

**2RP-3875**  
**REMEDIATION PLAN**  
**Nash Draw Tank Battery #24**  
**Eddy County, New Mexico**

LAI Project No. 16-0108-05

November 2, 2016

Prepared for:

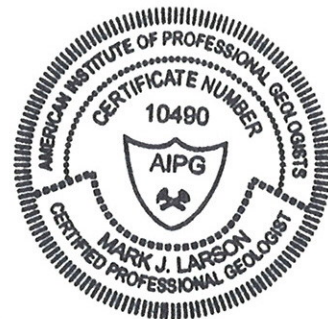
XTO Energy, Inc.  
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Prepared by:

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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 #24 (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-3875. The Site is located in Unit H (SE/4, NE/4), Section 14, Township 23 South, Range 29 East in Eddy County, New Mexico. The geodetic position is North 32.307778° and West -103.949444°. 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 east towards a playa lake located about 300 feet north 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":

<b>Criteria</b>	<b>Result</b>	<b>Score</b>
Depth-to-Groundwater	50 - 99 feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	200 – 1,000 Horizontal Feet	10

The following RRAL apply to the release for ranking score: **20**

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 100 mg/Kg

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### **1.3 Investigation Soil Samples**

Investigation soil samples were collected on June 21, 2016. LAI personnel used a Terraprobe® direct-push rig to collect soil samples at five (5) locations (DP-05-01 through DP-05-05) between ground surface and approximately four (4) feet bgs. Background samples (DP-05-BG) were collected at about 1 and 4 feet bgs about 80 feet south 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. Groundwater was observed at about 20 feet bgs in boring DP-05-04 on October 19, 2016. 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. 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-05-01, DP-05-02, DP-05-03, DP-05-04 and DP-05-05. Chloride was 2,390 mg/Kg in sample DP-05-04 at 15 feet bgs and increased to 12,100 mg/Kg in the sample from 20 feet bgs. The increase in chloride concentration at about 20 feet bgs is believed to be from groundwater and proximity to the playa lake. Chloride in boring DP-05-02 decreased to 67.9 mg/Kg at 6 feet bgs and increased to 666 mg/Kg at 8 feet bgs. XTO will collect samples from DP-05-02 at 6, 8, 10 and 12 feet bgs to confirm the chloride concentration. The background chloride concentrations were 30.2 mg/Kg and less than the method reporting limit (<5.75 mg/Kg) in samples from 1 and 4 feet bgs, respectively.

### **2.0 REMEDIATION PLAN**

XTO proposes to excavate soil from the area approximately 20 x 20 feet based on field observations, around DP-05-01 to approximately 3 feet 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 20 feet based on field observations, around DP-05-01 to approximately 3 feet 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 samples will be collected at DP-05-02 from 6, 8, 10 and 12 feet bgs to delineate chloride in soil. Soil will be excavated from the area approximately 15 x 15 feet based on field observations, around DP-05-02 to about 1 foot bgs if laboratory results confirm chloride decreases below 250 mg/Kg at 6 feet bgs. Additional soil will be removed as necessary based on visual observations for hydrocarbon staining and odor. The excavation will be filled to ground surface with clean soil. However, soil will be excavated to about 4 feet bgs if laboratory results confirm that chloride is greater than 250 mg/Kg at 12 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.

## Tables

Table 1

2RP-3875

## Investigation Soil Sample Analytical Data Summary

XTO Energy, Inc., Nash Draw Tank Battery 24

Unit H (SE/4, NE/4), Section 14, Township 23 South, Range 29 East

Eddy County, New Mexico

N32.307778° W-103.949444°

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: 100								
DP-05 -BG	0 - 1	6/21/2016	In-Situ	30.2	63.7	<26.0	93.9	30.2
	4	9/29/2016	In-Situ	--	--	--	--	<5.75
DP-05-01	0 - 1	6/21/2016	In-Situ	270	2,590	231	3,091	172
	1 - 2	6/21/2016	In-Situ	43.4	162	38.7	244.1	--
	2 - 3	6/21/2016	In-Situ	68.7	42.8	<27.8	111.5	--
	3 - 4	6/21/2016	In-Situ	<28.4	<28.4	<28.4	<28.4	--
DP-05-02	0 - 1	6/21/2016	In-Situ	269	3,020	334	3,623	727
	1 - 2	6/21/2016	In-Situ	<32.9	73.8	<32.9	73.8	712
	2 - 3	6/21/2016	In-Situ	41.8	36.3	<32.1	78.1	557
	4	9/29/2016	In-Situ	--	--	--	--	311
	6	9/29/2016	In-Situ	--	--	--	--	67.9
	8	9/29/2016	In-Situ	--	--	--	--	666
DP-05-03	0 - 1	6/21/2016	In-Situ	<137	757	208	965	48.2
	1 - 2	6/21/2016	In-Situ	38.7	116	38.1	192.8	--
	2 - 3	6/21/2016	In-Situ	<30.5	<30.5	<30.5	<30.5	--
	3 - 4	6/21/2016	In-Situ	--	--	--	--	--
DP-05-04	0 - 1	6/21/2016	In-Situ	259	4,930	587	5,776	554

Table 1  
2RP-3875  
Investigation Soil Sample Analytical Data Summary  
XTO Energy, Inc., Nash Draw Tank Battery 24  
Unit H (SE/4, NE/4), Section 14, Township 23 South, Range 29 East  
Eddy County, New Mexico  
N32.307778° W-103.949444°

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: 100								
DP-05-04	1 - 2	6/21/2016	In-Situ	94.0	1,820	202	2,120	2,460
	2 - 3	6/21/2016	In-Situ	50.4	34.8	<30.5	85.2	2,850
	3 - 4	6/21/2016	In-Situ	--	--	--	--	4,790
	6	9/29/2016	In-Situ	--	--	--	--	2,590
	8	9/29/2016	In-Situ	--	--	--	--	2,660
	10	9/29/2016	In-Situ	--	--	--	--	1,630
	15	10/19/2016	In-Situ	--	--	--	--	2,390
	20	10/19/2016	In-Situ	--	--	--	--	12,100*
DP-05-05	0 - 1	6/21/2016	In-Situ	231	4,100	741	5,072	112
	1 - 2	6/21/2016	In-Situ	40.9	494	90.5	625.4	--
	2 - 3	6/21/2016	In-Situ	47.3	271	59.1	377.4	--
	3 - 4	6/21/2016	In-Situ	<29.4	<29.4	<29.4	<29.4	--

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 guidance document (August 13, 1993)  
\*: groundwater observed at approximately 24 feet bgs

