Environmental & Safety Solutions, Inc.

Electronic Correspondence

January 17, 2018

Luke Meaux
HES Specialist
Mid-Continent Business Unit
Chevron North America
Exploration and Production Company
15 Smith Rd.
Midland, TX 79705

Re: Corrective Action Plan – 2RP-4200
Hayhurst (HH) S0 10 Pad #3 - Patterson Rig 270 Release
Legal: Unit N, Sec 03, T26S R27E, Lea County, NM
Latitude/Longitude: 32.065835/ -104.179893
Etech Proj. Number: 593-9005-000
Depth to Groundwater: Average depth 27 feet – New Mexico Office of the State Engineer
– ChevronTexaco Eddy Co. Depth To Ground Water - Water Wells Facilities Map
Release Type: Oil based drilling fluid

Constituents of Concern (COCs)	Threshold Levels
TPH	100 mg/kg
Benzene	10 mg/kg
BTEX	50 mg/kg
Chloride	250 mg/kg

Dear Mr. Meaux:

Etech Environmental & Safety Solutions, Inc. (Etech) is submitting the following corrective action plan on the aforementioned site for your review and approval.

Background

On April 17, 2017, the seal on the cuttings box was improperly sealed and/or damaged at the Hayhurst (HH) SO 10 P3 24H drill pad. Twenty-six (26) barrels of oil based drilling fluid were released. Twenty-four (24) barrels remained on the HDPE liner and two (2) barrels flowed onto the engineered caliche drill pad. A dirt berm was established to prevent additional spreading of fluid onto the drill pad. Vacuum/suction pumps were used to recover fluids to another cuttings box. A total of twenty-four (24) barrels of fluid were recovered.

An assessment and initial sampling were conducted of the impacted area on December 28, 2017 by Etech. It was determined that the release was on the engineered caliche drill pad. The release impacted an area of approximately 19,202 square feet.

Soil samples were collected by a hand auger from seven (7) locations of the impacted area. The soil samples were collected from the surface to a depth of twenty-four (24) inches below ground surface (bgs) at six (6) inch intervals. In addition, one (1) background sample was collected from the surface of a non-impacted portion of the engineered caliche drill pad using a hand shovel (See Attachment B). The soil samples were submitted to XENCO Laboratories (XENCO) and analyzed for TPH, benzene, BTEX, and chloride concentrations. The laboratory results determined that the TPH levels ranged from no analytical detection to 20,100 mg/kg, benzene levels ranged from no analytical detection to 0.00363 mg/kg, BTEX levels ranged from no analytical detection to 0.906 mg/kg, and chloride levels ranged from 13.9 mg/kg to 349 mg/kg, (See Table 1, Summary of Delineation Sampling Analytical Results below).

Table 1
Summary of Delineation Sampling Analytical Results

Sample ID	Depth	Date	C6-C12	>C12-C28	>C28-C35	Total TPH (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
Boring 1	0-6”	12/28/17	16.3	391	ND	**407**	ND	ND	33.0
Boring 1	6-12”	12/28/17	ND	ND	ND	ND	ND	ND	81.9
Boring 1	12-18”	12/28/17	ND	ND	ND	ND	ND	ND	181
Boring 1	18-24”	12/28/17	ND	ND	ND	ND	ND	ND	62.7
Boring 2	0-6”	12/28/17	523	19,500	83.8	**20,100**	ND	0.0822	180
Boring 2	6-12”	12/28/17	331	9,360	23.4	**9,710**	ND	0.174	121
Boring 2	12-18”	12/28/17	15.1	116	ND	**131**	ND	ND	123
Boring 2	18-24”	12/28/17	ND	29.6	ND	29.6	ND	ND	207
Boring 3	0-6”	12/28/17	685	12,300	100	**13,100**	ND	0.316	**272**
Boring 3	6-12”	12/28/17	295	3,660	ND	**3,960**	ND	0.163	47.6
Boring 3	12-18”	12/28/17	27.1	247	ND	**274**	ND	0.0453	234
Boring 3	18-24”	12/28/17	215	1,810	ND	**2,030**	ND	0.290	**349**
Boring 4	0-6”	12/28/17	ND	185	17.5	**203**	ND	ND	84.6
Boring 4	6-12”	12/28/17	ND	ND	ND	ND	ND	ND	102
Boring 4	12-18”	12/28/17	ND	ND	ND	ND	ND	ND	71.8
Boring 4	18-24”	12/28/17	ND	ND	ND	ND	ND	ND	54.9
Boring 5	0-6”	12/28/17	ND	ND	ND	ND	ND	ND	13.9
Boring 5	6-12”	12/28/17	ND	ND	ND	ND	ND	ND	14.1
Boring 5	12-18”	12/28/17	ND	ND	ND	ND	ND	ND	19.2
Boring 5	18-24”	12/28/17	ND	ND	ND	ND	ND	ND	20.5
Boring 6	0-6”	12/28/17	ND	31.4	ND	31.4	ND	ND	46.9
Boring 6	6-12”	12/28/17	ND	ND	ND	ND	ND	ND	33.2
Boring 6	12-18”	12/28/17	ND	ND	ND	ND	ND	ND	73.8
Boring 6	18-24”	12/28/17	ND	ND	ND	ND	ND	ND	54.6
Boring 7	0-6”	12/28/17	1,220	13,700	ND	**14,900**	0.00363	0.906	94.0
Boring 7	6-12”	12/28/17	276	1,150	ND	**1,430**	ND	0.678	51.1
Boring 7	12-18”	12/28/17	ND	ND	ND	ND	ND	0.00962	105
Boring 7	18-24”	12/28/17	ND	19.7	ND	19.7	ND	ND	66.7
Background	0”	12/28/17	ND	42.6	ND	42.6	ND	ND	15.8

ND denotes no analytical detection.
Bold denotes analytical results above regulatory guidelines

Depth to Groundwater Data

Depth to groundwater data was obtained from the New Mexico Office of the State Engineer (NMOSE). The average depth to groundwater within an approximate five (5) mile radius of the location is twenty-seven (27) feet bgs with a minimum depth of twelve (12) feet bgs and a maximum depth of fifty (50) feet bgs. The closest data point to the location is approximately one and a half (1.5) miles away and displays a depth to groundwater of nineteen (19) feet bgs. These values correlate well with the depth to groundwater values displayed for the site area on the ChevronTexaco Eddy Co. Depth To Ground Water - Water Wells Facilities Map.

The NMOSE Water Column/Average Depth to Water record and the correlating image from the ChevronTexaco Eddy Co. Depth To Ground Water - Water Wells Facilities Map are included in Attachment D.

Site Ranking Score and Recommended Remediation Action Levels

The New Mexico Oil Conservation Division publication entitled "Guidelines for Remediation of Leaks, Spills and Releases" (August 13, 1993) provides ranking criteria for the setting of recommended remediation action levels for release sites in New Mexico. Per these criteria the following ranking was calculated:

Criteria	Value	Ranking
Depth to Groundwater	Less than fifty (50)	20
Wellhead Protection Area	Greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source	0
Distance to Surface Water Body	Greater than 1,000 feet	0
Total Ranking		20

The recommended remediation action levels for a site that displays a total ranking of greater than nineteen (19) are:

TPH – 100 mg/kg

Benzene – 10 mg/kg

BTEX – 50 mg/kg

Chloride – 250 mg/kg

Scope of Work

The corrective action for this site will be excavation and disposal of impacted soils. The corrective action goals for this project will be 100 mg/kg for TPH, 10 mg/kg for benzene, 50 mg/kg for BTEX, and 250 mg/kg for chloride. The particulars for remediation will involve the actions summarized as follows:

1. Excavate the impacted area per boring location to the following depths (bgs):

Boring 1	6 inches
Boring 2	18 inches
Boring 3	36 inches
Boring 4	6 inches
Boring 5	Scrape surface
Boring 6	Scrape surface
Boring 7	18 inches

   Soil samples will be field tested for chloride concentrations in order to assure that the regulatory threshold level for chlorides has been met and full delineation completed. Excavated soils will be transported and disposed of at a NMOCD and BLM approved disposal facility. Any excavated soils that are not immediately transported to the disposal facility will be placed on plastic liner for later transport.

2. Collect confirmation soil samples from the remediated area to confirm that corrective action goals have been met.
3. If the results of analysis indicate that any of the constituents of concern levels are above regulatory threshold levels, additional remediation and confirmation soil sampling will be conducted until corrective action goals are met. However, if the depth of excavation becomes prohibitive, the company may request permission to emplace a plastic liner.
4. Once corrective action goals have been met, the excavation will be backfilled with top soil of the kind removed and/or caliche and the engineered caliche drill pad rebuilt.

Notifications and Special Conditions

1. The OCD will be notified prior to the commencement of on-site operations.
2. The OCD will be notified prior to each sampling event to allow the opportunity to witness the sampling events. Splits will be made available if requested.
3. A final report documenting the closure of the site will be submitted along with a final C-141.

Thank you for your assistance on this matter. Should you have any questions, require additional information, or have any additional stipulations for this site, please contact me at (432) 563-2200 (office) or via email at geoff@etechenv.com.

Respectfully:

Geoff Leking
Project Manager
Etech Environmental & Safety Solutions, Inc.

