## SITE INFORMATION

	Ro	ort Type	Closure Re	port	1RP-49	37		
General Site Info		Sort Type:		port		01		
Site:		Green Frog Ca	afé Federal #1H					
Company:		Marathon Oil						
Section, Townsl	hip and Range	Unit B	Sec. 18	T 20S	R 33E			
Lease Number:	·	API No. 30-02						
County:		Lea County						
GPS:			32.5781898° N			103.7	015533º W	
Surface Owner:		Federal						
Mineral Owner:		Federal						
Directions:		approximately 1.	From the intersection of Highway 62 and Laguna Road, travel north on Laguna Road an go for approximately 1.5 miles , turn right (east ) on Tonto Road, go 0.6 mile and turn left and road curve right and go 0.3 mile to location .					
Release Data:								
Date Released:		Unknown						
Type Release:		Crude oil						
Source of Contar	nination:	Flare stack						
Fluid Released:		31 bbls						
Fluids Recovered		2 bbls						
Official Commu	nication:							
Name:	Callie Karrigan				Clair Gonz	ales		
Company:	Marathon Oil Permi	an, LLC.			Tetra Tech	1		
Address:	2423 Bonita St.	,			901 West			
	2 120 Donita Oti				Suite 100	TT CIT		
0:4		0						
City:	Carlsbad, NM 8822	0			Midland, T			
Phone number:	<mark>(575) 297-0956</mark>		_		(432) 687-			
Fax:								
Email:	cnkarrigan@mara	athonoil.com			Clair.Gon	zales@tet	ratech.com	
Ranking Criteria	l							
Depth to Groundv	vater:		Ranking Score			Site Dat	a	
<50 ft			20					
50-99 ft			10					
>100 ft.			0			125'		
WellHead Protect	ion:		Ranking Score			Site Dat	a	
Water Source <1,0	000 ft., Private <200 ft	t.	20					
Water Source >1,000 ft., Private >200 ft.			0			0		
Surface Body of V	Ranking Score		Site Data					
<mark>&lt;200 ft.</mark> 200 ft - 1,000 ft.	<b>20</b> 10		Lagun	a Gatuna S	Sait Playa			
>1,000 ft.			10	+				
- 1,000 16				+				
Тс	otal Ranking Score	):	20					
		Accenta	ble Soil RRAL (r	na/ka)	-			
		Benzene	Total BTEX	TPH	-			
			TOTAL DIEX	100				

100

50

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February 19, 2019

Ms. Christina Hernandez Environmental Engineer Specialist Oil Conservation Division, District 1 1625 North French Drive Hobbs, New Mexico 88240

#### Re: Closure Request for the Marathon Oil Company, Green Frog Cafe Federal #1H, Unit B, Section 18, Township 20 South, Range 33 East, Lea County, New Mexico. 1RP-4937.

Ms. Hernandez:

Tetra Tech, Inc. (Tetra Tech) was contacted by Marathon Oil Company (Marathon) to investigate and assess a release that occurred at the Green Frog Café Federal #1H, Unit B, Section 18, Township 20 South, Range 33 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.5781898°, W 103.7015533°. The site location is shown in Figures 1 and 2.

#### Background

According to the State of New Mexico C-141 Initial Report, the release was discovered on January 9, 2018, and released approximately 31 barrels of crude oil due to the mechanical failure of a back-pressure valve on the flare line. Approximately two (2) barrels were recovered from the area. The release occurred at the flare stack, which then migrated along the well pad and then along a lease road. The fluids then migrated approximately 435' into the Laguna Gatuna Salt Playa. The total impacted area measures approximately 10' x 675'. Marathon immediately excavated the spill area and removed approximately 0.5' from the flare stack area, edge of the pad, and at the well location. These areas were scraped using a backhoe. All of the excavated material was hauled to proper disposal. The initial C-141 form is included in Appendix A.

In addition, the release in the playa migrated into a surface wash created by rainwater. Some of the wash areas depths were at approximately 1.0' to 4.5' deep. As directed by the BLM, the impacted areas in the playa wash were hand dug to depths of approximately of 6" to 1.0' deep below wash depth. The impacted areas in the deeper wash areas were not accessible and not removed due to safety concerns.



#### Groundwater

No wells are listed within Section 18 in the New Mexico Office of the State Engineers database or the Geology and Groundwater Conditions in Southern Lea County, NM (Report 6). The USGS National Water Information System does list one well in Section 18 with depth to groundwater of 125' below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in the area is between 125' and 150' below surface. The groundwater data is shown in Appendix B.

#### Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the distance to the Laguna Gatuna Salt Playa, the proposed RRAL for TPH is 100 mg/kg.

#### **Soil Assessment and Analytical Results**

On January 23, 2018, Tetra Tech personnel were onsite to evaluate and sample the release area. Ten (10) auger holes (AH-1 through AH-10) were installed in the spill footprint. Auger holes (AH-1, AH-2, AH-3 and AH4) were installed to total depths ranging from 0.5' to 1.5' below surface in the area of the flare stack, edge of well pad, and adjacent well pad. Auger holes (AH-5, AH-6, AH-7, AH-8, AH-9 and AH-10) were installed in the playa with sampling depths ranging from 0.5' to 2.5' below excavation bottom (BEB). Selected samples were analyzed for TPH analysis by EPA method 8015 modified and BTEX by EPA Method 8021B. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the areas of auger holes (AH-3 and AH-7) did not show benzene, total BTEX, or TPH concentrations above the RRALs. Additionally, the areas of auger holes (AH-1, AH-6, AH-8, AH-9, and AH-10) did not show benzene or total BTEX concentrations above the RRALs, however TPH concentrations above the RRAL of 154 mg/kg, 116 mg/kg, 222 mg/kg, 184 mg/kg, and 251 mg/kg were detected at 0-1' below surface, respectively. The TPH concentrations then declined with depth to below the laboratory reporting limit at 1-1.5' below surface.

Additionally, the areas of auger holes (AH-2 and AH-4) did not show benzene or total BTEX concentrations above the RRALs. However, TPH concentrations of 725 mg/kg at 0-6" and 384 mg/kg at 0-1' below surface, respectively, were detected. Deeper samples were not collected due to a dense formation in the area.



However, the area of auger hole (AH-5) showed total BTEX concentrations of 567 mg/kg at 0-1', 462 mg/kg at 1-1.5', which then declined to 118 mg/kg at 2-2.5' BEB. The total BTEX was not vertically defined. Additionally, benzene concentrations above the RRAL were detected, with concentrations of 22.4 mg/kg at 0-1', 20 mg/kg at 1-1.5' below surface. The benzene declined with depth to below the RRAL with a concentration of 0.211 mg/kg at 2-2.5' BEB. Elevated TPH concentrations were also detected in the area of auger hole (AH-5) above the RRALs with concentrations of 5,710 mg/kg (0-1') and 5,790 mg/kg (1-1.5'). The TPH concentrations then declined with depth at 2.0-2.5' below surface, with a concentration of 437 mg/kg.

Per discussion with the NMOCD April 12, 2018, the area of auger holes (AH-4 and AH-5) will be vertically defined for TPH and the area of (AH-5) will also be vertically defined for BTEX. The remaining areas in the playa will be worked in-situ, or micro blazed due to access issues and monitored until the RRALs are below the regulatory limit.

#### Additional Sampling

On June 7, 2018, Tetra Tech personnel were onsite to evaluate and remediate the soil in-situ, and re-sample the areas. A total of three (3) auger holes (AH-1, AH-2, and AH-4) were installed to total depths ranging from 0-1.0' below surface in the area of the flare stack, edge of the well pad, and adjacent well pad. A total of five (5) auger holes (AH-5, AH-6, AH-8, AH-9, and AH-10) were installed in the playa with sampling depths ranging from 0.5' to 2.5' below excavation bottom (BEB). Selected samples were analyzed for TPH analysis by EPA method 8015 modified and BTEX by EPA Method 8021B. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the areas of auger holes (AH-1, AH-6, and AH-8) did not show benzene, total BTEX, or TPH concentrations above the RRALs. Additionally, the areas of auger holes (AH-2, AH-4, AH-5, AH-9, and AH-10) did not show benzene or total BTEX concentrations above the RRALs, however TPH concentrations above the RRAL of 552 mg/kg, 371 mg/kg, 255 mg/kg, 354 mg/kg, and 189 mg/kg were detected at 0-1' below surface, respectively. The TPH concentrations then declined with depth to below the laboratory reporting limit at 1-1.5' below surface.

On October 17, 2018, Tetra Tech personnel were onsite to re-sample the areas of auger holes (AH-2, AH-4, AH-5, AH-9, and AH-10). A total of two (2) auger holes (AH-2 and AH4), were installed to total depths ranging from 0-1.0' below surface in the area of the edge of well pad, and adjacent well pad. A total of three (3) auger holes (AH-5, AH-9, and AH-10) were installed in the playa with sampling depths ranging from 0.5' to 4.5' below excavation bottom (BEB). Selected samples were analyzed for TPH analysis by EPA method 8015 modified and BTEX by EPA Method 8021B. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the areas of auger holes (AH-4, AH-5, and AH-10) did not show benzene, total BTEX, or TPH concentrations above the RRALs. The area of (AH-4, AH-5, and AH-10) showed TPH concentration of <15.0 mg/kg at 0-1', <14.9 mg/kg at 0-1'



4.5' below excavation bottom (BEB), and 57.2 mg/kg at 0-1' below surface. Additionally, the areas of auger holes (AH-2, and AH-9) did not show benzene or total BTEX concentrations above the RRALs. However, the TPH concentrations were above the RRALs with concentrations of 360 mg/kg, and 127 mg/kg, were detected at 0-1' below surface, respectively.

