2RP-3873
REMEDIATION PLAN
Nash Draw Tank Battery #10
Eddy County, New Mexico

LAI Project No. 16-0108-02

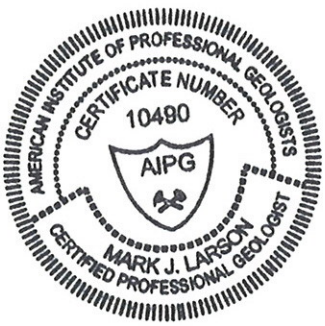
November 2, 2016

Prepared for:

XTO Energy, Inc.
500 W. Illinois Ave., Suite 100
Midland, Texas 79707

Prepared by:

Larson & Associates, Inc.
507 North Marienfeld Street, Suite 205
Midland, Texas 79701



Mark J. Larson, P.G.

Certified Professional Geologist #10490

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1.0 INTRODUCTION

This document is prepared by Larson & Associates, Inc. (LAI) on behalf of XTO Energy, Inc. (XTO) for submittal to the New Mexico Oil Conservation Division (OCD) District 2 and U.S. Bureau of Land Management (BLM) to present the investigation results and remediation plan for contamination at the Nash Draw Unit tank battery #10 (Site). XTO consolidated production from several tank batteries into a three (3) tank batteries therefore the tank battery is no longer needed and is being remediated. Equipment was removed from the Site in early 2016 to allow for the soil investigation and remediation. On September 7, 2016, XTO submitted the initial C-141 to OCD District 2 and the Site was assigned remediation permit number 2RP-3873. The Site is located in Unit G (SW/4, NE/4), Section 13, Township 23 South, Range 29 East in Eddy County, New Mexico. The geodetic position is North 33.307222° and West -103.935556°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Setting

The setting is as follows:

- Elevation is approximately 3,000 feet above mean sea level (AMSL);
- Topography slopes toward the south-southeast;
- The nearest surface water feature is a playa lake (Salt Lake) located about ½ mile west of the Site;
- Surface geology is comprised of unconsolidated Holocene to mid- Pleistocene-age eolian and piedmont-slope deposits that are approximately 80 feet thick according to a log from a nearby well;
- The Triassic-age Chinle formation of the Dockum group underlies the unconsolidated deposits and is comprised of interbedded sand, clay, and mudstone;
- According to New Mexico Office of the State Engineer (NMOSE) records a well is located about 1.25 miles south in Unit J, Section 24, Township 23 South, Range 29 East, with groundwater reported at about 54 feet below ground surface (bgs).

1.2 Remediation Action Levels

Remediation action levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the New Mexico Oil Conservation Division (OCD) in "*Guidelines for Remediation of Leaks, Spills and Releases, August 13,* 1993":

Criteria	*Result*	*Score*
Depth-to-Groundwater	50 - 99 feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0

The following RRAL apply to the release for ranking score: **10**

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg

- TPH 1,000 mg/Kg

1.3 Investigation Soil Samples

Investigation soil samples were collected on June 20, 2016. LAI personnel used a Terraprobe® direct-push rig to collect soil samples at four (4) locations (DP-02-01 through DP-02-04) between ground surface and approximately four (4) feet bgs. A background sample (DP-02-BG) was collected at about 1 foot bgs about 100 feet west of the Site. Additional samples were collected with a backhoe (September 29, 2016) and air rotary rig with jam tube sampler (October 10, 2016) to define the vertical extent of impact. The samples were tested for headspace vapors with a calibrated photoionization detector (PID) and all were less than 100 parts per million (ppm). Permian Basin Environmental Lab (PBEL) located in Midland, Texas, analyzed the samples for total petroleum hydrocarbons (TPH) including gasoline (GRO), diesel (DRO) and oil (ORO) range organics by EPA SW-846 Method 8015 and chloride by method 300. The background sample was analyzed for chloride. Table 1 presents the investigation sample laboratory analytical data summary. Figure 3 presents a Site drawing and sample locations. Appendix A presents the laboratory reports.

Referring to Table 1, the RRAL for TPH was exceeded in samples from locations DP-02-01 and DP-02-02. Chloride was delineated to less than 250 milligrams per kilogram (mg/Kg) in boring DP-02-02 at 10.5 feet bgs (119 mg/Kg). The background chloride concentration is 37.6 mg/Kg.

2.0 REMEDIATION PLAN

XTO proposes to excavate soil from the area approximately 10 x 20 feet based on field observations, around DP-02-01 to approximately 1 foot bgs. Additional soil will be removed as necessary based on visual observations for hydrocarbon staining and odor. The excavation will be filled to surface with clean soil.

Soil will be excavated from the area approximately 20 x 25 feet based on field observation, around DP-02-02 to about 17 feet bgs. Samples will be collected from the excavation sidewalls for laboratory analysis (BTEX and TPH) to determine if concentrations are below the RRAL. Additional soil will be removed as necessary to achieve the RRAL. The excavation will be filled to surface with clean soil.

Contaminated soil will be disposed at and clean soil acquired from Lea Land Landfill, LLC. The surface will be restored to BLM requirements following remediation. A final report will be submitted to OCD District 2 and BLM upon completion of remediation. Figure 4 presents the approximate locations for the remediation areas. Appendix B presents the initial C-141.