## FIGURES

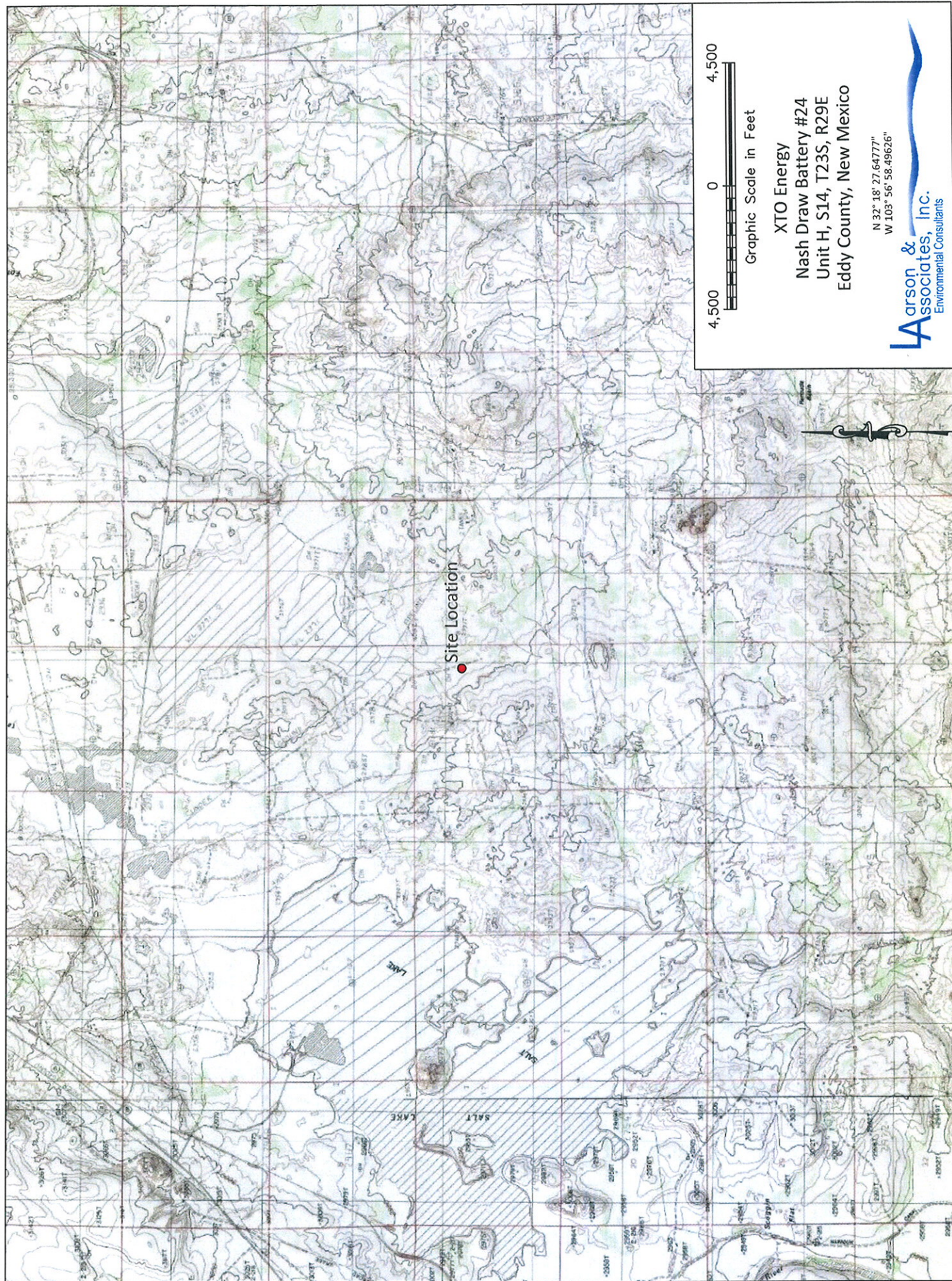


Figure 1 - Topographic Map



100 0 100  
Graphic Scale in Feet

XTO Energy  
Nash Draw Battery #24  
Unit H, S14, T23S, R29E  
Eddy County, New Mexico

N 32° 18' 27.64777"  
W 103° 56' 58.49626"

Larson &  
Associates, Inc.  
Environmental Consultants

Figure 2 - Aerial Map

11" x 8.5"