On December 17, 2018, Tetra Tech personnel were onsite to re-sample, remediate, and micro-blaze the areas of auger holes (AH-2, AH-5, and AH-9). Selected samples were analyzed for TPH analysis by EPA method 8015 modified and BTEX by EPA Method 8021B. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the area of auger hole (AH-2) was excavated to 1' below surface and stockpiled on plastic. The stockpile material was composited to get a representative sample of the area of auger hole (AH-2) and showed a TPH concentration of 91.6 mg/kg and benzene and total BTEX below laboratory reporting limit. In the area of auger hole (AH-5) deeper samples were collected at depths of 1'-1.5 and 2'-2.5' with an excavation bottom of 4.5' (BEB), showing TPH concentrations of <15.0 mg/kg and 79.5 mg/kg. A sample was also taken at 0-1' with an excavation bottom (BEB) of 6' below surface in the area of (AH-5) and showed a TPH concentration of <15.0 mg/kg. The area of auger hole (AH-9) showed a TPH concentration of <15.0 mg/kg at 0-1' below surface, respectively. In addition, the areas of auger hole (AH-5 and AH-9) were treated with micro-blaze product to aid in the degradation and natural attenuation of any potential remaining hydrocarbon impact.

#### Conclusion

Based on the results and remediation activities performed the areas appear to have naturally attenuated with time and also due to rain events. Marathon requests closure of this spill issue. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559

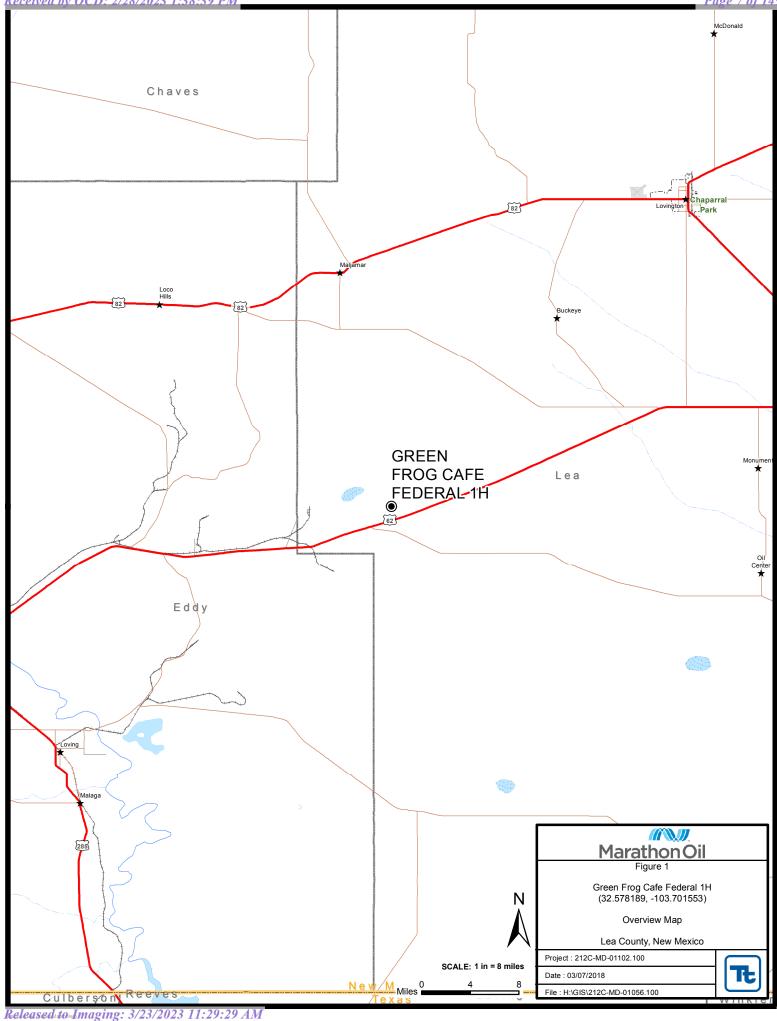
Respectfully submitted, TETRA TECH

Clair Gonzales, Project Manager Mike Carmona, Geologist

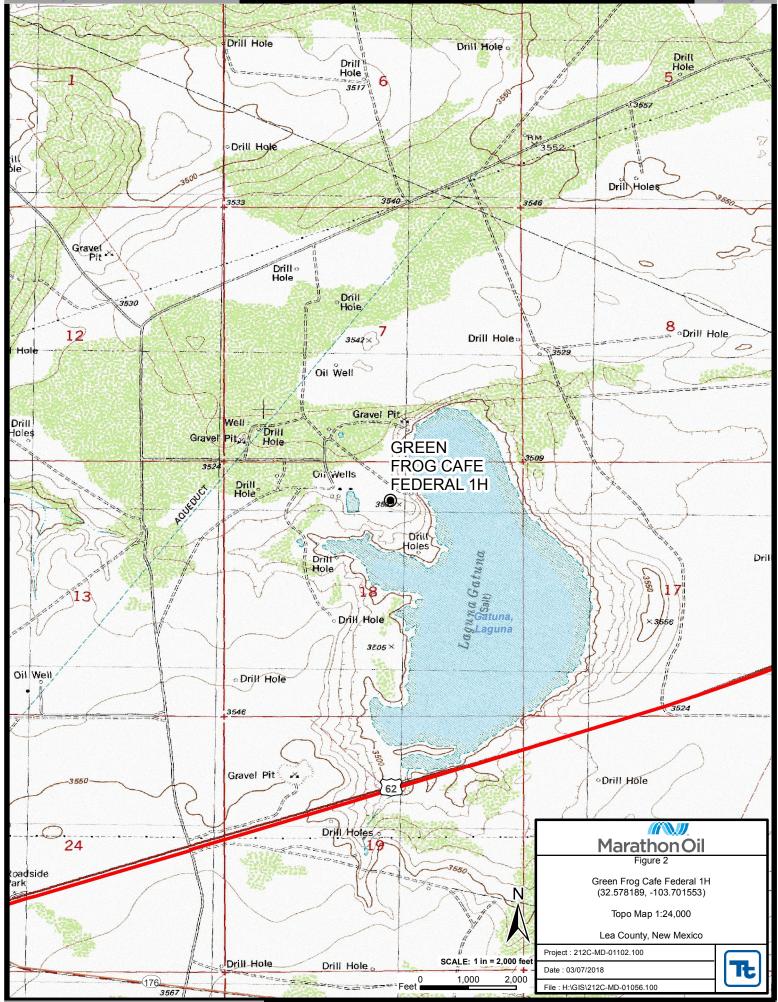
cc: Shelly Tucker – BLM Henryetta Price – BLM Callie Karrigan - Marathon

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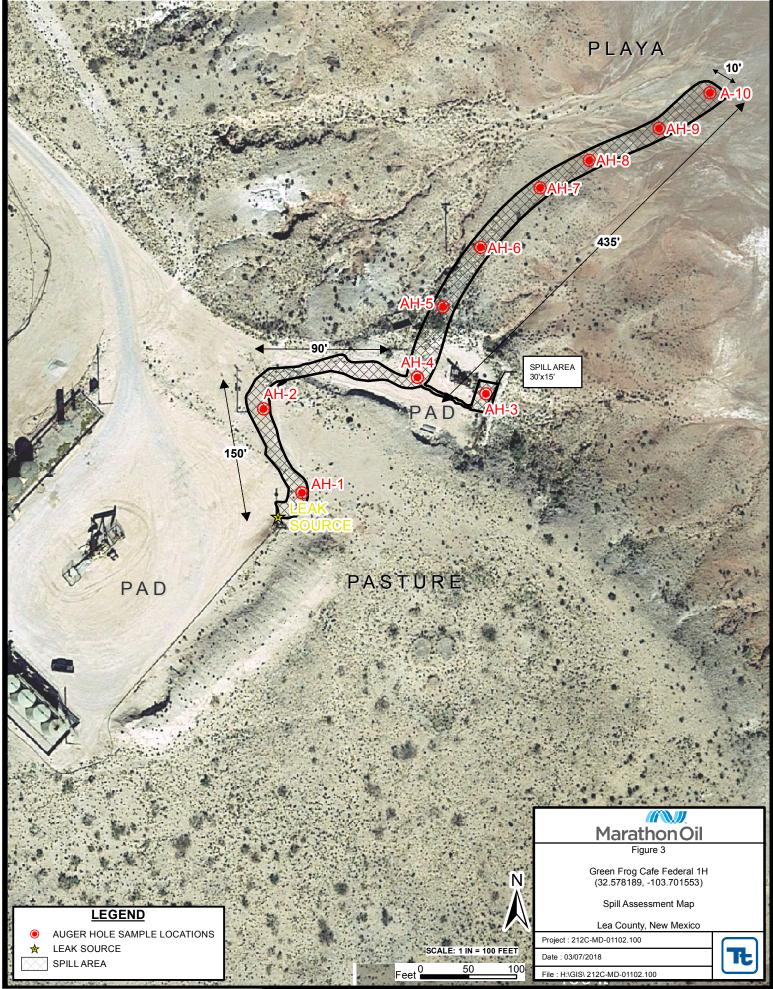
# Figures