Tables

Table 1
2RP-3873
Investigation Soil Sample Analytical Data Summary
XTO Energy, Inc., Nash Draw Tank Battery 10
Unit G (SW/4, NE/4), Section 13, Township 23 South, Range 29 East
Eddy County, New Mexico
N32.307222° W-103.935556°

Location	Depth (Feet)	Collection Date	Status	C6 - C12 (mg/Kg)	>C12 - C28 (mg/Kg)	>C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
OCD RRAL:							**1,000**	
DP-02-BG	0 - 1	6/20/2016	In-Situ	<26.3	<26.3	<26.3	<26.3	37.6
DP-02-01	0 - 1	6/20/2016	In-Situ	434	4,780	793	**6,007**	19.4
	4	9/28/2016	In-Situ	<28.7	62.9	<28.7	**62.9**	--
	8	9/28/2016	In-Situ	<30.1	43.3	<30.1	**43.3**	--
	10	9/28/2016	In-Situ	<26.9	34.6	<26.9	**34.6**	--
DP-02-02	0 - 1	6/20/2016	In-Situ	825	6,430	1,201	**8,456**	**457**
	1 - 2	6/20/2016	In-Situ	570	2,450	327	**3,350**	**2,220**
	4	9/28/2016	In-Situ	1,080	2,890	556	**4,520**	**13,600**
	8	9/28/2016	In-Situ	964	1,970	372	**3,310**	**6,150**
	10.5	9/28/2016	In-Situ	838	1,070	179	**2,090**	**119**
	15	10/19/2016	In-Situ	308	739	74.9	**1,121.9**	--
	20	10/19/2016	In-Situ	39.2	210	36.6	**285.8**	--
	25	10/19/2016	In-Situ	--	--	--	--	--
DP-02-03	0 - 1	6/20/2016	In-Situ	<26.6	53	<26.6	**53**	36.5
	1 - 2	6/20/2016	In-Situ	--	--	--	--	--
	2 - 3	6/20/2016	In-Situ	--	--	--	--	--
	3 - 4	6/20/2016	In-Situ	--	--	--	--	--

Table 1
2RP-3873
Investigation Soil Sample Analytical Data Summary
XTO Energy, Inc., Nash Draw Tank Battery 10
Unit G (SW/4, NE/4), Section 13, Township 23 South, Range 29 East
Eddy County, New Mexico
N32.307222° W-103.935556°

Location	Depth (Feet)	Collection Date	Status	C6 - C12 (mg/Kg)	>C12 - C28 (mg/Kg)	>C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
OCD RRAL:							**1,000**	
DP-02-04	0 - 1	6/20/2016	In-Situ	<26.6	<26.6	<26.6	<26.6	68.9
	1 - 2	6/20/2016	In-Situ	--	--	--	--	--
	2 - 3	6/20/2016	In-Situ	--	--	--	--	--
	3 - 4	6/20/2016	In-Situ	--	--	--	--	--

Notes: laboratory analysis performed by Permian Basin Environmental Lab, Midland, Texas, by EPA SW-846 method 8015M (TPH) and 300.0 (chloride)
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
RRAL: Remediation action level calculated from OCD guidence document (August 13, 1993)

