Remediation Closure Report

Indian Flats Bass Federal #5
Eddy County, New Mexico
Section 35, Township 21S South, Range 28 East
Latitude 32.43011° North, Longitude 104.05784 ° West

May 30, 2019

Prepared for:

XTO Environmental Management

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TABLE OF CONTENTS

Section **Page**

Introduction

The purpose of this Remediation Closure Report is to provide an outline of the procedures utilized by HydroChemPSC to perform restoration of areas contaminated by the hydrocarbon releases at the **XTO Energy-Indian Flats Bass FED #5 site**.

The Operator XTO Energy reported the release on **1/19/19** utilizing OCD reporting form C-141 (**RP Reference #2RP-5225**). References to the incident is identified within the report**.** This report details the requirements and actions taken to sample and remediate for hydrocarbon releases reported and ensure the impacted soils/property meet the no further action for releasing as defined by the New Mexico Oil Conservation Division (NMOCD). The information was used as a general guide for all federal, state and fee lands when remediating contaminants resulting from leaks, spills and releases of oilfield wastes or products.

The NMOCD requires that corrective actions be taken for leaks, spills or releases of any material which has a reasonable probability or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property. The guidelines were followed to provide direction for remediation of soils contaminated. Specific constituents and/or requirements for soil and ground water analysis and/or remediation may vary depending on site specific conditions. Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release.

***Note: <u>None of the fluid release events depicted in the report traversed, leached or flowed offsite exiting the original well site lease location.</u>**

Site Specific Information:

- Company-**XTO Energy (former Bopco, LP site)**
- Field-**Indian Flats**
- Lease- **Bass Federal #5**
- County-**Eddy**
- API No.- **30-015-22671**
- Section- **35**
- Township- **21S**
- Surface/Mineral Owner- **Federal**
- Lat/Long- **32.43011 N -104.05784**
- OCD Notification #- **2RP-5225**
- Date of Loss Occurrence- **1/19/19**
- Reported Type of Released-**Produced Water**
- Total Fluid Loss Volume Reported-**60 Barrels**
- Recovered Volume Reported-**50**- **Barrels**
- Contaminated Soil Recovered Upon Completion **~156 cubic yards**

Aerial Reference

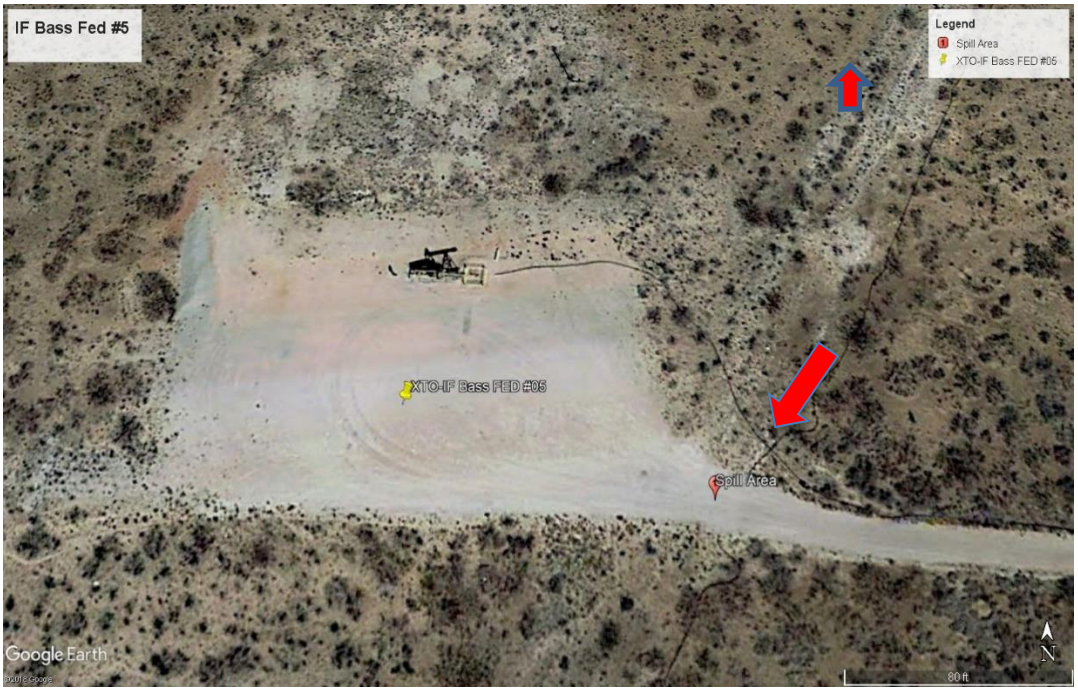
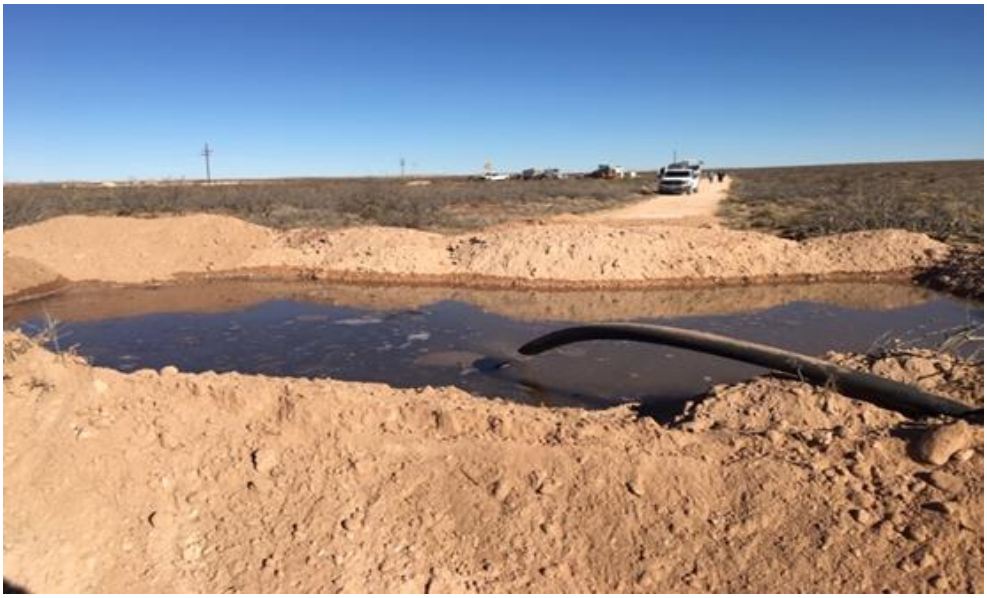