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AH-2	32.57858552	-103.7010873	March 1
AH-3	32.57862827	-103.7004521	and the second sec
AH-4	32.57867552	-103.7006473	and the second
AH-5	32.57887696	-103.7005742	PLAYA
AH-6	32.57904552	-103.7004673	FLAIA
AH-7	32.57921552	-103.7002973	A-10
AH-8	32.57929552	-103.7001573	A-10
AH-9	32.57938552	-103.6999573	
AH-10	32.57948696	-103.699812	AH-9
LEAK SOURCE	32.57827825	-103.7010461	
LEAK SOURCE	32.57827825	-103.7010461	AH-8
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R. Bas	State of the Party	1200 1000	FIGURE 4
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AUGER HOLE S	AMPLE LOCATIONS	162 32 600	GREEN FROG CAFE FEDERAL 1H (32.578189, -103.701553)
		Sec. al	and the second
		- The Alla	EXCAVATION AREA & DEPTH MAP
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APE	755	And the second second	LEA COUNTY, NEW MEXICO
			LEA COUNTY, NEW MEXICO Project : 212C-MD-01102.100
4.0' EXCAVATED	DEPTH AREA		Project : 212C-MD-01102.100
	DEPTH AREA		Project : 212C-MD-01102.100

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# Tables

## Table 1 Marathon Oil Company Green Frog Café Federal #1H Lea County, New Mexico

Oceanal a ID	Osmula Data	Sample		Soil	Status		TPH	(mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX
Sample ID	Sample Date	Depth (ft)	BEB (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Flare Stack, Edge of P	ad and Adjacer	nt Well Site												
AH-1	1/23/2018	0-1	0.5'	Х		<15.0	137	16.7	154	0.0179	0.0307	0.0121	0.0280	0.0887
AH-1B	6/7/2018	0-1	-	Х		<15.0	<15.0	<15.0	<15.0	-	-	-	-	-
AH-2	1/23/2018	0.5	0.5'		Х	135	508	82.2	725	0.0625	0.718	0.535	1.23	2.54
AH-2B	6/7/2018	0-1	-		Х	17.4	510	24.5	552	-	-	-	-	-
AH-2C	10/17/2018	0-1	-		Х	<14.9	360	<14.9	360	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199
AH-2	12/11/2018	0-1	1'	Х		<15.0	<15.0	<15.0	35.6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
AH-2 Stockpile	12/11/2018	-	-	Х		<15.0	71.0	20.6	91.6	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202
AH-3	1/23/2018	0-1	0.5'	Х		<15.0	40.3	<15.0	40.3	0.00862	0.0532	0.0396	0.0985	0.200
	"	1-1.5	-	Х		<15.0	<15.0	<15.0	<15.0	<0.00334	0.00360	0.00358	<0.00334	0.00718
AH-4	1/23/2018	0-1	0.5'	Х		59.4	283	41.6	384	0.00899	0.0317	0.135	0.441	0.617
AH-4B	6/7/2018	0-1	-	Х		<15.0	352	18.8	371	-	-	-	-	-
AH-4C	10/17/2018	0-1	-	Х		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

## Table 1 Marathon Oil Company Green Frog Café Federal #1H Lea County, New Mexico

		Sample		Soil	Status		TPH (	(mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX
Sample ID	Sample Date	Depth (ft)	BEB (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Playa Area									-					
AH-5	1/23/2018	0-1	4.5'	Х		1,480	3,650	575	5,710	22.4	191	113	241	567
	"	1-1.5	"	Х		2,010	3,290	492	5,790	20.0	174	87.8	180	462
	"	2-2.5	"	Х		93.1	302	41.6	437	0.211	22.8	26.6	68.0	118
AH-5B	6/7/2018	2.5-3.0	4.5	Х		52.1	332	<15.0	384	<0.0200	0.168	0.368	1.27	1.81
	"	3.5-4.0	"	Х		16.6	238	<14.9	255	<0.00200	<0.00200	0.00366	0.0130	0.0167
AH-5C	10/17/2018	0-1	4.5	Х		<14.9	<14.9	<14.9	<14.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
AH-5	12/11/2018	1-1.5	4.5	Х		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	"	2-2.5	"	Х		<15.0	79.5	<15.0	79.5	<0.00200	<0.00200	0.00366	0.0130	0.0167
AH-5	12/11/2018	0-1	6	Х		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201
AH-5B Stockpile	6/7/2018	-	-	Х		21.1	212	<15.0	233	<0.0202	0.00706	0.0207	0.0782	0.106
	10/17/2018	-	-	Х		<15.0	64.9	<15.0	64.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199
AH-6	1/23/2018	0-1	1.5'	Х		<14.9	116	<14.9	116	0.00702	0.0490	0.0240	0.0605	0.141
	"	1-1.5		Х		<15.0	<15.0	<15.0	<15.0	0.00667	0.0157	0.00394	0.00874	0.0351
AH-6B	6/7/2018	0-1	1.5'	Х		<15.0	<15.0	<15.0	<15.0	-	-	-	-	-
AH-7	1/23/2018	0-1	1.0'	Х		<15.0	68.5	<15.0	68.5	<0.00202	0.00596	0.00530	0.0164	0.0277
	"	1-1.5		Х		<15.0	28.4	<15.0	28.4	<0.00201	0.00349	<0.00201	0.00404	0.00753
AH-8	1/23/2018	0-1	0.5'	Х		<15.0	167	55.4	222	0.00438	0.00704	< 0.00199	< 0.00199	0.0114
	11	1-1.5		Х		<14.9	<14.9	<14.9	<14.9	<0.00198	0.00227	<0.00198	<0.00198	0.00227
AH-8B	6/7/2018	0-1	0.5	Х		<15.0	91.7	<15.0	91.7	-	-	-	-	-
AH-9	1/23/2018	0-1	1.0'	Х		30.7	137	16.6	184	0.00350	0.0454	0.0413	0.103	0.193
	"	1-1.5		Х		<15.0	<15.0	<15.0	<15.0	<0.00202	0.00217	<0.00202	<0.00202	0.00217
AH-9B	6/7/2018	0-1	1.0	Х		<15.0	324	30.3	354	-	-	-	-	-
AH-9C	10/17/2018	0-1		Х		<14.9	127	<14.9	127	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201
AH-9D	12/11/2018	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
AH-10	1/23/2018	0-1	1.0'	Х		38.9	186	26.2	251	0.00360	0.107	0.0773	0.181	0.369
	"	1-1.5		Х		<15.0	<15.0	<15.0	<15.0	<0.00199	0.00207	<0.00199	<0.00199	0.00207
AH-10B	6/7/2018	0-1	1.0	Х		<15.0	189	<15.0	189	-	-	-	-	-
	10/17/2018	0-1		Х		<15.0	57.2	<15.0	57.2	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199
	Excavation De													

Excavation Depths

Naturally Attenuated Areas

BEB

Below Excavation Bottom - Excavation Bottom

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# Photos





View West – Area of AH-1



View Northeast– Area of AH-2



View Northeast – Excavated Area of AH-1



View East – Area of AH-3





View South – Area of AH-4



View East – Area of AH-5





View West – Excavated Area of AH-5



View West – Area of AH-5 Micro-blazed





View East – Area of AH-6



View East – Area of AH-7 and AH-8

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View East – Area of AH-9



View East – Area of AH-10







View East – Area of AH-10 Micro-blazed

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# Appendix A

State of New Mexico **Energy Minerals and Natural Resources** 

> **Oil Conservation Division** 1220 South St. Francis Dr.

Form C-141 Revised April 3, 2017

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

API No.: 30-025-40828

Santa Fe, NM 87505

### **Release Notification and Corrective Action**

OPERATOR	Initial Report	Final Report
Contact: Jason Wardell		
Felephone No.: 575-297-0682		
Facility Type: Oil Well		
Co Fe	ontact: Jason Wardell elephone No.: 575-297-0682	elephone No.: 575-297-0682

Surface Owner: Federal	
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#### LOCATION OF RELEASE

Mineral Owner: Federal

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
В	18	205	33E	810	FNL	2310	FEL	Lea

#### Latitude32.5781898 Longitude-103.7015533 NAD83

#### NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 31 bbls	Volume Recovered: 2 bbls			
Source of Release: Flare Stack	Date and Hour of Occurrence: Date and Hour of Discovery: 01/09				
	Unknown	- 2330 HRS			
Was Immediate Notice Given?		phone call to Shelly Tucker and email to			
By Whom? Jason Wardell	Date and Hour: 01/11/2018 1259 HF	28			
Was a Watercourse Reached?	If YES, Volume Impacting the Wate				
☐ Yes ⊠ No	N/A	Acoulse.			
If a Watercourse was Impacted, Describe Fully.*					
N/A	RECEIVED				
	By Olivia Yu at 10:18	8 am, Jan 17, 2018			
Describe Cause of Problem and Remedial Action Taken.* Mechanical failure of a back pressure valve on the flare line. Back press installed before the well is started back up. Earthen berm around Green location.					
Describe Area Affected and Cleanup Action Taken.* Oil spilled out of the flare stack onto the Green Frog Café location and ra location. Shovels and wheel borrows will be used to clean up the offsite Impacted caliche on location has been removed, disposed of and replaced	spill and testing will be completed to er d.	isure all impacted soil has been removed.			
I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report of federal, state, or local laws and/or regulations.	notifications and perform corrective acti ne NMOCD marked as "Final Report" d te contamination that pose a threat to gr	ions for releases which may endanger oes not relieve the operator of liability ound water, surface water, human health			
	OIL CONSERV	ATION DIVISION			
Signature: Jason Wardell	Approved by Environmental Specialist	. M			
Printed Name: Jason Wardell					
Title: HES Professional	Approval Date: 1/17/2018	Expiration Date:			
E-mail Address: jlwardell@marathonoil.com	Conditions of Approval:	Attached			
Date: 01/16/2018 Phone: 575-297-06892	see attached directive				