P: analysis pending

FIGURES

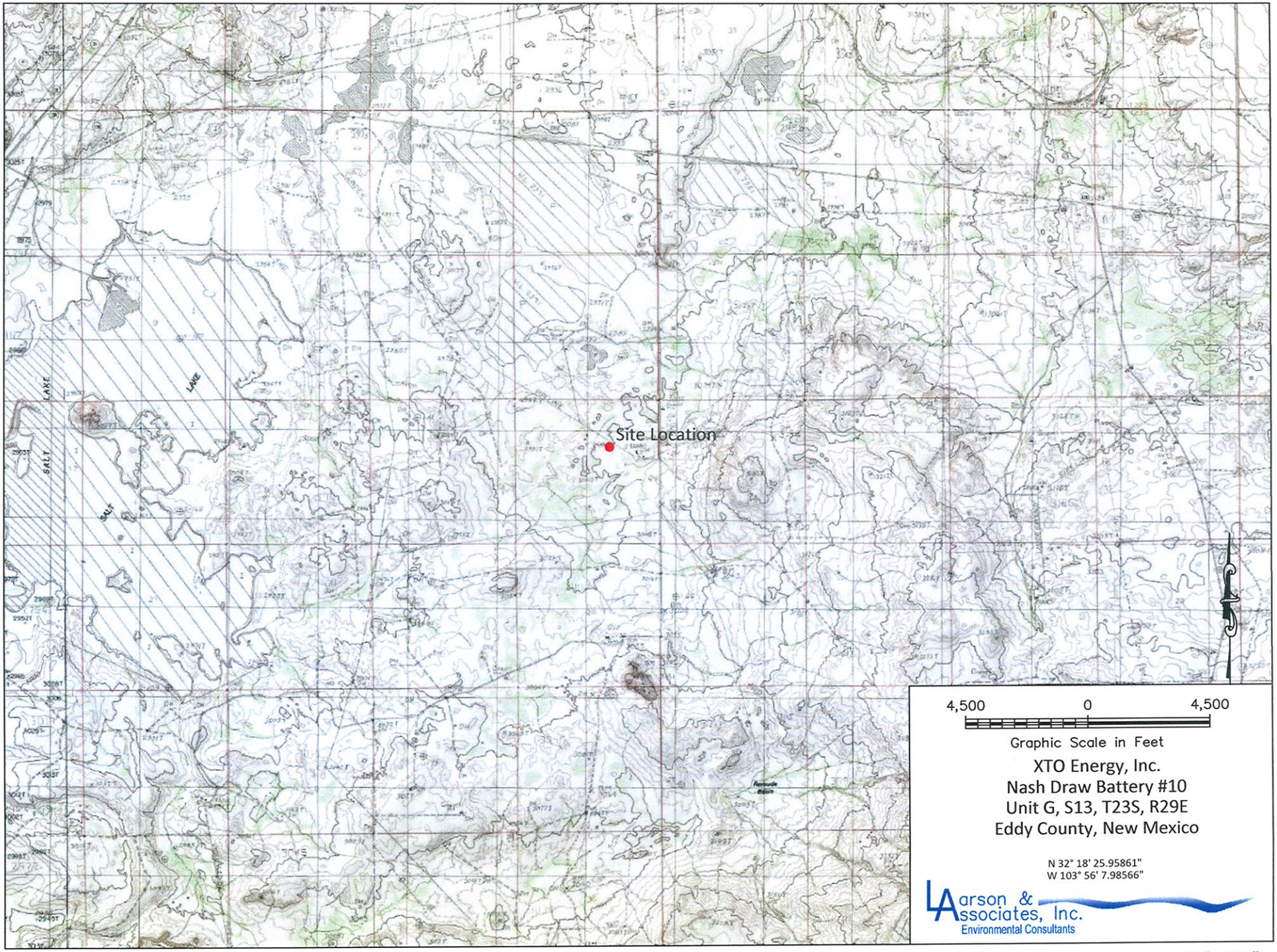

Figure 1 - Topographic Map

11" x 8.5"

Figure 2 - Aerial Map

11" x 8.5"

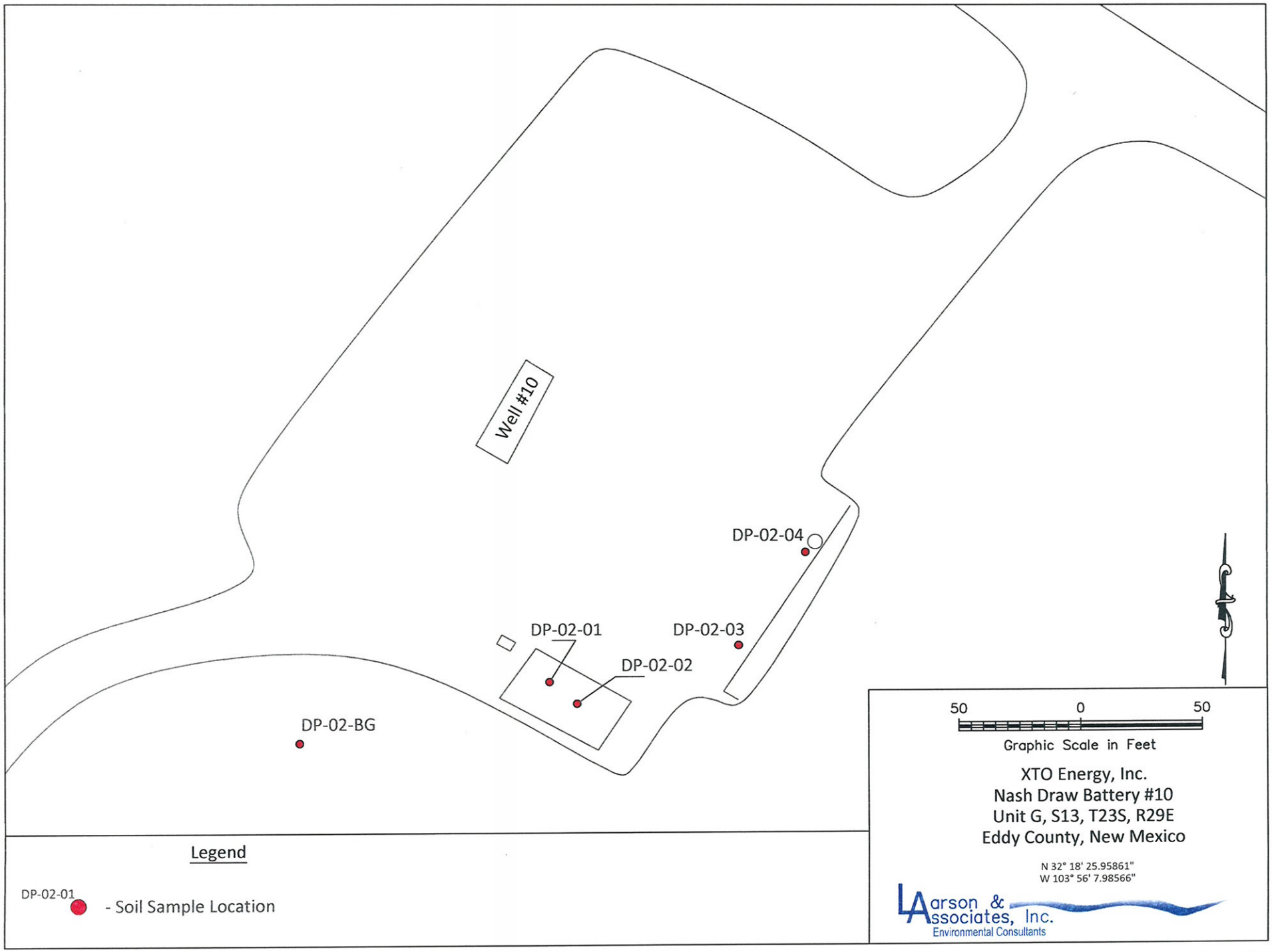

Figure 3 - Site Map Showing Soil Sample Locations

11" x 8.5"