Photo Illustration of Spill Event



Site Preparation

Field operations office and break areas were set up in an area where field activities could be monitored and remediation procedures could be positively controlled. A waste staging area was setup and established for waste preparation, loading and transportation to disposal. Labor and Equipment necessary to perform the remediation project was assembled and mobilized following the authorization to proceed. Equipment was delivered to the site and set up for field operations. The specific layout of equipment was determined in the field after equipment mobilization to the site.

Summarized Project Activities

- Performed Pre-Project Meeting.
- Notification with XTO Energy prior to executing.
- Identification of Pipe Lines prior to executing project. (One Call Notification).
- Site Preparation.
- Excavation/Remediation of Contaminated Soils.
- Final sampling notification to NMOCD and BLM.
- Transportation of Contaminated Soils.
- Post-Project Sampling Analysis.
- Photo Gallery Recap.

Soil Sampling Procedures for Laboratory Analysis

All soil sampling for laboratory analysis was conducted according to NMOCD approved industry standards or other NMOCD-approved procedures. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis.
- Samples were labeled with a unique code for each.
- Samples were packed cold or on ice.
- Promptly shipped to the lab for analysis following chain of custody procedures.
- All samples were analyzed within the holding times for the laboratory analytical methods specified by EPA.

Soil Analytical Methods

All soil samples were analyzed using EPA methods, or by other NMOCD approved methods. Below are laboratory analytical methods accepted by NMOCD for analysis of soil samples analyzed for petroleum related constituents.

- Chlorides- EPA 300 Method
- Benzene, toluene, ethylbenzene and xylene -EPA Method 602/8020.
- Total Petroleum Hydrocarbons -EPA Method 418.1, or; EPA Method Modified 8015.

Goals for Soil Characterization

1) Determination of the lateral and vertical extents along with the magnitude of soil contamination.
2) Determine if groundwater or surface waters have been impacted.
3) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). Vertical & Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination was characterized to the following release concentrations:

    - Benzene <10 mg/kg.
    - Total BTEX <50 mg/kg.
    - TPH <100 mg/kg.
    - Chlorides< 600 mg/kg.

Achievement Goals for Soil Remediation

When RCRA exempt or RCRA nonhazardous petroleum contaminated soil requires remediation, it will be remediated and managed according to the criteria described below or by other NMOCD approved procedures which will remove, treat, or isolate contaminants in order to protect fresh waters, public health and the environment. Highly contaminated/saturated soils and unsaturated contaminated soils exceeding the standards described should be either:

1 Excavated from the ground until a representative sample from the walls and bottom of the excavation is below the contaminant specific remediation level or an alternate approved remediation level.
2 Excavated to the required depth and horizontal extent practicable. Upon reaching this limit samples will be taken from the walls and bottom of the excavation to determine the remaining levels of soil contaminants. Further excavation may be required.
3 Treatment of soil in place was not be performed for remediation or reclamation projects.
4 All contaminated soils were transported offsite to an approved disposal facility and documented.

Summary of Soil Remediation Activities

Following the initial spill assessment of the site on January 19, 2019; A preliminary sampling event was performed on 1/21/2019. Only exceeded levels of chlorides was observed in the lab analytical report based on a 3 panel BTEX, TPH and Chlorides analysis summary. Heavy equipment was mobilized in on April 22, 2019 and used to excavate all contaminated soils. Soils in the impacted area were excavated from 1" to 60" depths. The overall excavated area was 17'X27'X5' or ~85 cubic yards. Actual contaminated soil removed from the site for disposal was ~156 cubic yards. The reference area is identified on the included site excavation mapping within the report. On April 23, 2019 the NMOCD was notified of a final sampling event being performed after the excavation of the contaminated area. On 4/25/19 a total of 14 samples were extracted for laboratory analysis; the sampling event references areas depicted in the illustrated mapping included within the report referencing OCD Notification **2RP-5225**. Final laboratory analytical results for TPH/BTEX and EPA 300 Chloride contents indicated all samples were below the regulatory action levels established by the NMOCD.

Grab and Composite samples from the summary above were collected from the remediated areas in reference to the sampling event and analyzed at a laboratory for Total Petroleum Hydrocarbons (TPH), Chlorides, BTEX and Benzene using NMOCD approved methods. A final level of acceptance for release was achieved through laboratory analysis. All original sampling data reference has been submitted.

Volume of contaminated soil excavated for the project in its entirety was ~**156** cubic yards. Impacted soil was transported offsite from the location to an approved disposal site (**R-360 Environmental**). While derived methods were used in the practical course of remediation, release criteria for the site were based on field data for release by confirmed laboratory measurements.