\* Attach Additional Sheets If Necessary

1RP-4937

nOY1801737259

pOY1801737638

Received by OCD: 2/28/2023 1:38:39 PM Form C-141 State of New Mexico

Oil Conservation Division

	Page 24 of 149
Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

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

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

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

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

Laboratory data including chain of custody

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

<b>Received by OCD: 2/28/2</b> Form C-141 Page 4	2023 1:38:39 PM State of New Mexico Oil Conservation Division		Page 25 o       Incident ID       District RP       Facility ID       Application ID		
regulations all operators a public health or the enviro failed to adequately inves	aformation given above is true and complete to the irre required to report and/or file certain release not comment. The acceptance of a C-141 report by the tigate and remediate contamination that pose a thr e of a C-141 report does not relieve the operator o	tifications and perform co OCD does not relieve the reat to groundwater, surfa	prrective actions for rele e operator of liability sh ace water, human health	eases which may endanger ould their operations have or the environment. In	
Printed Name:		_ Title:			
Signature <u>Callis Ka</u>	rrigan	Date:			
email:		Telephone:			
OCD Only					
Received by:		Date:			

Page 6

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

<b><u>Closure Report Attachment Checklist</u></b> : Each of the following i	items must be included in the closure report.								
A scaled site and sampling diagram as described in 19.15.29.11 NMAC									
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office								
Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)								
Description of remediation activities									
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and ren human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the co accordance with 19.15.29.13 NMAC including notification to the C	ations. The responsible party acknowledges they must substantially anditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.								
Printed Name:	Title:								
Signature: <u>Callie Karrigan</u>	Date:								
email:	Telephone:								
OCD Only									
Received by:	Date:								
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.								
Closure Approved by:	Date:								
Printed Name:	Title:								

•

# Appendix B

#### Water Well Data Average Depth to Groundwater (ft) Marathon - Green Frog Café Federal #1H Lea County, New Mexico

	19 S	outh	3	2 East	:		19 5	South	3	3 East			19 So	outh	34	East	
6	5	4	3	2	1	6	5	4	3	2	1	6 <b>244</b>	5	4	3	2 <b>100</b>	1
7	8	9	10	11	12	7	8	9	10	11	12	7	8	9 <b>29</b>	10	11	12 <b>60</b>
	365	10	15		10.105		17	10	15		10	10	47	28.6	4.5	123	
18	17	16	15	14	13 135 dry	18 <b>340</b>	17 <b>116</b>	16	15	14	13	18	17	16	15	14	13
19	20	21	22	23	24	19	20	21	22	23	24	19	20	21	22	23	24
02	345																
80	29	28	27	26	25	30	29	28 130 dry	27	26 <b>92</b> 85	25	30	29	28	27	26	25 28
81	32	33	34	35	36	31	32	33	34	35	36	31	32	33	34	35	36
			250				185					65					
	20 5	outh	3	2 East	:		20 5	South	3	3 East			20 So	outh	34	East	
6	5	4	3	2	1	6	5 <b>325</b>	4	3	2	1	6	5	4 125		2	1
					21.8		278	33									
/	8	9	10	11	12	7	8	9	10	11	12	7	8	9	10	11	12
8	17	16	15	14	13	<mark>18</mark>	17	16	15	14	13	18	17 1 <mark>28</mark>	16	15	14	13
<mark>9</mark> 9						125			335				140			1 <b>50</b>	
9	20	21	22	23	24 <b>35</b>	19	20	21	22	23	24	19	20	21	22	23	24
					0.5				07		+300				07		270
30	29	28	27	26	25	30	29	28	27	26	25	30	29	28	27	26	25
<b>9.9</b> 31	32	33	<b>12.3</b> 34	35	36	31	32	33	34	35	36	31	32	33	34 <mark>82</mark>	35	36
	-				46		-					-					
	21 5	outh	3	1 East			21 5	South	3	2 East			21 So	outh	33	East	
6	5	4	3	2	1	6	5	4	3	2	1	6	5	4	3		1
																107	
	8	9	10	11	12	7	8	9	10	11	12	7	8	9	10	11 <b>150</b>	12
8	17	16	15	14	13	18	17	16	15	14	13	18	17	16	15	14	13
		630										143					
9	20	21	22	23	24	19	20	21	22	23	24	19	20	21	22	23	24
0	29	28	27	26	25	30	29	28	27	26	25	30	29	28	27	26	25
														179			
1	32	33	34	35	36	31	32	33	34	35	36	31	32	33 <mark>180</mark>	34	35	36
		SITE									1		1	1	1	1	1

- 88 New Mexico State Engineers Well Reports
- **105** USGS Well Reports
- **90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6) Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34 NMOCD Groundwater Data
- 123 Tetra Tech installed temporary wells and field water level
- 143 NMOCD Groundwater map well location

## 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	(R=POD been rep O=orpha	laced,	,												
serves a water right file.)	C=the fil closed)	(qu	(quarters are 1=NW 2=NE 3=S) (quarters are smallest to largest)						,			(In feet)	et)		
		POD Sub-		Q	Q	Q								Water	
POD Number	Code		County						-	Х	Y	•	IIDepthWate		
<u>CP 00317</u>		CP	LE	3	4	3	05	20S	33E	623054	3607235* 🌍	680	325	355	
CP 00653 POD1		CP	LE		4	4	04	20S	33E	625573	3607367* 🌍	60			
<u>CP 00748 POD1</u>		CP	LE			2	01	20S	33E	630197	3608428* 🌍				
<u>CP 00798 POD1</u>		CP	LE	2	1	1	24	20S	33E	629348	3603892* 🌍	850			
											Average Depth	n to Water:	325	feet	
											Minimu	um Depth:	325	feet	
											Maximu	um Depth:	325	feet	
Record Count: 4															
PLSS Search:															
Township: 20S	Range:	33E													
*UTM location was derived	from PLSS	- see He	elp												
data is furnished by the NMC ed, concerning the accuracy,												SE/ISC make	no warranties,	expressed o	

3/2/18 8:29 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

**USGS Home Contact USGS** Search USGS

### **National Water Information System: Web Interface**

USGS Water Resources	Data Category:	Geographic Area:			
USUS Water Resources	Groundwater V	New Mexico	$\checkmark$	GO	

Click to hideNews Bulletins

- Please see news on new formats
- Full News 🔊

Groundwater levels for New Mexico

Click to hide state-specific text

## Search Results -- 1 sites found

site no list =

• 323429103421601

### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

### USGS 323429103421601 20S.33E.18.12322

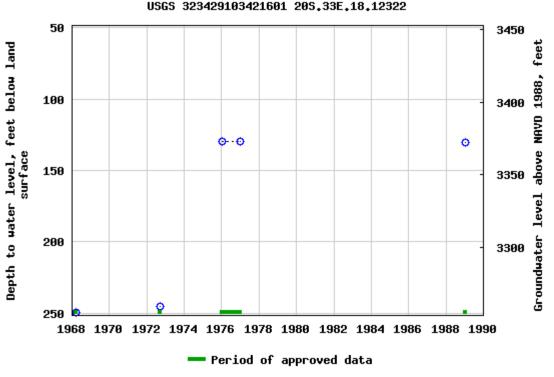
Available data for this site Groundwater: Field measurements

GO

V

Lea County, New Mexico Hydrologic Unit Code 13060011 Latitude 32°34'29", Longitude 103°42'16" NAD27 Land-surface elevation 3,503 feet above NAVD88 This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer. **Output formats** 

# Table of data Tab-separated data Graph of data Reselect period



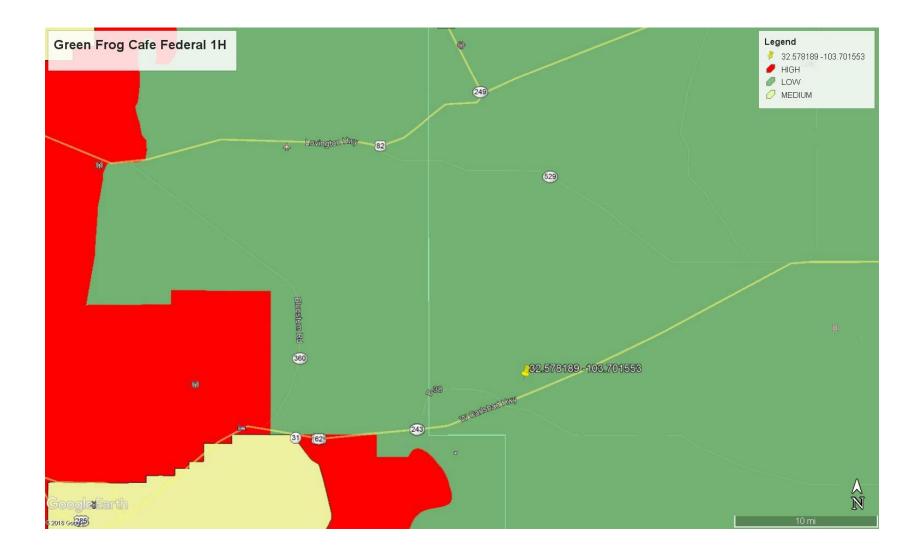
Breaks in the plot represent a gap of at least one year between field measurements.

