



6 September 2016

1RP-4398

Ms. Shelly Tucker  
Environmental Protection Specialist  
BLM  
620 E. Greene Street  
Carlsbad, New Mexico 88220

RE: Remediation Progress Report and Closure Proposal  
XTO Energy – SDE 31 Tank Battery  
UL-F, Section 31, Township 23 South, Range 32 East  
Lea County, New Mexico

Ms. Tucker:

The following *Remediation Progress Report and Closure Proposal* serves as a condensed update on remedial activities undertaken and closure proposal for the above referenced Site.

**Remediation Progress:**

EPI personnel mobilized on the site on August 12, 2016 to collect soil samples to determine the vertical extent of contamination. A total of ten (10) soil samples were collected from two (2) sample locations; SP1 and SP2. All samples were jarred, chilled and sent to Cardinal Labs for Chloride testing. Laboratory analytical results indicate Chloride concentrations in excess of NMOCD Recommended Remedial Action Levels (NMOCD RRALs) of 1,000 mg/Kg at SP1 to three (3) feet bgs and SP2 to two (2) feet bgs (reference *Figure 4* and *Table 2*).

The entire release area has been excavated approximately six (6) inches bgs and the contaminated soil has been hauled to a state approved facility for disposal.

**Closure Proposal:**

As the release area was contained within the berm and is located on an active tank battery, EPI proposes to backfill the excavated area with clean soil. All soil will be free of rocks, clumps or deleterious material. Backfilling will continue until the entire excavation is closed. Upon completion of backfill activities, the entire disturbed area will be contoured to blend with existing tank battery location and protected against wind/water erosion.

Following completion of closure activities, EPI will provide a detailed *Final Closure Report* to XTO and BLM personnel.

**Conditions of Approval:**

NMOCD approves this work plan with the following conditions:

SP 1 should be excavated to 3' bgs, with confirmation samples taken at that depth, SP 2 should be excavated to 2' bgs, due to the fact of the high Cl- content still being high at both sample points. Confirmation sidewall samples. Please Notify NMOCD prior to sampling to give witnessing opportunities.

Thank You,

Kristen D. Lynch

---

XTO Energy and EPI personnel would welcome an opportunity to briefly discuss the *Closure Proposal* at your earliest convenience. However, should you have any questions or concerns please feel free to contact me at (575) 394-3481 or via e-mail at [ddominguezepi@gmail.com](mailto:ddominguezepi@gmail.com) or Mr. John Robinson at (575) 441-5199 or via e-mail at [john\\_robinson@xtoenergy.com](mailto:john_robinson@xtoenergy.com). All official communication should be addressed to:

Mr. John Robinson  
XTO Energy  
P.O. Box 700  
Eunice, New Mexico 88231

Sincerely,

ENVIRONMENTAL PLUS, INC.

Daniel Dominguez  
Environmental Consultant

cc: John Robinson – XTO Energy  
File

Encl.: Figure 1 – Area Map  
Figure 2 – Site Location Map  
Figure 3 – Sample/Site Map  
Table 1 – Well Data  
Table 2 – Summary of Soil Sample Field Testing and Laboratory Analytical Results  
Attachment I – Photographs  
Attachment II – Laboratory Analytical Results  
Attachment III – Copy of Initial NMOCD Form C-141