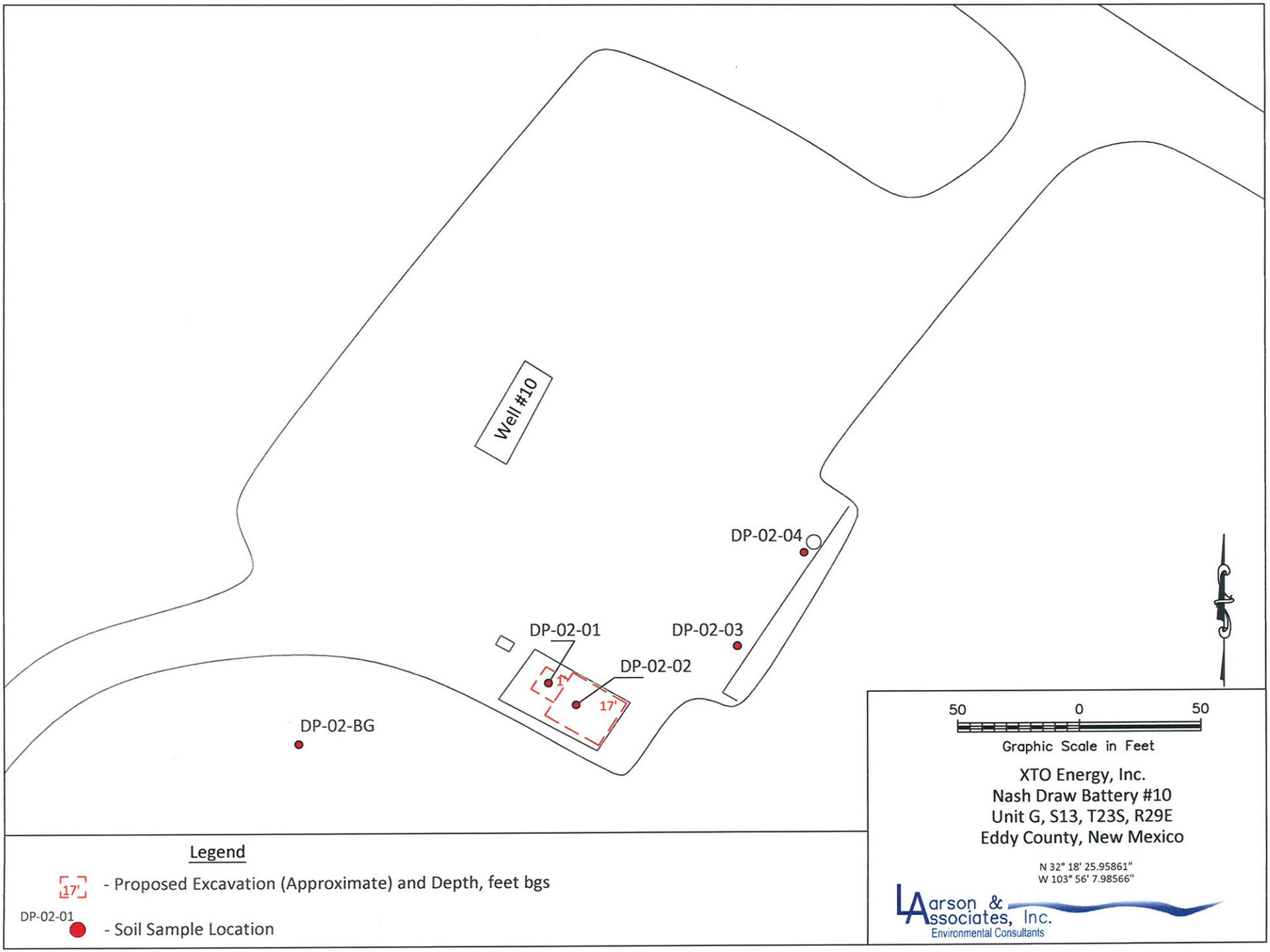

Figure 4 - Site Map Showing Soil Sample Locations and Proposed Excavation Areas and Depth

11" x 8.5"

APPENDIX A

Laboratory Reports

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: XTO Nash Draw Site 2
Project Number: 16-0108-02
Location: New Mexico

Lab Order Number: 6F26003

NELAP/TCEQ # T104704156-13-3

Report Date: 07/20/16

Larson & Associates, Inc.	Project: XTO Nash Draw Site 2	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-02-01 (0-1)	6F26003-01	Soil	06/20/16 14:10	06-24-2016 16:30
SP-02-02 (0-1)	6F26003-02	Soil	06/20/16 14:35	06-24-2016 16:30
SP-02-02 (1-2)	6F26003-03	Soil	06/20/16 14:35	06-24-2016 16:30
SP-02-03 (0-1)	6F26003-04	Soil	06/20/16 14:40	06-24-2016 16:30
SP-02-04 (0-1)	6F26003-08	Soil	06/20/16 14:50	06-24-2016 16:30
SP-02-BG (0-1)	6F26003-12	Soil	06/20/16 15:00	06-24-2016 16:30

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: XTO Nash Draw Site 2
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

SP-02-01 (0-1)

6F26003-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**19.4**	1.12	mg/kg dry	1	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**434**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**4780**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**793**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.2 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**6010**	140	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

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SP-02-02 (0-1)

6F26003-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**457**	1.14	mg/kg dry	1	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**825**	142	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**6430**	142	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**1210**	142	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**8470**	142	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

SP-02-02 (1-2)

6F26003-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2220**	11.2	mg/kg dry	10	P6G2009	07/20/16	07/20/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**570**	28.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**2450**	28.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**327**	28.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.2 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3350**	28.1	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

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SP-02-03 (0-1)

6F26003-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**36.5**	5.32	mg/kg dry	5	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**53.0**	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.3 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**53.0**	26.6	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

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SP-02-04 (0-1)

6F26003-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**68.9**	10.6	mg/kg dry	10	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.9 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

SP-02-BG (0-1)

6F26003-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**37.6**	5.26	mg/kg dry	5	P6F2802	06/27/16	06/28/16	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.7 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.0 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6F2802 - * DEFAULT PREP *****										
Blank (P6F2802-BLK1)				Prepared & Analyzed: 06/27/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6F2802-BS1)				Prepared & Analyzed: 06/27/16						
Chloride	175	1.00	mg/kg wet	200		87.6	80-120			
LCS Dup (P6F2802-BSD1)				Prepared & Analyzed: 06/27/16						
Chloride	173	1.00	mg/kg wet	200		86.6	80-120	1.13	20	
Duplicate (P6F2802-DUP1)		Source: 6F26002-01		Prepared & Analyzed: 06/27/16						
Chloride	162	1.03	mg/kg dry		165			1.53	20	
Duplicate (P6F2802-DUP2)		Source: 6F26003-08		Prepared & Analyzed: 06/27/16						
Chloride	70.9	10.6	mg/kg dry		68.9			2.74	20	
Matrix Spike (P6F2802-MS1)		Source: 6F26004-18		Prepared: 06/27/16 Analyzed: 06/28/16						
Chloride	204	5.21	mg/kg dry	208	59.4	69.5	80-120			QM-07
Batch P6F2901 - * DEFAULT PREP *****										
Blank (P6F2901-BLK1)				Prepared & Analyzed: 06/29/16						
% Moisture	ND	0.1	%							
Duplicate (P6F2901-DUP1)		Source: 6F26010-37		Prepared & Analyzed: 06/29/16						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P6F2901-DUP2)		Source: 6F26008-08		Prepared & Analyzed: 06/29/16						
% Moisture	11.0	0.1	%		12.0			8.70	20	

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Midland TX, 79710	Project Manager: Mark Larson	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6F2901 - * DEFAULT PREP *** **										
Duplicate (P6F2901-DUP3)		**Source: 6F26008-12**		Prepared & Analyzed: 06/29/16						
% Moisture	7.0	0.1	%		7.0			0.00	20	
Batch P6G0501 - * DEFAULT PREP *** **										
Blank (P6G0501-BLK1)				Prepared & Analyzed: 07/05/16						
% Moisture	ND	0.1	%							
Duplicate (P6G0501-DUP1)		**Source: 6F26006-06**		Prepared & Analyzed: 07/05/16						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Duplicate (P6G0501-DUP2)		**Source: 6F26009-23**		Prepared & Analyzed: 07/05/16						
% Moisture	14.0	0.1	%		17.0			19.4	20	
Duplicate (P6G0501-DUP3)		**Source: 6G01003-01**		Prepared & Analyzed: 07/05/16						
% Moisture	6.0	0.1	%		5.0			18.2	20	
Duplicate (P6G0501-DUP4)		**Source: 6G01008-02**		Prepared & Analyzed: 07/05/16						
% Moisture	13.0	0.1	%		12.0			8.00	20	

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P.O. Box 50685
Midland TX, 79710

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Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6F2906 - TX 1005										
Blank (P6F2906-BLK1)				Prepared & Analyzed: 06/26/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*85.5*		"	*100*		*85.5*	*70-130*			
Surrogate: o-Terphenyl	*45.4*		"	*50.0*		*90.8*	*70-130*			
LCS (P6F2906-BS1)				Prepared & Analyzed: 06/26/16						
C6-C12	933	25.0	mg/kg wet	1000		93.3	75-125			
>C12-C28	1050	25.0	"	1000		105	75-125			
Surrogate: 1-Chlorooctane	*106*		"	*100*		*106*	*70-130*			
Surrogate: o-Terphenyl	*54.7*		"	*50.0*		*109*	*70-130*			
LCS Dup (P6F2906-BSD1)				Prepared & Analyzed: 06/26/16						
C6-C12	969	25.0	mg/kg wet	1000		96.9	75-125	3.77	20	
>C12-C28	1120	25.0	"	1000		112	75-125	6.43	20	
Surrogate: 1-Chlorooctane	*122*		"	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*52.0*		"	*50.0*		*104*	*70-130*			
Matrix Spike (P6F2906-MS1)	**Source: 6F26004-18**			Prepared: 06/26/16 Analyzed: 06/27/16						
C6-C12	957	26.0	mg/kg dry	1040	ND	91.9	75-125			
>C12-C28	1190	26.0	"	1040	25.6	111	75-125			
Surrogate: 1-Chlorooctane	*123*		"	*104*		*118*	*70-130*			
Surrogate: o-Terphenyl	*67.4*		"	*52.1*		*129*	*70-130*			
Matrix Spike Dup (P6F2906-MSD1)	**Source: 6F26004-18**			Prepared: 06/26/16 Analyzed: 06/27/16						
C6-C12	965	26.0	mg/kg dry	1040	ND	92.6	75-125	0.817	20	
>C12-C28	1180	26.0	"	1040	25.6	111	75-125	0.157	20	
Surrogate: 1-Chlorooctane	*126*		"	*104*		*121*	*70-130*			
Surrogate: o-Terphenyl	*67.4*		"	*52.1*		*129*	*70-130*			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: XTO Nash Draw Site 2
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6G0602 - TX 1005										
Blank (P6G0602-BLK1)				Prepared & Analyzed: 07/01/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*86.4*		"	*100*		*86.4*	*70-130*			
Surrogate: o-Terphenyl	*48.3*		"	*50.0*		*96.6*	*70-130*			
LCS (P6G0602-BS1)				Prepared & Analyzed: 07/01/16						
C6-C12	817	25.0	mg/kg wet	1000		81.7	75-125			
>C12-C28	986	25.0	"	1000		98.6	75-125			
Surrogate: 1-Chlorooctane	*104*		"	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*46.5*		"	*50.0*		*93.1*	*70-130*			
LCS Dup (P6G0602-BSD1)				Prepared & Analyzed: 07/01/16						
C6-C12	923	25.0	mg/kg wet	1000		92.3	75-125	12.2	20	
>C12-C28	1100	25.0	"	1000		110	75-125	10.7	20	
Surrogate: 1-Chlorooctane	*120*		"	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*57.3*		"	*50.0*		*115*	*70-130*			

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: _____ Date: 7/20/2016

Brent Barron, Laboratory Director/Technical Director

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 6-20-16 PAGE 1 OF 1
PO #: LAB WORK ORDER #: 6F26003
PROJECT LOCATION OR NAME: XTO NASH DRAW SITE 2
LAI PROJECT #: 16-0108-02 COLLECTOR: TW / GF

Data Reported to:

TRRP report? ☐ Yes ☒ No
TIME ZONE: Time zone/State: MTN / NM
S=SOIL P=PAINT W=WATER SL=SLUDGE A=AIR OT=OTHER
6F26003

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐ DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐	BTEX 8021 ☐	FIELD NOTES
DP-02-01 (0-1)	-01	6.20.16	2:10	S	1								X	X												X		
DP-02-02 (0-1)	-02		2:35										X	X												X		
DP-02-02 (1-2)	-03		1																								X	
DP-02-03 (0-1)	-04		2:40										X	X												X		
(1-2)	-05																										X	
(2-3)	-06																										/	
(3-4)	-07																											
DP-02-04 (0-1)	-08		2:50										X	X												X		
(1-2)	-09																										X	
(2-3)	-10																										/	
(3-4)	-11																											
DP-02-BG (0-1)	-12		3:00										X	X												X		
TOTAL																												

RELINQUISHED BY:(Signature) DATE/TIME 6/24/16 4:30 RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME 6/24/16 16:30 RECEIVED BY: (Signature) Marissa Martin

TURN AROUND TIME
NORMAL ☐
1 DAY ☐
2 DAY ☐
OTHER ☒
3 DAY

LABORATORY USE ONLY:
RECEIVING TEMP: 6-0 THERM #:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: XTO Nash Draw Site #10
Project Number: 16-0108-02
Location: New Mexico

Lab Order Number: 6I30003

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-16-6

Report Date: 11/04/16

Larson & Associates, Inc.	Project: XTO Nash Draw Site #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-02-01, 4'	6I30003-02	Soil	09/28/16 13:49	09-30-2016 08:30
DP-02-01, 8'	6I30003-04	Soil	09/28/16 13:56	09-30-2016 08:30
DP-02-01, 10'	6I30003-05	Soil	09/28/16 14:01	09-30-2016 08:30
DP-02-02, 4'	6I30003-06	Soil	09/28/16 12:50	09-30-2016 08:30
DP-02-02, 8'	6I30003-08	Soil	09/28/16 13:00	09-30-2016 08:30
DP-02-02, 10.5'	6I30003-10	Soil	09/28/16 13:25	09-30-2016 08:30

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: XTO Nash Draw Site #10
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-02-01, 4'

6I30003-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**13.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**62.9**	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.5 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**62.9**	28.7	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-01, 8'

6I30003-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**17.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.1	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**43.3**	30.1	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*128 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*133 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**43.3**	30.1	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-01, 10'

6I30003-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**7.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**34.6**	26.9	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*83.4 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.8 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**34.6**	26.9	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-02, 4'

6I30003-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**13600**	57.5	mg/kg dry	50	P6J0305	10/03/16	10/03/16	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**1080**	144	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**2890**	144	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**556**	144	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.1 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.3 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**4520**	144	mg/kg dry	5	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710	Project: XTO Nash Draw Site #10 Project Number: 16-0108-02 Project Manager: Mark Larson	Fax: (432) 687-0456

DP-02-02, 8'

6I30003-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6150**	55.6	mg/kg dry	50	P6J0305	10/03/16	10/03/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**964**	139	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**1970**	139	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**372**	139	mg/kg dry	5	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**3310**	139	mg/kg dry	5	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-02, 10.5'

6I30003-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**119**	5.49	mg/kg dry	5	P6J0305	10/03/16	10/03/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**838**	27.5	mg/kg dry	1	P6J0403	09/30/16	10/04/16	TPH 8015M	
>C12-C28	**1070**	27.5	mg/kg dry	1	P6J0403	09/30/16	10/04/16	TPH 8015M	
>C28-C35	**179**	27.5	mg/kg dry	1	P6J0403	09/30/16	10/04/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.2 %*	*70-130*		*P6J0403*	*09/30/16*	*10/04/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*80.2 %*	*70-130*		*P6J0403*	*09/30/16*	*10/04/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**2090**	27.5	mg/kg dry	1	[CALC]	09/30/16	10/04/16	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: XTO Nash Draw Site #10
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J0304 - * DEFAULT PREP *****										
Blank (P6J0304-BLK1)				Prepared & Analyzed: 10/03/16						
% Moisture	ND	0.1	%							
Duplicate (P6J0304-DUP1)		**Source: 6I30004-04**		Prepared & Analyzed: 10/03/16						
% Moisture	12.0	0.1	%		12.0			0.00	20	
Duplicate (P6J0304-DUP2)		**Source: 6I30006-03**		Prepared & Analyzed: 10/03/16						
% Moisture	16.0	0.1	%		17.0			6.06	20	
Batch P6J0305 - * DEFAULT PREP *****										
Blank (P6J0305-BLK1)				Prepared & Analyzed: 10/03/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6J0305-BS1)				Prepared & Analyzed: 10/03/16						
Chloride	411	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P6J0305-BSD1)				Prepared & Analyzed: 10/03/16						
Chloride	411	1.00	mg/kg wet	400		103	80-120	0.0341	20	
Duplicate (P6J0305-DUP1)		**Source: 6J02004-01**		Prepared & Analyzed: 10/03/16						
Chloride	ND	1.01	mg/kg dry		ND				20	
Duplicate (P6J0305-DUP2)		**Source: 6I30003-07**		Prepared & Analyzed: 10/03/16						
Chloride	15000	58.1	mg/kg dry		15000			0.104	20	
Matrix Spike (P6J0305-MS1)		**Source: 6J02004-01**		Prepared & Analyzed: 10/03/16						
Chloride	961	1.01	mg/kg dry	1010	ND	95.1	80-120			

Larson & Associates, Inc.
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Midland TX, 79710

Project: XTO Nash Draw Site #10
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J0401 - TX 1005										
Blank (P6J0401-BLK1)				Prepared: 09/30/16 Analyzed: 10/03/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*126*		"	*100*		*126*	*70-130*			
Surrogate: o-Terphenyl	*66.4*		"	*50.0*		*133*	*70-130*			*S-GC*
LCS (P6J0401-BS1)				Prepared: 09/30/16 Analyzed: 10/03/16						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125			
>C12-C28	1070	25.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	*122*		"	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*59.1*		"	*50.0*		*118*	*70-130*			
LCS Dup (P6J0401-BSD1)				Prepared: 09/30/16 Analyzed: 10/03/16						
C6-C12	989	25.0	mg/kg wet	1000		98.9	75-125	4.21	20	
>C12-C28	1000	25.0	"	1000		100	75-125	6.69	20	
Surrogate: 1-Chlorooctane	*122*		"	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*59.6*		"	*50.0*		*119*	*70-130*			
Batch P6J0403 - TX 1005										
Blank (P6J0403-BLK1)				Prepared: 09/30/16 Analyzed: 10/04/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*137*		"	*150*		*91.0*	*70-130*			
Surrogate: o-Terphenyl	*71.5*		"	*75.0*		*95.4*	*70-130*			

Larson & Associates, Inc.
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Midland TX, 79710

Project: XTO Nash Draw Site #10
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J0403 - TX 1005										
LCS (P6J0403-BS1)				Prepared: 09/30/16 Analyzed: 10/04/16						
C6-C12	1050	25.0	mg/kg wet	1000		105	75-125			
>C12-C28	1050	25.0	"	1000		105	75-125			
Surrogate: 1-Chlorooctane	*155*		"	*150*		*104*	*70-130*			
Surrogate: o-Terphenyl	*72.4*		"	*75.0*		*96.6*	*70-130*			
LCS Dup (P6J0403-BSD1)				Prepared: 09/30/16 Analyzed: 10/04/16						
C6-C12	1100	25.0	mg/kg wet	1000		110	75-125	4.31	20	
>C12-C28	1120	25.0	"	1000		112	75-125	5.67	20	
Surrogate: 1-Chlorooctane	*165*		"	*150*		*110*	*70-130*			
Surrogate: o-Terphenyl	*77.0*		"	*75.0*		*103*	*70-130*			

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: _____ Date: 11/4/2016

Brent Barron, Laboratory Director/Technical Director

Lt30003

CH

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Larson & Associates, Inc.
Environmental Consultants
Data Reported to: Mark Larson

507 N. Marienfeld, Ste. 205/200
Midland, TX 79701
432-687-0901

DATE: 9-30-2016 PAGE 1 OF 1
PO #: LAB WORK ORDER #:
PROJECT LOCATION OR NAME: XTO Nash Draw Bty #10
LAI PROJECT #: 16-01098-02 COLLECTOR: JM

TRRP report? ☐ Yes ☑ No
TIME ZONE: Time zone/State: Mtn/NM
S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
DP-1, 2'		9/29/16	13:41	S	1				X			
DP-1, 4'			13:49		1							
DP-1, 6'			13:53		1							
DP-1, 8'			13:56		1							
DP-1, 10'			14:01		1							
DP-2, 4'			12:58		1							
DP-2, 6'			12:55		1							
DP-2, 8'			13:00		1							
DP-2, 10'			13:20		1							
DP-2, 10.5'			13:25		1							

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ | 6081 PESTICIDES ☐ 8082 PCBS ☐ 8151 HERBICIDES ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ SemiVOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PERCHLORATE ☐ | CHLORIDE 300 ☑ ANIONS ☐ ALKALINITY ☐ | HOLD

TOTAL

RELINQUISHED BY:(Signature) David Moreno — DATE/TIME 9/30/2016 9:30 — RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) — DATE/TIME — RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) — DATE/TIME 9-30-16 8:30 — RECEIVED BY: (Signature)
PBE Lab

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☑
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 2.0 THERM #:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Nash Draw Battery #10
Project Number: 16-0108-02
Location: New Mexico

Lab Order Number: 6J20016

NELAP/TCEQ # T104704156-13-3

Report Date: 10/24/16

Larson & Associates, Inc.	Project: Nash Draw Battery #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-02-02,15'	6J20016-01	Soil	10/19/16 10:14	10-20-2016 09:32
DP-02-02,20'	6J20016-02	Soil	10/19/16 10:28	10-20-2016 09:32

Larson & Associates, Inc.	Project: Nash Draw Battery #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-02,15'

6J20016-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**5.0**	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**308**	26.3	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
>C12-C28	**739**	26.3	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
>C28-C35	**74.9**	26.3	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.0 %*	*70-130*		*P6J2407*	*10/21/16*	*10/22/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.0 %*	*70-130*		*P6J2407*	*10/21/16*	*10/22/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**1120**	26.3	mg/kg dry	1	[CALC]	10/21/16	10/22/16	calc	

Larson & Associates, Inc.	Project: Nash Draw Battery #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

DP-02-02,20'

6J20016-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
General Chemistry Parameters by EPA / Standard Methods									
% Moisture	**4.0**	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**39.2**	26.0	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
>C12-C28	**201**	26.0	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
>C28-C35	**36.6**	26.0	mg/kg dry	1	P6J2407	10/21/16	10/22/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.4 %*	*70-130*		*P6J2407*	*10/21/16*	*10/22/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P6J2407*	*10/21/16*	*10/22/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**277**	26.0	mg/kg dry	1	[CALC]	10/21/16	10/22/16	calc	

Larson & Associates, Inc.	Project: Nash Draw Battery #10	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-02	
Midland TX, 79710	Project Manager: Mark Larson	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J2403 - * DEFAULT PREP *** **										
Blank (P6J2403-BLK1)				Prepared & Analyzed: 10/24/16						
% Moisture	ND	0.1	%							
Duplicate (P6J2403-DUP2)		**Source: 6J20010-27**		Prepared & Analyzed: 10/24/16						
% Moisture	16.0	0.1	%		15.0			6.45	20	
Duplicate (P6J2403-DUP3)		**Source: 6J20011-27**		Prepared & Analyzed: 10/24/16						
% Moisture	16.0	0.1	%		16.0			0.00	20	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Nash Draw Battery #10
Project Number: 16-0108-02
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: _____ Date: 10/24/2016

Brent Barron, Laboratory Director/Technical Director

e720016

C4

CHAIN-OF-CUSTOD

Page 7 of 7

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 10-20-2016 PAGE 1 OF 1

PO #: LAB WORK ORDER #:

PROJECT LOCATION OR NAME: Nash Draw Batty #10

LAI PROJECT #: 16-0108-02 COLLECTOR: MG

Data Reported to:

TRRP report? ☐ Yes ☑ No

TIME ZONE: Time zone/State: Mtn/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	~~VOC 8260~~ BTEX - MOD 8015	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	Helium	FIELD NOTES
DP-02-02, 15'		10/19/16	10:14	S	1				✓				✓	✓	✓															
DP-02-02, 20'		"	10:28	S	1				✓				✓	✓	✓															
DP-02-02, 25'		"	10:55	S	1				✓																				✓	
TOTAL																														

RELINQUISHED BY:(Signature) DATE/TIME 10/20/2016 09:32 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 10-20-16 9:32 RECEIVED BY: (Signature)

PBELab

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -3.0 THERM #:
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

APPENDIX B

Initial 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
SEP 07 2016
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

nAB1625328377

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy, Inc. 5380	Contact: Dudley McMinn
Address: 500 W. Illinois Ave., Suite 100, Midland, TX 70701	Telephone No.: (432) 682-8873
Facility Name: Nash Draw Unit Battery #10	Facility Type: Tank Battery (Equipment Removed)

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-26992

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Eddy
G	13	23S	29E	1750	North	1850	East	

Latitude 32.307222 Longitude -103.935556

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Spills	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 07-20-2016
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.* Hydrocarbons in soil due to historic use of tank battery reported in soil samples by laboratory following removal of tanks and equipment. Will remediate to OCD and BLM requirements.

Describe Area Affected and Cleanup Action Taken.*
Affected soil to be excavated, treated onsite treatment or disposed offsite at OCD approved facility. Refer to attached analytical data summary.

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: Luke Williams

Title: EH&S Coordinator

E-mail Address: Luke_Williams@xtoenergy.com

Date: 09-07-2016 Phone: (432) 683-8873

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 9/8/16 Expiration Date: N/A

Conditions of Approval: Remediation per O.C.D. Rules & Guidelines. Attached ☐
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 10/9/16

2RP-3873

* Attach Additional Sheets If Necessary