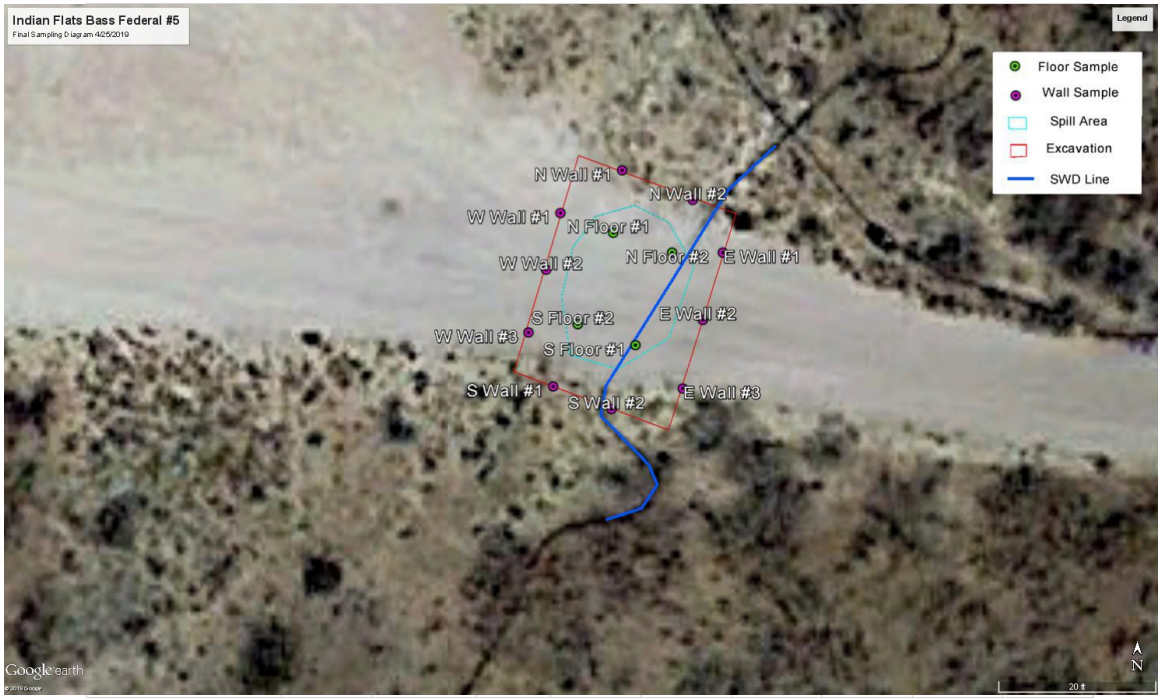
Sampling Release Table

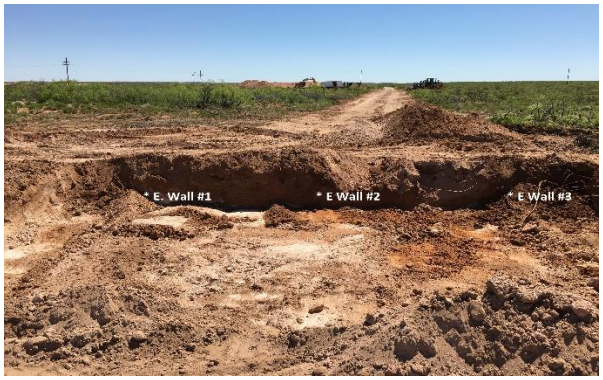
Reference 2RP-5225

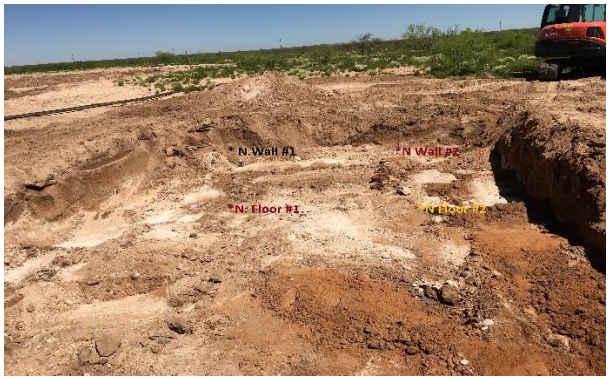
Analysis Certificate #622372 4/29/19

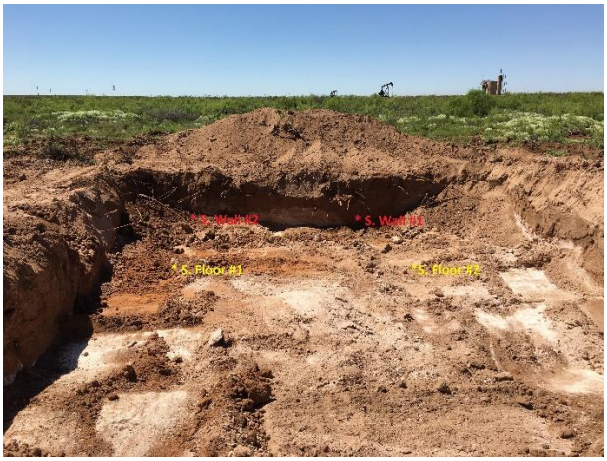
SAMPLE LOCATIONS	SAMPLE DEPTH	SAMPLE DATE	SOIL STAUTS	METHOD: EPA 8021B					METHOD: 8015M			TOTAL TPH	EPA 300	Comments
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	EHTYL-BENZENE	TOTAL XYLENES	TOTAL BETEX	GRO C_6-C_{12}	DRO C_{12}-C_{28}	MRO C_{28}-C_{35}	C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)	
#001 North Wall #1	2'	4/25/2019	Dry	<0.00199	<0.00199	0.00533	0.00177	0.023	<14.9	<14.9	<14.9	<14.9	14.1	Pass
#002 North Wall #2	2'	4/25/2019	Dry	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	132	Pass
#003 North Floor #1	4'	4/25/2019	Dry	<0.00201	<0.00201	<0.00201	0.00405	0.00405	<15.0	<15.0	<15.0	<15.0	<4.95	Pass
#004 North Floor #2	4'	4/25/2019	Dry	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	12.1	Pass
#005 South Wall #2	3.5'	4/25/2019	Dry	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<5.04	Pass
#006 South Wall #1	3'	4/25/2019	Dry	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	11.8	Pass
#007 South Floor #1	3'	4/25/2019	Dry	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	108	Pass
#008 South Floor #2	3.5'	4/25/2019	Dry	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	34.7	Pass
#009 East Wall #1	3'	4/25/2019	Dry	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	47.4	Pass
#010 East Wall #2	3'	4/25/2019	Dry	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	147	Pass
#011 East Wall #3	3'	4/25/2019	Dry	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<5.05	Pass
#012 West Wall #3	3.5'	4/25/2019	Dry	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<5.05	Pass
#013 West Wall #2	3'	4/25/2019	Dry	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.98	Pass
#014 West Wall #1	3.5'	4/25/2019	Dry	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<5.03	Pass
NMOCD Criteria				<10mg/kg				<50mg/kg				<100mg/kg	<600mg/kg	