## FIGURES

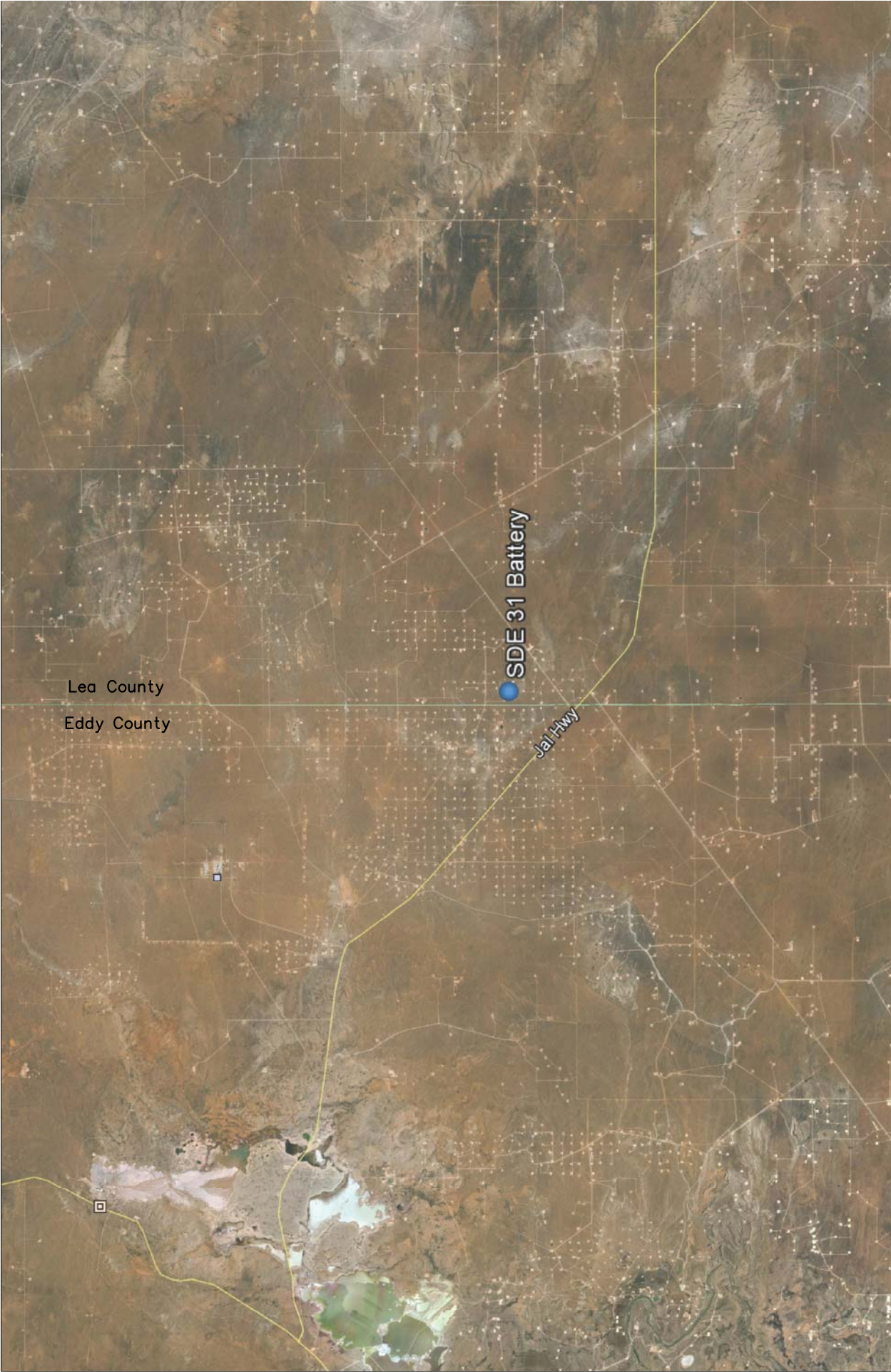
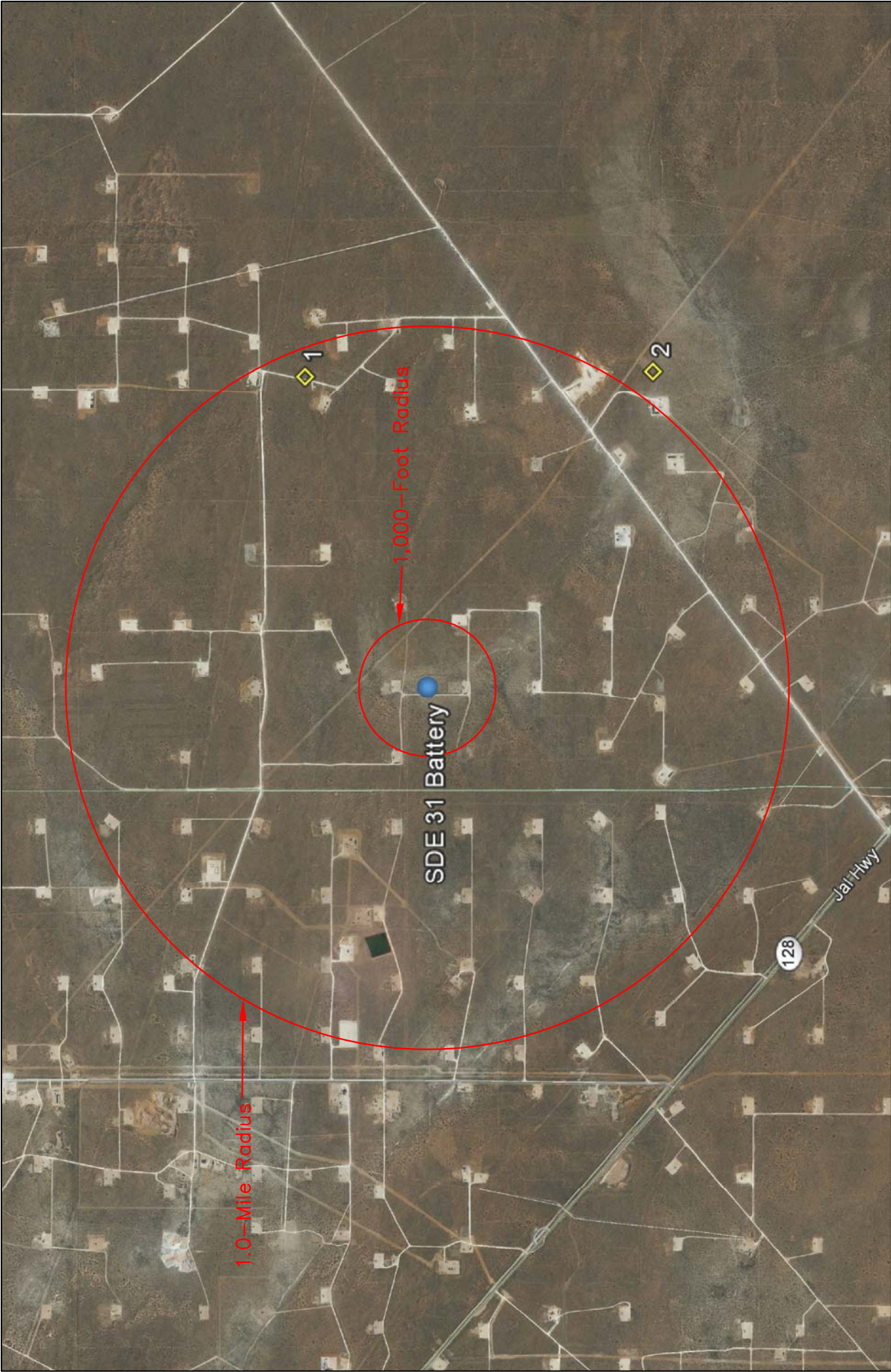