Attachment A
Form C-141 Release and Corrective Action Forms

Attachment A
Form C-141 Release and Corrective Action Forms

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 03 2017
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1713154243

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Chevron USA Inc. 4323	Contact Josepha DeLeon
Address 6301 Deauville Blvd., Midland, TX 79706	Telephone No. cell: 432-425-1528 wk: 575-263-0424
Facility Name: Hayhurst SO 10 P3 24H	Facility Type: Gas Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-43926-00-X1

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	3	26S	37E	553	South	2066	West	Eddy

Lat/Long: 32.065353,-104.179781

NATURE OF RELEASE

Type of Release: Oil Based Mud	Volume of Release: 26 barrels oil based mud	Volume Recovered : 24 barrels
Source of Release: Metal Cuttings Box	Date and Hour of Occurrence 04/17/2017; 04:30 PM	Date and Hour of Discovery 04/17/2017; 04:30 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Olivia Yu, Maxey Brown – NMOCD Shelly Tucker - BLM	
By Whom? Josepha DeLeon	Date and Hour: 04/17/2017; verbal via phone call 4:30PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

New forms can be found in the New Mexico State Website in forms: http://www.emnrd.state.nm.us/OCD/forms.html

Describe Cause of Problem and Remedial Action Taken.*

Seal on cuttings box was improperly sealed and/or damaged.

Describe Area Affected and Cleanup Action Taken.*

24 barrels of oil based mud spilled onto HDPE liner and 2 barrels spilled out, onto engineered caliche drill pad. Dirt berm was established to prevent additional spreading of fluid on drill pad. Vacuum / suction pumps were used to recover fluids to another cuttings box.

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.

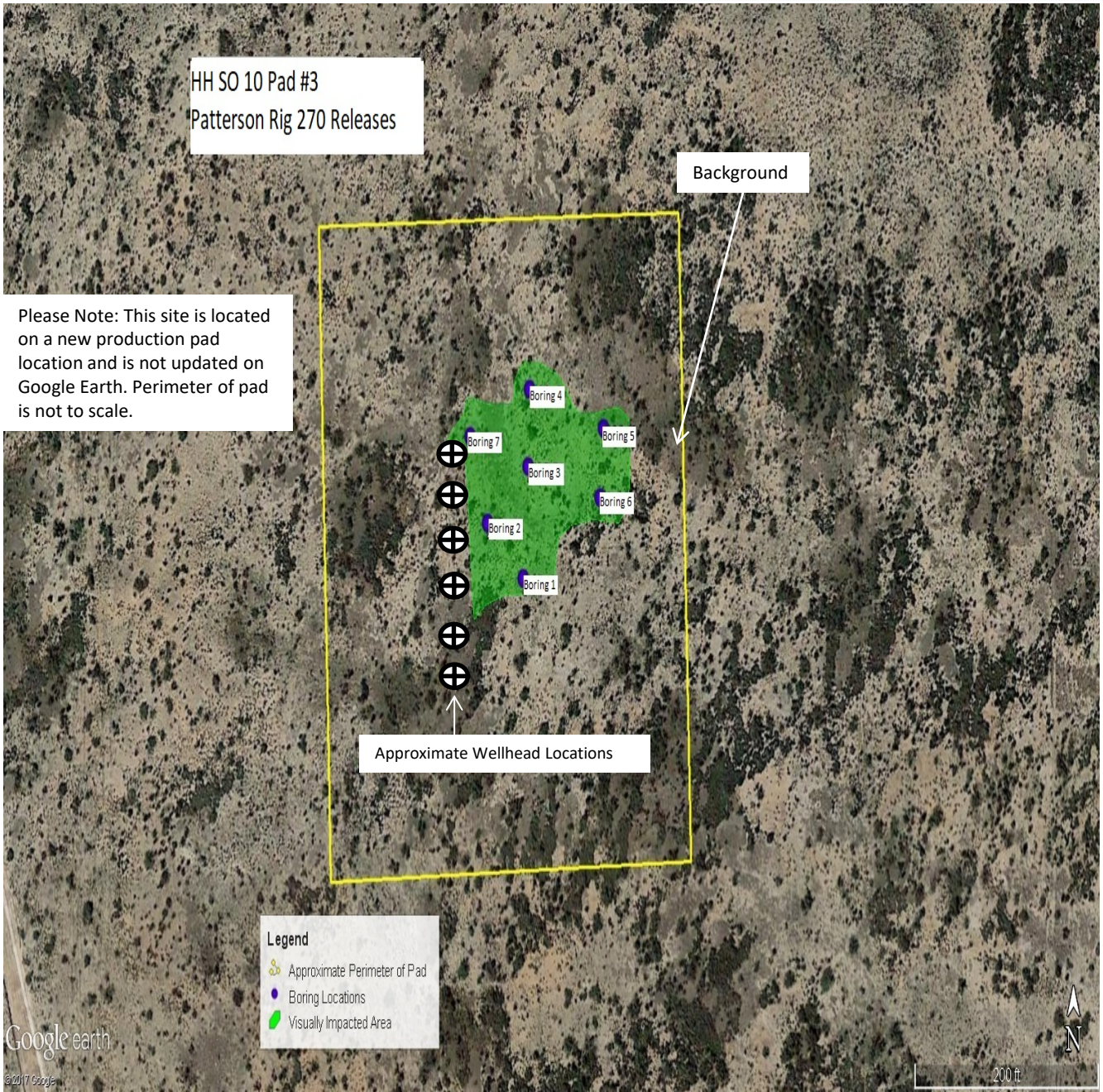
Signature: JDeLeon	OIL CONSERVATION DIVISION
Printed Name: Josepha DeLeon	Approved by Environmental Specialist: Signed By Mike Bratcher
Title: HES Specialist, Environmental Compliance Support	Approval Date: 5/8/17 Expiration Date: N/A
E-mail Address: jdxd@chevron.com	Conditions of Approval: See attached Attached ☒
Date: 04/27//2017 Phone: 575-263-0424	

* Attach Additional Sheets If Necessary

2RP-4200

Attachment B
Annotated Aerial Imagery

eTECH Environmental & Safety Solutions, Inc.	Delineation & Assessment Report ©	Project Name:	Chevron – HH SO 10 Pad #3 - Patterson Rig 270 Releases		2RP-4200 & 2RP-4433
		Date Assessed:	December 28, 2017		



Assessment Results

Sample I.D.	Depth	Total BTEX	Chlorides (mg/kg)	Total TPH (mg/kg)
Boring 1	0-6”	<0.00199	33.0	**407**
Boring 1	6-12”	<0.00201	81.9	<15.0
Boring 1	12-18”	<0.00200	181	<15.0
Boring 1	18-24”	<0.00200	62.7	<15.0
Boring 2	0-6”	0.0822	180	**20,100**
Boring 2	6-12”	0.174	121	**9,710**
Boring 2	12-18”	<0.00198	123	**131**
Boring 2	18-24”	<0.00202	207	29.6
Boring 3	0-6”	0.316	**272**	**13,100**
Boring 3	6-12”	0.163	47.6	**3,960**
Boring 3	12-18”	0.0453	234	**274**
Boring 3	18-24”	0.290	**349**	**2,030**
Boring 4	0-6”	<0.00200	84.6	**203**
Boring 4	6-12”	<0.00200	102	<15.0
Boring 4	12-18”	<0.00201	71.8	<15.0
Boring 4	18-24”	<0.00200	54.9	<15.0
Boring 5	0-6”	<0.00199	13.9	<15.0
Boring 5	6-12”	<0.00199	14.1	<15.0
Boring 5	12-18”	<0.00202	19.2	<15.0
Boring 5	18-24”	<0.00199	20.5	<15.0
Boring 6	0-6”	<0.00198	46.9	31.4
Boring 6	6-12”	<0.00201	33.2	<15.0
Boring 6	12-18”	<0.00200	73.8	<15.0
Boring 6	18-24”	<0.00200	54.6	<15.0
Boring 7	0-6”	0.906	94.0	**14,900**
Boring 7	6-12”	0.678	51.1	**1,430**
Boring 7	12-18”	0.00962	105	<15.0
Boring 7	18-24”	<0.00201	66.7	19.7
Background	0”	<0.00201	15.8	42.6