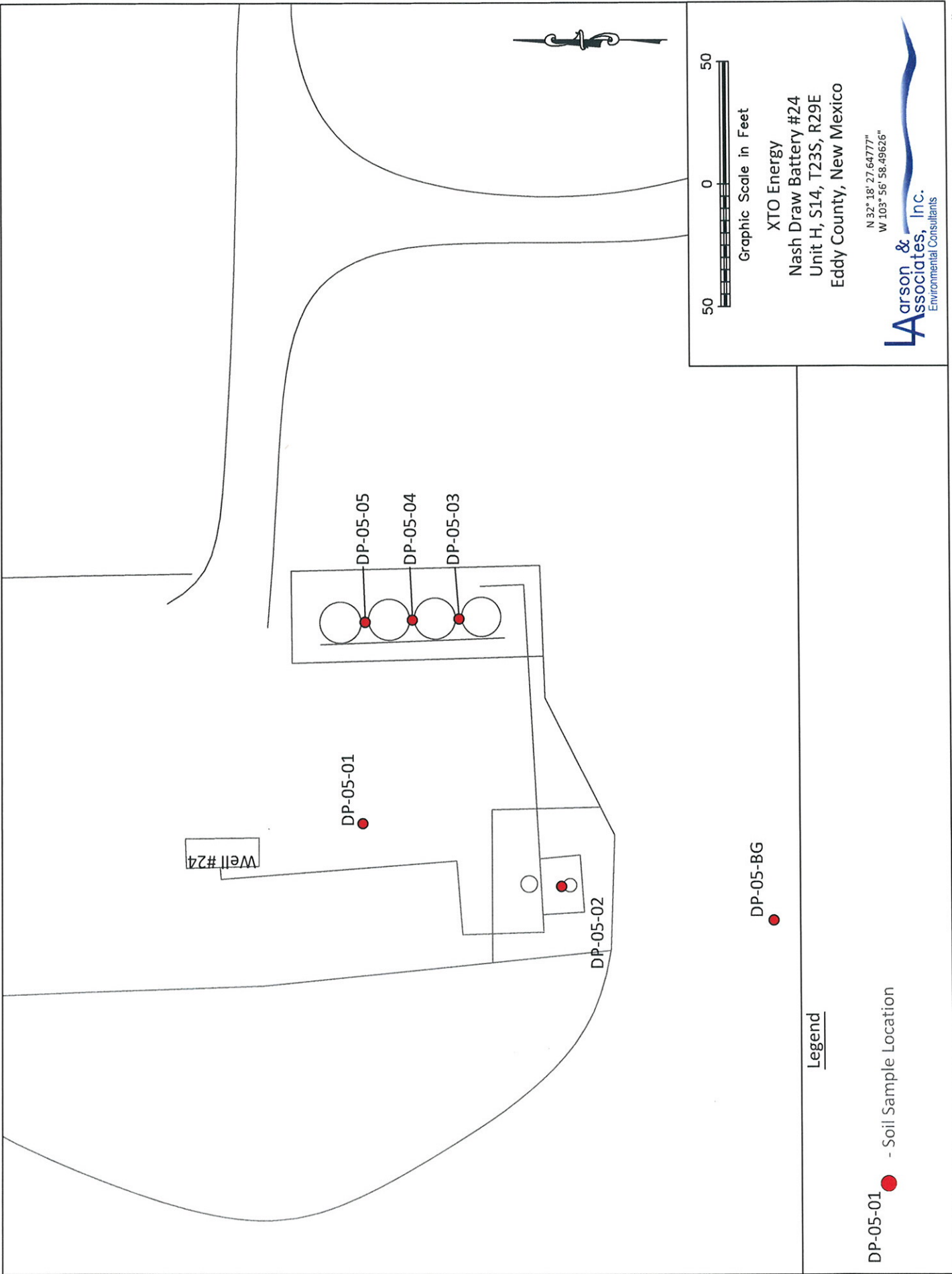


Figure 3 - Site Map Showing Soil Sample Locations

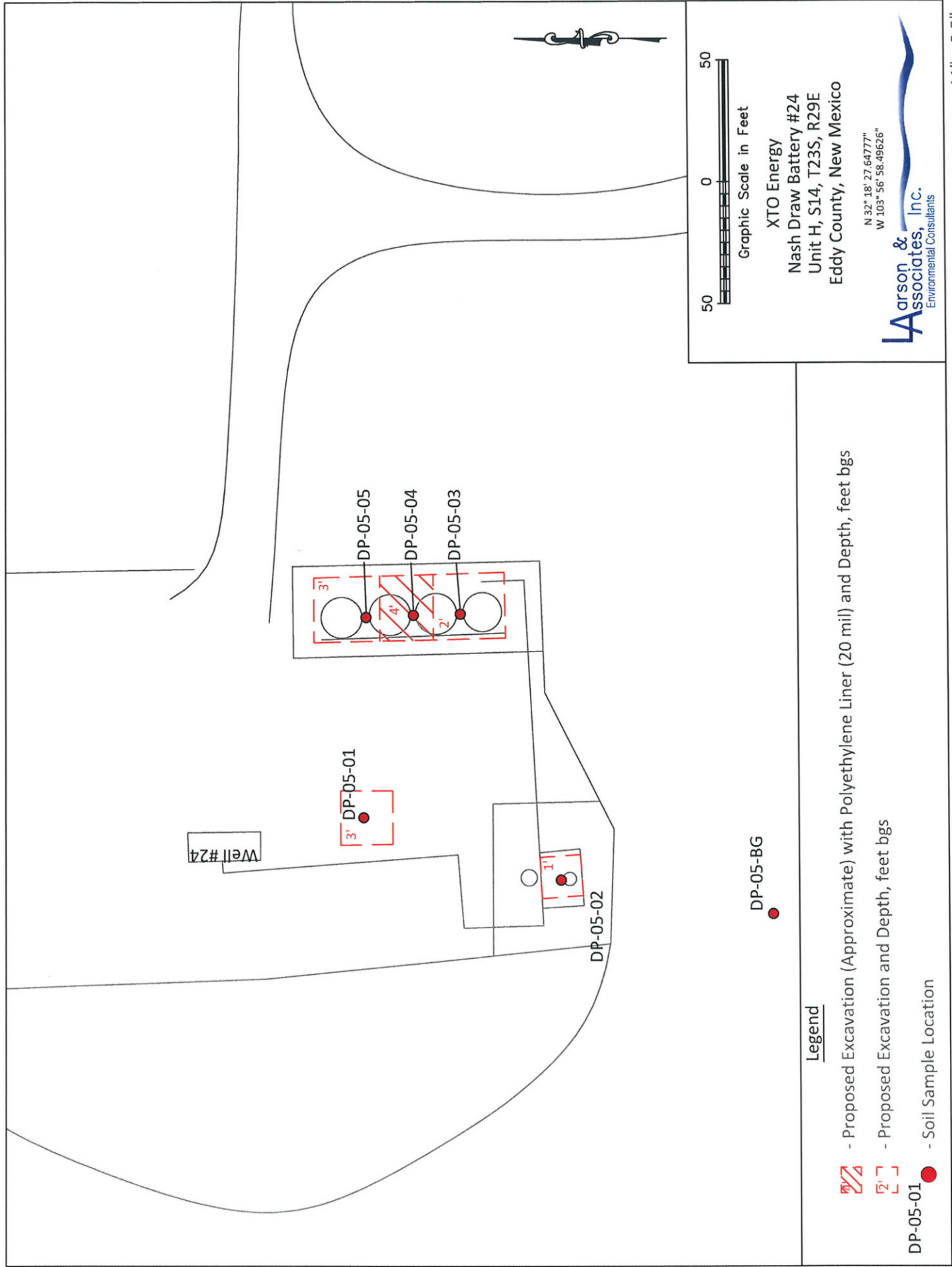


Figure 4 - Site Map Showing Soil Sample Locations, Proposed Excavation Area and Depth

## **APPENDIX A**

### **Laboratory Reports**

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



## Analytical Report

**Prepared for:**

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Location: New Mexico  
Lab Order Number: 6F26005



NELAP/TCEQ # T104704156-13-3

Report Date: 07/20/16

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP 05-05 (0-1)	6F26005-01	Soil	06/21/16 11:55	06-24-2016 16:30
DP 05-05 (1-2)	6F26005-02	Soil	06/21/16 11:55	06-24-2016 16:30
DP 05-05 (2-3)	6F26005-03	Soil	06/21/16 11:55	06-24-2016 16:30
DP 05-05 (3-4)	6F26005-04	Soil	06/21/16 11:55	06-24-2016 16:30
DP 05-04 (0-1)	6F26005-05	Soil	06/21/16 12:15	06-24-2016 16:30
DP 05-04 (1-2)	6F26005-06	Soil	06/21/16 12:15	06-24-2016 16:30
DP 05-04 (2-3)	6F26005-07	Soil	06/21/16 12:15	06-24-2016 16:30
DP 05-04 (3-4)	6F26005-08	Soil	06/21/16 12:15	06-24-2016 16:30
DP 05-03 (0-1)	6F26005-09	Soil	06/21/16 12:22	06-24-2016 16:30
DP 05-03 (1-2)	6F26005-10	Soil	06/21/16 12:22	06-24-2016 16:30
DP 05-03 (2-3)	6F26005-11	Soil	06/21/16 12:22	06-24-2016 16:30
DP 05-02 (0-1)	6F26005-13	Soil	06/21/16 12:30	06-24-2016 16:30
DP 05-02 (1-2)	6F26005-14	Soil	06/21/16 12:30	06-24-2016 16:30
DP 05-02 (2-3)	6F26005-15	Soil	06/21/16 12:30	06-24-2016 16:30
DP 05-01 (0-1)	6F26005-17	Soil	06/21/16 12:40	06-24-2016 16:30
DP 05-01 (1-2)	6F26005-18	Soil	06/21/16 12:40	06-24-2016 16:30
DP 05-01 (2-3)	6F26005-19	Soil	06/21/16 12:40	06-24-2016 16:30
DP 05-01 (3-4)	6F26005-20	Soil	06/21/16 12:40	06-24-2016 16:30
DP 05-BG (0-1)	6F26005-21	Soil	06/21/16 12:50	06-24-2016 16:30