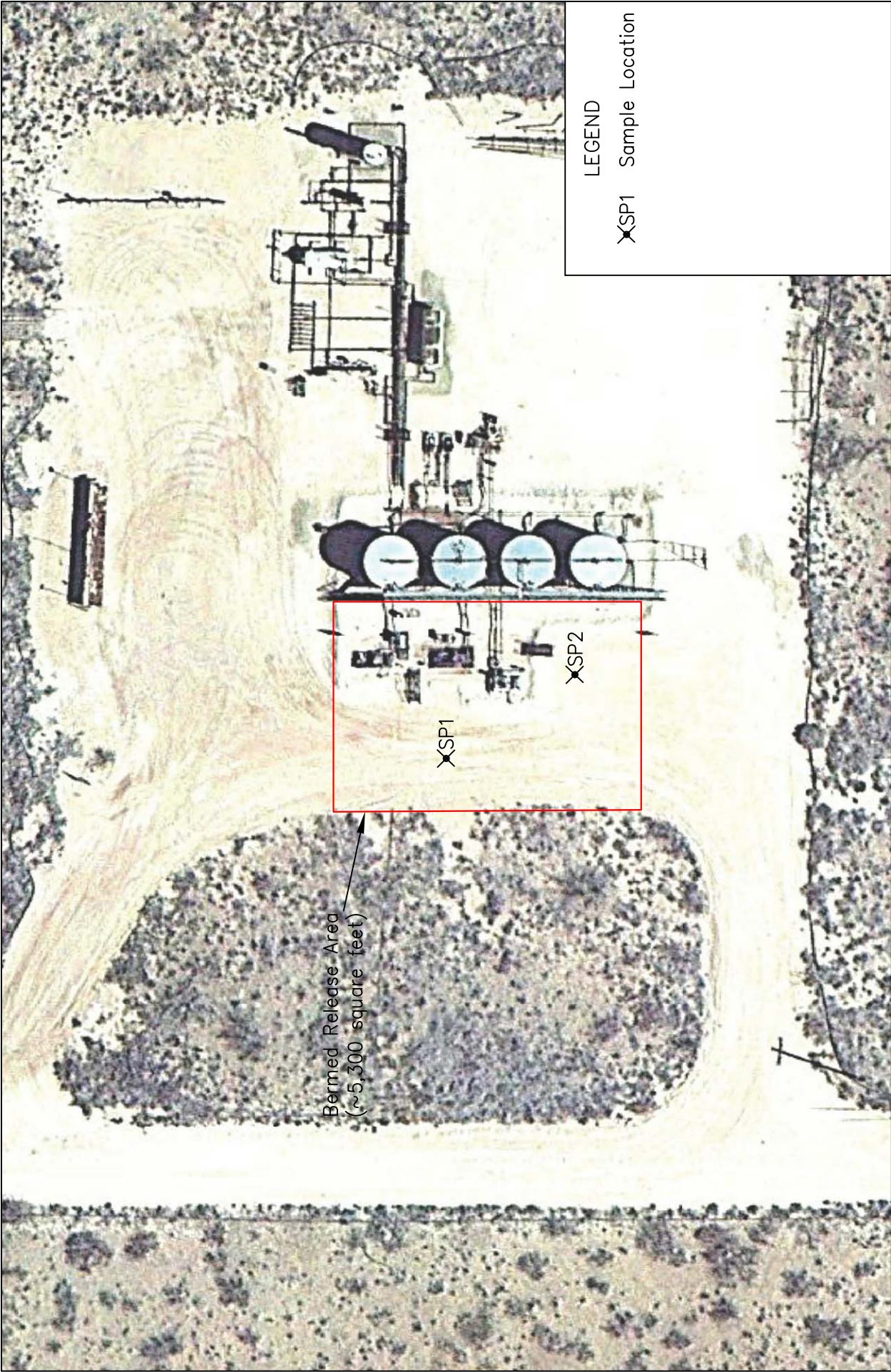
Figure 1 Area Map XTO Energy SDE 31 Battery	Lea County, New Mexico SE 1/4 of NW 1/4, Sec. 31, T23S, R32E N 32°15' 52.78" W 103° 42' 59.72" Elevation: 3,586 feet amsl	DWG By: D Dominguez August 2016		REVISED:		
				SHEET 1 of 1		
						