Bold denotes analytical results above regulatory guidelines

Attachment C
Photograph Log

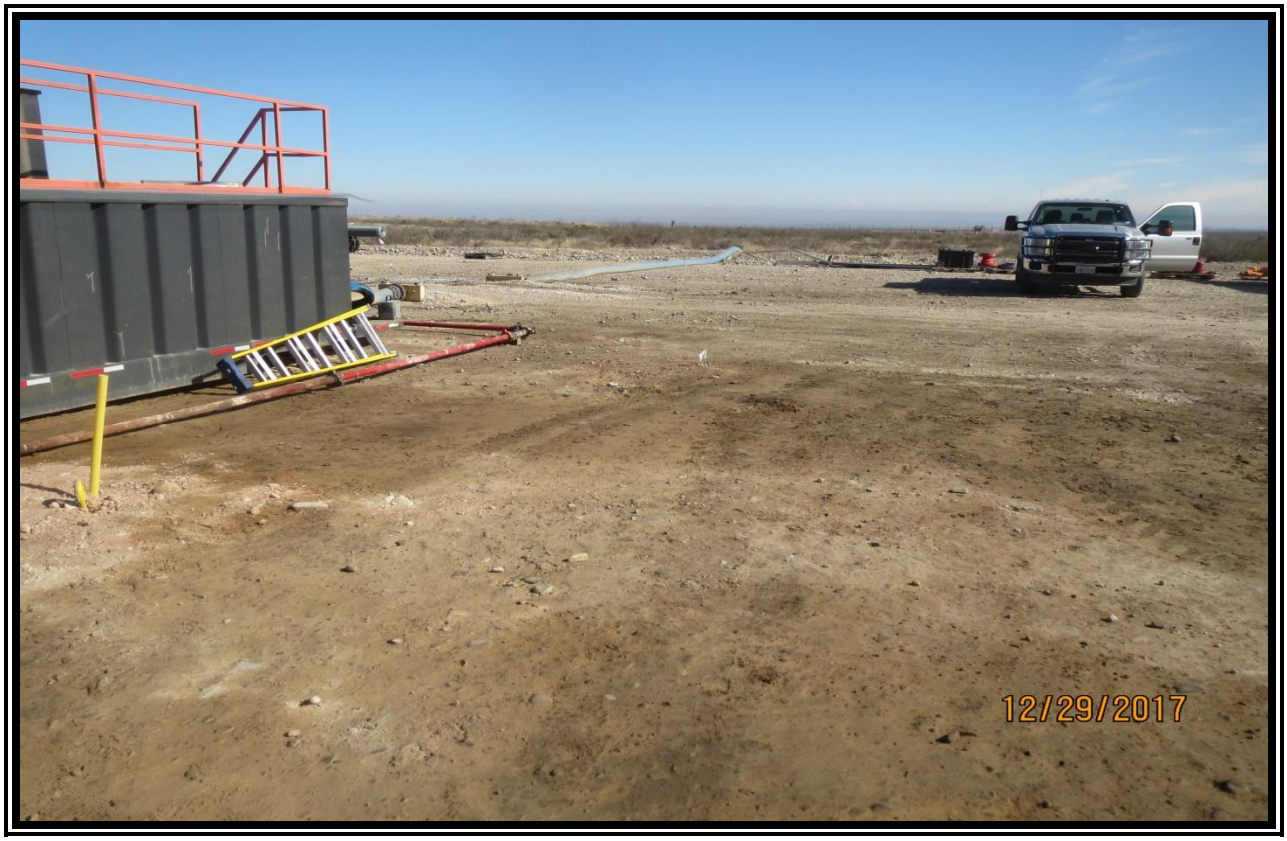
View of site signage looking north.

View of impacted area looking northwest.

View of impacted area looking northwest.

View of impacted area looking north.

View of impacted area looking northeast.



View of impacted area looking east.

Attachment D
Depth to Groundwater Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02474		CUB	ED		4	3	02	26S	27E	578964	3548029*	1554	100		
C 02588		C	ED	3	4	3	33	25S	27E	575645	3549575*	2346	81	19	62
C 02219		CUB	ED	4	4	4	05	26S	27E	575033	3547948*	2377	35		
C 02218		CUB	ED	4	1	4	07	26S	27E	573039	3546725*	4560	35		
C 02930		C	ED	2	3	4	22	26S	27E	577938	3543284*	4772	100	50	50
C 02475		CUB	ED		2	4	13	26S	27E	581450	3545252*	4901	100		
C 02476		CUB	ED		4	1	24	26S	27E	580653	3544032*	5146	150		
C 03938 POD1		CUB	ED	2	2	2	25	25S	27E	581482	3552616	6135	21	12	9
C 03262 POD1		C	ED	2	1	2	22	25S	27E	577837	3554244*	6231	75		
C 02438			ED	4	2	3	12	26S	26E	571015	3546705*	6529	30		
C 02478		CUB	ED		2	1	05	26S	28E	583848	3549325*	6568	100		
C 01013		C	ED			4	25	25S	26E	571505	3551456*	6827	245		
C 03261 POD1			ED	3	2	1	20	25S	27E	574007	3554006*	6879	351		
C 02221		CUB	ED	4	3	2	25	25S	26E	571412	3551961*	7172	35		

Average Depth to Water: **27 feet**
Minimum Depth: **12 feet**
Maximum Depth: **50 feet**

Record Count: 14

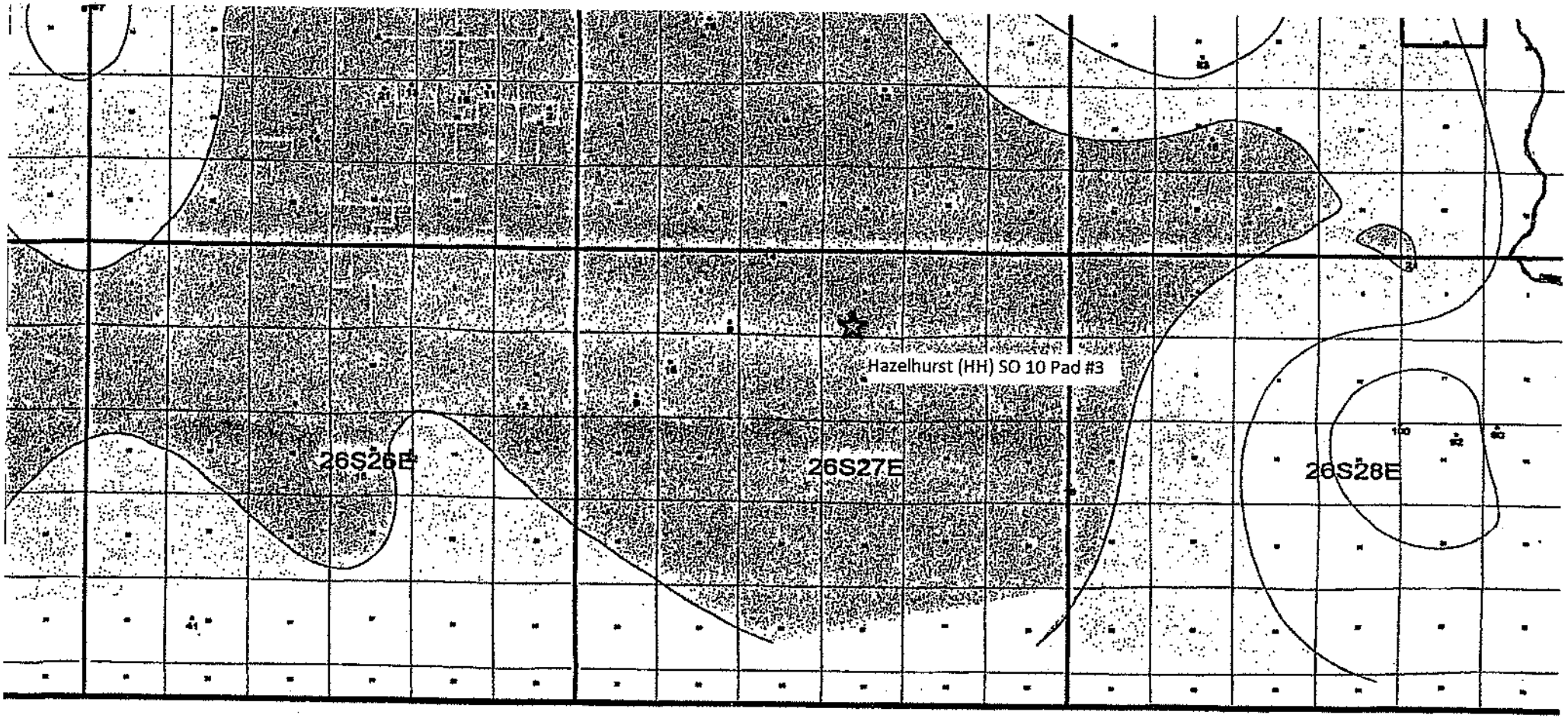
Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 577409.25 **Northing (Y):** 3548027.17 **Radius:** 8000

***UTM location was derived from PLSS - see Help**


Hazelhurst (HH) SO 10 Pad #3
26S26E
26S27E
26S28E

Attachment E
Analytical Results

Certificate of Analysis Summary 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Patterson Rig 270-Chevron

Project Id: 9005
Contact: Sean Carter
Project Location:

Date Received in Lab: Fri Dec-29-17 02:57 pm
Report Date: 09-JAN-18
Project Manager: Julian Martinez