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-05 (0-1)**  
**6F26005-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	112	28.7	mg/kg dry	25	P6F2802	06/27/16	06/28/16	EPA 300.0	
% Moisture	13.0	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	231	144	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C12-C28	4100	144	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
>C28-C35	741	144	mg/kg dry	5	P6F2906	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		83.4 %	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	5070	144	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-05 (1-2)**  
**6F26005-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	20.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	40.9	31.2	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C12-C28	494	31.2	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C28-C35	90.5	31.2	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: 1-Chlorooctane		109 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: o-Terphenyl		118 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	626	31.2	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-05 (2-3)**

**6F26005-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	18.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	47.3	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C12-C28	271	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C28-C35	59.1	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		128 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: o-Terphenyl		143 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	377	30.5	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

Larson & Associates, Inc.  
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Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

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**DP 05-05 (3-4)**

**6F26005-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	15.0	0.1	%	1	P6G1401	07/14/16	07/14/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.4	mg/kg dry	1	P6G1403	07/13/16	07/13/16	TPH 8015M
>C12-C28	ND	29.4	mg/kg dry	1	P6G1403	07/13/16	07/13/16	TPH 8015M
>C28-C35	ND	29.4	mg/kg dry	1	P6G1403	07/13/16	07/13/16	TPH 8015M
Surrogate: 1-Chlorooctane		116 %	70-130		P6G1403	07/13/16	07/13/16	TPH 8015M
Surrogate: o-Terphenyl		132 %	70-130		P6G1403	07/13/16	07/13/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	07/13/16	07/13/16	calc

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

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**DP 05-04 (0-1)**  
**6F26005-05 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	554	29.8	mg/kg dry	25	P6F2913	06/28/16	06/28/16	EPA 300.0
% Moisture	16.0	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	259	149	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M
>C12-C28	4930	149	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M
>C28-C35	587	149	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M
Surrogate: 1-Chlorooctane		80.1 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M
Surrogate: o-Terphenyl		89.5 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	5780	149	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-04 (1-2)**  
**6F26005-06 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	2460	60.2	mg/kg dry	50	P6G1405	07/15/16	07/15/16	EPA 300.0
% Moisture	17.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	94.0	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C12-C28	1820	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C28-C35	202	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: 1-Chlorooctane		115 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: o-Terphenyl		125 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	2120	30.1	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-04 (2-3)**

**6F26005-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	2850	61.0	mg/kg dry	50	P6G1405	07/15/16	07/15/16	EPA 300.0	
% Moisture	18.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	50.4	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C12-C28	34.8	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C28-C35	ND	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		110 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: o-Terphenyl		120 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	85.2	30.5	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

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Midland TX, 79710

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP 05-04 (3-4)**

**6F26005-08 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	4790	61.0	mg/kg dry	50	P6G1405	07/15/16	07/15/16	EPA 300.0	
% Moisture	18.0	0.1	%	1	P6G1401	07/14/16	07/14/16	% calculation	

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Project Manager: Mark Larson

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**DP 05-03 (0-1)**  
**6F26005-09 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	48.2	1.10	mg/kg dry	1	P6F2913	06/28/16	06/28/16	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	P6F2907	06/26/16	06/27/16	TPH 8015M
>C12-C28	757	137	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M
>C28-C35	208	137	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M
Surrogate: 1-Chlorooctane		93.0 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M
Surrogate: o-Terphenyl		99.0 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	965	137	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc

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**DP 05-03 (1-2)**  
**6F26005-10 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	17.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	38.7	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C12-C28	116	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
>C28-C35	38.1	30.1	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: 1-Chlorooctane		89.4 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Surrogate: o-Terphenyl		99.7 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	193	30.1	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc

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**DP 05-03 (2-3)**

**6F26005-11 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	18.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C12-C28	ND	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
>C28-C35	ND	30.5	mg/kg dry	1	P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: 1-Chlorooctane		130 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	
Surrogate: o-Terphenyl		148 %	70-130		P6G0705	07/01/16	07/02/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	30.5	mg/kg dry	1	[CALC]	07/01/16	07/02/16	calc	

Permian Basin Environmental Lab, L.P.

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Project Manager: Mark Larson

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**DP 05-02 (0-1)**  
**6F26005-13 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	727	30.1	mg/kg dry	25	P6F2913	06/28/16	06/28/16	EPA 300.0	
% Moisture	17.0	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	269	151	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C12-C28	3020	151	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C28-C35	334	151	mg/kg dry	5	P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		79.5 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: o-Terphenyl		90.3 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	3620	151	mg/kg dry	5	[CALC]	06/26/16	06/27/16	calc	

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**DP 05-02 (1-2)**  
**6F26005-14 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	712	32.9	mg/kg dry	25	P6G1405	07/15/16	07/15/16	EPA 300.0	
% Moisture	24.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	32.9	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C12-C28	73.8	32.9	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C28-C35	ND	32.9	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		127 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: o-Terphenyl		139 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	73.8	32.9	mg/kg dry	1	[CALC]	07/01/16	07/01/16	calc	

Permian Basin Environmental Lab, L.P.

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**DP 05-02 (2-3)**

**6F26005-15 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	557	32.1	mg/kg dry	25	P6G1405	07/15/16	07/15/16	EPA 300.0	
% 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	41.8	32.1	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C12-C28	36.3	32.1	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C28-C35	ND	32.1	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		129 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: o-Terphenyl		146 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	78.1	32.1	mg/kg dry	1	[CALC]	07/01/16	07/01/16	calc	

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**DP 05-01 (0-1)**  
**6F26005-17 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	172	29.8	mg/kg dry	25	P6F2913	06/28/16	06/28/16	EPA 300.0	
% Moisture	16.0	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	270	29.8	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C12-C28	2590	29.8	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C28-C35	231	29.8	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		105 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: o-Terphenyl		100 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	3090	29.8	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

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**DP 05-01 (1-2)**  
**6F26005-18 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**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
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	43.4	28.7	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C12-C28	162	28.7	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
>C28-C35	38.7	28.7	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: 1-Chlorooctane		128 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	
Surrogate: o-Terphenyl		140 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	244	28.7	mg/kg dry	1	[CALC]	07/01/16	07/01/16	calc	

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**DP 05-01 (2-3)**  
**6F26005-19 (Soil)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	10.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	68.7	27.8	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
>C12-C28	42.8	27.8	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
Surrogate: 1-Chlorooctane		94.8 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M
Surrogate: o-Terphenyl		103 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	112	27.8	mg/kg dry	1	[CALC]	07/01/16	07/01/16	calc