<p>Figure 2 Site Location Map XTO Energy SDE 31 Battery</p>	<p>Lea County, New Mexico SE 1/4 of NW 1/4, Sec. 31, T23S, R32E N 32° 15' 52.78" W 103° 42' 59.72" Elevation: 3,586 feet amsl</p>	<p>DWG By: D Dominguez August 2016</p> <p>REVISED:</p> <table><tr><td>0</td><td>2,000</td><td>4,000</td></tr><tr><td colspan="3">Feet</td></tr></table> <p>SHEET 1 of 1</p>	0	2,000	4,000	Feet		
0	2,000	4,000						
Feet								





<p>Figure 3 Sample/Site Map XTO Energy SDE 31 Battery</p>	<p>Lea County, New Mexico SE 1/4 of NW 1/4, Sec. 31, T23S, R32E N 32°15' 52.78" W 103°42' 59.72" Elevation: 3,586 feet amsl</p>	<p>DWG By: D Dominguez August 2016</p>	<p>REVISED:</p>	
		<p>0 40 80 Feet</p>	<p>SHEET 1 of 1</p>	

LEGEND  
X SP1 Sample Location

## **TABLES**

TABLE 1

Well Data**XTO Energy - SDE 31 Tank Battery**

Ref #	Well Number	Diversion <sup>A</sup>	Owner	Use	Twsp	Rng	Sec	q64	q16	q4	Easting	Northing	Distance <sup>B</sup>	Date Measured	Surface Elevation <sup>C</sup>	Depth to Water (ft bgs)
1	C 03529	3	US DEPT. OF INTERIOR - BLM	STK	23S	32E	29	2	4	3	622654	3571212	1,898		3,680	
2	C 03555	3	MARK MCCLOY	STK	24S	32E	5	2	2	1	622709	3569231	2,223	21-Oct-13	3,651	380

\* = Data obtained from the New Mexico Office of the State Engineer Website ([http://iwaters.ose.state.nm.us:7001/iWATERS/wr\\_RegisServlet](http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet))

<sup>A</sup> = In acre feet per annum

<sup>B</sup> = In meters

<sup>C</sup> = Elevation interpolated from USGS topographical map based on referenced location.