Analysis Requested													
	Lab Id:	572348-001		572348-002		572348-003		572348-004		572348-005		572348-006	
	Field Id:	Boring-1		Boring-1		Boring-1		Boring-1		Boring-2		Boring-2	
	Depth:	0-6 In		6-12 In		12-18 In		18-24 In		0-6 In		6-12 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 10:30		Dec-28-17 10:35		Dec-28-17 10:40		Dec-28-17 10:45		Dec-28-17 10:50		Dec-28-17 10:55	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 16:00		Jan-02-18 10:30		Jan-02-18 10:30		Jan-02-18 10:30		Jan-02-18 16:00		Jan-02-18 10:30	
	Analyzed:	Jan-03-18 04:03		Jan-02-18 21:24		Jan-02-18 20:10		Jan-02-18 19:32		Jan-03-18 10:29		Jan-02-18 21:05	
	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	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	0.0171	0.00198
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.00603	0.00200	0.0292	0.00198
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00401	0.00401	<0.00399	0.00399	0.0309	0.00401	0.0794	0.00397
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.0453	0.00200	0.0486	0.00198
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.0762	0.00200	0.128	0.00198
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.0822	0.00200	0.174	0.00198
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00	
	Analyzed:	Jan-02-18 16:37		Jan-02-18 19:32		Jan-02-18 19:39		Jan-02-18 16:58		Jan-02-18 17:19		Jan-02-18 17:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		33.0	24.7	81.9	5.00	181	4.91	62.7	49.0	180	25.0	121	24.8
TPH By SW8015 Mod	***Extracted:***	Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00	
	Analyzed:	Jan-03-18 14:32		Jan-03-18 12:33		Jan-03-18 12:53		Jan-03-18 11:31		Jan-03-18 14:51		Jan-03-18 13:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		16.3	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	523	15.0	331	15.0
Diesel Range Organics (DRO)		391	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	19500 D	150	9360 D	75.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	83.8	15.0	23.4	15.0
Total TPH		407	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	20100	15.0	9710	15.0

Julian Martinez
Project Manager

Certificate of Analysis Summary 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Patterson Rig 270-Chevron

Project Id: 9005
Contact: Sean Carter
Project Location:

Date Received in Lab: Fri Dec-29-17 02:57 pm
Report Date: 09-JAN-18
Project Manager: Julian Martinez

Analysis Requested													
	Lab Id:	572348-007		572348-008		572348-009		572348-010		572348-011		572348-012	
	Field Id:	Boring-2		Boring-2		Boring-3		Boring-3		Boring-3		Boring-3	
	Depth:	12-18 In		18-24 In		0-6 In		6-12 In		12-18 In		18-24 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 11:00		Dec-28-17 11:05		Dec-28-17 11:10		Dec-28-17 11:15		Dec-28-17 11:20		Dec-28-17 11:25	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 10:30		Jan-02-18 10:30		Jan-02-18 16:00		Jan-02-18 10:30		Jan-02-18 10:30		Jan-02-18 10:30	
	Analyzed:	Jan-02-18 20:29		Jan-02-18 19:51		Jan-03-18 10:48		Jan-02-18 21:43		Jan-02-18 20:46		Jan-02-18 22:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00202	0.00202	0.0146	0.00200	0.0136	0.00200	<0.00201	0.00201	0.00681	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00202	0.00202	0.0371	0.00200	0.0290	0.00200	0.00718	0.00201	0.0350	0.00199
m,p-Xylenes		<0.00396	0.00396	<0.00403	0.00403	0.170	0.00399	0.0762	0.00401	0.0294	0.00402	0.142	0.00398
o-Xylene		<0.00198	0.00198	<0.00202	0.00202	0.0941	0.00200	0.0441	0.00200	0.00874	0.00201	0.106	0.00199
Total Xylenes		<0.00198	0.00198	<0.00202	0.00202	0.264	0.00200	0.120	0.00200	0.0381	0.00201	0.248	0.00199
Total BTEX		<0.00198	0.00198	<0.00202	0.00202	0.316	0.00200	0.163	0.00200	0.0453	0.00201	0.290	0.00199
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00	
	Analyzed:	Jan-02-18 17:33		Jan-02-18 17:40		Jan-02-18 17:47		Jan-02-18 18:15		Jan-02-18 18:22		Jan-02-18 16:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		123	49.4	207	49.2	272	24.8	47.6	24.8	234	24.7	349	4.94
TPH By SW8015 Mod	***Extracted:***	Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00	
	Analyzed:	Jan-03-18 13:33		Jan-04-18 01:41		Jan-03-18 15:13		Jan-03-18 14:12		Jan-03-18 16:14		Jan-03-18 16:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		15.1	15.0	<15.0	15.0	685	15.0	295	15.0	27.1	15.0	215	15.0
Diesel Range Organics (DRO)		116	15.0	29.6	15.0	12300 D	75.0	3660	15.0	247	15.0	1810	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	100	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		131	15.0	29.6	15.0	13100	15.0	3960	15.0	274	15.0	2030	15.0

Certificate of Analysis Summary 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Patterson Rig 270-Chevron

Project Id: 9005
Contact: Sean Carter
Project Location:

Date Received in Lab: Fri Dec-29-17 02:57 pm
Report Date: 09-JAN-18
Project Manager: Julian Martinez

Analysis Requested													
	Lab Id:	572348-013		572348-014		572348-015		572348-016		572348-017		572348-018	
	Field Id:	Boring-4		Boring-4		Boring-4		Boring-4		Boring-5		Boring-5	
	Depth:	0-6 In		6-12 In		12-18 In		18-24 In		0-6 In		6-12 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 11:30		Dec-28-17 11:35		Dec-28-17 11:40		Dec-28-17 11:45		Dec-28-17 11:50		Dec-28-17 11:55	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 10:30		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00	
	Analyzed:	Jan-02-18 22:21		Jan-03-18 01:31		Jan-03-18 01:12		Jan-03-18 01:50		Jan-03-18 02:10		Jan-03-18 02:29	
	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	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:30		Jan-02-18 16:00		Jan-02-18 16:00	
	Analyzed:	Jan-05-18 10:46		Jan-05-18 10:53		Jan-02-18 17:54		Jan-02-18 20:21		Jan-05-18 11:00		Jan-05-18 11:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		84.6	4.95	102	4.94	71.8	4.98	54.9	4.98	13.9	4.96	14.1	4.95
TPH By SW8015 Mod	***Extracted:***	Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00	
	Analyzed:	Jan-03-18 16:55		Jan-03-18 17:15		Jan-03-18 17:36		Jan-03-18 17:56		Jan-03-18 18:16		Jan-03-18 18:35	
	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	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		185	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		17.5	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		203	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Certificate of Analysis Summary 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Patterson Rig 270-Chevron

Project Id: 9005
Contact: Sean Carter
Project Location:

Date Received in Lab: Fri Dec-29-17 02:57 pm
Report Date: 09-JAN-18
Project Manager: Julian Martinez

Analysis Requested													
	Lab Id:	572348-019		572348-020		572348-021		572348-022		572348-023		572348-024	
	Field Id:	Boring-5		Boring-5		Boring-6		Boring-6		Boring-6		Boring-6	
	Depth:	12-18 In		18-24 In		0-6 In		6-12 In		12-18 In		18-24 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 12:00		Dec-28-17 12:05		Dec-28-17 12:10		Dec-28-17 12:15		Dec-28-17 12:20		Dec-28-17 12:25	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00	
	Analyzed:	Jan-03-18 02:48		Jan-03-18 03:06		Jan-03-18 03:25		Jan-03-18 03:44		Jan-03-18 05:19		Jan-03-18 05:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00396	0.00396	<0.00402	0.00402	<0.00401	0.00401	<0.00399	0.00399
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30	
	Analyzed:	Jan-05-18 11:14		Jan-05-18 11:21		Jan-05-18 11:28		Jan-05-18 11:35		Jan-05-18 11:42		Jan-02-18 20:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		19.2	4.92	20.5	4.99	46.9	4.94	33.2	4.98	73.8	4.98	54.6	4.95
TPH By SW8015 Mod	***Extracted:***	Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00	
	Analyzed:	Jan-03-18 18:55		Jan-03-18 19:14		Jan-03-18 20:51		Jan-03-18 21:50		Jan-03-18 22:10		Jan-03-18 22:31	
	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	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	31.4	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	31.4	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Certificate of Analysis Summary 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Patterson Rig 270-Chevron

Project Id: 9005
Contact: Sean Carter
Project Location:

Date Received in Lab: Fri Dec-29-17 02:57 pm
Report Date: 09-JAN-18
Project Manager: Julian Martinez

Analysis Requested											
	Lab Id:	572348-025		572348-026		572348-027		572348-028		572348-029	
	Field Id:	Boring-7		Boring-7		Boring-7		Boring-7		Background	
	Depth:	0-6 In		6-12 In		12-18 In		18-24 In			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 12:30		Dec-28-17 12:35		Dec-28-17 12:40		Dec-28-17 12:45		Dec-28-17 12:50	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 16:00		Jan-02-18 10:30	
	Analyzed:	Jan-03-18 06:54		Jan-03-18 05:57		Jan-03-18 06:16		Jan-03-18 06:35		Jan-02-18 17:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00363	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Toluene		0.110	0.00202	0.00795	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Ethylbenzene		0.145	0.00202	0.0414	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
m,p-Xylenes		0.424	0.00403	0.424	0.00398	0.00632	0.00398	<0.00402	0.00402	<0.00402	0.00402
o-Xylene		0.223	0.00202	0.205	0.00199	0.00330	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total Xylenes		0.647	0.00202	0.629	0.00199	0.00962	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total BTEX		0.906	0.00202	0.678	0.00199	0.00962	0.00199	<0.00201	0.00201	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30	
	Analyzed:	Jan-02-18 21:02		Jan-05-18 11:49		Jan-05-18 12:10		Jan-05-18 12:17		Jan-05-18 12:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		94.0	24.9	51.1	4.93	105	4.93	66.7	4.95	15.8	4.92
TPH By SW8015 Mod	***Extracted:***	Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00		Jan-03-18 10:00	
	Analyzed:	Jan-04-18 08:38		Jan-03-18 22:52		Jan-03-18 23:13		Jan-03-18 23:34		Jan-03-18 23:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		1220	150	276	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		13700	150	1150	15.0	<15.0	15.0	19.7	15.0	42.6	15.0
Oil Range Hydrocarbons (ORO)		<150	150	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		14900	150	1430	15.0	<15.0	15.0	19.7	15.0	42.6	15.0