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**DP 05-01 (3-4)**  
**6F26005-20 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	12.0	0.1	%	1	P6G0501	07/05/16	07/05/16	% calculation
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
>C12-C28	ND	28.4	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
>C28-C35	ND	28.4	mg/kg dry	1	P6G0705	07/01/16	07/01/16	TPH 8015M
Surrogate: 1-Chlorooctane		92.0 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M
Surrogate: o-Terphenyl		98.9 %	70-130		P6G0705	07/01/16	07/01/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	07/01/16	07/01/16	calc

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**DP 05-BG (0-1)**

**6F26005-21 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	61.5	26.0	mg/kg dry	25	P6F2913	06/28/16	06/28/16	EPA 300.0	
% Moisture	4.0	0.1	%	1	P6F2901	06/29/16	06/29/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	30.2	26.0	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C12-C28	63.7	26.0	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: 1-Chlorooctane		91.3 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Surrogate: o-Terphenyl		95.7 %	70-130		P6F2907	06/26/16	06/27/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	93.8	26.0	mg/kg dry	1	[CALC]	06/26/16	06/27/16	calc	

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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
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**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
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**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	
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**Batch P6F2913 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P6F2913-BLK1)**

Prepared & Analyzed: 06/28/16

Chloride	ND	1.00	mg/kg wet							
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**LCS (P6F2913-BS1)**

Prepared & Analyzed: 06/28/16

Chloride	177	1.00	mg/kg wet	200		88.7	80-120			
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**LCS Dup (P6F2913-BSD1)**

Prepared & Analyzed: 06/28/16

Chloride	178	1.00	mg/kg wet	200		88.8	80-120	0.0789	20	
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**Duplicate (P6F2913-DUP1)**

Source: 6F26005-05

Prepared & Analyzed: 06/28/16

Chloride	569	29.8	mg/kg dry		554			2.65	20	
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**Duplicate (P6F2913-DUP2)**

Source: 6F26006-21

Prepared & Analyzed: 06/28/16

Chloride	1110	10.9	mg/kg dry		1110			0.548	20	
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**Matrix Spike (P6F2913-MS1)**

Source: 6F26005-05

Prepared & Analyzed: 06/28/16

Chloride	11000	29.8	mg/kg dry	9520	554	110	80-120			
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**Batch P6G0501 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P6G0501-BLK1)**

Prepared & Analyzed: 07/05/16

% Moisture	ND	0.1	%							
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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
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
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**Batch P6G0501 - \*\*\* DEFAULT PREP \*\*\***

<b>Duplicate (P6G0501-DUP1)</b>		<b>Source: 6F26006-06</b>			<b>Prepared &amp; Analyzed: 07/05/16</b>					
% Moisture	13.0	0.1	%		13.0			0.00	20	
<b>Duplicate (P6G0501-DUP2)</b>		<b>Source: 6F26009-23</b>			<b>Prepared &amp; Analyzed: 07/05/16</b>					
% Moisture	14.0	0.1	%		17.0			19.4	20	
<b>Duplicate (P6G0501-DUP3)</b>		<b>Source: 6G01003-01</b>			<b>Prepared &amp; Analyzed: 07/05/16</b>					
% Moisture	6.0	0.1	%		5.0			18.2	20	
<b>Duplicate (P6G0501-DUP4)</b>		<b>Source: 6G01008-02</b>			<b>Prepared &amp; Analyzed: 07/05/16</b>					
% Moisture	13.0	0.1	%		12.0			8.00	20	

**Batch P6G1401 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6G1401-BLK1)</b>		<b>Prepared &amp; Analyzed: 07/14/16</b>								
% Moisture	ND	0.1	%							
<b>Duplicate (P6G1401-DUP1)</b>		<b>Source: 6G13010-02</b>			<b>Prepared &amp; Analyzed: 07/14/16</b>					
% Moisture	8.0	0.1	%		9.0			11.8	20	
<b>Duplicate (P6G1401-DUP2)</b>		<b>Source: 6G13015-01</b>			<b>Prepared &amp; Analyzed: 07/14/16</b>					
% Moisture	2.0	0.1	%		2.0			0.00	20	

**Batch P6G1405 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6G1405-BLK1)</b>		<b>Prepared &amp; Analyzed: 07/15/16</b>								
Chloride	ND	1.00	mg/kg wet							

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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
<b>Batch P6G1405 - *** DEFAULT PREP ***</b>										
<b>LCS (P6G1405-BS1)</b>				Prepared & Analyzed: 07/15/16						
Chloride	173	1.00	mg/kg wet	200		86.5	80-120			
<b>LCS Dup (P6G1405-BSD1)</b>				Prepared & Analyzed: 07/15/16						
Chloride	173	1.00	mg/kg wet	200		86.7	80-120	0.283	20	
<b>Duplicate (P6G1405-DUP1)</b>				Source: 6G07015-08		Prepared & Analyzed: 07/15/16				
Chloride	3720	27.8	mg/kg dry		3710			0.127	20	
<b>Duplicate (P6G1405-DUP2)</b>				Source: 6G08001-06		Prepared & Analyzed: 07/15/16				
Chloride	1120	1.04	mg/kg dry		1130			0.528	20	
<b>Matrix Spike (P6G1405-MS1)</b>				Source: 6G07015-08		Prepared & Analyzed: 07/15/16				
Chloride	8000	27.8	mg/kg dry	4440	3710	96.5	80-120			

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Midland TX, 79710

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
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
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**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			

Permian Basin Environmental Lab, L.P.

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1400 Rankin HWY Midland, TX 79701 432-686-7235

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
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
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#### Batch P6F2907 - TX 1005

##### Blank (P6F2907-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	101		"	100		101	70-130			
Surrogate: o-Terphenyl	52.3		"	50.0		105	70-130			

##### LCS (P6F2907-BS1)

Prepared & Analyzed: 06/26/16

C6-C12	882	25.0	mg/kg wet	1000		88.2	75-125			
>C12-C28	1050	25.0	"	1000		105	75-125			
Surrogate: 1-Chlorooctane	116		"	100		116	70-130			
Surrogate: o-Terphenyl	49.5		"	50.0		99.1	70-130			

##### LCS Dup (P6F2907-BSD1)

Prepared & Analyzed: 06/26/16

C6-C12	941	25.0	mg/kg wet	1000		94.1	75-125	6.44	20	
>C12-C28	1130	25.0	"	1000		113	75-125	6.88	20	
Surrogate: 1-Chlorooctane	116		"	100		116	70-130			
Surrogate: o-Terphenyl	53.0		"	50.0		106	70-130			

##### Matrix Spike (P6F2907-MS1)

Source: 6F26005-21

Prepared: 06/26/16 Analyzed: 06/27/16

C6-C12	891	26.0	mg/kg dry	1040	30.2	82.6	75-125			
>C12-C28	1090	26.0	"	1040	63.7	98.5	75-125			
Surrogate: 1-Chlorooctane	125		"	104		120	70-130			
Surrogate: o-Terphenyl	55.0		"	52.1		106	70-130			

##### Matrix Spike Dup (P6F2907-MSD1)

Source: 6F26005-21

Prepared: 06/26/16 Analyzed: 06/27/16

C6-C12	894	26.0	mg/kg dry	1040	30.2	82.9	75-125	0.399	20	
>C12-C28	1110	26.0	"	1040	63.7	100	75-125	1.61	20	
Surrogate: 1-Chlorooctane	123		"	104		118	70-130			
Surrogate: o-Terphenyl	47.9		"	52.1		92.0	70-130			

Permian Basin Environmental Lab, L.P.

