend.

Ashley

Ashley Ager, M.S., P.G.
Senior Geologist/Vice President of Regional Offices

LT Environmental, Inc.
848 East 2nd Avenue
Durango, Colorado 81301
(970) 385-1096 office
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Connect with us:

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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 385923

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 385923
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Historical document upload.	9/23/2024