Analytical Report 572348

for

Etech Environmental & Safety Solution, Inc

Project Manager: Sean Carter

Patterson Rig 270-Chevron

9005

09-JAN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

09-JAN-18

Project Manager: **Sean Carter**
Etech Environmental & Safety Solution, Inc
P.O. Box 8469
Midland, TX 79708

Reference: XENCO Report No(s): **572348**
Patterson Rig 270-Chevron
Project Address:

Sean Carter:

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) 572348. 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. 572348 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,

Julian Martinez
Project Manager

Sample Cross Reference 572348

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Boring-1	S	12-28-17 10:30	0 - 6 In	572348-001
Boring-1	S	12-28-17 10:35	6 - 12 In	572348-002
Boring-1	S	12-28-17 10:40	12 - 18 In	572348-003
Boring-1	S	12-28-17 10:45	18 - 24 In	572348-004
Boring-2	S	12-28-17 10:50	0 - 6 In	572348-005
Boring-2	S	12-28-17 10:55	6 - 12 In	572348-006
Boring-2	S	12-28-17 11:00	12 - 18 In	572348-007
Boring-2	S	12-28-17 11:05	18 - 24 In	572348-008
Boring-3	S	12-28-17 11:10	0 - 6 In	572348-009
Boring-3	S	12-28-17 11:15	6 - 12 In	572348-010
Boring-3	S	12-28-17 11:20	12 - 18 In	572348-011
Boring-3	S	12-28-17 11:25	18 - 24 In	572348-012
Boring-4	S	12-28-17 11:30	0 - 6 In	572348-013
Boring-4	S	12-28-17 11:35	6 - 12 In	572348-014
Boring-4	S	12-28-17 11:40	12 - 18 In	572348-015
Boring-4	S	12-28-17 11:45	18 - 24 In	572348-016
Boring-5	S	12-28-17 11:50	0 - 6 In	572348-017
Boring-5	S	12-28-17 11:55	6 - 12 In	572348-018
Boring-5	S	12-28-17 12:00	12 - 18 In	572348-019
Boring-5	S	12-28-17 12:05	18 - 24 In	572348-020
Boring-6	S	12-28-17 12:10	0 - 6 In	572348-021
Boring-6	S	12-28-17 12:15	6 - 12 In	572348-022
Boring-6	S	12-28-17 12:20	12 - 18 In	572348-023
Boring-6	S	12-28-17 12:25	18 - 24 In	572348-024
Boring-7	S	12-28-17 12:30	0 - 6 In	572348-025
Boring-7	S	12-28-17 12:35	6 - 12 In	572348-026
Boring-7	S	12-28-17 12:40	12 - 18 In	572348-027
Boring-7	S	12-28-17 12:45	18 - 24 In	572348-028
Background	S	12-28-17 12:50	In	572348-029