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

Project: Nash Draw Site #24  
Project Number: 16-0108-05  
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
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**Batch P6G0705 - TX 1005**

**Blank (P6G0705-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	101		"	100		101	70-130			
Surrogate: o-Terphenyl	52.7		"	50.0		105	70-130			

**LCS (P6G0705-BS1)**

Prepared & Analyzed: 07/01/16

C6-C12	834	25.0	mg/kg wet	1000		83.4	75-125			
>C12-C28	965	25.0	"	1000		96.5	75-125			
Surrogate: 1-Chlorooctane	119		"	100		119	70-130			
Surrogate: o-Terphenyl	44.6		"	50.0		89.2	70-130			

**LCS Dup (P6G0705-BSD1)**

Prepared & Analyzed: 07/01/16

C6-C12	890	25.0	mg/kg wet	1000		89.0	75-125	6.60	20	
>C12-C28	1010	25.0	"	1000		101	75-125	4.68	20	
Surrogate: 1-Chlorooctane	110		"	100		110	70-130			
Surrogate: o-Terphenyl	47.4		"	50.0		94.8	70-130			

**Duplicate (P6G0705-DUP1)**

Source: 6F26005-03

Prepared: 07/01/16 Analyzed: 07/02/16

C6-C12	32.4	30.5	mg/kg dry		47.3			37.2	20	
>C12-C28	386	30.5	"		271			35.1	20	
Surrogate: 1-Chlorooctane	167		"	183		91.5	70-130			
Surrogate: o-Terphenyl	92.8		"	91.5		102	70-130			

**Batch P6G1403 - TX 1005**

**Blank (P6G1403-BLK1)**

Prepared & Analyzed: 07/13/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	57.5		"	50.0		115	70-130			

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Midland TX, 79710

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Project Number: 16-0108-05  
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
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**Batch P6G1403 - TX 1005**

**LCS (P6G1403-BS1)**

Prepared & Analyzed: 07/13/16

C6-C12	928	25.0	mg/kg wet	1000		92.8	75-125			
>C12-C28	1030	25.0	"	1000		103	75-125			
Surrogate: 1-Chlorooctane	117		"	100		117	70-130			
Surrogate: o-Terphenyl	63.1		"	50.0		126	70-130			

**LCS Dup (P6G1403-BSD1)**

Prepared & Analyzed: 07/13/16

C6-C12	933	25.0	mg/kg wet	1000		93.3	75-125	0.536	20	
>C12-C28	1050	25.0	"	1000		105	75-125	2.51	20	
Surrogate: 1-Chlorooctane	126		"	100		126	70-130			
Surrogate: o-Terphenyl	60.1		"	50.0		120	70-130			

**Matrix Spike (P6G1403-MS1)**

Source: 6G12001-08

Prepared & Analyzed: 07/13/16

C6-C12	964	25.3	mg/kg dry	1010	18.9	93.6	75-125			
>C12-C28	1030	25.3	"	1010	52.8	97.1	75-125			
Surrogate: 1-Chlorooctane	121		"	101		120	70-130			
Surrogate: o-Terphenyl	63.9		"	50.5		127	70-130			

**Matrix Spike Dup (P6G1403-MSD1)**

Source: 6G12001-08

Prepared & Analyzed: 07/13/16

C6-C12	790	25.3	mg/kg dry	1010	18.9	76.4	75-125	20.2	20	QM-05
>C12-C28	886	25.3	"	1010	52.8	82.4	75-125	16.3	20	
Surrogate: 1-Chlorooctane	120		"	101		118	70-130			
Surrogate: o-Terphenyl	56.5		"	50.5		112	70-130			

Permian Basin Environmental Lab, L.P.

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Project Number: 16-0108-05  
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### Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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Environmental Consultants

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

Data Reported to:

DATE: 6/29/16 PAGE 1 OF 2  
PO #: \_\_\_\_\_ LAB WORK ORDER #: 6F2600S  
PROJECT LOCATION OR NAME: NASH DENV #24  
LAI PROJECT #: 16-0108-QS COLLECTOR: TU

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TRRP report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			S=SOIL      P=PAINT W=WATER      SL=SLUDGE A=AIR      OT=OTHER		
TIME ZONE: _____ Time zone/State: _____			6F26005		
Field Sample I.D. _____					
Lab #	Date	Time	Matrix	# of Containers	PRESERVATION HCl _____ HNO <sub>3</sub> _____ H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> ICE _____ UNPRESERVED _____
ANALYSES BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> GASOLINE MOD 8015 <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL - MOD 8015 <input type="checkbox"/> VOC 8260 <input type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> 8082 PCBs <input type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Semi-VOC <input type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> RQ <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>			FIELD NOTES 10/24/16 11:35		
DP 05-05 (G-1)	(1-2)	-02		1	X
	(2-3)	-03			
	(3-4)	-04			
DP 05-04 (G-1)	(1-2)	-06			X
	(2-3)	-07			
	(3-4)	-08			
DP 05-03 (G-1)	(1-2)	-10			X
	(2-3)	-11			
	(3-4)	-12			
DP 05-02 (G-1)	(1-2)	-13			X
	(2-3)	-14			
	(3-4)	-15			
TOTAL					
RELINQUISHED BY: (Signature) _____ DATE/TIME: 11/30 10:24/16			RECEIVED BY: (Signature) _____ DATE/TIME: 11/30 10:24/16		
RELINQUISHED BY: (Signature) _____ DATE/TIME: 11/24/16 16:30			RECEIVED BY: (Signature) _____ DATE/TIME: 11/24/16 16:30		
RELINQUISHED BY: (Signature) _____ DATE/TIME: 11/24/16 16:30			RECEIVED BY: (Signature) _____ DATE/TIME: 11/24/16 16:30		
TURN AROUND TIME NORMAL <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input type="checkbox"/> 3 day			LABORATORY USE ONLY: RECEIVING TEMP: 10.2 THERM #: _____ CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED CARRIER BILL # _____ HAND DELIVERED <input type="checkbox"/>		

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

Data Reported to:

DATE: 6/24/16 PAGE 2 OF 2  
PO #: \_\_\_\_\_ LAB WORK ORDER #: 6F26003  
PROJECT LOCATION OR NAME: NASH DRAW # 251  
LAI PROJECT #: 16-0103-05 COLLECTOR: TU

COLLECTOR: TM

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TRRP report?		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		TIME ZONE: Time zone/State:		N/A		6F26005	
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/>	ICE	UNPRESERVED	ANALYSES
05-02 (3-4)	-16	6/24/16	12:30	S	1						<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Sem-VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> <input checked="" type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> <input checked="" type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> <input checked="" type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> <input checked="" type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> <input checked="" type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> <input checked="" type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>
05-02 (1-2)	-18										<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Sem-VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> <input checked="" type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> <input checked="" type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> <input checked="" type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> <input checked="" type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> <input checked="" type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> <input checked="" type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>
05-02 (2-3)	-19										<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Sem-VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> <input checked="" type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> <input checked="" type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> <input checked="" type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> <input checked="" type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> <input checked="" type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> <input checked="" type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>
05-02 (3-4)	-20										<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Sem-VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> <input checked="" type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> <input checked="" type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> <input checked="" type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> <input checked="" type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> <input checked="" type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> <input checked="" type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>
05-186 (0-1)	-21		12:50								<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Sem-VOC <input type="checkbox"/> <input checked="" type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/> <input checked="" type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/> <input checked="" type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> <input checked="" type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> <input checked="" type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> <input checked="" type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECTHLORATE <input type="checkbox"/> <input checked="" type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>
05-186 (1-2)	-22										<input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> <input checked="" type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> <input checked="" type="checkbox"/> GASOLINE MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DIESEL MOD 8015 <input checked="" type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> VOC 8260 <input type="checkbox"/> <input checked="" type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> <input checked="" type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> <input checked="" type="checkbox"/> 8082 PCBs <input type="checkbox"/> 

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



## Analytical Report

**Prepared for:**

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

Project: XTO Nash Draw Site #24

Project Number: 16-0108-01

Location:

Lab Order Number: 6I30005



NELAP/TCEQ # T104704156-16-6

Report Date: 10/04/16

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

Project: XTO Nash Draw Site #24  
Project Number: 16-0108-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B6, 4'	6130005-01	Soil	09/29/16 12:17	09-30-2016 08:30
DP-02, 4'	6130005-02	Soil	09/29/16 11:58	09-30-2016 08:30
DP-02, 6'	6130005-03	Soil	09/29/16 12:02	09-30-2016 08:30
DP-02, 8'	6130005-04	Soil	09/29/16 12:05	09-30-2016 08:30
DP-04, 6'	6130005-05	Soil	09/29/16 11:36	09-30-2016 08:30
DP-04, 8'	6130005-06	Soil	09/29/16 11:42	09-30-2016 08:30
DP-04, 10'	6130005-07	Soil	09/29/16 11:50	09-30-2016 08:30

Larson & Associates, Inc.  
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**B6, 4'**  
**6130005-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	ND	5.75	mg/kg dry	5	P6J0306	10/03/16	10/03/16	EPA 300.0	
% Moisture	13.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

Permian Basin Environmental Lab, L.P.

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.*

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

Project: XTO Nash Draw Site #24  
Project Number: 16-0108-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP-02, 4'**  
**6130005-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	311	32.1	mg/kg dry	25	P6J0306	10/03/16	10/03/16	EPA 300.0	
% Moisture	22.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

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Project Manager: Mark Larson

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**DP-02, 6'**  
**6I30005-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	67.9	6.02	mg/kg dry	5	P6J0306	10/03/16	10/03/16	EPA 300.0	
% Moisture	17.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

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**DP-02, 8'**  
**6130005-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	666	28.4	mg/kg dry	25	P6J0306	10/03/16	10/03/16	EPA 300.0	
% Moisture	12.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

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Midland TX, 79710

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Project Number: 16-0108-01  
Project Manager: Mark Larson

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**DP-04, 6'**  
**6130005-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	2590	52.1	mg/kg dry	50	P6J0306	10/03/16	10/03/16	EPA 300.0	
% Moisture	4.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

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Project Number: 16-0108-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**DP-04, 8'**  
**6130005-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	2660	64.1	mg/kg dry	50	P6J0306	10/03/16	10/04/16	EPA 300.0	
% Moisture	22.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

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**DP-04, 10'**

**6130005-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	1630	30.5	mg/kg dry	25	P6J0306	10/03/16	10/04/16	EPA 300.0	
% Moisture	18.0	0.1	%	1	P6J0304	10/03/16	10/03/16	% calculation	

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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
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**Batch P6J0304 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6J0304-BLK1)</b>		Prepared & Analyzed: 10/03/16								
% Moisture	ND	0.1	%							
<b>Duplicate (P6J0304-DUP1)</b>		<b>Source: 6I30004-04</b>		Prepared & Analyzed: 10/03/16						
% Moisture	12.0	0.1	%		12.0			0.00	20	
<b>Duplicate (P6J0304-DUP2)</b>		<b>Source: 6I30006-03</b>		Prepared & Analyzed: 10/03/16						
% Moisture	16.0	0.1	%		17.0			6.06	20	

**Batch P6J0306 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6J0306-BLK1)</b>		Prepared & Analyzed: 10/03/16								
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P6J0306-BS1)</b>		Prepared & Analyzed: 10/03/16								
Chloride	421	1.00	mg/kg wet	400		105	80-120			
<b>LCS Dup (P6J0306-BSD1)</b>		Prepared & Analyzed: 10/03/16								
Chloride	425	1.00	mg/kg wet	400		106	80-120	0.887	20	
<b>Duplicate (P6J0306-DUP1)</b>		<b>Source: 6I29006-28</b>		Prepared & Analyzed: 10/03/16						
Chloride	2050	10.5	mg/kg dry		1990			2.93	20	
<b>Duplicate (P6J0306-DUP2)</b>		<b>Source: 6I30005-05</b>		Prepared: 10/03/16 Analyzed: 10/04/16						
Chloride	2610	52.1	mg/kg dry		2590			1.10	20	
<b>Matrix Spike (P6J0306-MS1)</b>		<b>Source: 6I29006-28</b>		Prepared & Analyzed: 10/03/16						
Chloride	2630	10.5	mg/kg dry	789	1990	80.5	80-120			

Permian Basin Environmental Lab, L.P.

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Page 10 of 12

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

Project: XTO Nash Draw Site #24  
Project Number: 16-0108-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### Notes and Definitions

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: 10/4/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

CF

DATE: 9-30-2016 PAGE 1 OF 1  
PO #: LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: Xto Nioch Draw Btly '24  
LA PROJECT #: 16-0108-05 COLLECTOR: Jrs

DATE: 9-30-2016 PAGE 1 OF 3  
PO #: LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: X10 Nlanch Road Bty 24  
LAI PROJECT #: 16-6103-G5 COLLECTOR: Jm

PRESERVATION			
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NaOH

# of
HCl
HNO <sub>3</sub>
H <sub>2</sub> SO <sub>4</sub>
ICE
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RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

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100

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

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

FACT ☐ NOT USED

4

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



## Analytical Report

**Prepared for:**

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

Project: Nash Draw Battery #24

Project Number: 16-0108-05

Location: New Mexico

Lab Order Number: 6J20018



NELAP/TCEQ # T104704156-16-6

Report Date: 10/25/16

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

Project: Nash Draw Battery #24  
Project Number: 16-0108-05  
Project Manager: Mark Larson

Fax: (432) 687-0456

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-05-04,15'	6J20018-01	Soil	10/19/16 12:14	10-20-2016 09:32
DP-05-04,20'	6J20018-02	Soil	10/19/16 12:16	10-20-2016 09:32

Per Client corrected Sample ID's to DP-05-04. 10/25/16 bb

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**DP-05-04,15'**  
**6J20018-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	2390	53.8	mg/kg dry	50	P6J2401	10/24/16	10/24/16	EPA 300.0	
% Moisture	7.0	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	

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**DP-05-04,20'**  
**6J20018-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	12100	26.3	mg/kg dry	25	P6J2401	10/24/16	10/24/16	EPA 300.0	
% Moisture	5.0	0.1	%	1	P6J2403	10/24/16	10/24/16	% calculation	

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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
<b>Batch P6J2401 - *** DEFAULT PREP ***</b>										
<b>Blank (P6J2401-BLK1)</b>				Prepared & Analyzed: 10/24/16						
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P6J2401-BS1)</b>				Prepared & Analyzed: 10/24/16						
Chloride	363	1.00	mg/kg wet	400		90.7	80-120			
<b>LCS Dup (P6J2401-BSD1)</b>				Prepared & Analyzed: 10/24/16						
Chloride	370	1.00	mg/kg wet	400		92.5	80-120	2.01	20	
<b>Duplicate (P6J2401-DUP1)</b>				<b>Source: 6J20018-01</b>		Prepared & Analyzed: 10/24/16				
Chloride	2380	53.8	mg/kg dry		2390			0.339	20	
<b>Duplicate (P6J2401-DUP2)</b>				<b>Source: 6J20019-61</b>		Prepared & Analyzed: 10/24/16				
Chloride	224	27.2	mg/kg dry		168			28.6	20	R3
<b>Matrix Spike (P6J2401-MS1)</b>				<b>Source: 6J20018-01</b>		Prepared & Analyzed: 10/24/16				
Chloride	2360	53.8	mg/kg dry	1080	2390	NR	80-120			QM-07
<b>Batch P6J2403 - *** DEFAULT PREP ***</b>										
<b>Blank (P6J2403-BLK1)</b>				Prepared & Analyzed: 10/24/16						
% Moisture	ND	0.1	%							
<b>Duplicate (P6J2403-DUP2)</b>				<b>Source: 6J20010-27</b>		Prepared & Analyzed: 10/24/16				
% Moisture	16.0	0.1	%		15.0			6.45	20	
<b>Duplicate (P6J2403-DUP3)</b>				<b>Source: 6J20011-27</b>		Prepared & Analyzed: 10/24/16				
% Moisture	16.0	0.1	%		16.0			0.00	20	

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### Notes and Definitions

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.

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

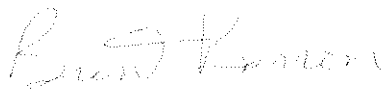
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date: 10/25/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.*

1400 Rankin HWY Midland, TX 79701 432-686-7235

620018

CHAIN-OF-CUSTODY

**Marson & Associates, Inc.**  
Environmental Consultants

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

Data Reported to:

DATE: 10-26-2016  
PO #: LAB WORK ORDER #  
PROJECT LOCATION OR NAME: Mch Hwy Bty # 24  
LAI PROJECT #: 16-0109-05 COLLECTOR: M6

TRRP report?  
☐ Yes ☒ No

S=SOIL  
W=WATER  
A=AIR

P=PAINT  
SL=SLUDGE  
OT=OTHER

TIME ZONE:  
Time Zone/State:

Field Sample I.D.

Lab #

Date

Time

Matrix

# of Containers

PRESERVATION  
HCl  
HNO<sub>3</sub>  
H<sub>2</sub>SO<sub>4</sub> ☐ NaOH ☐  
ICE  
UNPRESERVED

ANALYSES

BTEX ☐ MTBE ☐  
TPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐  
GASOLINE MOD 8015 ☐  
DIESEL - MOD 8015 ☐  
VOC 8260 ☐  
SVOC 8270 ☐ PAH 8270 ☐ HCHO/PAH ☐  
8081 PESTICIDES ☐ 8151 HERBICIDES ☐  
TCDF - METALS ☐  
TCDF - PEST ☐ Herb ☐ Semi-VOC ☐  
TOTAL METALS (RCRA) ☐ OTHER LIST ☐  
LEAD - TOTAL ☐ D.W. 200.8 ☐ TCDF ☐  
RCI ☐ TOX ☐ FLASHPOINT ☐  
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐  
PH ☐ HEXAVALENT CHROME ☐ CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

1 Df-05-01, 15'  
2 Df-05-01, 20'  
Df-05-01, 25'

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME RECEIVED BY: (Signature)  
10/26/2016 09:32

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

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 ☒

Relin

Relin

10/26/2016 9:32

## **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

Form C-141  
Revised August 8, 2011

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

RECEIVED

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

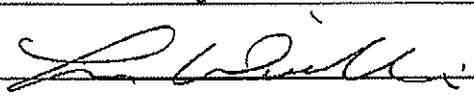
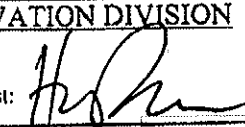
Name of Company: XTO Energy, Inc. <b>5380</b>	Contact: Dudley McMinn
Address: 500 W. Illinois Ave., Suite 100, Midland, TX 70701	Telephone No.: (432) 682-8873
Facility Name: Nash Draw Unit Battery #24	Facility Type: Tank Battery (Equipment Removed)
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-28271	

### LOCATION OF RELEASE

Unit Letter H	Section 14	Township 23S	Range 29E	Feet from the 1750	North/South Line North	Feet from the 890	East/West Line East	County: Eddy
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Latitude 32.307778 Longitude -103.949444

### 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* 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: 	OIL CONSERVATION DIVISION	
Printed Name: Luke Williams	Approved by Environmental Specialist: 	
Title: EH&S Coordinator	Approval Date: <u>9/8/16</u>	Expiration Date: <u>NA</u>
E-mail Address: Luke.Williams@xtoenergy.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines <input type="checkbox"/>	
Date: 09-07-2016 Phone: (432) 683-8873	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <u>10/14/16</u>	

\* Attach Additional Sheets If Necessary

2RP-3875