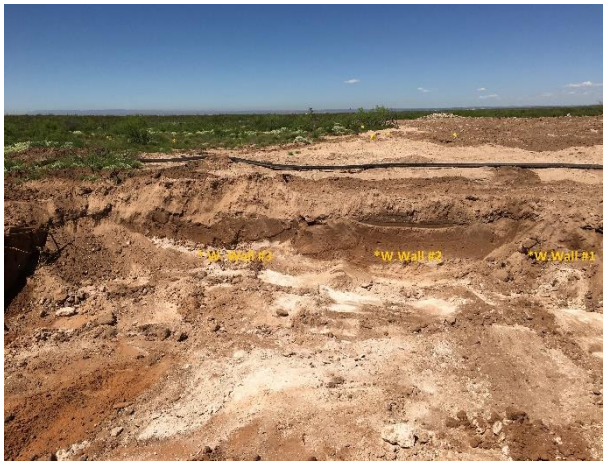
Aerial of Location and Sampling Points











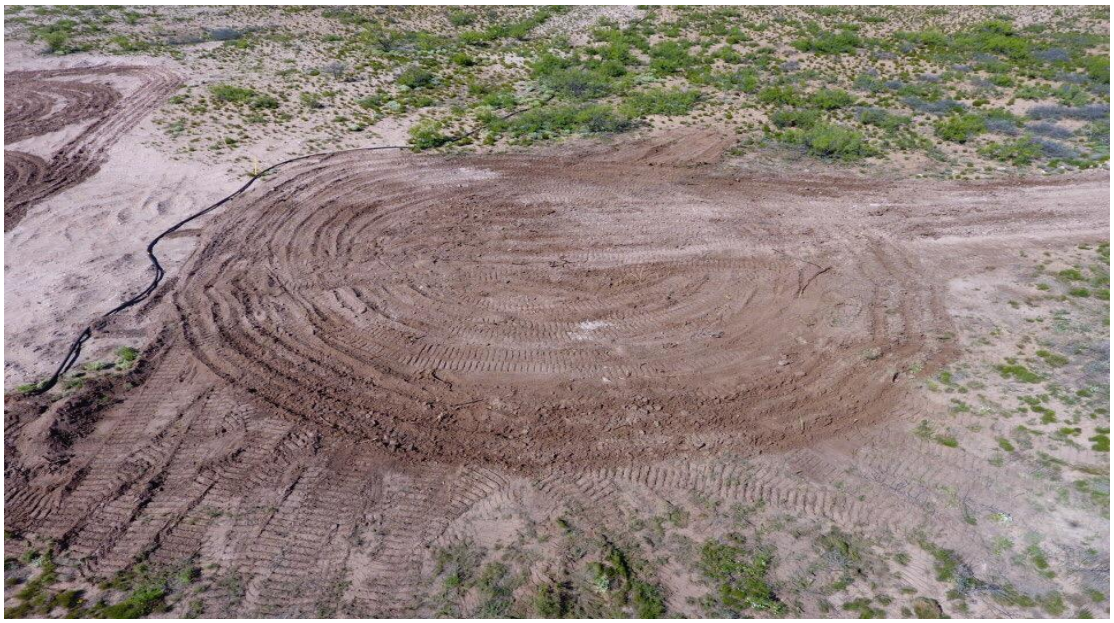
Appendices

Appendix A – Certificate of Laboratory Analysis Release Report #622372 4/29/19

Appendix B – NMOCD Final C-141 2RP-5225

- Attachments of the original appendix documents has been included and submitted with the final closure request.

Final Aerial View of Location



Post Remedial Closure Summary

Following Remediation, this final summary report was prepared to document the project in its entirety for **XTO Energy** to submit a no further action release request to the New Mexico Oil Conservation Division (NMOCD). Additional submittal may be requested by the Bureau of Land Management (BLM). This final closure report documents the execution of the remedial services performed. An aerial map illustrates the area affected by the spill occurrence; locations of remedial sampling to delineate the impacts, and sampling locations to confirm successful remediation. Areas of contamination identified in the analytical process were vertically and horizontally delineated. Post-remediation sampling data indicates the site meets compliance with NMOCD standards and confirms no remaining soils exceeds elevated contamination levels. **Note:** No onsite bioremediation or other methods i.e. soil blending/mixing was performed on the project. Contaminated soil was transported offsite to an approved permitted landfill for disposal. Topsoil media was dressed, and dozer bladed for resurfacing of the site upon completion.

This closure report includes a summary of the remediation performed, onsite activities, analytical data and pertinent project documentation. Additional Reclamation services was performed to return the site back to its original state. Original project file reports/copies and backups have been submitted to XTO Energy Environmental Management.

HydroChemPSC recommends XTO Energy provide the NMOCD District Office and the BLM a copy of this Remediation Summary & Site Closure Request. HydroChemPSC on behalf of XTO Energy request closure of the RP file **2RP-5225** associated with the spill notification.

Appendix A

Certificate of Laboratory Analysis Release Report #622372 4/29/19

2RP-5225

Certificate of Analysis Summary 622372

HydroChemPSC (PSC), Morgan City, LA

Project Name: XTO- Indian Flats Bass Fed 005

Project Id: 1217-XTO-1033
Contact: Kevin Claytor
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 29-APR-19
Project Manager: Incorrect Lab Proj. Manager