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3037292 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3037402 BTEX by EPA 8021B
Lab Sample ID 572348-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 572348-001, -005, -009, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-001	Date Collected:	12.28.17 10.30	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.0**	24.7	mg/kg	01.02.18 16.37		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.3**	15.0	mg/kg	01.03.18 14.32		1
Diesel Range Organics (DRO)	C10C28DRO	**391**	15.0	mg/kg	01.03.18 14.32		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 14.32	U	1
Total TPH	PHC635	**407**	15.0	mg/kg	01.03.18 14.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.03.18 14.32	
o-Terphenyl	84-15-1	105	%	70-135	01.03.18 14.32	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-001	Date Collected:	12.28.17 10.30	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.18 04.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.18 04.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	80-120	01.03.18 04.03	
1,4-Difluorobenzene	540-36-3	89	%	80-120	01.03.18 04.03	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-002	Date Collected:	12.28.17 10.35	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.9**	5.00	mg/kg	01.02.18 19.32		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 12.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 12.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 12.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 12.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.03.18 12.33	
o-Terphenyl	84-15-1	101	%	70-135	01.03.18 12.33	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-002	Date Collected:	12.28.17 10.35	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.02.18 21.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.02.18 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	01.02.18 21.24	
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.02.18 21.24	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-003	Date Collected:	12.28.17 10.40	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**181**	4.91	mg/kg	01.02.18 19.39		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 12.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 12.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 12.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 12.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.03.18 12.53	
o-Terphenyl	84-15-1	95	%	70-135	01.03.18 12.53	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-003	Date Collected:	12.28.17 10.40	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.02.18 20.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.02.18 20.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	01.02.18 20.10	
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.02.18 20.10	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-004	Date Collected:	12.28.17 10.45	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.7**	49.0	mg/kg	01.02.18 16.58		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 11.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 11.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 11.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.03.18 11.31	
o-Terphenyl	84-15-1	111	%	70-135	01.03.18 11.31	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-1**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-004	Date Collected:	12.28.17 10.45	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.02.18 19.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.02.18 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.02.18 19.32	
1,4-Difluorobenzene	540-36-3	92	%	80-120	01.02.18 19.32	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-005	Date Collected:	12.28.17 10.50	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**180**	25.0	mg/kg	01.02.18 17.19		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**523**	15.0	mg/kg	01.03.18 14.51		1
Diesel Range Organics (DRO)	C10C28DRO	**19500**	150	mg/kg	01.04.18 07.59	D	10
Oil Range Hydrocarbons (ORO)	PHCG2835	**83.8**	15.0	mg/kg	01.03.18 14.51		1
Total TPH	PHC635	**20100**	15.0	mg/kg	01.04.18 07.59		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.03.18 14.51	
o-Terphenyl	84-15-1	87	%	70-135	01.03.18 14.51	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-005	Date Collected:	12.28.17 10.50	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 10.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.18 10.29	U	1
Ethylbenzene	100-41-4	**0.00603**	0.00200	mg/kg	01.03.18 10.29		1
m,p-Xylenes	179601-23-1	**0.0309**	0.00401	mg/kg	01.03.18 10.29		1
o-Xylene	95-47-6	**0.0453**	0.00200	mg/kg	01.03.18 10.29		1
Total Xylenes	1330-20-7	**0.0762**	0.00200	mg/kg	01.03.18 10.29		1
Total BTEX		**0.0822**	0.00200	mg/kg	01.03.18 10.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	01.03.18 10.29	
1,4-Difluorobenzene	540-36-3	89	%	80-120	01.03.18 10.29	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-006	Date Collected:	12.28.17 10.55	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**121**	24.8	mg/kg	01.02.18 17.26		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**331**	15.0	mg/kg	01.03.18 13.13		1
Diesel Range Organics (DRO)	C10C28DRO	**9360**	75.0	mg/kg	01.04.18 03.10	D	5
Oil Range Hydrocarbons (ORO)	PHCG2835	**23.4**	15.0	mg/kg	01.03.18 13.13		1
Total TPH	PHC635	**9710**	15.0	mg/kg	01.04.18 03.10		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.03.18 13.13	
o-Terphenyl	84-15-1	111	%	70-135	01.03.18 13.13	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-006	Date Collected:	12.28.17 10.55	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.02.18 21.05	U	1
Toluene	108-88-3	**0.0171**	0.00198	mg/kg	01.02.18 21.05		1
Ethylbenzene	100-41-4	**0.0292**	0.00198	mg/kg	01.02.18 21.05		1
m,p-Xylenes	179601-23-1	**0.0794**	0.00397	mg/kg	01.02.18 21.05		1
o-Xylene	95-47-6	**0.0486**	0.00198	mg/kg	01.02.18 21.05		1
Total Xylenes	1330-20-7	**0.128**	0.00198	mg/kg	01.02.18 21.05		1
Total BTEX		**0.174**	0.00198	mg/kg	01.02.18 21.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	01.02.18 21.05	
1,4-Difluorobenzene	540-36-3	82	%	80-120	01.02.18 21.05	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-007	Date Collected:	12.28.17 11.00	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**123**	49.4	mg/kg	01.02.18 17.33		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.1**	15.0	mg/kg	01.03.18 13.33		1
Diesel Range Organics (DRO)	C10C28DRO	**116**	15.0	mg/kg	01.03.18 13.33		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 13.33	U	1
Total TPH	PHC635	**131**	15.0	mg/kg	01.03.18 13.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.03.18 13.33	
o-Terphenyl	84-15-1	102	%	70-135	01.03.18 13.33	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-007	Date Collected:	12.28.17 11.00	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.02.18 20.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.02.18 20.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	80-120	01.02.18 20.29	
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.02.18 20.29	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-008	Date Collected:	12.28.17 11.05	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**207**	49.2	mg/kg	01.02.18 17.40		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.04.18 01.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.6**	15.0	mg/kg	01.04.18 01.41		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.04.18 01.41	U	1
Total TPH	PHC635	**29.6**	15.0	mg/kg	01.04.18 01.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.04.18 01.41	
o-Terphenyl	84-15-1	102	%	70-135	01.04.18 01.41	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-2**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-008	Date Collected:	12.28.17 11.05	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.02.18 19.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.02.18 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	01.02.18 19.51	
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.02.18 19.51	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-009	Date Collected:	12.28.17 11.10	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**272**	24.8	mg/kg	01.02.18 17.47		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**685**	15.0	mg/kg	01.03.18 15.13		1
Diesel Range Organics (DRO)	C10C28DRO	**12300**	75.0	mg/kg	01.04.18 08.19	D	5
Oil Range Hydrocarbons (ORO)	PHCG2835	**100**	15.0	mg/kg	01.03.18 15.13		1
Total TPH	PHC635	**13100**	15.0	mg/kg	01.04.18 08.19		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.03.18 15.13	
o-Terphenyl	84-15-1	116	%	70-135	01.03.18 15.13	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-009	Date Collected:	12.28.17 11.10	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 10.48	U	1
Toluene	108-88-3	**0.0146**	0.00200	mg/kg	01.03.18 10.48		1
Ethylbenzene	100-41-4	**0.0371**	0.00200	mg/kg	01.03.18 10.48		1
m,p-Xylenes	179601-23-1	**0.170**	0.00399	mg/kg	01.03.18 10.48		1
o-Xylene	95-47-6	**0.0941**	0.00200	mg/kg	01.03.18 10.48		1
Total Xylenes	1330-20-7	**0.264**	0.00200	mg/kg	01.03.18 10.48		1
Total BTEX		**0.316**	0.00200	mg/kg	01.03.18 10.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	80-120	01.03.18 10.48	
1,4-Difluorobenzene	540-36-3	86	%	80-120	01.03.18 10.48	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-010	Date Collected:	12.28.17 11.15	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.6**	24.8	mg/kg	01.02.18 18.15		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**295**	15.0	mg/kg	01.03.18 14.12		1
Diesel Range Organics (DRO)	C10C28DRO	**3660**	15.0	mg/kg	01.03.18 14.12		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 14.12	U	1
Total TPH	PHC635	**3960**	15.0	mg/kg	01.03.18 14.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	01.03.18 14.12	
o-Terphenyl	84-15-1	88	%	70-135	01.03.18 14.12	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-010	Date Collected:	12.28.17 11.15	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.02.18 21.43	U	1
Toluene	108-88-3	**0.0136**	0.00200	mg/kg	01.02.18 21.43		1
Ethylbenzene	100-41-4	**0.0290**	0.00200	mg/kg	01.02.18 21.43		1
m,p-Xylenes	179601-23-1	**0.0762**	0.00401	mg/kg	01.02.18 21.43		1
o-Xylene	95-47-6	**0.0441**	0.00200	mg/kg	01.02.18 21.43		1
Total Xylenes	1330-20-7	**0.120**	0.00200	mg/kg	01.02.18 21.43		1
Total BTEX		**0.163**	0.00200	mg/kg	01.02.18 21.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	01.02.18 21.43	
4-Bromofluorobenzene	460-00-4	109	%	80-120	01.02.18 21.43	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-011	Date Collected:	12.28.17 11.20	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**234**	24.7	mg/kg	01.02.18 18.22		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.1**	15.0	mg/kg	01.03.18 16.14		1
Diesel Range Organics (DRO)	C10C28DRO	**247**	15.0	mg/kg	01.03.18 16.14		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 16.14	U	1
Total TPH	PHC635	**274**	15.0	mg/kg	01.03.18 16.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.03.18 16.14	
o-Terphenyl	84-15-1	95	%	70-135	01.03.18 16.14	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-011	Date Collected:	12.28.17 11.20	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.02.18 20.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.02.18 20.46	U	1
Ethylbenzene	100-41-4	**0.00718**	0.00201	mg/kg	01.02.18 20.46		1
m,p-Xylenes	179601-23-1	**0.0294**	0.00402	mg/kg	01.02.18 20.46		1
o-Xylene	95-47-6	**0.00874**	0.00201	mg/kg	01.02.18 20.46		1
Total Xylenes	1330-20-7	**0.0381**	0.00201	mg/kg	01.02.18 20.46		1
Total BTEX		**0.0453**	0.00201	mg/kg	01.02.18 20.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	80-120	01.02.18 20.46	
1,4-Difluorobenzene	540-36-3	83	%	80-120	01.02.18 20.46	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-012	Date Collected:	12.28.17 11.25	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**349**	4.94	mg/kg	01.02.18 16.16		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**215**	15.0	mg/kg	01.03.18 16.34		1
Diesel Range Organics (DRO)	C10C28DRO	**1810**	15.0	mg/kg	01.03.18 16.34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 16.34	U	1
Total TPH	PHC635	**2030**	15.0	mg/kg	01.03.18 16.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	01.03.18 16.34	
o-Terphenyl	84-15-1	94	%	70-135	01.03.18 16.34	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-3**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-012	Date Collected:	12.28.17 11.25	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.02.18 22.02	U	1
Toluene	108-88-3	**0.00681**	0.00199	mg/kg	01.02.18 22.02		1
Ethylbenzene	100-41-4	**0.0350**	0.00199	mg/kg	01.02.18 22.02		1
m,p-Xylenes	179601-23-1	**0.142**	0.00398	mg/kg	01.02.18 22.02		1
o-Xylene	95-47-6	**0.106**	0.00199	mg/kg	01.02.18 22.02		1
Total Xylenes	1330-20-7	**0.248**	0.00199	mg/kg	01.02.18 22.02		1
Total BTEX		**0.290**	0.00199	mg/kg	01.02.18 22.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	01.02.18 22.02	
1,4-Difluorobenzene	540-36-3	90	%	80-120	01.02.18 22.02	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-013	Date Collected:	12.28.17 11.30	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.6**	4.95	mg/kg	01.05.18 10.46		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 16.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**185**	15.0	mg/kg	01.03.18 16.55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**17.5**	15.0	mg/kg	01.03.18 16.55		1
Total TPH	PHC635	**203**	15.0	mg/kg	01.03.18 16.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	01.03.18 16.55	
o-Terphenyl	84-15-1	112	%	70-135	01.03.18 16.55	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-013	Date Collected:	12.28.17 11.30	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.02.18 22.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.02.18 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	83	%	80-120	01.02.18 22.21	
4-Bromofluorobenzene	460-00-4	80	%	80-120	01.02.18 22.21	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-014	Date Collected:	12.28.17 11.35	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**102**	4.94	mg/kg	01.05.18 10.53		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 17.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 17.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 17.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.03.18 17.15	
o-Terphenyl	84-15-1	101	%	70-135	01.03.18 17.15	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-014	Date Collected:	12.28.17 11.35	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.03.18 01.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.18 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.03.18 01.31	
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.03.18 01.31	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-015	Date Collected:	12.28.17 11.40	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**71.8**	4.98	mg/kg	01.02.18 17.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 17.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 17.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 17.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 17.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.03.18 17.36	
o-Terphenyl	84-15-1	112	%	70-135	01.03.18 17.36	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-015	Date Collected:	12.28.17 11.40	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.03.18 01.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.03.18 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.03.18 01.12	
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.03.18 01.12	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-016	Date Collected:	12.28.17 11.45	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.9**	4.98	mg/kg	01.02.18 20.21		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 17.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 17.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 17.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 17.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.03.18 17.56	
o-Terphenyl	84-15-1	103	%	70-135	01.03.18 17.56	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-4**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-016	Date Collected:	12.28.17 11.45	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.03.18 01.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.18 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	01.03.18 01.50	
1,4-Difluorobenzene	540-36-3	96	%	80-120	01.03.18 01.50	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-017	Date Collected:	12.28.17 11.50	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.9**	4.96	mg/kg	01.05.18 11.00		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 18.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 18.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 18.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 18.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.03.18 18.16	
o-Terphenyl	84-15-1	104	%	70-135	01.03.18 18.16	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-017	Date Collected:	12.28.17 11.50	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.18 02.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.18 02.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.03.18 02.10	
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.03.18 02.10	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-018	Date Collected:	12.28.17 11.55	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.1**	4.95	mg/kg	01.05.18 11.07		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 18.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 18.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.03.18 18.35	
o-Terphenyl	84-15-1	107	%	70-135	01.03.18 18.35	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-018	Date Collected:	12.28.17 11.55	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.18 02.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.18 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.03.18 02.29	
4-Bromofluorobenzene	460-00-4	87	%	80-120	01.03.18 02.29	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-019	Date Collected:	12.28.17 12.00	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.2**	4.92	mg/kg	01.05.18 11.14		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 18.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 18.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 18.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.03.18 18.55	
o-Terphenyl	84-15-1	95	%	70-135	01.03.18 18.55	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-019	Date Collected:	12.28.17 12.00	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.03.18 02.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.03.18 02.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.03.18 02.48	
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.03.18 02.48	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-020	Date Collected:	12.28.17 12.05	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.5**	4.99	mg/kg	01.05.18 11.21		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 19.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 19.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 19.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 19.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.03.18 19.14	
o-Terphenyl	84-15-1	114	%	70-135	01.03.18 19.14	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-5**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-020	Date Collected:	12.28.17 12.05	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.18 03.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.18 03.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.03.18 03.06	
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.03.18 03.06	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-021	Date Collected:	12.28.17 12.10	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.9**	4.94	mg/kg	01.05.18 11.28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**31.4**	15.0	mg/kg	01.03.18 20.51		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 20.51	U	1
Total TPH	PHC635	**31.4**	15.0	mg/kg	01.03.18 20.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	01.03.18 20.51	
o-Terphenyl	84-15-1	114	%	70-135	01.03.18 20.51	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-021	Date Collected:	12.28.17 12.10	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.03.18 03.25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.03.18 03.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.03.18 03.25	
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.03.18 03.25	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-022	Date Collected:	12.28.17 12.15	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.2**	4.98	mg/kg	01.05.18 11.35		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 21.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 21.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 21.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 21.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.03.18 21.50	
o-Terphenyl	84-15-1	100	%	70-135	01.03.18 21.50	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-022	Date Collected:	12.28.17 12.15	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.03.18 03.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.03.18 03.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.03.18 03.44	
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.03.18 03.44	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-023	Date Collected:	12.28.17 12.20	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.8**	4.98	mg/kg	01.05.18 11.42		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 22.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 22.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 22.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 22.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.03.18 22.10	
o-Terphenyl	84-15-1	107	%	70-135	01.03.18 22.10	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-023	Date Collected:	12.28.17 12.20	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.03.18 05.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.18 05.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	80-120	01.03.18 05.19	
4-Bromofluorobenzene	460-00-4	91	%	80-120	01.03.18 05.19	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-024	Date Collected:	12.28.17 12.25	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.6**	4.95	mg/kg	01.02.18 20.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 22.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 22.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 22.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 22.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.03.18 22.31	
o-Terphenyl	84-15-1	101	%	70-135	01.03.18 22.31	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-6**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-024	Date Collected:	12.28.17 12.25	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.03.18 05.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.18 05.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.03.18 05.38	
1,4-Difluorobenzene	540-36-3	92	%	80-120	01.03.18 05.38	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-025	Date Collected:	12.28.17 12.30	Sample Depth:	0 - 6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**94.0**	24.9	mg/kg	01.02.18 21.02		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1220**	150	mg/kg	01.04.18 08.38		10
Diesel Range Organics (DRO)	C10C28DRO	**13700**	150	mg/kg	01.04.18 08.38		10
Oil Range Hydrocarbons (ORO)	PHCG2835	<150	150	mg/kg	01.04.18 08.38	U	10
Total TPH	PHC635	**14900**	150	mg/kg	01.04.18 08.38		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.04.18 08.38	
o-Terphenyl	84-15-1	92	%	70-135	01.04.18 08.38	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-025	Date Collected:	12.28.17 12.30	Sample Depth:	0 - 6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00363**	0.00202	mg/kg	01.03.18 06.54		1
Toluene	108-88-3	**0.110**	0.00202	mg/kg	01.03.18 06.54		1
Ethylbenzene	100-41-4	**0.145**	0.00202	mg/kg	01.03.18 06.54		1
m,p-Xylenes	179601-23-1	**0.424**	0.00403	mg/kg	01.03.18 06.54		1
o-Xylene	95-47-6	**0.223**	0.00202	mg/kg	01.03.18 06.54		1
Total Xylenes	1330-20-7	**0.647**	0.00202	mg/kg	01.03.18 06.54		1
Total BTEX		**0.906**	0.00202	mg/kg	01.03.18 06.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	01.03.18 06.54	
1,4-Difluorobenzene	540-36-3	81	%	80-120	01.03.18 06.54	