Download a presentation-quality graph

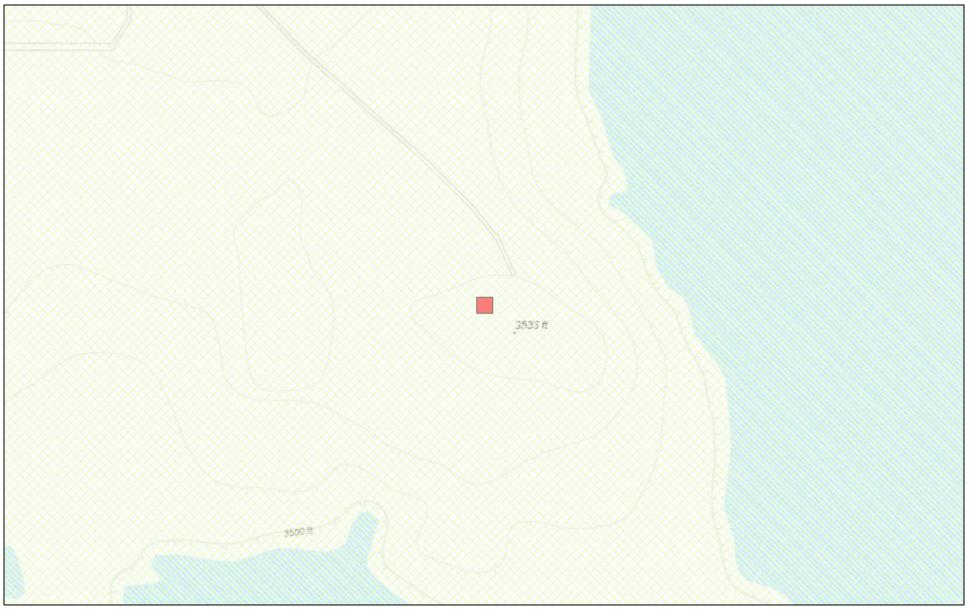
Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

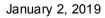
AccessibilityPlug-InsFOIAPrivacyPolicies and NoticesU.S. Department of the InteriorU.S. Geological SurveyTitle:Groundwater for New Mexico:Water LevelsURL:https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

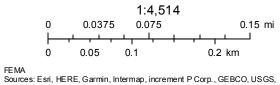
Page Contact Information: <u>New Mexico Water Data Maintainer</u> Page Last Modified: 2018-03-02 11:14:14 EST 1.05 0.93 nadww01



# New Mexico NFHL Data







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# Appendix C

# Analytical Report 574500

for Tetra Tech- Midland

**Project Manager: Ike Tavarez** 

Marathon-Green Frog Cafe Federal #1H

### 01-FEB-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)





01-FEB-18

Project Manager: **Ike Tavarez Tetra Tech- Midland** 4000 N. Big Spring Suite 401 Midland, TX 79705

#### Reference: XENCO Report No(s): **574500 Marathon-Green Frog Cafe Federal #1H** Project Address: Lea County NM

#### Ike Tavarez:

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) 574500. 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. 574500 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



#### Sample Id

AH #1 (0-1') AH #1 (1-1.5') AH #2 (0-6") AH #3 (0-1') AH #3 (1-1.5') AH #4 (0-1') AH #5 (0-1') 4.5' BEB AH #5 (1-1.5') 4.5' BEB AH #5 (2-2.2') 4.5' BEB AH #6 (0-1') 1.5' BEB AH #6 (1-1.5') 1.5' BEB AH #7 (0-1') 1'BEB AH #7 (1-1.5') 1'BEB AH #8 (0-1')0.5' BEB AH #8 (1-1.5') 0.5' BEB AH #9 (0-1') 1'BEB AH #9 (1-1.5') 1'BEB AH #10 (0-1') 1'BEB AH #10 (1-1.5') 1'BEB

## Sample Cross Reference 574500



Marathon-Green Frog Cafe Federal #1H

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	01-23-18 00:00	0 - 1 ft	574500-001
S	01-23-18 00:00	1 - 1.5 ft	574500-002
S	01-23-18 00:00	0 - 6 In	574500-003
S	01-23-18 00:00	0 - 1 ft	574500-004
S	01-23-18 00:00	1 - 1.5 ft	574500-005
S	01-23-18 00:00	0 - 1 ft	574500-006
S	01-23-18 00:00	0 - 1 ft	574500-007
S	01-23-18 00:00	1 - 1.5 ft	574500-008
S	01-23-18 00:00	2 - 2.2 ft	574500-009
S	01-23-18 00:00	0 - 1 ft	574500-010
S	01-23-18 00:00	1 - 1.5 ft	574500-011
S	01-23-18 00:00	0 - 1 ft	574500-012
S	01-23-18 00:00	1 - 1.5 ft	574500-013
S	01-23-18 00:00	0 - 1 ft	574500-014
S	01-23-18 00:00	1 - 1.5 ft	574500-015
S	01-23-18 00:00	0 - 1 ft	574500-016
S	01-23-18 00:00	1 - 1.5 ft	574500-017
S	01-23-18 00:00	0 - 1 ft	574500-018
S	01-23-18 00:00	1 - 1.5 ft	574500-019

Page 37 of 149



# CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Marathon-Green Frog Cafe Federal #1H

Project ID: Work Order Number(s): 574500

ORATORIES

Report Date: 01-FEB-18 Date Received: 01/25/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3039315 BTEX by EPA 8021B

Lab Sample ID 574500-019 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 Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 574500-001, -006, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019.

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.

Batch: LBA-3039364 BTEX by EPA 8021B

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



Project Id:Contact:Ike TavarezProject Location:Lea County NM

Certificate of Analysis Summary 574500

Tetra Tech- Midland, Midland, TX

Project Name: Marathon-Green Frog Cafe Federal #1H



Date Received in Lab:Thu Jan-25-18 09:35 amReport Date:01-FEB-18Project Manager:Kelsey Brooks

	Lab Id:	574500-	001	574500-	002	574500-	003	574500-	004	574500-	005	574500-	006
Analysis Requested	Field Id:	AH #1 (0	0-1')	AH #1 (1	-1.5')	AH #2 (0	)-6")	AH #3 ((	)-1')	AH #3 (1-	-1.5')	AH #4 (0	)-1')
Anuiysis Kequesieu	Depth:	0-1 f	t	1-1.5	ft	0-6 II	ı	0-1 ft	t	1-1.5	ft	0-1 f	t
	Matrix:	SOIL	_	SOIL									
	Sampled:	Jan-23-18	00:00										
BTEX by EPA 8021B	Extracted:	Jan-25-18	16:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-25-18	16:00
	Analyzed:	Jan-25-18	21:46	Jan-26-18	16:56	Jan-26-18	17:52	Jan-26-18	18:09	Jan-26-18	18:28	Jan-25-18	23:21
	Units/RL:	mg/kg	RL										
Benzene		0.0179	0.00200	0.0137	0.00346	0.0625	0.00360	0.00862	0.00341	< 0.00334	0.00334	0.00899	0.00200
Toluene		0.0307	0.00200	0.00813	0.00346	0.718	0.00360	0.0532	0.00341	0.00360	0.00334	0.0317	0.00200
ylbenzene		0.0121	0.00200	0.00484	0.00346	0.535	0.00360	0.0396	0.00341	0.00358	0.00334	0.135	0.00200
m,p-Xylenes		0.0191	0.00401	< 0.00692	0.00692	0.845	0.00719	0.0675	0.00683	< 0.00669	0.00669	0.283	0.00401
o-Xylene		0.00890	0.00200	< 0.00346	0.00346	0.381	0.00360	0.0310	0.00341	< 0.00334	0.00334	0.158	0.00200
Total Xylenes		0.0280	0.00200	< 0.00346	0.00346	1.23	0.00360	0.0985	0.00341	< 0.00334	0.00334	0.441	0.00200
Total BTEX		0.0887	0.00200	0.0267	0.00346	2.54	0.00360	0.200	0.00341	0.00718	0.00334	0.617	0.00200
TPH By SW8015 Mod	Extracted:	Jan-26-18	08:00										
	Analyzed:	Jan-26-18	13:19	Jan-26-18	14:19	Jan-26-18	14:40	Jan-26-18	14:59	Jan-26-18	15:20	Jan-26-18	15:40
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	135	15.0	<15.0	15.0	<15.0	15.0	59.4	15.0
Diesel Range Organics (DRO)		137	15.0	<15.0	15.0	508	15.0	40.3	15.0	<15.0	15.0	283	15.0
Oil Range Hydrocarbons (ORO)		16.7	15.0	<15.0	15.0	82.2	15.0	<15.0	15.0	<15.0	15.0	41.6	15.0
Total TPH		154	15.0	<15.0	15.0	725	15.0	40.3	15.0	<15.0	15.0	384	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager



Project Id:Contact:Ike TavarezProject Location:Lea County NM

Certificate of Analysis Summary 574500

Tetra Tech- Midland, Midland, TX

Project Name: Marathon-Green Frog Cafe Federal #1H



Date Received in Lab:Thu Jan-25-18 09:35 amReport Date:01-FEB-18Project Manager:Kelsey Brooks