Analysis Requested													
	Lab Id:	622372-001		622372-002		622372-003		622372-004		622372-005		622372-006	
	Field Id:	Indian Flats Bass 005-N. Wa		Indian Flats Bass 005-N. Wa		Indian Flats Bass 005-S. Wa		Indian Flats Bass 005-S. Wa		ndian Flats Bass 005- W. W		ndian Flats Bass 005- W. W	
	Depth:	2- ft		2- ft		4- ft		4- ft		3.5- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-25-19 12:02		Apr-25-19 12:02		Apr-25-19 12:04		Apr-25-19 12:05		Apr-25-19 12:05		Apr-25-19 12:06	
BTEX by EPA 8021B	***Extracted:***	Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00	
	Analyzed:	Apr-26-19 18:50		Apr-26-19 19:09		Apr-26-19 19:28		Apr-26-19 19:47		Apr-26-19 20:06		Apr-26-19 20:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		0.00533	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		0.0115	0.00398	<0.00397	0.00397	<0.00402	0.00402	<0.00399	0.00399	<0.00400	0.00400	<0.00403	0.00403
o-Xylene		0.00618	0.00199	<0.00198	0.00198	0.00405	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		0.0177	0.00199	<0.00198	0.00198	0.00405	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		0.0230	0.00199	<0.00198	0.00198	0.00405	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38	
	Analyzed:	Apr-27-19 15:18		Apr-27-19 15:40		Apr-27-19 15:47		Apr-27-19 15:55		Apr-27-19 16:02		Apr-27-19 16:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		14.1	4.98	132	4.97	<4.95	4.95	12.1	5.00	<5.04	5.04	11.8	5.03
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00	
	Analyzed:	Apr-27-19 17:45		Apr-27-19 18:49		Apr-27-19 19:10		Apr-27-19 19:31		Apr-28-19 11:27		Apr-27-19 20:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

John Builes
Project Manager

Certificate of Analysis Summary 622372

HydroChemPSC (PSC), Morgan City, LA

Project Name: XTO- Indian Flats Bass Fed 005

Project Id: 1217-XTO-1033
Contact: Kevin Claytor
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 29-APR-19
Project Manager: Incorrect Lab Proj. Manager

Analysis Requested													
	Lab Id:	622372-007		622372-008		622372-009		622372-010		622372-011		622372-012	
	Field Id:	ndian Flats Bass 005- W. W		Indian Flats Bass 005- E. W		Indian Flats Bass 005- E. W		Indian Flats Bass 005- E. W		Indian Flats Bass 005- N. Fl		ndian Flats Bass 005- S. Flo	
	Depth:	3- ft		3.5- ft		3- ft		3- ft		3- ft		3.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-25-19 12:06		Apr-25-19 12:07		Apr-25-19 12:08		Apr-25-19 12:10		Apr-25-19 12:11		Apr-25-19 12:11	
BTEX by EPA 8021B	***Extracted:***	Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00		Apr-26-19 13:00	
	Analyzed:	Apr-26-19 20:45		Apr-26-19 21:04		Apr-26-19 21:23		Apr-26-19 21:42		Apr-26-19 22:57		Apr-26-19 23:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402	<0.00397	0.00397	<0.00402	0.00402	<0.00399	0.00399	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38		Apr-26-19 14:38	
	Analyzed:	Apr-27-19 16:16		Apr-27-19 16:38		Apr-27-19 16:45		Apr-27-19 17:07		Apr-27-19 17:14		Apr-27-19 17:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		108	4.95	34.7	5.01	47.4	5.00	147	5.05	<5.05	5.05	<5.05	5.05
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00		Apr-27-19 09:00	
	Analyzed:	Apr-27-19 20:34		Apr-27-19 20:55		Apr-27-19 21:16		Apr-27-19 21:36		Apr-27-19 22:38		Apr-27-19 22:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

John Builes
Project Manager

Certificate of Analysis Summary 622372

HydroChemPSC (PSC), Morgan City, LA

Project Name: XTO- Indian Flats Bass Fed 005

Project Id: 1217-XTO-1033
Contact: Kevin Claytor
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 29-APR-19
Project Manager: Incorrect Lab Proj. Manager

Analysis Requested													
	Lab Id:	622372-013				622372-014							
	Field Id:	Indian Flats Bass 005- N. Fl				ndian Flats Bass 005- S. Flo							
	Depth:	3- ft				3.5- ft							
	Matrix:	SOIL				SOIL							
	Sampled:	Apr-25-19 12:12				Apr-25-19 12:12							
BTEX by EPA 8021B	***Extracted:***	Apr-26-19 13:00				Apr-26-19 13:00							
	Analyzed:	Apr-26-19 23:35				Apr-26-19 23:54							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Benzene		<0.00199	0.00199			<0.00201	0.00201						
Toluene		<0.00199	0.00199			<0.00201	0.00201						
Ethylbenzene		<0.00199	0.00199			<0.00201	0.00201						
m,p-Xylenes		<0.00398	0.00398			<0.00402	0.00402						
o-Xylene		<0.00199	0.00199			<0.00201	0.00201						
Total Xylenes		<0.00199	0.00199			<0.00201	0.00201						
Total BTEX		<0.00199	0.00199			<0.00201	0.00201						
Chloride by EPA 300	***Extracted:***	Apr-26-19 14:38				Apr-26-19 14:38							
	Analyzed:	Apr-27-19 17:29				Apr-27-19 17:36							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Chloride		<4.98	4.98			<5.03	5.03						
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 09:00				Apr-27-19 09:00							
	Analyzed:	Apr-27-19 23:19				Apr-27-19 23:40							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0			<14.9	14.9						
Diesel Range Organics (DRO)		<15.0	15.0			<14.9	14.9						
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0			<14.9	14.9						
Total TPH		<15.0	15.0			<14.9	14.9						

John Builes
Project Manager

Analytical Report 622372

for

HydroChemPSC (PSC)

Project Manager: Kevin Claytor

XTO- Indian Flats Bass Fed 005

1217-XTO-1033

29-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

29-APR-19

Project Manager: **Kevin Claytor**
HydroChemPSC (PSC)
PO Box 1529 Amelia, La 70340
Morgan City, LA

Reference: XENCO Report No(s): **622372**
XTO- Indian Flats Bass Fed 005
Project Address:

Kevin Claytor:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 622372. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 622372 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