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Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-026	Date Collected:	12.28.17 12.35	Sample Depth:	6 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.1**	4.93	mg/kg	01.05.18 11.49		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**276**	15.0	mg/kg	01.03.18 22.52		1
Diesel Range Organics (DRO)	C10C28DRO	**1150**	15.0	mg/kg	01.03.18 22.52		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 22.52	U	1
Total TPH	PHC635	**1430**	15.0	mg/kg	01.03.18 22.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	01.03.18 22.52	
o-Terphenyl	84-15-1	107	%	70-135	01.03.18 22.52	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-026	Date Collected:	12.28.17 12.35	Sample Depth:	6 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 05.57	U	1
Toluene	108-88-3	**0.00795**	0.00199	mg/kg	01.03.18 05.57		1
Ethylbenzene	100-41-4	**0.0414**	0.00199	mg/kg	01.03.18 05.57		1
m,p-Xylenes	179601-23-1	**0.424**	0.00398	mg/kg	01.03.18 05.57		1
o-Xylene	95-47-6	**0.205**	0.00199	mg/kg	01.03.18 05.57		1
Total Xylenes	1330-20-7	**0.629**	0.00199	mg/kg	01.03.18 05.57		1
Total BTEX		**0.678**	0.00199	mg/kg	01.03.18 05.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	80-120	01.03.18 05.57	
4-Bromofluorobenzene	460-00-4	110	%	80-120	01.03.18 05.57	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-027	Date Collected:	12.28.17 12.40	Sample Depth:	12 - 18 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**105**	4.93	mg/kg	01.05.18 12.10		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.03.18 23.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.03.18 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.03.18 23.13	
o-Terphenyl	84-15-1	106	%	70-135	01.03.18 23.13	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-027	Date Collected:	12.28.17 12.40	Sample Depth:	12 - 18 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 06.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 06.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 06.16	U	1
m,p-Xylenes	179601-23-1	**0.00632**	0.00398	mg/kg	01.03.18 06.16		1
o-Xylene	95-47-6	**0.00330**	0.00199	mg/kg	01.03.18 06.16		1
Total Xylenes	1330-20-7	**0.00962**	0.00199	mg/kg	01.03.18 06.16		1
Total BTEX		**0.00962**	0.00199	mg/kg	01.03.18 06.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	80-120	01.03.18 06.16	
1,4-Difluorobenzene	540-36-3	84	%	80-120	01.03.18 06.16	

Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-028	Date Collected:	12.28.17 12.45	Sample Depth:	18 - 24 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.7**	4.95	mg/kg	01.05.18 12.17		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.7**	15.0	mg/kg	01.03.18 23.34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 23.34	U	1
Total TPH	PHC635	**19.7**	15.0	mg/kg	01.03.18 23.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	01.03.18 23.34	
o-Terphenyl	84-15-1	129	%	70-135	01.03.18 23.34	

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Etech Environmental & Safety Solution, Inc, Midland, TX

Patterson Rig 270-Chevron

Sample Id:	**Boring-7**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-028	Date Collected:	12.28.17 12.45	Sample Depth:	18 - 24 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.03.18 06.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.03.18 06.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	01.03.18 06.35	
4-Bromofluorobenzene	460-00-4	98	%	80-120	01.03.18 06.35	

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Patterson Rig 270-Chevron

Sample Id: **Background** Matrix: Soil Date Received:12.29.17 14.57

Lab Sample Id: 572348-029 Date Collected: 12.28.17 12.50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Analyst: OJS Date Prep: 01.02.18 16.30 Basis: Wet Weight

Seq Number: 3037498

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.8**	4.92	mg/kg	01.05.18 12.24		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: JUM % Moisture:

Analyst: JUM Date Prep: 01.03.18 10.00 Basis: Wet Weight

Seq Number: 3037559

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.03.18 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.6**	15.0	mg/kg	01.03.18 23.55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.03.18 23.55	U	1
Total TPH	PHC635	**42.6**	15.0	mg/kg	01.03.18 23.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.03.18 23.55	
o-Terphenyl	84-15-1	93	%	70-135	01.03.18 23.55	

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Patterson Rig 270-Chevron

Sample Id:	**Background**	Matrix:	Soil	Date Received:	12.29.17 14.57
Lab Sample Id:	572348-029	Date Collected:	12.28.17 12.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 10.30	Basis:	Wet Weight
Seq Number:	3037292				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.02.18 17.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.02.18 17.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.02.18 17.57	
1,4-Difluorobenzene	540-36-3	96	%	80-120	01.02.18 17.57	

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

+ NELAC certification not offered for this compound.

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

QC Summary 572348

Etech Environmental & Safety Solution, Inc

Patterson Rig 270-Chevron

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037497 Matrix: Solid Date Prep: 01.02.18
MB Sample Id: 7636856-1-BLK LCS Sample Id: 7636856-1-BKS LCSD Sample Id: 7636856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	241	96	242	97	90-110	0	20	mg/kg	01.02.18 13:28	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Solid Date Prep: 01.02.18
MB Sample Id: 7636857-1-BLK LCS Sample Id: 7636857-1-BKS LCSD Sample Id: 7636857-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	241	96	247	99	90-110	2	20	mg/kg	01.02.18 20:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037497 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572348-012 MS Sample Id: 572348-012 S MSD Sample Id: 572348-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	349	247	599	101	584	95	90-110	3	20	mg/kg	01.02.18 16:23	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037497 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572348-015 MS Sample Id: 572348-015 S MSD Sample Id: 572348-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	71.8	249	318	99	334	105	90-110	5	20	mg/kg	01.02.18 18:01	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572348-016 MS Sample Id: 572348-016 S MSD Sample Id: 572348-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.9	249	297	97	316	105	90-110	6	20	mg/kg	01.02.18 20:28	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 572348

Etech Environmental & Safety Solution, Inc

Patterson Rig 270-Chevron

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572384-001 MS Sample Id: 572384-001 S MSD Sample Id: 572384-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.1	250	302	105	293	101	90-110	3	20	mg/kg	01.02.18 22:05	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037365 Matrix: Solid Date Prep: 01.03.18
MB Sample Id: 7636916-1-BLK LCS Sample Id: 7636916-1-BKS LCSD Sample Id: 7636916-1-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)	<15.0	1000	904	90	895	90	70-135	1	35	mg/kg	01.03.18 10:52	
Diesel Range Organics (DRO)	<15.0	1000	958	96	960	96	70-135	0	35	mg/kg	01.03.18 10:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		102		96		70-135	%	01.03.18 10:52
o-Terphenyl	105		108		93		70-135	%	01.03.18 10:52

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037559 Matrix: Solid Date Prep: 01.03.18
MB Sample Id: 7637042-1-BLK LCS Sample Id: 7637042-1-BKS LCSD Sample Id: 7637042-1-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)	<15.0	1000	1020	102	942	94	70-135	8	35	mg/kg	01.03.18 20:12	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1000	100	70-135	4	35	mg/kg	01.03.18 20:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		114		102		70-135	%	01.03.18 20:12
o-Terphenyl	110		116		88		70-135	%	01.03.18 20:12

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037365 Matrix: Soil Date Prep: 01.03.18
Parent Sample Id: 572348-004 MS Sample Id: 572348-004 S MSD Sample Id: 572348-004 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)	<15.0	1000	865	87	900	90	70-135	4	35	mg/kg	01.03.18 11:50	
Diesel Range Organics (DRO)	<15.0	1000	921	92	954	95	70-135	4	35	mg/kg	01.03.18 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		115		70-135	%	01.03.18 11:50
o-Terphenyl	108		111		70-135	%	01.03.18 11:50

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 572348

Etech Environmental & Safety Solution, Inc

Patterson Rig 270-Chevron

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037559 Matrix: Soil Date Prep: 01.03.18
Parent Sample Id: 572348-021 MS Sample Id: 572348-021 S MSD Sample Id: 572348-021 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)	<15.0	1000	773	77	784	78	70-135	1	35	mg/kg	01.03.18 21:10	
Diesel Range Organics (DRO)	31.4	1000	832	80	836	80	70-135	0	35	mg/kg	01.03.18 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		110		70-135	%	01.03.18 21:10
o-Terphenyl	108		111		70-135	%	01.03.18 21:10

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3037292 Matrix: Solid Date Prep: 01.02.18
MB Sample Id: 7636850-1-BLK LCS Sample Id: 7636850-1-BKS LCSD Sample Id: 7636850-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0777	78	0.0798	79	70-130	3	35	mg/kg	01.02.18 11:03	
Toluene	<0.00200	0.100	0.0771	77	0.0795	79	70-130	3	35	mg/kg	01.02.18 11:03	
Ethylbenzene	<0.00200	0.100	0.0922	92	0.0944	93	71-129	2	35	mg/kg	01.02.18 11:03	
m,p-Xylenes	<0.00401	0.200	0.180	90	0.185	92	70-135	3	35	mg/kg	01.02.18 11:03	
o-Xylene	<0.00200	0.100	0.0880	88	0.0899	89	71-133	2	35	mg/kg	01.02.18 11:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		113		108		80-120	%	01.02.18 11:03
4-Bromofluorobenzene	84		110		112		80-120	%	01.02.18 11:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3037402 Matrix: Solid Date Prep: 01.02.18
MB Sample Id: 7636912-1-BLK LCS Sample Id: 7636912-1-BKS LCSD Sample Id: 7636912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0760	76	0.0750	75	70-130	1	35	mg/kg	01.02.18 22:59	
Toluene	<0.00200	0.100	0.0755	76	0.0763	76	70-130	1	35	mg/kg	01.02.18 22:59	
Ethylbenzene	<0.00200	0.100	0.0895	90	0.0882	88	71-129	1	35	mg/kg	01.02.18 22:59	
m,p-Xylenes	<0.00401	0.200	0.174	87	0.171	86	70-135	2	35	mg/kg	01.02.18 22:59	
o-Xylene	<0.00200	0.100	0.0863	86	0.0851	85	71-133	1	35	mg/kg	01.02.18 22:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		116		115		80-120	%	01.02.18 22:59
4-Bromofluorobenzene	85		120		109		80-120	%	01.02.18 22:59

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
E = MSD/LCSD Result

Etech Environmental & Safety Solution, Inc

Patterson Rig 270-Chevron

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3037292 Matrix: Soil Date Prep: 01.02.18

Parent Sample Id: 572380-001 MS Sample Id: 572380-001 S MSD Sample Id: 572380-001 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	0.0656	66	0.0535	53	70-130	20	35	mg/kg	01.02.18 11:41	X
Toluene	<0.00200	0.100	0.0584	58	0.0455	45	70-130	25	35	mg/kg	01.02.18 11:41	X
Ethylbenzene	<0.00200	0.100	0.0587	59	0.0450	45	71-129	26	35	mg/kg	01.02.18 11:41	X
m,p-Xylenes	0.00547	0.200	0.114	54	0.0871	41	70-135	27	35	mg/kg	01.02.18 11:41	X
o-Xylene	0.00256	0.100	0.0617	59	0.0472	44	71-133	27	35	mg/kg	01.02.18 11:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		115		80-120	%	01.02.18 11:41
4-Bromofluorobenzene	113		118		80-120	%	01.02.18 11:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3037402 Matrix: Soil Date Prep: 01.02.18

Parent Sample Id: 572348-015 MS Sample Id: 572348-015 S MSD Sample Id: 572348-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0450	45	0.0464	46	70-130	3	35	mg/kg	01.02.18 23:37	X
Toluene	<0.00199	0.0996	0.0439	44	0.0433	43	70-130	1	35	mg/kg	01.02.18 23:37	X
Ethylbenzene	<0.00199	0.0996	0.0515	52	0.0492	49	71-129	5	35	mg/kg	01.02.18 23:37	X
m,p-Xylenes	<0.00398	0.199	0.101	51	0.0936	47	70-135	8	35	mg/kg	01.02.18 23:37	X
o-Xylene	<0.00199	0.0996	0.0502	50	0.0484	48	71-133	4	35	mg/kg	01.02.18 23:37	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		80-120	%	01.02.18 23:37
4-Bromofluorobenzene	93		98		80-120	%	01.02.18 23:37

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

XENCO LABORATORIES

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Sean Carter
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: PO Box 8469
City/State/Zip: Midland, Texas 79708
Telephone No: 432-563-2200
Fax No: 432-563-2213
Sampler Signature:
e-mail: Sean@etechenv.com
cc: brandon@etechenv.com

Project Name: Patterson Rig 270 - Chevron
Project #: 9005
Project Loc:
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 572348

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 9005 / 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030	RCI	N.O.R.M.	Texas 11 Metals (Total)	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Boring - 1	0	6"	12/28/17	10:30	1	X								5	X							X				X				X
		6	12"		10:35																										
		12	18"		10:40																										
		18	24"		10:45																										
	Boring - 2	0	6"		10:50																										
		6	12"		10:55																										
		12	18"		11:00																										
		18	24"		11:05																										
	Boring - 3	0	6"		11:10																										
		6	12"		11:15																										

Special Instructions:

Temp: 2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.0°C

Relinquished by:	Date	Time	Received by:	Date	Time
	12/28/17	14:57			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: °C

XENCO LABORATORIES

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Sean Carter
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: PO Box 8469
City/State/Zip: Midland, Texas 79708
Telephone No: 432-563-2200
Sampler Signature:

Fax No: 432-563-2213
e-mail: Sean@etechenv.com
Cc: brandon@etechenv.com

Project Name: Patterson Rig 270 - Chevron
Project #: 9005
Project Loc:
PO #:
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 572348

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 1005 1006	TOTAL: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Texas 11 Metals (Total)		Chlorides		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Boring - 3	12	18"	12/28/17	11:20	1	X								S	X								X						X			X
		18	24"		11:25																											
	Boring - 4	0	6"		11:30																											
		6	12"		11:35																											
		12	18"		11:40																											
		18	24"		11:45																											
	Boring - 5	0	6"		11:50																											
		6	12"		11:55																											
		12	18"		12:00																											
		18	24"		12:05																											

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	12/28/17	14:57			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

Temp: -2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: -2.00

XENCO LABORATORIES

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Sean Carter
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: PO Box 8469
City/State/Zip: Midland, Texas 79708
Telephone No: 432-563-2200
Fax No: 432-563-2213
Sampler Signature:
e-mail: Sean@etechenv.com

Project Name: Patterson Rig 270 - Chevron
Project #: 9005
Project Loc:
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 572348

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Texas 11 Metals (Total)		Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Boring -6	0	6"	12/28/17	12:10	1	X								S	X							X					X		X
		6	12"		12:15																									
		12	18"		12:20																									
		18	24"		12:25																									
	Boring -7	0	6"		12:30																									
		6	12"		12:35																									
		12	18"		12:40																									
		18	24"		12:45																									
	Back ground	—			12:50																									

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	12/29/17	14:57			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

Temp: -2.2 °C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: -2.0 °