	Lab Id:	574500-0	07	574500-0	08	574500-	009	574500-	010	574500-	011	574500-	012
Analysis Paguastad	Field Id:	AH #5 (0-1') 4	.5' BEB	AH #5 (1-1.5') 4	4.5' BEB	AH #5 (2-2.2')	4.5' BEB	AH #6 (0-1')	1.5' BEB	AH #6 (1-1.5')	1.5' BEB	AH #7 (0-1')	) 1'BEB
Analysis Requested	Depth:	0-1 ft		1-1.5 ft	t	2-2.2 1	ft	0-1 ft		1-1.5	ft	0-1 ft	t
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		SOIL		SOIL	
	Sampled:	Jan-23-18 (	00:00	Jan-23-18 0	00:00	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00
BTEX by EPA 8021B	Extracted:	Jan-25-18 1	6:00	Jan-25-18 1	6:00	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00
	Analyzed:	Jan-25-18 2	23:38	Jan-25-18 2	3:58	Jan-26-18	00:17	Jan-26-18	00:36	Jan-26-18	01:33	Jan-26-18	01:52
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		22.4 D	0.994	20.0 D	0.998	0.211	0.00200	0.00702	0.00199	0.00667	0.00200	< 0.00202	0.00202
Toluene		191 D	0.994	174 D	0.998	22.8 D	1.00	0.0490	0.00199	0.0157	0.00200	0.00596	0.00202
Ethylbenzene		113 D	0.994	87.8 D	0.998	26.6 D	1.00	0.0240	0.00199	0.00394	0.00200	0.00530	0.00202
m,p-Xylenes		175 D	1.99	133 D	2.00	50.0 D	2.00	0.0412	0.00398	0.00594	0.00399	0.0106	0.00404
o-Xylene		65.7 D	0.994	47.3 D	0.998	18.0 D	1.00	0.0193	0.00199	0.00280	0.00200	0.00581	0.00202
Total Xylenes		241	0.994	180	0.998	68.0	1.00	0.0605	0.00199	0.00874	0.00200	0.0164	0.00202
Total BTEX		567	0.994	462	0.998	118	0.00200	0.141	0.00199	0.0351	0.00200	0.0277	0.00202
TPH By SW8015 Mod	Extracted:	Jan-26-18 (	08:00	Jan-26-18 0	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00
	Analyzed:	Jan-26-18 1	6:00	Jan-26-18 1	6:20	Jan-26-18	16:40	Jan-26-18	17:02	Jan-26-18	18:02	Jan-26-18	18:22
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		1480	75.0	2010	74.9	93.1	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		3650	75.0	3290	74.9	302	15.0	116	14.9	<15.0	15.0	68.5	15.0
Oil Range Hydrocarbons (ORO)		575	75.0	492	74.9	41.6	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		5710	75.0	5790	74.9	437	15.0	116	14.9	<15.0	15.0	68.5	15.0

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Kelsey Brooks Project Manager

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Ike Tavarez

Lea County NM

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 574500

Tetra Tech- Midland, Midland, TX

Project Name: Marathon-Green Frog Cafe Federal #1H



Date Received in Lab:Thu Jan-25-18 09:35 amReport Date:01-FEB-18Project Manager:Kelsey Brooks

	Lab Id:	574500-	013	574500-	014	574500-0	015	574500-	016	574500-0	017	574500-	018
Analysis Degreeted	Field Id:	AH #7 (1-1.5	') 1'BEB	AH #8 (0-1')0	).5' BEB	AH #8 (1-1.5')	0.5' BEB	AH #9 (0-1)	) 1'BEB	AH #9 (1-1.5	) 1'BEB	AH #10 (0-1	) 1'BEB
Analysis Requested	Depth:	1-1.5	ft	0-1 ft	t	1-1.5 1	ìt	0-1 f	t	1-1.5 1	ft	0-1 ft	t
	Matrix:	SOIL		SOIL		SOIL		SOII	<u>.</u>	SOIL		SOIL	
	Sampled:	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00	Jan-23-18	00:00
BTEX by EPA 8021B	Extracted:	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00	Jan-25-18	16:00
	Analyzed:	Jan-26-18	02:11	Jan-26-18	02:30	Jan-26-18	02:49	Jan-26-18	03:08	Jan-26-18	03:27	Jan-26-18	03:47
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00201	0.00201	0.00438	0.00199	< 0.00198	0.00198	0.00350	0.00201	< 0.00202	0.00202	0.00360	0.00200
Toluene		0.00349	0.00201	0.00704	0.00199	0.00227	0.00198	0.0454	0.00201	0.00217	0.00202	0.107	0.00200
Ethylbenzene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00198	0.00198	0.0413	0.00201	< 0.00202	0.00202	0.0773	0.00200
m,p-Xylenes		0.00404	0.00402	< 0.00398	0.00398	< 0.00397	0.00397	0.0702	0.00402	< 0.00403	0.00403	0.122	0.00401
o-Xylene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00198	0.00198	0.0330	0.00201	< 0.00202	0.00202	0.0587	0.00200
Total Xylenes		0.00404	0.00201	< 0.00199	0.00199	< 0.00198	0.00198	0.103	0.00201	< 0.00202	0.00202	0.181	0.00200
Total BTEX		0.00753	0.00201	0.0114	0.00199	0.00227	0.00198	0.193	0.00201	0.00217	0.00202	0.369	0.00200
TPH By SW8015 Mod	Extracted:	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00	Jan-26-18	08:00
	Analyzed:	Jan-26-18	18:44	Jan-26-18	19:04	Jan-26-18	19:27	Jan-26-18	19:48	Jan-26-18	20:08	Jan-26-18	20:29
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)	· · · · · · · · · · · · · · · · · · ·	<15.0	15.0	<15.0	15.0	<14.9	14.9	30.7	15.0	<15.0	15.0	38.9	15.0
Diesel Range Organics (DRO)		28.4	15.0	167	15.0	<14.9	14.9	137	15.0	<15.0	15.0	186	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	55.4	15.0	<14.9	14.9	16.6	15.0	<15.0	15.0	26.2	15.0
Total TPH		28.4	15.0	222	15.0	<14.9	14.9	184	15.0	<15.0	15.0	251	15.0

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Kelsey Brooks Project Manager



Project Id:Contact:Ike TavarezProject Location:Lea County NM

# Certificate of Analysis Summary 574500

Tetra Tech- Midland, Midland, TX

Project Name: Marathon-Green Frog Cafe Federal #1H



Date Received in Lab:Thu Jan-25-18 09:35 amReport Date:01-FEB-18Project Manager:Kelsey Brooks

	Lab Id:	574500-019			
Analysis Requested	Field Id:	AH #10 (1-1.5') 1'BEB			
Analysis Kequestea	Depth:	1-1.5 ft			
	Matrix:	SOIL			
	Sampled:	Jan-23-18 00:00			
BTEX by EPA 8021B	Extracted:	Jan-25-18 16:00			
	Analyzed:	Jan-26-18 04:06			
	Units/RL:	mg/kg RL			
Benzene		<0.00199 0.00199			
Toluene		0.00207 0.00199			
Ethylbenzene		<0.00199 0.00199			
m,p-Xylenes		<0.00398 0.00398			
o-Xylene		<0.00199 0.00199			
Total Xylenes		<0.00199 0.00199			
Total BTEX		0.00207 0.00199			
TPH By SW8015 Mod	Extracted:	Jan-26-18 08:00			
	Analyzed:	Jan-26-18 20:50			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0			
Diesel Range Organics (DRO)		<15.0 15.0			
Oil Range Hydrocarbons (ORO)		<15.0 15.0			
Total TPH		<15.0 15.0			

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Kelsey Brooks Project Manager



# **Flagging Criteria**



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- 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 LimitSDL Sample Detection LimitLOD Limit of DetectionPQL Practical Quantitation LimitMQL Method Quantitation LimitLOQ 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

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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	



# Project Name: Marathon-Green Frog Cafe Federal #1H

	ders : 57450 #: 3039315	Sample: 574500-001 / SMP	Batc	Project ID h: 1 Matrix			
J <b>nits:</b>	mg/kg	Date Analyzed: 01/25/18 21:46	st	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0258	0.0300	86	80-120	
4-Bromofluc	orobenzene		0.0279	0.0300	93	80-120	
Lab Batch	#: 3039315	Sample: 574500-006 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/25/18 23:21	st	RROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro		Analytes	0.0246	0.0300	82	80-120	
4-Bromofluc			0.0293	0.0300	98	80-120	
Lab Batch	#: 3039364	Sample: 574500-007 / SMP	Batc		: Soil		
Units:	mg/kg	Date Analyzed: 01/25/18 23:38	su	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro	benzene		0.0246	0.0300	82	80-120	
4-Bromofluc	orobenzene		0.0343	0.0300	114	80-120	
Lab Batch	#: 3039364	Sample: 574500-008 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/25/18 23:58	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene		0.0305	0.0300	102	80-120	
4-Bromofluc	orobenzene		0.0289	0.0300	96	80-120	
Lab Batch	#: 3039364	Sample: 574500-009 / SMP	Batc	h: 1 Matrix	: Soil	1	<u> </u>
Units:	mg/kg	Date Analyzed: 01/26/18 00:17	SU	RROGATE R	ECOVERY S	STUDY	
		A polytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
140'0		Analytes					
1,4-Difluoro			0.0321	0.0300	107	80-120	
4-Bromofluc	orobenzene		0.0351	0.0300	117	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