John Builes
Project Manager

Sample Cross Reference 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Indian Flats Bass 005-N. Wall #1	S	04-25-19 12:02	2 ft	622372-001
Indian Flats Bass 005-N. Wall #2	S	04-25-19 12:02	2 ft	622372-002
Indian Flats Bass 005-S. Wall #1	S	04-25-19 12:04	4 ft	622372-003
Indian Flats Bass 005-S. Wall #2	S	04-25-19 12:05	4 ft	622372-004
Indian Flats Bass 005- W. Wall #1	S	04-25-19 12:05	3.5 ft	622372-005
Indian Flats Bass 005- W. Wal #2	S	04-25-19 12:06	3 ft	622372-006
Indian Flats Bass 005- W. Wall #3	S	04-25-19 12:06	3 ft	622372-007
Indian Flats Bass 005- E. Wall #1	S	04-25-19 12:07	3.5 ft	622372-008
Indian Flats Bass 005- E. Wall #2	S	04-25-19 12:08	3 ft	622372-009
Indian Flats Bass 005- E. Wall #3	S	04-25-19 12:10	3 ft	622372-010
Indian Flats Bass 005- N. Floor #1	S	04-25-19 12:11	3 ft	622372-011
Indian Flats Bass 005- S. Floor #1	S	04-25-19 12:11	3.5 ft	622372-012
Indian Flats Bass 005- N. Floor #2	S	04-25-19 12:12	3 ft	622372-013
Indian Flats Bass 005- S. Floor #2	S	04-25-19 12:12	3.5 ft	622372-014

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087150 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 622372-001,622372-002,622372-004,622372-010,622372-008,622372-009,622372-005.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-N. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-001	Date Collected:	04.25.19 12.02	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.1**	4.98	mg/kg	04.27.19 15.18		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 17.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 17.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 17.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 17.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	04.27.19 17.45	
o-Terphenyl	84-15-1	93	%	70-135	04.27.19 17.45	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-N. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-001	Date Collected:	04.25.19 12.02	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.26.19 18.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.26.19 18.50	U	1
Ethylbenzene	100-41-4	**0.00533**	0.00199	mg/kg	04.26.19 18.50		1
m,p-Xylenes	179601-23-1	**0.0115**	0.00398	mg/kg	04.26.19 18.50		1
o-Xylene	95-47-6	**0.00618**	0.00199	mg/kg	04.26.19 18.50		1
Total Xylenes	1330-20-7	**0.0177**	0.00199	mg/kg	04.26.19 18.50		1
Total BTEX		**0.0230**	0.00199	mg/kg	04.26.19 18.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.26.19 18.50	
4-Bromofluorobenzene	460-00-4	143	%	70-130	04.26.19 18.50	**

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-N. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-002	Date Collected:	04.25.19 12.02	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**132**	4.97	mg/kg	04.27.19 15.40		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 18.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 18.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 18.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 18.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.27.19 18.49	
o-Terphenyl	84-15-1	85	%	70-135	04.27.19 18.49	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-N. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-002	Date Collected:	04.25.19 12.02	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.26.19 19.09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.26.19 19.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	150	%	70-130	04.26.19 19.09	**
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.26.19 19.09	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-S. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-003	Date Collected:	04.25.19 12.04	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	04.27.19 15.47	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 19.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 19.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 19.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 19.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.19 19.10	
o-Terphenyl	84-15-1	97	%	70-135	04.27.19 19.10	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-S. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-003	Date Collected:	04.25.19 12.04	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 19.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 19.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 19.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 19.28	U	1
o-Xylene	95-47-6	**0.00405**	0.00201	mg/kg	04.26.19 19.28		1
Total Xylenes	1330-20-7	**0.00405**	0.00201	mg/kg	04.26.19 19.28		1
Total BTEX		**0.00405**	0.00201	mg/kg	04.26.19 19.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.26.19 19.28	
4-Bromofluorobenzene	460-00-4	88	%	70-130	04.26.19 19.28	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-S. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-004	Date Collected:	04.25.19 12.05	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.1**	5.00	mg/kg	04.27.19 15.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 19.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 19.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 19.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 19.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.27.19 19.31	
o-Terphenyl	84-15-1	83	%	70-135	04.27.19 19.31	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005-S. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-004	Date Collected:	04.25.19 12.05	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.26.19 19.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 19.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	147	%	70-130	04.26.19 19.47	**
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.26.19 19.47	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-005	Date Collected:	04.25.19 12.05	Sample Depth:	3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	04.27.19 16.02	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 11.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 11.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 11.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 11.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.28.19 11.27	
o-Terphenyl	84-15-1	103	%	70-135	04.28.19 11.27	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-005	Date Collected:	04.25.19 12.05	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.26.19 20.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	143	%	70-130	04.26.19 20.06	**
1,4-Difluorobenzene	540-36-3	89	%	70-130	04.26.19 20.06	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wal #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-006	Date Collected:	04.25.19 12.06	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.8**	5.03	mg/kg	04.27.19 16.09		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 20.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 20.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 20.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 20.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.27.19 20.13	
o-Terphenyl	84-15-1	93	%	70-135	04.27.19 20.13	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wal #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-006	Date Collected:	04.25.19 12.06	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.26.19 20.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.26.19 20.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.26.19 20.26	
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.26.19 20.26	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wall #3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-007	Date Collected:	04.25.19 12.06	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	4.95	mg/kg	04.27.19 16.16		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 20.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 20.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 20.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.19 20.34	
o-Terphenyl	84-15-1	95	%	70-135	04.27.19 20.34	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- W. Wall #3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-007	Date Collected:	04.25.19 12.06	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.26.19 20.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.26.19 20.45	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.26.19 20.45	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-008	Date Collected:	04.25.19 12.07	Sample Depth:	3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.7**	5.01	mg/kg	04.27.19 16.38		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 20.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 20.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 20.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 20.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.27.19 20.55	
o-Terphenyl	84-15-1	98	%	70-135	04.27.19 20.55	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-008	Date Collected:	04.25.19 12.07	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 21.04	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.26.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	141	%	70-130	04.26.19 21.04	**
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.26.19 21.04	