STK = 72-12-1 Livestock watering

quarters are 1 =NW, 2=NE, 3=SW, 4=SE; quarters are smallest to biggest



**TABLE 2**  
**Summary of Soil Sample Field Testing and Laboratory Analytical Results**  
**XTO Energy**  
**SDE 31 Tank Battery**

Sample ID	Depth (feet)	Soil Status	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	GRO C6-C10 (mg/Kg)	DRO C10-C28 (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
SP1	Surface	Excavated	12-Aug-16	9.2	>4,000	--	--	--	--	--	--	--	--	<b>16,800</b>
	1	In Situ	12-Aug-16	5.1	3,000	--	--	--	--	--	--	--	--	<b>3,400</b>
	2	In Situ	12-Aug-16	3.9	2,800	--	--	--	--	--	--	--	--	<b>3,400</b>
	3	In Situ	12-Aug-16	0.9	3,040	--	--	--	--	--	--	--	--	<b>3,520</b>
	4	In Situ	12-Aug-16	0.1	280	--	--	--	--	--	--	--	--	208
SP2	Surface	Excavated	12-Aug-16	11.5	>4,000	--	--	--	--	--	--	--	--	<b>21,200</b>
	1	In Situ	12-Aug-16	13.3	>4,000	--	--	--	--	--	--	--	--	<b>14,400</b>
	2	In Situ	12-Aug-16	6.5	1,120	--	--	--	--	--	--	--	--	<b>1,390</b>
	3	In Situ	12-Aug-16	5.4	560	--	--	--	--	--	--	--	--	688
	4	In Situ	12-Aug-16	4.1	160	--	--	--	--	--	--	--	--	96
NMOCD Recommended Remedial Action Levels				100		10				50			5,000	1,000

-- = Not Analyzed

**Bold** values are in excess of NMOCD Recommended Remedial Action Levels

## **ATTACHMENTS**

**ATTACHMENT I**  
**Photographs**





Photograph #1 – Looking across release area



Photograph #2 – Looking across release area





Photograph #3 – Looking across release area



Photograph #4 – Excavated area





Photograph #5 – Excavated area



Photograph #6 – Excavated area



**ATTACHMENT II**  
**Laboratory Analytical Results**

August 18, 2016

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: SDE #31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/16/16 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received:	08/16/2016	Sampling Date:	08/12/2016
Reported:	08/18/2016	Sampling Type:	Soil
Project Name:	SDE #31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	UL-F SEC. 31, T23S, R32E		

**Sample ID: SP 1 (SURFACE) (H601828-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16800	16.0	08/17/2016	ND	448	112	400	3.64	

**Sample ID: SP 1 (1') (H601828-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3400	16.0	08/17/2016	ND	448	112	400	3.64	

**Sample ID: SP 1 (2') (H601828-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3400	16.0	08/17/2016	ND	448	112	400	3.64	

**Sample ID: SP 1 (3') (H601828-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	08/17/2016	ND	448	112	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 08/16/2016  
 Reported: 08/18/2016  
 Project Name: SDE #31 FEDERAL BATTERY  
 Project Number: NONE GIVEN  
 Project Location: UL-F SEC. 31, T23S, R32E

 Sampling Date: 08/12/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Angela Cabrera

**Sample ID: SP 1 (4') (H601828-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/17/2016	ND	416	104	400	0.00	

**Sample ID: SP 2 (SURFACE) (H601828-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	21200	16.0	08/17/2016	ND	416	104	400	0.00	

**Sample ID: SP 2 (1') (H601828-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14400	16.0	08/17/2016	ND	416	104	400	0.00		

**Sample ID: SP 2 (2') (H601828-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	08/17/2016	ND	416	104	400	0.00	

**Sample ID: SP 2 (3') (H601828-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	08/17/2016	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 08/16/2016  
Reported: 08/18/2016  
Project Name: SDE #31 FEDERAL BATTERY  
Project Number: NONE GIVEN  
Project Location: UL-F SEC. 31, T23S, R32E

Sampling Date: 08/12/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Angela Cabrera

**Sample ID: SP 2 (4') (H601828-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/17/2016	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



---

Celey D. Keene, Lab Director/Quality Manager



# Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231  
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form  
LAB Cardinal

Company Name Environmental Plus, Inc.