• • •	a	Sample: 574500-010 / SMP					
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 00:36	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0241	0.0300	80	80-120	
4-Bromoflu	orobenzene		0.0307	0.0300	102	80-120	
Lab Batch	#: 3039315	Sample: 574500-011 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 01:33	SU	JRROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro			0.0250	0.0300	83	80-120	
4-Bromoflu			0.0269	0.0300	90	80-120	
Lab Batch	#: 3039315	Sample: 574500-012 / SMP	Batc		: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 01:52	su	JRROGATE R	ECOVERY	STUDY	
		K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluoro			0.0245	0.0300	82	80-120	
4-Bromoflu			0.0257	0.0300	86	80-120	
	#: 3039315	Sample: 574500-013 / SMP	Batc				
Units:	mg/kg	Date Analyzed: 01/26/18 02:11	st	JRROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluoro	obenzene		0.0244	0.0300	81	80-120	
4-Bromoflu	orobenzene		0.0267	0.0300	89	80-120	
Lab Batch	#: 3039315	Sample: 574500-014 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 02:30	SU	JRROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluoro			0.0254	0.0300	85	80-120	
., · Dinuon			0.0234	0.0500	1 05	00-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

		-									
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 02:49	SU	RROGATE R	ECOVERY S	STUDY					
	BTEX by EPA 8021B Analytes fluorobenzene nofluorobenzene atch #: 3039315 Sample: 574500-016 / mg/kg Date Analyzed: 01/26/18 03:0 BTEX by EPA 8021B Analytes fluorobenzene atch #: 3039315 Sample: 574500-017 / mg/kg Date Analyzed: 01/26/18 03:2 BTEX by EPA 8021B Analytes fluorobenzene nofluorobenzene atch #: 3039315 Sample: 574500-018 / mg/kg Date Analyzed: 01/26/18 03:4 BTEX by EPA 8021B Analytes fluorobenzene nofluorobenzene atch #: 3039315 Sample: 574500-018 / mg/kg Date Analyzed: 01/26/18 03:4 BTEX by EPA 8021B Analytes fluorobenzene atch #: 3039315 Sample: 574500-018 / mg/kg Date Analyzed: 01/26/18 03:4 BTEX by EPA 8021B Analytes fluorobenzene atch #: 3039315 Sample: 574500-018 / mg/kg Date Analyzed: 01/26/18 03:4 BTEX by EPA 8021B Analytes fluorobenzene nofluorobenzene atch #: 3039315 Sample: 574500-018 /	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage				
		Analytes			[D]						
1,4-Difluoro	obenzene		0.0252	0.0300	84	80-120					
			0.0289 0.0300 96 80-120								
Lab Batch	#: 3039315	Sample: 574500-016 / SMP	Batc	h: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 01/26/18 03:08	SU	RROGATE R	ECOVERY S	STUDY					
	ВТЕХ		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1.4-Difluor	benzene	Anarytes	0.0251	0.0300	84	80-120					
			0.0231	0.0300	98	80-120					
		Sample: 574500-017 / SMP	Bate			00-120					
Units:		Date Analyzed: 01/26/18 03:27		RROGATE R		STUDY					
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage				
		Analytes	[]	[-]	[D]	,					
1,4-Difluoro	obenzene		0.0242	0.0300	81	80-120					
4-Bromoflu	orobenzene		0.0279	0.0300	93	80-120					
Lab Batch	#: 3039315	Sample: 574500-018 / SMP	Batc	h: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 01/26/18 03:47	SU	RROGATE R	ECOVERY S	STUDY					
				-		Control Limits	Flags				
	BTEX		Amount Found [A]	True Amount [B]	Recovery %R [D]	%R					
1,4-Difluoro			Found	Amount	%R	%R 80-120					
,	obenzene		Found [A]	Amount [B]	%R [D]						
4-Bromoflu	obenzene		Found [A] 0.0246	Amount [B] 0.0300 0.0300	%R [D] 82 90	80-120					
4-Bromoflu Lab Batch	obenzene orobenzene #: 3039315	Analytes	Found [A] 0.0246 0.0269 Batc	Amount [B] 0.0300 0.0300	%R [D] 82 90 : Soil	80-120 80-120					
4-Bromoflu Lab Batch	obenzene orobenzene #: 3039315 mg/kg	Analytes  Sample: 574500-019 / SMP Date Analyzed: 01/26/18 04:06  X by EPA 8021B	Found [A] 0.0246 0.0269 Batc	Amount [B] 0.0300 0.0300 h: 1 Matrix	%R [D] 82 90 :: Soil ECOVERY S Recovery %R	80-120 80-120	Flags				
4-Bromoflu	obenzene orobenzene #: 3039315 mg/kg BTEX	Analytes  Sample: 574500-019 / SMP Date Analyzed: 01/26/18 04:06	Found [A] 0.0246 0.0269 Batc SU Amount Found	Amount [B] 0.0300 0.0300 h: 1 Matrix JRROGATE R True Amount	%R [D] 82 90 : Soil ECOVERY S Recovery	80-120 80-120 STUDY Control Limits	Flags				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

Lab Batch #:	ers: 574500 3039409	Sample: 574500-001 / SMP	Bate	Project ID h: 1 Matrix							
Units:	mg/kg	Date Analyzed: 01/26/18 13:19	SU	JRROGATE R	ECOVERY	STUDY					
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage				
		Analytes			[D]						
1-Chlorooctane	e		103	99.9	103	70-135					
o-Terphenyl			51.7 50.0 103 70-135								
Lab Batch #:	3039409	Sample: 574500-002 / SMP	Bate	h: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 01/26/18 14:19	SU	JRROGATE R	ECOVERY	STUDY					
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage				
1-Chlorooctane		Analytes	112	99.8	112	70-135					
o-Terphenyl	-		57.4	49.9	112	70-135					
Lab Batch #:	3039409	Sample: 574500-003 / SMP	Bate			10 155					
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 14:40		JRROGATE R	-	STUDY					
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage				
		Analytes	[]	[2]	[D]	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
1-Chlorooctane	e		109	99.8	109	70-135					
o-Terphenyl			55.9	49.9	112	70-135					
Lab Batch #:	3039409	Sample: 574500-004 / SMP	Batc	h: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 01/26/18 14:59	SU	JRROGATE R	ECOVERYS	STUDY					
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane		Analytes	114	99.9	114	70-135					
o-Terphenyl			58.4	50.0	117	70-135					
Lab Batch #:	3039409	Sample: 574500-005 / SMP	Bate								
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 15:20		JRROGATE R		STUDY					
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag				
		Analytes			[D]						
1-Chlorooctane	e		108	99.7	108	70-135					
o-Terphenyl			55.7	49.9	112	70-135					

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

	<b>ders :</b> 57450 #: 3039409	Sample: 574500-006 / SMP	Batc	Project ID h: 1 Matrix			
U <b>nits:</b>	mg/kg	Date Analyzed: 01/26/18 15:40	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chloroocta	ane		106	99.7	106	70-135	
o-Terphenyl			54.7	49.9	110	70-135	
Lab Batch #	#: 3039409	Sample: 574500-007 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 16:00	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chloroocta	ane		114	100	114	70-135	
o-Terphenyl			62.5	50.0	125	70-135	
Lab Batch #	#: 3039409	Sample: 574500-008 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 16:20	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chloroocta	ane		115	99.9	115	70-135	
o-Terphenyl			57.9	50.0	116	70-135	
Lab Batch #	#: 3039409	Sample: 574500-009 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 16:40	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chloroocta	ane		104	100	104	70-135	
o-Terphenyl			55.2	50.0	110	70-135	
Lab Batch #	#: 3039364	Sample: 574500-002 / SMP	Batc	h: 1 Matrix	: Soil	1	<u> </u>
Units:	mg/kg	Date Analyzed: 01/26/18 16:56	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
		1 mm y 000		1	1		
1,4-Difluoro	benzene		0.0265	0.0300	88	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

	rders: 57450 #: 3039409	Sample: 574500-010 / SMP	Batc	Project ID h: 1 Matrix						
U <b>nits:</b>	mg/kg	Date Analyzed: 01/26/18 17:02	SU	JRROGATE R	ECOVERY	STUDY				
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag			
		Analytes			[D]					
1-Chlorooc	tane		99.6	99.6	100	70-135				
o-Terpheny	1		50.9	49.8	102	70-135				
Lab Batch	<b>#:</b> 3039364	Sample: 574500-003 / SMP	IP Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 01/26/18 17:52	SU	JRROGATE R	ECOVERY S	STUDY				
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage			
1,4-Difluor			0.0288	0.0300	96	80-120				
4-Bromoflu	orobenzene		0.0273	0.0300	91	80-120				
Lab Batch	#: 3039409	Sample: 574500-011 / SMP	Batc		: Soil					
Units:	mg/kg	Date Analyzed: 01/26/18 18:02	su	JRROGATE R	ECOVERY	STUDY				
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage			
		Analytes			[D]					
1-Chlorooc	tane		103	99.9	103	70-135				
o-Terpheny			52.8	50.0	106	70-135				
Lab Batch	<b>#:</b> 3039364	Sample: 574500-004 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 01/26/18 18:09	SU	JRROGATE R	ECOVERY S	STUDY				
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage			
1,4-Difluor	obenzene		0.0245	0.0300	82	80-120				
4-Bromoflu	orobenzene		0.0283	0.0300	94	80-120				
	#: 3039409	Sample: 574500-012 / SMP	Batc							
Units:	mg/kg	Date Analyzed: 01/26/18 18:22	su	JRROGATE R	ECOVERY S	STUDY				
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag			
		Analytes			[D]					
1-Chlorooc			102	99.8	102	70-135				
o-Terpheny	1		50.6	49.9	101	70-135				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