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-009	Date Collected:	04.25.19 12.08	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.4**	5.00	mg/kg	04.27.19 16.45		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 21.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 21.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 21.16	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 21.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.27.19 21.16	
o-Terphenyl	84-15-1	103	%	70-135	04.27.19 21.16	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-009	Date Collected:	04.25.19 12.08	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.26.19 21.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.26.19 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	153	%	70-130	04.26.19 21.23	**
1,4-Difluorobenzene	540-36-3	88	%	70-130	04.26.19 21.23	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-010	Date Collected:	04.25.19 12.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**147**	5.05	mg/kg	04.27.19 17.07		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 21.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 21.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 21.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3		%	70-135	04.27.19 21.36	
o-Terphenyl	84-15-1	80	%	70-135	04.27.19 21.36	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- E. Wall #3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-010	Date Collected:	04.25.19 12.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 21.42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.26.19 21.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	150	%	70-130	04.26.19 21.42	**
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.26.19 21.42	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- N. Floor #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-011	Date Collected:	04.25.19 12.11	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	04.27.19 17.14	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 22.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 22.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.27.19 22.38	
o-Terphenyl	84-15-1	103	%	70-135	04.27.19 22.38	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- N. Floor #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-011	Date Collected:	04.25.19 12.11	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.26.19 22.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	04.26.19 22.57	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.26.19 22.57	

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- S. Floor #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-012	Date Collected:	04.25.19 12.11	Sample Depth:	3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	04.27.19 17.21	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 22.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 22.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 22.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 22.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.27.19 22.59	
o-Terphenyl	84-15-1	101	%	70-135	04.27.19 22.59	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- S. Floor #1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-012	Date Collected:	04.25.19 12.11	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.26.19 23.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.26.19 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.26.19 23.16	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 23.16	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- N. Floor #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-013	Date Collected:	04.25.19 12.12	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	04.27.19 17.29	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.27.19 23.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.27.19 23.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.27.19 23.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.27.19 23.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.27.19 23.19	
o-Terphenyl	84-15-1	101	%	70-135	04.27.19 23.19	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- N. Floor #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-013	Date Collected:	04.25.19 12.12	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.26.19 23.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.26.19 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.26.19 23.35	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.26.19 23.35	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- S. Floor #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-014	Date Collected:	04.25.19 12.12	Sample Depth:	3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 14.38	Basis:	Wet Weight
Seq Number:	3087108				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	04.27.19 17.36	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 09.00	Basis:	Wet Weight
Seq Number:	3087224				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.27.19 23.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.27.19 23.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.27.19 23.40	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.27.19 23.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.27.19 23.40	
o-Terphenyl	84-15-1	103	%	70-135	04.27.19 23.40	

Certificate of Analytical Results 622372

HydroChemPSC (PSC), Morgan City, LA

XTO- Indian Flats Bass Fed 005

Sample Id:	**Indian Flats Bass 005- S. Floor #2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622372-014	Date Collected:	04.25.19 12.12	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.19 13.00	Basis:	Wet Weight
Seq Number:	3087150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.26.19 23.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.26.19 23.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.26.19 23.54	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.26.19 23.54	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 622372

HydroChemPSC (PSC)

XTO- Indian Flats Bass Fed 005

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087108 Matrix: Solid Date Prep: 04.26.19
MB Sample Id: 7676639-1-BLK LCS Sample Id: 7676639-1-BKS LCSD Sample Id: 7676639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	258	103	260	104	90-110	1	20	mg/kg	04.27.19 14:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087108 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622369-001 MS Sample Id: 622369-001 S MSD Sample Id: 622369-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.8	250	264	99	265	100	90-110	0	20	mg/kg	04.27.19 14:42	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087108 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622372-007 MS Sample Id: 622372-007 S MSD Sample Id: 622372-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	108	248	353	99	355	100	90-110	1	20	mg/kg	04.27.19 16:23	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087224 Matrix: Solid Date Prep: 04.27.19
MB Sample Id: 7676728-1-BLK LCS Sample Id: 7676728-1-BKS LCSD Sample Id: 7676728-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	935	94	950	95	70-135	2	20	mg/kg	04.27.19 17:03	
Diesel Range Organics (DRO)	<8.13	1000	939	94	974	97	70-135	4	20	mg/kg	04.27.19 17:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		116		116		70-135	%	04.27.19 17:03
o-Terphenyl	91		112		98		70-135	%	04.27.19 17:03

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 622372

HydroChemPSC (PSC)

XTO- Indian Flats Bass Fed 005

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087224 Matrix: Soil Date Prep: 04.27.19
Parent Sample Id: 622372-001 MS Sample Id: 622372-001 S MSD Sample Id: 622372-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	912	91	915	92	70-135	0	20	mg/kg	04.27.19 18:07	
Diesel Range Organics (DRO)	<8.11	998	928	93	917	92	70-135	1	20	mg/kg	04.27.19 18:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		115		70-135	%	04.27.19 18:07
o-Terphenyl	94		115		70-135	%	04.27.19 18:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087150 Matrix: Solid Date Prep: 04.26.19
MB Sample Id: 7676677-1-BLK LCS Sample Id: 7676677-1-BKS LCSD Sample Id: 7676677-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.114	115	0.107	106	70-130	6	35	mg/kg	04.26.19 16:57	
Toluene	<0.00199	0.0994	0.105	106	0.0981	97	70-130	7	35	mg/kg	04.26.19 16:57	
Ethylbenzene	<0.00199	0.0994	0.112	113	0.105	104	70-130	6	35	mg/kg	04.26.19 16:57	
m,p-Xylenes	<0.00398	0.199	0.230	116	0.215	106	70-130	7	35	mg/kg	04.26.19 16:57	
o-Xylene	<0.00199	0.0994	0.113	114	0.105	104	70-130	7	35	mg/kg	04.26.19 16:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		97		97		70-130	%	04.26.19 16:57
4-Bromofluorobenzene	97		101		97		70-130	%	04.26.19 16:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087150 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622372-001 MS Sample Id: 622372-001 S MSD Sample Id: 622372-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0841	84	0.0982	98	70-130	15	35	mg/kg	04.26.19 17:35	
Toluene	<0.00200	0.100	0.0757	76	0.0870	87	70-130	14	35	mg/kg	04.26.19 17:35	
Ethylbenzene	0.00533	0.100	0.0760	71	0.0875	82	70-130	14	35	mg/kg	04.26.19 17:35	
m,p-Xylenes	0.0115	0.200	0.157	73	0.180	84	70-130	14	35	mg/kg	04.26.19 17:35	
o-Xylene	0.00618	0.100	0.0776	71	0.0884	82	70-130	13	35	mg/kg	04.26.19 17:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	04.26.19 17:35
4-Bromofluorobenzene	108		107		70-130	%	04.26.19 17:35