EPI Project Manager Daniel Dominguez

Mailing Address P.O. BOX 1558

City, State, Zip Eunice New Mexico 88231

EPI Phone#/Fax# 575-394-3481 / 575-394-2601

Client Company XTO

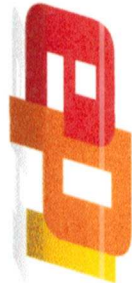
Facility Name SDE #31 Federal Battery

Location UL-F Sec. 31, T23S, R32E

Project Reference

EPI Sampler Name David Robinson

Attn: Daniel Dominguez  
P.O. Box 1558  
Eunice, NM 88231



Bill To

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	SAMPLING							
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:										
1	SP1 (Surface)	G	1			X				12-Aug-16	10:05								
2	SP1 (1')	G	1			X				12-Aug-16	10:06								
3	SP1 (2')	G	1			X				12-Aug-16	10:07								
4	SP1 (3')	G	1			X				12-Aug-16	10:08								
5	SP1 (4')	G	1			X				12-Aug-16	10:09								
6	SP2 (Surface)	G	1			X				12-Aug-16	11:10								
7	SP2 (1')	G	1			X				12-Aug-16	11:11								
8	SP2 (2')	G	1			X				12-Aug-16	11:12								
9	SP2 (3')	G	1			X				12-Aug-16	11:13								
10	SP2 (4')	G	1			X				12-Aug-16	11:14								

Sampler Relinquished:

Date 8/15/16

Received By:

Signature

E-mail results to: ddominguezepi@gmail.com & john\_robinson@xtoenergy.com

NOTES:

Relinquished by:

Date 8/16/16

Received By: (lab staff)

Signature

Delivered by:

Date 8/16/16

Received By:

Signature

Checked By:

Signature

Sample Cool & Intact

Yes

No

Signature

Signature

Signature

Signature

Signature

**ATTACHMENT III**  
**Copy of Initial NMOCD Form C-141**

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

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

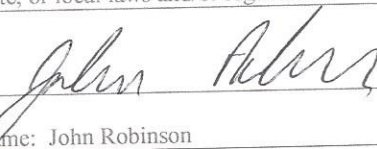
Name of Company XTO Energy, Inc.	Contact John Robinson	
Address 500 W Illinois, Midland, TX 79701	Telephone No. 575-441-5199	
Facility Name SDE 31 Battery	Facility Type Battery	
Surface Owner BLM	Mineral Owner	API No.

**LOCATION OF RELEASE**

Unit Letter F	Section 31	Township 23 S	Range 32 E	Feet from the 1980	North/South Line North	Feet from the 1980	East/West Line West	County Lea
------------------	---------------	------------------	---------------	-----------------------	---------------------------	-----------------------	------------------------	---------------

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release Produced Water and Oil	Volume of Release 86.86 bbls Water .01 bbls Oil	Volume Recovered 85 bbls water
Source of Release Suction hose on injection pump	Date and Hour of Occurrence 8-8-16 2:00am	Date and Hour of Discovery 8-8-16 2:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Shelly Tucker BLM Jamie Keyes OCD	
By Whom? Bo Jackson	Date and Hour 8-8-16 11:00 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Hose on suction side of injection pump had a hole rubbed in it from laying on the ground. Had a vacuum truck clean up all fluid possible.		
Describe Area Affected and Cleanup Action Taken.* Spill was contained inside berm area around injection pumps. Will clean up contaminated soil and replace with clean soil.		
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: 		<b>OIL CONSERVATION DIVISION</b>
Printed Name: John Robinson		Approved by Environmental Specialist:
Title: Maintenance Foreman	Approval Date:	Expiration Date:
E-mail Address: john_robinson@xtoenergy.com	Conditions of Approval:	
Date: 8-10-16 Phone: 575-441-5199	Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary