2RP-3877
REMEDIATION PLAN
Nash Draw Tank Battery #1 and #6
Eddy County, New Mexico

LAI Project No. 16-0108-01

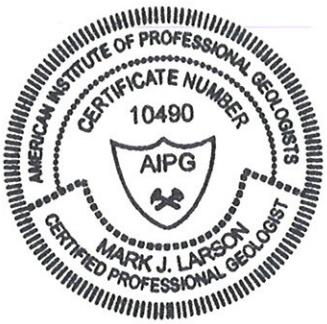
November 2, 2016

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 #1 and #6 (Site). XTO consolidated production from several tank batteries into 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-3877. The Site is located in Unit H (SE/4, NE/4), Section 13, Township 23 South, Range 29 East in Eddy County, New Mexico. The geodetic position is North 33.307778° and West -103.932222°. 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 northwest 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 January 26, 2016. LAI personnel used a Terraprobe® direct-push rig to collect soil samples at five (5) locations (DP-01-01 through DP-01-05) between ground surface and approximately five (5) feet bgs. A background sample (DP-01-BG) was collected at about 1 foot bgs about 80 feet southwest 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-01-01, DP-01-03 and DP-01-04. Chloride was 433 milligrams per kilogram (mg/Kg) in the deepest sample from boring DP-01-01, 25 feet bgs. The background chloride concentration is 165 mg/kg.

2.0 REMEDIATION PLAN

XTO proposes to excavate soil from the area approximately 15 x 25 feet based on field observations, around DP-01-01 to approximately 8 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. A 20 mil thickness liner will be placed in the bottom of the excavation and filled to surface with clean soil.

Soil will be excavated from the area approximately 15 x 15 feet based on field observations, around DP-01-03 to about 8 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.

Soil will be excavated from the area approximately 10 x 10 feet based on field observation, around DP-01-04 to about 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.

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-3877
Investigation Soil Sample Analytical Data Summary
XTO Energy, Inc., Nash Draw Tank Battery 1 and 6
Unit H (SE/4, NE/4), Section 13, Township 23 South, Range 29 East
Eddy County, New Mexico
N32.307778° W-103.932222

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-01 -BG	0 - 1	6/20/2016	In-Situ	<25.8	<25.8	<25.8	<25.8	165
DP-01-01	0 - 1	6/20/2016	In-Situ	1,660	26,800	4,670	**33,130**	**1,870**
	1 - 2	6/20/2016	In-Situ	2,730	23,500	3,350	**29,500**	**6,050**
	2 - 3	6/20/2016	In-Situ	2,190	25,300	3,440	**30,900**	--
	3 - 4	6/20/2016	In-Situ	224	1,810	269	**2,300**	**4,790**
	6	9/29/2016	In-Situ	968	8,180	1,980	**11,100**	**4,820**
	10	9/29/2016	In-Situ	<28.7	38.0	<28.7	**38.0**	**4,190**
	14	9/29/2016	In-Situ	<26.9	146	39.0	**185**	**2,180**
	15	10/19/2016	In-Situ	--	--	--	--	**1,540**
	20	10/19/2016	In-Situ	--	--	--	--	**722**
	25	10/19/2016	In-Situ	--	--	--	--	**433**
DP-01-02	0 - 1	6/20/2016	In-Situ	<137	541	181	**722**	39.6
	1 - 2	6/20/2016	In-Situ	--	--	--	--	--
	2 - 3	6/20/2016	In-Situ	<29.1	<29.1	<29.1	<29.1	71.5
	3 - 4	6/20/2016	In-Situ	--	--	--	--	--
DP-01-03	0 - 1	6/20/2016	In-Situ	635	19,500	3,800	**23,935**	271
	1 - 2	6/20/2016	In-Situ	1,470	20,100	2,960	**24,500**	--
	2 - 3	6/20/2016	In-Situ	1,960	20,000	2,300	**24,300**	--

Table 1
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Investigation Soil Sample Analytical Data Summary
XTO Energy, Inc., Nash Draw Tank Battery 1 and 6
Unit H (SE/4, NE/4), Section 13, Township 23 South, Range 29 East
Eddy County, New Mexico
N32.307778° W-103.932222

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**	
	3 - 4	6/20/2016	In-Situ	197	4,380	563	**5,140**	--
	6	9/29/2016	In-Situ	85.7	3,230	722	**4,030**	--
	10	9/29/2016	In-Situ	<27.5	481	107	**587**	--
	14	9/29/2016	In-Situ	30.7	720	160	**910.7**	--
DP-01-04	0 - 1	6/20/2016	In-Situ	166	11,200	1,610	**12,976**	**601**
	1 - 2	6/20/2016	In-Situ	<29.4	175	35.1	**210.1**	--
	2 - 3	6/20/2016	In-Situ	<32.1	157	59.0	**216.0**	--
	3 - 4	6/20/2016	In-Situ	--	--	--	--	--
DP-01-05	0 - 1	6/20/2016	In-Situ	<27.8	<27.8	<27.8	<27.8	**306**
	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

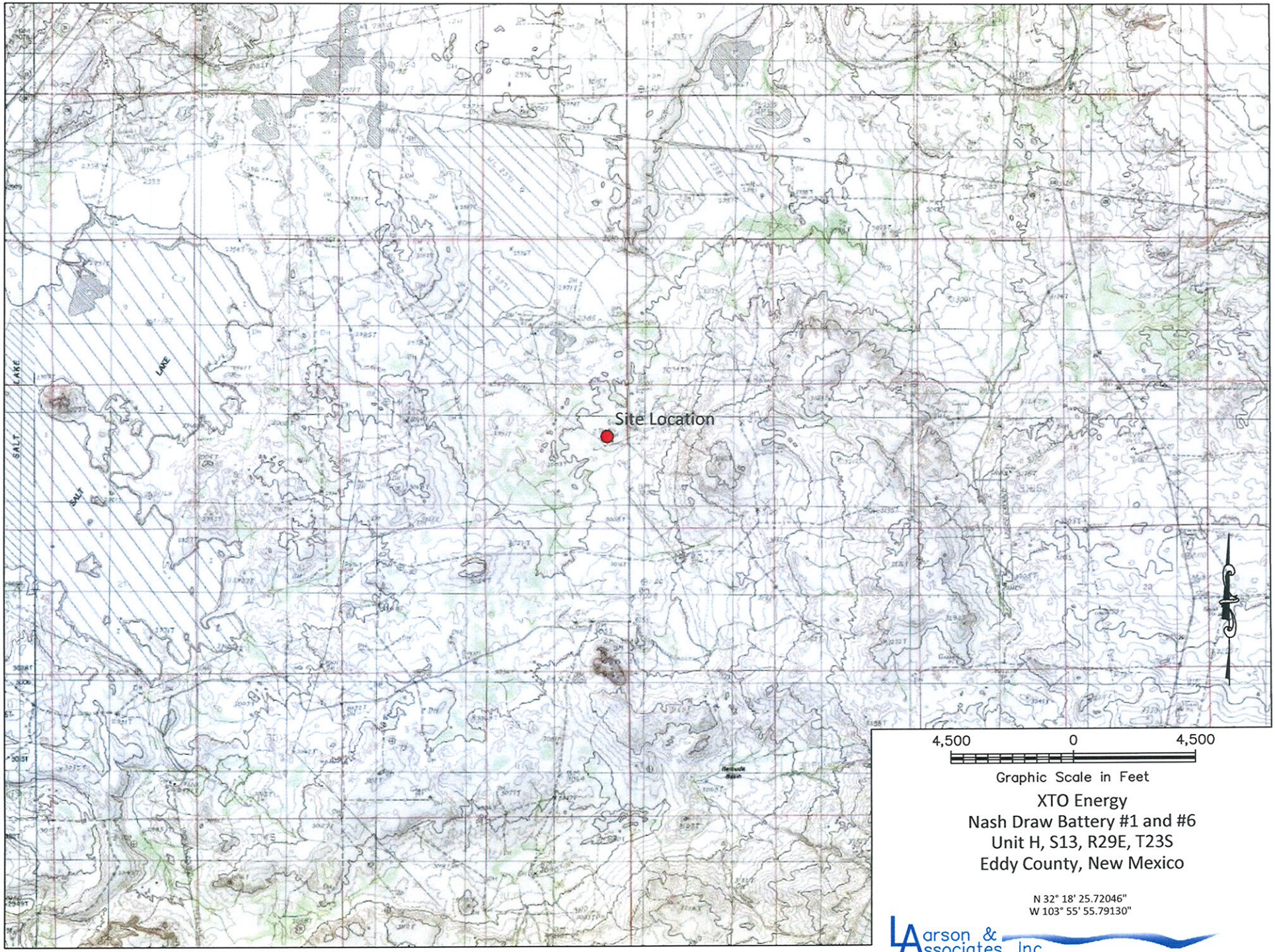

Figure 1 - Topographic Map

Figure 2a - General Aerial Map

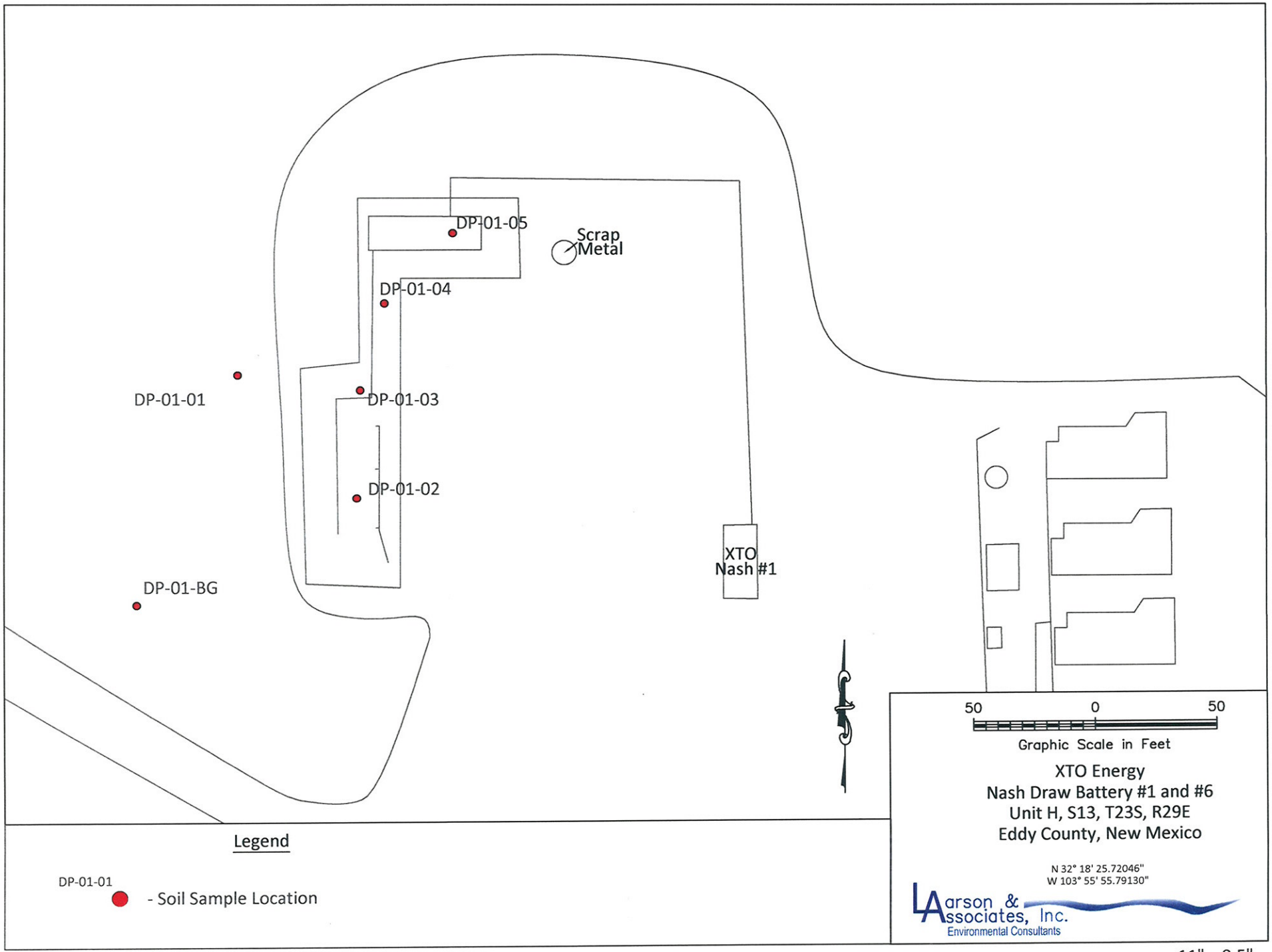

Figure 3 - Site Map Showing Soil Sample Locations

11" x 8.5"

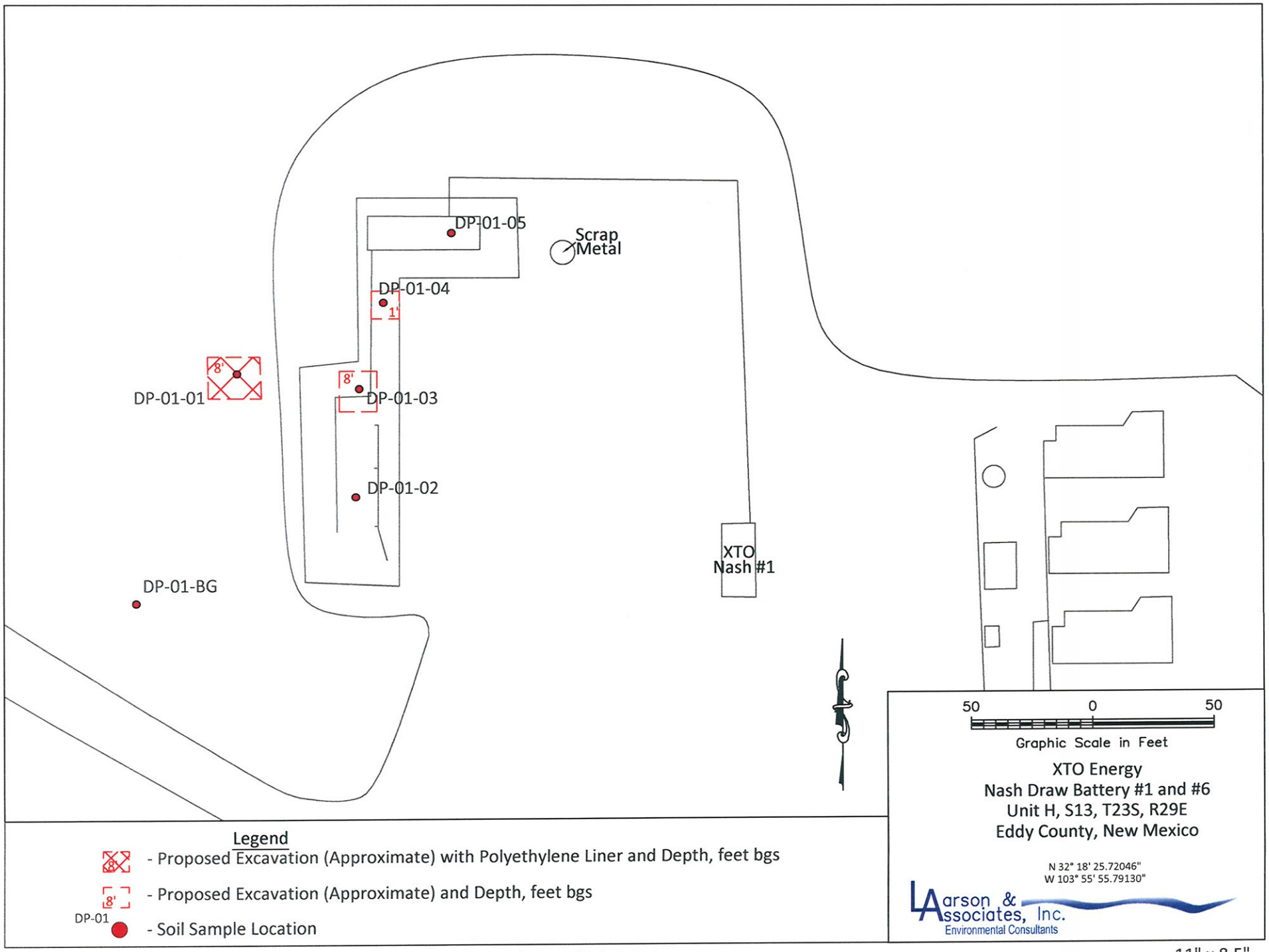

Figure 4 - Site Map Showing Soil Sample Locations and Proposed Remediation Areas

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 1
Project Number: 16-0108-01
Location: New Mexico

Lab Order Number: 6F26002

NELAP/TCEQ # T104704156-13-3

Report Date: 07/20/16

Larson & Associates, Inc.	Project: XTO Nash Draw Site 1	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-01-BG (0-1)	6F26002-01	Soil	06/20/16 11:25	06-24-2016 16:30
DP-01-05 (0-1)	6F26002-02	Soil	06/20/16 11:35	06-24-2016 16:30
DP-01-04 (0-1)	6F26002-06	Soil	06/20/16 11:45	06-24-2016 16:30
DP-01-04 (1-2)	6F26002-07	Soil	06/20/16 11:45	06-24-2016 16:30
DP-01-04 (2-3)	6F26002-08	Soil	06/20/16 11:45	06-24-2016 16:30
DP-01-03 (0-1)	6F26002-10	Soil	06/20/16 11:55	06-24-2016 16:30
DP-01-03 (1-2)	6F26002-11	Soil	06/20/16 11:55	06-24-2016 16:30
DP-01-03 (2-3)	6F26002-12	Soil	06/20/16 11:55	06-24-2016 16:30
DP-01-03 (3-4)	6F26002-13	Soil	06/20/16 11:55	06-24-2016 16:30
DP-01-02 (0-1)	6F26002-14	Soil	06/20/16 12:10	06-24-2016 16:30
DP-01-02 (2-3)	6F26002-16	Soil	06/20/16 12:10	06-24-2016 16:30
DP-01-01 (0-1)	6F26002-18	Soil	06/20/16 12:20	06-24-2016 16:30
DP-01-01 (1-2)	6F26002-19	Soil	06/20/16 12:20	06-24-2016 16:30
DP-01-01 (2-3)	6F26002-20	Soil	06/20/16 12:20	06-24-2016 16:30
DP-01-01 (3-4)	6F26002-21	Soil	06/20/16 12:20	06-24-2016 16:30

Larson & Associates, Inc.	Project: XTO Nash Draw Site 1	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-BG (0-1)

6F26002-01 (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	**165**	1.03	mg/kg dry	1	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*76.6 %*	*70-130*		*P6F2906*	*06/26/16*	*06/26/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.7 %*	*70-130*		*P6F2906*	*06/26/16*	*06/26/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	06/26/16	06/26/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site 1	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-05 (0-1)

6F26002-02 (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	**306**	27.8	mg/kg dry	25	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P6F2906	06/26/16	06/26/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*70.6 %*	*70-130*		*P6F2906*	*06/26/16*	*06/26/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*90.4 %*	*70-130*		*P6F2906*	*06/26/16*	*06/26/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/26/16	06/26/16	calc	

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DP-01-04 (0-1)

6F26002-06 (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	**601**	28.1	mg/kg dry	25	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	**166**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**11200**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**1610**	140	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*71.1 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**13000**	140	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

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DP-01-04 (1-2)

6F26002-07 (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	**15.0**	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.4	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**175**	29.4	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**35.1**	29.4	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*119 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*139 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**210**	29.4	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

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

Project: XTO Nash Draw Site 1
Project Number: 16-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-01-04 (2-3)

6F26002-08 (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									
% Moisture	**22.0**	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	32.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**157**	32.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**59.0**	32.1	mg/kg dry	1	P6G0602	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*131 %*	*70-130*		*P6G0602*	*07/01/16*	*07/02/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**216**	32.1	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

DP-01-03 (0-1)

6F26002-10 (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	**271**	11.0	mg/kg dry	10	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**635**	275	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**19500**	275	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**3800**	275	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**24000**	275	mg/kg dry	10	[CALC]	06/26/16	06/27/16	calc	

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Midland TX, 79710	Project Manager: Mark Larson	

DP-01-03 (1-2)

6F26002-11 (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	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**1470**	144	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**20100**	144	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**2960**	144	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*140 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**24500**	144	mg/kg dry	5	[CALC]	07/01/16	07/02/16	calc	

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DP-01-03 (2-3)

6F26002-12 (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									
% 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	**1960**	140	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**20000**	140	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**2300**	140	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*155 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**24300**	140	mg/kg dry	5	[CALC]	07/01/16	07/02/16	calc	

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DP-01-03 (3-4)

6F26002-13 (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	**12.0**	0.1	%	1	P6G1302	07/13/16	07/13/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**197**	28.4	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
>C12-C28	**4380**	28.4	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
>C28-C35	**563**	28.4	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P6G1303*	*07/12/16*	*07/13/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P6G1303*	*07/12/16*	*07/13/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**5140**	28.4	mg/kg dry	1	[CALC]	07/12/16	07/13/16	calc	

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DP-01-02 (0-1)

6F26002-14 (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	**39.6**	5.49	mg/kg dry	5	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	137	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**541**	137	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**181**	137	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.2 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.7 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**722**	137	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

DP-01-02 (2-3)

6F26002-16 (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	**71.5**	29.1	mg/kg dry	25	P6F2802	06/27/16	06/27/16	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.4 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

DP-01-01 (0-1)

6F26002-18 (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	**1870**	11.2	mg/kg dry	10	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	**1660**	281	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	**26800**	281	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	**4670**	281	mg/kg dry	10	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P6F2906*	*06/26/16*	*06/27/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**33200**	281	mg/kg dry	10	[CALC]	06/26/16	06/27/16	calc	

DP-01-01 (1-2)

6F26002-19 (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	**6050**	27.8	mg/kg dry	25	P6G0711	07/06/16	07/07/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**2730**	139	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**23500**	139	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**3350**	139	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*127 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*151 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	*S-GC*
Total Petroleum Hydrocarbon C6-C35	**29500**	139	mg/kg dry	5	[CALC]	07/01/16	07/02/16	calc	

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DP-01-01 (2-3)

6F26002-20 (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	**4050**	27.2	mg/kg dry	25	P6G1902	07/19/16	07/20/16	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**2190**	136	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C12-C28	**25300**	136	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
>C28-C35	**3440**	136	mg/kg dry	5	P6G0707	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*113 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*P6G0707*	*07/01/16*	*07/02/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**30900**	136	mg/kg dry	5	[CALC]	07/01/16	07/02/16	calc	

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DP-01-01 (3-4)

6F26002-21 (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	**4790**	27.2	mg/kg dry	25	P6G1405	07/15/16	07/15/16	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P6G1302	07/13/16	07/13/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**224**	27.2	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
>C12-C28	**1810**	27.2	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
>C28-C35	**269**	27.2	mg/kg dry	1	P6G1303	07/12/16	07/13/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*12.0 %*	*70-130*		*P6G1303*	*07/12/16*	*07/13/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*10.8 %*	*70-130*		*P6G1303*	*07/12/16*	*07/13/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**2300**	27.2	mg/kg dry	1	[CALC]	07/12/16	07/13/16	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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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	
Batch P6G0711 - * DEFAULT PREP *** **										
Blank (P6G0711-BLK1)				Prepared: 07/06/16 Analyzed: 07/07/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6G0711-BS1)				Prepared: 07/06/16 Analyzed: 07/07/16						
Chloride	179	1.00	mg/kg wet	200		89.4	80-120			

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 P6G0711 - * DEFAULT PREP *****										
LCS Dup (P6G0711-BSD1)				Prepared: 07/06/16 Analyzed: 07/07/16						
Chloride	177	1.00	mg/kg wet	200		88.4	80-120	1.13	20	
Duplicate (P6G0711-DUP1)		**Source: 6F30003-04**		Prepared: 07/06/16 Analyzed: 07/07/16						
Chloride	3080	27.5	mg/kg dry		3010			2.22	20	
Duplicate (P6G0711-DUP2)		**Source: 6F30003-14**		Prepared: 07/06/16 Analyzed: 07/07/16						
Chloride	20.8	1.16	mg/kg dry		22.7			8.66	20	
Batch P6G1302 - * DEFAULT PREP *****										
Blank (P6G1302-BLK1)				Prepared & Analyzed: 07/13/16						
% Moisture	ND	0.1	%							
Duplicate (P6G1302-DUP1)		**Source: 6F29008-04**		Prepared & Analyzed: 07/13/16						
% Moisture	10.0	0.1	%		10.0			0.00	20	
Duplicate (P6G1302-DUP2)		**Source: 6G13003-02**		Prepared & Analyzed: 07/13/16						
% Moisture	5.0	0.1	%		5.0			0.00	20	
Batch P6G1405 - * DEFAULT PREP *****										
Blank (P6G1405-BLK1)				Prepared & Analyzed: 07/15/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6G1405-BS1)				Prepared & Analyzed: 07/15/16						
Chloride	173	1.00	mg/kg wet	200		86.5	80-120			

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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 P6G1405 - * DEFAULT PREP *****										
LCS Dup (P6G1405-BSD1)				Prepared & Analyzed: 07/15/16						
Chloride	173	1.00	mg/kg wet	200		86.7	80-120	0.283	20	
Duplicate (P6G1405-DUP1)		Source: 6G07015-08		Prepared & Analyzed: 07/15/16						
Chloride	3720	27.8	mg/kg dry		3710			0.127	20	
Duplicate (P6G1405-DUP2)		Source: 6G08001-06		Prepared & Analyzed: 07/15/16						
Chloride	1120	1.04	mg/kg dry		1130			0.528	20	
Matrix Spike (P6G1405-MS1)		Source: 6G07015-08		Prepared & Analyzed: 07/15/16						
Chloride	8000	27.8	mg/kg dry	4440	3710	96.5	80-120			
Batch P6G1902 - * DEFAULT PREP *****										
LCS (P6G1902-BS1)				Prepared & Analyzed: 07/19/16						
Chloride	357	1.00	mg/kg wet	400		89.3	80-120			
LCS Dup (P6G1902-BSD1)				Prepared & Analyzed: 07/19/16						
Chloride	354	1.00	mg/kg wet	400		88.6	80-120	0.804	20	
Duplicate (P6G1902-DUP1)		Source: 6G14009-08		Prepared & Analyzed: 07/19/16						
Chloride	2320	5.62	mg/kg dry		1480			44.4	20	R3
Duplicate (P6G1902-DUP2)		Source: 6G14010-06		Prepared & Analyzed: 07/19/16						
Chloride	9.51	1.10	mg/kg dry		6.10			43.7	20	R3
Matrix Spike (P6G1902-MS1)		Source: 6G14009-08		Prepared & Analyzed: 07/19/16						
Chloride	1880	5.62	mg/kg dry	449	1480	90.5	80-120			

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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*			

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*			
Batch P6G0707 - TX 1005										
Blank (P6G0707-BLK1)				Prepared: 07/01/16 Analyzed: 07/02/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*99.2*		"	*100*		*99.2*	*70-130*			
Surrogate: o-Terphenyl	*51.6*		"	*50.0*		*103*	*70-130*			

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

Project: XTO Nash Draw Site 1
Project Number: 16-0108-01
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 P6G0707 - TX 1005										
LCS (P6G0707-BS1)				Prepared: 07/01/16 Analyzed: 07/02/16						
C6-C12	920	25.0	mg/kg wet	1000		92.0	75-125			
>C12-C28	1070	25.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	*117*		"	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*49.1*		"	*50.0*		*98.2*	*70-130*			
LCS Dup (P6G0707-BSD1)				Prepared: 07/01/16 Analyzed: 07/02/16						
C6-C12	945	25.0	mg/kg wet	1000		94.5	75-125	2.61	20	
>C12-C28	1100	25.0	"	1000		110	75-125	3.25	20	
Surrogate: 1-Chlorooctane	*131*		"	*100*		*131*	*70-130*			*S-GC*
Surrogate: o-Terphenyl	*57.8*		"	*50.0*		*116*	*70-130*			
Batch P6G1303 - TX 1005										
Blank (P6G1303-BLK1)				Prepared & Analyzed: 07/12/16						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*106*		"	*100*		*106*	*70-130*			
Surrogate: o-Terphenyl	*53.2*		"	*50.0*		*106*	*70-130*			
LCS (P6G1303-BS1)				Prepared & Analyzed: 07/12/16						
C6-C12	878	25.0	mg/kg wet	1000		87.8	75-125			
>C12-C28	991	25.0	"	1000		99.1	75-125			
Surrogate: 1-Chlorooctane	*113*		"	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*49.7*		"	*50.0*		*99.4*	*70-130*			
LCS Dup (P6G1303-BSD1)				Prepared & Analyzed: 07/12/16						
C6-C12	884	25.0	mg/kg wet	1000		88.4	75-125	0.717	20	
>C12-C28	987	25.0	"	1000		98.7	75-125	0.324	20	
Surrogate: 1-Chlorooctane	*116*		"	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*49.8*		"	*50.0*		*99.5*	*70-130*			

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

Project: XTO Nash Draw Site 1
Project Number: 16-0108-01
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 P6G1303 - TX 1005										
Matrix Spike (P6G1303-MS1)	**Source: 6G11001-01**			Prepared: 07/12/16 Analyzed: 07/13/16						
C6-C12	801	26.6	mg/kg dry	1060	30.0	72.4	75-125			QM-05
>C12-C28	908	26.6	"	1060	616	27.5	75-125			QM-05
Surrogate: 1-Chlorooctane	*117*		"	*106*		*110*	*70-130*			
Surrogate: o-Terphenyl	*53.4*		"	*53.2*		*100*	*70-130*			
Matrix Spike Dup (P6G1303-MSD1)	**Source: 6G11001-01**			Prepared: 07/12/16 Analyzed: 07/13/16						
C6-C12	802	26.6	mg/kg dry	1060	30.0	72.6	75-125	0.210	20	QM-05
>C12-C28	910	26.6	"	1060	616	27.6	75-125	0.595	20	QM-05
Surrogate: 1-Chlorooctane	*120*		"	*106*		*113*	*70-130*			
Surrogate: o-Terphenyl	*54.3*		"	*53.2*		*102*	*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.
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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 2
PO #: LAB WORK ORDER #: 6F26002
PROJECT LOCATION OR NAME: XTO WASH DRAW SITE 1
LAI PROJECT #: 16-0108-01 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
6F26002

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 ☐ DRO GRO 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) ☐ D.W. 200.8 ☐ OTHER LIST ☐	LEAD - TOTAL ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	H&LD	FIELD NOTES
DP-01-BG (0-1)	-01	6.20.16	11:25	S	1							✓	✓													✓			
DP-01-05 (0-1)	-02		11:35									✓	✓													✓			
(1-2)	-03																										X		
(2-3)	-04																										/		
(3-4)	-05																												
DP-01-04 (0-1)	-06		11:45									✓	✓													✓			
(1-2)	-07																										X		
(2-3)	-08																										/		
(3-4)	-09																												
DP-01-03 (0-1)	-10		11:55									✓	✓													✓			
(1-2)	-11																										X		
(2-3)	-12																										/		
(3-4)	-13																												
DP-01-02 (0-1)	-14		12:10									✓	✓													✓			
1 (1-2)	-15		1																								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

CHAIN-OF-CUSTODY

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

Data Reported to:

DATE: 6-20-16 PAGE 2 OF 2
PO #: ______ LAB WORK ORDER #: 6F26002
PROJECT LOCATION OR NAME: XTO NASH DRAW SITE 1
LAI PROJECT #: 16-0108-01 COLLECTOR: TW / GF

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MTN / NM

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

6F26002

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO$_3$	H$_2$SO$_4$ ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒ GRO SOS ☒	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 ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐			Hold	FIELD NOTES
DP-01-02 (2-3)	-16	6-20-16	12:10	S	1				|				X	X													X				
| (3-4)	-17	|	|	|	|				|																					X	
DP-01-01 (0-1)	-18	|	12:20	|	|				|				X	X													X				
| (1-2)	-19	|	|	|	|				|																					X	
| (2-3)	-20	|	|	|	|				|																					|	
| (3-4)	-21	|	|	|	|				|																					|	

TOTAL:

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

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

LABORATORY USE ONLY:
RECEIVING TEMP: 4.0 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 # 1 & # 6
Project Number: 16-0108-01
Location:

Lab Order Number: 6I30002

NELAP/TCEQ # T104704156-16-6

Report Date: 11/04/16

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-01-01, 6'	6I30002-01	Soil	09/28/16 10:45	09-30-2016 08:30
DP-01-01, 10'	6I30002-03	Soil	09/28/16 11:07	09-30-2016 08:30
DP-01-01, 14'	6I30002-05	Soil	09/28/16 11:30	09-30-2016 08:30
DP-01-03, 6'	6I30002-06	Soil	09/28/16 11:50	09-30-2016 08:30
DP-01-03, 10'	6I30002-08	Soil	09/28/16 12:05	09-30-2016 08:30
DP-01-03, 12'	6I30002-09	Soil	09/28/16 12:15	09-30-2016 08:30
DP-01-03, 14'	6I30002-10	Soil	09/28/16 12:30	09-30-2016 08:30

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

Project: XTO Nash Draw Site # 1 & # 6
Project Number: 16-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

DP-01-01, 6'

6I30002-01 (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	**4820**	27.5	mg/kg dry	25	P6J0302	10/02/16	10/02/16	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	**968**	275	mg/kg dry	10	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**8180**	275	mg/kg dry	10	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**1980**	275	mg/kg dry	10	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*118 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**11100**	275	mg/kg dry	10	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-01, 10'

6130002-03 (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	**4190**	28.7	mg/kg dry	25	P6J0302	10/02/16	10/02/16	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	ND	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**38.0**	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		*87.4 %*	*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	**38.0**	28.7	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-01, 14'

6I30002-05 (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									
Chloride	**2180**	26.9	mg/kg dry	25	P6J0302	10/02/16	10/02/16	EPA 300.0	
% 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	**146**	26.9	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**39.0**	26.9	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*127 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**185**	26.9	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-03, 6'

6I30002-06 (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	**85.7**	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**3230**	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**722**	28.7	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*137 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	*S-GC*
Surrogate: o-Terphenyl		*128 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**4030**	28.7	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-03, 10'

6I30002-08 (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									
% 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	ND	27.5	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**481**	27.5	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**107**	27.5	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.4 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*99.3 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**587**	27.5	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-03, 12'

6I30002-09 (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	**8.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

DP-01-03, 14'

6I30002-10 (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									
% Moisture	**8.0**	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**30.7**	27.2	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C12-C28	**720**	27.2	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
>C28-C35	**160**	27.2	mg/kg dry	1	P6J0401	09/30/16	10/03/16	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*130 %*	*70-130*		*P6J0401*	*09/30/16*	*10/03/16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**911**	27.2	mg/kg dry	1	[CALC]	09/30/16	10/03/16	calc	

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

Project: XTO Nash Draw Site # 1 & # 6
Project Number: 16-0108-01
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 P6J0302 - * DEFAULT PREP *** **										
Blank (P6J0302-BLK1)				Prepared & Analyzed: 10/02/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6J0302-BS1)				Prepared & Analyzed: 10/02/16						
Chloride	436	1.00	mg/kg wet	400		109	80-120			
LCS Dup (P6J0302-BSD1)				Prepared & Analyzed: 10/02/16						
Chloride	442	1.00	mg/kg wet	400		110	80-120	1.22	20	
Duplicate (P6J0302-DUP1)		Source: 6J02001-01		Prepared & Analyzed: 10/02/16						
Chloride	3420	25.5	mg/kg dry		3410			0.381	20	
Duplicate (P6J0302-DUP2)		Source: 6I30002-01		Prepared & Analyzed: 10/02/16						
Chloride	4880	27.5	mg/kg dry		4820			1.18	20	
Matrix Spike (P6J0302-MS1)		Source: 6J02001-01		Prepared & Analyzed: 10/02/16						
Chloride	3830	25.5	mg/kg dry	510	3410	82.8	80-120			
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	

Larson & Associates, Inc.	Project: XTO Nash Draw Site # 1 & # 6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

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*			

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

1 of 3000 C

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 205
Midland, TX 79701
432-687-0901

Data Reported to: Mark Larson

DATE: 9-30-2016 PAGE 1 OF 1

PO #: LAB WORK ORDER #:

PROJECT LOCATION OR NAME: XTO Nash Draw Bty #1 + #6

LAI PROJECT #: 16-0108-01 COLLECTOR: JM

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 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP - PEST ☐	TOTAL METALS (RCRA) ☐	LEAD - TOTAL ☐	RCI ☐	TDS ☐	pH ☐	EXPLOSIVES ☐	CHLORIDE ☐	300	Hold	FIELD NOTES
DP-1, 6'		9/28/16	10:45	S	1				X				✓	✓												✓				
DP-1, 8'			10:50		1																						✓		
DP-1, 10'			11:GT		1								✓	✓												✓				
DP-1, 12'			11:20		1																						✓		
DP-1, 14'			11:30		1								✓	✓												✓				
DP-3, 6'			11:50		1								✓	✓																
DP-3, 8'			11:58		1																						✓		
DP-3, 10'			12:05		1								✓	✓																
DP-3, 12'			12:15		1																						✓		
DP-3, 14'		↓	12:30	↓	1				↓				✓	✓																
TOTAL																													

RELINQUISHED BY:(Signature) Jarod Morin DATE/TIME 9/30/20 14 08:30 RECEIVED BY: (Signature)

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

RELINQUISHED BY:(Signature) DATE/TIME 9-30-16 4:30 RECEIVED BY: (Signature)

PBELab

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 #1 & #6
Project Number: 16-0108-01
Location: New Mexico

Lab Order Number: 6J20015

NELAP/TCEQ # T104704156-16-6

Report Date: 10/25/16

Larson & Associates, Inc.	Project: Nash Draw Battery #1 & #6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-01-01,15'	6J20015-01	Soil	10/19/16 13:32	10-20-2016 09:32
DP-01-01,20'	6J20015-02	Soil	10/19/16 13:39	10-20-2016 09:32
DP-01-01,25'	6J20015-03	Soil	10/19/16 13:48	10-20-2016 09:32

Larson & Associates, Inc.	Project: Nash Draw Battery #1 & #6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-01,15'

6J20015-01 (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	**1540**	10.6	mg/kg dry	10	P6J2202	10/22/16	10/23/16	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	

Larson & Associates, Inc.	Project: Nash Draw Battery #1 & #6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-01,20'

6J20015-02 (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	**722**	5.26	mg/kg dry	5	P6J2202	10/22/16	10/23/16	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	

Larson & Associates, Inc.	Project: Nash Draw Battery #1 & #6	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 16-0108-01	
Midland TX, 79710	Project Manager: Mark Larson	

DP-01-01,25'

6J20015-03 (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	**433**	1.05	mg/kg dry	1	P6J2202	10/22/16	10/23/16	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	

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

Project: Nash Draw Battery #1 & #6
Project Number: 16-0108-01
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 P6J2202 - * DEFAULT PREP *** **										
Blank (P6J2202-BLK1)				Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6J2202-BS1)				Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	397	1.00	mg/kg wet	400		99.4	80-120			
LCS Dup (P6J2202-BSD1)				Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	394	1.00	mg/kg wet	400		98.4	80-120	0.978	20	
Duplicate (P6J2202-DUP1)		Source: 6J20011-38		Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	14000	54.9	mg/kg dry		13400			4.63	20	
Duplicate (P6J2202-DUP2)		Source: 6J20019-01		Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	375	26.3	mg/kg dry		382			1.74	20	
Matrix Spike (P6J2202-MS1)		Source: 6J20011-38		Prepared: 10/22/16 Analyzed: 10/23/16						
Chloride	26800	54.9	mg/kg dry	11500	13400	116	80-120			
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	

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: 10/25/2016

Brent Barron, Laboratory Director/Technical Director

CH

CHAIN-OF-CUSTOD

Page 8 of 8

Larson & Associates, Inc.
Environmental Consultants

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

Data Reported to:

DATE: 10-20-2016 PAGE 1 OF 1

PO #: _____ LAB WORK ORDER #: 16J20015

PROJECT LOCATION OR NAME: Nash Draw Bty #1 + #6

LAI PROJECT #: 16-0108-01 COLLECTOR: MC

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 ☐	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 ☐	300	1631	FIELD NOTES
DP-01-01, 15'		10/19/16	13:32	S	1				✓																	✓				
DP-01-01, 20'		"	13:39	S	1				✓																	✓				
DP-01-01, 25'		"	13:48	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

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 07 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

nAB1625335026

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 #1 & #6	Facility Type: Tank Battery (Equipment Removed)

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-21277

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Eddy
H	13	23S	29E	1980	North	660	East	

Latitude 32.307778 Longitude -103.932222

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 ☐
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 10/8/16

2RP-3877

* Attach Additional Sheets If Necessary