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

1st Page

Chain of Custody

Work Order No: 622372

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 2

Project Manager:	Kevin Claytor	Bill to: (if different)	
Company Name:	HydroChem PSC	Company Name:	
Address:	PO Box 1529	Address:	
City, State ZIP:	Amelia, LA 70340	City, State ZIP:	
Phone:	903-424-7504	Email:	Kevin.Claytor@HydroChemPSC.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	XTO-Indian Flats Bass Fed 005	Turn Around	
Project Number:	1217-XTO-1035	Routine ☐	
P.O. Number:	LAN1217-1046	Rush: 24 hr	
Sampler's Name:	Kevin Claytor	Due Date: ASAP	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3.1/3.0	Thermometer ID		
Received Intact:	(Yes) No	R8		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chlorides	BTEX	TPH
Indian Flats Bass 005-N. Wall #1	S	4-25-19	12:02	2'	1	✓	✓	✓
" N. Wall #2	S	"	12:02	2'	1	✓	✓	✓
" S. Wall #1	S	"	12:04	4'	1	✓	✓	✓
" S. Wall #2	S	"	12:05	4'	1	✓	✓	✓
" W. Wall #1	S	"	12:05	3½"	1	✓	✓	✓
" W. Wall #2	S	"	12:06	3'	1	✓	✓	✓
" W. Wall #3	S	"	12:06	3'	1	✓	✓	✓
" E. Wall #1	S	"	12:07	3'	1	✓	✓	✓
" E. Wall #2	S	"	12:08	3'	1	✓	✓	✓
" E. Wall #3	S	"	12:10	3'	1	✓	✓	✓

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Kevin Clay	Courtney	4/25/19 1250	2 Courtney	4/25/19 to FedEx	4/25/19 14:00
3	Michelle 4.26.19 1130	19	4	cc 4/25/19	
5		cc	6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 39 of 41

2nd Page

XENCO LABORATORIES

Chain of Custody

Work Order No: 622372

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 2 of 2

Project Manager:	Kevin Claytor	Bill to: (if different)	
Company Name:	HydroChem PSC	Company Name:	
Address:	PO Box 1529	Address:	
City, State ZIP:	Amelia, LA 70340	City, State ZIP:	
Phone:	903-424-7504	Email:	Kevin.Claytor@HydroChemPSC.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	XTO - N. Indian Flats Bass 005	Turn Around	
Project Number:	~~XTO-~~ 1217-XTO-1033	Routine ☐	
P.O. Number:	LAN1217-1046	Rush: 24hr	
Sampler's Name:	Kevin Claytor	Due Date: ASAP	

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.1 / 3.0	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chlorides	BETEX	TPH	Sample Comments
Indian Flats Bass 005 - N. Floor #1	S	4-25-19	12:11	3' ft	1	✓	✓	✓	
" S. Floor #1	S	"	12:11	3½' ft	1	✓	✓	—	
" N. Floor #2	S	"	12:12	3' ft	1	✓	—	—	
" S. Floor #2	S	"	12:12	3½' ft	1	✓	—	—	
~~x~~	~~S~~								
	~~S~~								
	~~S~~								
	~~S~~								
	~~S~~								
	~~S~~								

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	4/25/19 12:50	2 [signature]	Fed Ex	4/25/19 14:00
3	[signature]	4.26.19 1130	4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: HydroChemPSC (PSC)

Date/ Time Received: 04/26/2019 11:30:00 AM

Work Order #: 622372

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 04/26/2019

Checklist reviewed by: John Builes Date: 04/29/2019

Appendix B

NMOCD Final C-141

2RP-5225

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1904234306
District RP	2 2RP-5225
Facility ID	
Application ID	pAB1904234053

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1904234306
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.43011 Longitude -104.05784
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Indian Flats Bass Federal #5	Site Type P&A well location
Date Release Discovered 1/19/2019	API# *(if applicable)* 30-015-22671

Unit Letter	Section	Township	Range	County
N	35	21S	28E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 60	Volume Recovered (bbls) 50
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

While removing caliche from the P&A location, contract company struck a low pressure water flowline with a front end loader. Fluids were released to the lease road. The crew constructed an earthen berm to contain the spill until a vacuum truck could recover standing fluids. The damaged line was repaired. An environmental contractor has been retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1904234306
District RP	2 2RP-5225
Facility ID	
Application ID	pAB1904234053

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Amy Ruth to Mike Bratcher and Rob Hamlet (NMOCD), Shelly Tucker and Jim Amos (BLM) on 1/19/19 by email

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Kyle Littrell
Title: SH&E Coordinator
Signature:
Date: 2-1-19
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by:
Date: 2/11/2019

Location:	Indian Flats Bass Fed #005 (30-015-22671)	
Spill Date:	1/19/2019	

Length of Spill=	25.00	feet
Width of Spill=	15.00	feet
Saturation (or depth) of Spill=	12.00	inches
Approximate Oil %	-	
Porosity Factor=	0.15	
Volume Recovered=	50.00	bbls

VOLUME OF LEAK		
Total Oil=	-	barrels
Total Produced Water=	60.0	barrels

VOLUME RECOVERED		
Total Oil=	-	barrels
Total Produced Water=	50.0	barrels

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Amy C. Ruth Title: SH&E Coordinator

Signature: Date: 6/13/2019

email: Amy_Ruth@xtoenergy.com Telephone: 575-689-3380

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amy C. Ruth Title: SH&E Coordinator

Signature: _____ Date: 6/13/2019

email: Amy_Ruth@xtoenergy.com Telephone: 575-689-3380

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____