Work Orde Lab Batch #:		0, Sample: 574500-005 / SMP	Batch	Project ID 1: 1 Matrix			
	mg/kg	Date Analyzed: 01/26/18 18:28	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorober		Analytes	0.0245	0.0200		00.120	
4-Bromofluoro			0.0245	0.0300	82	80-120	
Lab Batch #:		Sample: 574500-013 / SMP	Batcl		_	80-120	
	mg/kg	<b>Date Analyzed:</b> 01/26/18 18:44		RROGATE R		STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	:	Analytes	105	99.8	105	70-135	
o-Terphenyl			52.3	49.9	105	70-135	
Lab Batch #:	3039364	Sample: 574500-007 / DL	Batch			10 100	
Units:	mg/kg	Date Analyzed: 01/26/18 18:47	SU	RROGATE R		STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorober	izene		0.0252	0.0300	84	80-120	
4-Bromofluoro			0.0232	0.0300	111	80-120	
Lab Batch #:		Sample: 574500-014 / SMP	Batch			00 120	
	mg/kg	Date Analyzed: 01/26/18 19:04	SU	RROGATE R		STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane			98.8	99.8	99	70-135	
o-Terphenyl			50.2	49.9	101	70-135	
Lab Batch #:	3039364	Sample: 574500-008 / DL	Batch	n: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 19:06	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorober	nzene		0.0247	0.0300	82	80-120	
4-Bromofluoro	hanzana		0.0250	0.0300	83	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

	<b>ders :</b> 57450 #: 3039364	o, Sample: 574500-009 / DL	Batcl	Project ID h: 1 Matrix			
Units:	mg/kg	Date Analyzed: 01/26/18 19:25	SU	RROGATE R	RECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro			0.0246	0.0300	82	80-120	
4-Bromoflu		Sec. 574500.015 / SMD	0.0321	0.0300 h: 1 Matrix	107	80-120	
	#: 3039409	Sample: 574500-015 / SMP	Batcl				
Units:	mg/kg	Date Analyzed: 01/26/18 19:27	SU	RROGATE R	RECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		90.2	99.6	91	70-135	
o-Terpheny	1		46.7	49.8	94	70-135	
Lab Batch	#: 3039409	Sample: 574500-016 / SMP	Batcl	h: 1 Matrix	c: Soil		
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 19:48	SU	RROGATE R	RECOVERY	STUDY	
	TPHI	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chlorooct			102	99.7	102	70-135	
o-Terpheny		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	52.2	49.9	105	70-135	
	#: 3039409	Sample: 574500-017 / SMP	Batch				
Units:	mg/kg	Date Analyzed: 01/26/18 20:08	SU	RROGATE R	RECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		105	100	105	70-135	
o-Terpheny	l		52.9	50.0	106	70-135	
Lab Batch	#: 3039409	Sample: 574500-018 / SMP	Batcl	h: 1 Matrix	c: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 20:29	SU	RROGATE R	RECOVERY	STUDY	
		By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flage
	TPH		[A]	[B]	%R [D]	%R	
1-Chlorooct		Analytes				%R	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

Lab Batch		Sample: 574500-019 / SMP					
U <b>nits:</b>	mg/kg	Date Analyzed: 01/26/18 20:50	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	ane		97.9	99.8	98	70-135	
o-Terpheny	l		50.0	49.9	100	70-135	
Lab Batch	#: 3039315	Sample: 7638086-1-BLK / B	BLK Bate	h: 1 Matrix	: Solid	· · · · · · · · · · · · · · · · · · ·	
Units:	mg/kg	Date Analyzed: 01/25/18 21:26	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene	Analytes	0.0259	0.0300	86	80-120	
4-Bromoflu			0.0259	0.0300	93	80-120	
	#: 3039364	Sample: 7638117-1-BLK / H			Solid	00-120	
Units:	mg/kg	Date Analyzed: 01/26/18 10:42					
Units.	iiig/kg	Date Analyzeu. 01/20/18 10.42	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0263	0.0300	88	80-120	
4-Bromoflu	orobenzene		0.0291	0.0300	97	80-120	
Lab Batch	#: 3039409	Sample: 7638140-1-BLK / H	BLK Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 01/26/18 12:19	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	ane		115	100	115	70-135	
o-Terpheny			59.6	50.0	119	70-135	
Lab Batch	#: 3039315	Sample: 7638086-1-BKS / E	BKS Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 01/25/18 19:32	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0267	0.0300	89	80-120	
4-Bromoflu	orobenzene		0.0287	0.0300	96	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



The Analyzed: 01/26/18 08:41 The Analytes Analytes Analytes Sample: 7638140-1-BKS Date Analyzed: 01/26/18 12:39 TPH By SW8015 Mod Analytes	Amount Found [A] 0.0269 0.0280 / BKS Batcl	JRROGATE R True Amount [B] 0.0300 0.0300 h: 1 Matrix JRROGATE R True Amount [B]	Recovery %R [D] 90 93 :: Solid ECOVERY S Recovery	Control Limits %R 80-120 80-120	Flags
09 Sample: 7638140-1-BKS 3 Date Analyzed: 01/26/18 12:39 5 PH By SW8015 Mod	0.0269 0.0280 / BKS Batcl SU Amount Found	0.0300 0.0300 h: 1 Matrix JRROGATE R True Amount	[D]       90       93       :: Solid       ECOVERY S       Recovery	80-120 80-120 STUDY Control	
09 Sample: 7638140-1-BKS Date Analyzed: 01/26/18 12:39 TPH By SW8015 Mod	0.0280 / BKS Batcl SU Amount Found	0.0300 h: 1 Matrix JRROGATE R True Amount	93 Solid ECOVERY S Recovery	80-120 STUDY Control	
09 Sample: 7638140-1-BKS Date Analyzed: 01/26/18 12:39 TPH By SW8015 Mod	/ BKS Batcl SU Amount Found	h: 1 Matrix JRROGATE R True Amount	:: Solid ECOVERY S Recovery	STUDY Control	
Date Analyzed: 01/26/18 12:39 TPH By SW8015 Mod	Amount Found	JRROGATE R True Amount	Recovery	Control	
PH By SW8015 Mod	Amount Found	True Amount	Recovery	Control	
-	Found	Amount	•		
		[~]	%R [D]	%R	Flags
	103	100	103	70-135	
	50.7	50.0	101	70-135	
15 Sample: 7638086-1-BSD	/ BSD Bate	h: 1 Matrix	: Solid		
<b>Date Analyzed:</b> 01/25/18 19:51	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
Analytes			[D]		I
	0.0271	0.0300	90	80-120	
	0.0300	0.0300	100	80-120	
64         Sample: 7638117-1-BSD	/ BSD Batch	h: 1 Matrix	: Solid		
<b>Date Analyzed:</b> 01/26/18 09:00	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	0.0273	0.0300	91	80-120	
2	0.0292	0.0300	97	80-120	
09 Sample: 7638140-1-BSD	/ BSD Bate	h: 1 Matrix	: Solid		
<b>Date Analyzed:</b> 01/26/18 12:59	SU	RROGATE R	ECOVERY S	STUDY	
PH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
Analytes					
	Date Analyzed: 01/25/18 19:51         BTEX by EPA 8021B         Analytes         64       Sample: 7638117-1-BSD         Date Analyzed: 01/26/18 09:00         BTEX by EPA 8021B         Analytes         9       Sample: 7638140-1-BSD         Date Analyzed: 01/26/18 12:59	Date Analyzed: 01/25/18 19:51       St         STEX by EPA 8021B       Amount Found [A]         Analytes       0.0271         0.0300       0.0300         64       Sample: 7638117-1-BSD / BSD         BTEX by EPA 8021B       Amount Found [A]         BTEX by EPA 8021B       Amount Found [A]         BTEX by EPA 8021B       Amount Found [A]         O.0273       0.0292         09       Sample: 7638140-1-BSD / BSD       Batc         Date Analyzed: 01/26/18 12:59       St         PH By SW8015 Mod       Amount Found [A]	Date Analyzed: 01/25/18 19:51       SURROGATE R         STEX by EPA 8021B       Amount Found [A]       True Amount [B]         Analytes       0.0271       0.0300         64       Sample: 7638117-1-BSD / BSD       Batch:       1       Matrix         Date Analyzed: 01/26/18 09:00       SURROGATE R         STEX by EPA 8021B       Amount [A]       True Amount [B]         Analytes       0.0273       0.0300         STEX by EPA 8021B       Amount Found [A]       True Amount [B]         Oute Analyzed: 01/26/18 09:00       SURROGATE R         STEX by EPA 8021B       Amount Found [A]       True Amount [B]         Oute Analytes       0.0273       0.0300         09       Sample: 7638140-1-BSD / BSD       Batch:       1       Matrix         Date Analyzed: 01/26/18 12:59       SURROGATE R         PH By SW8015 Mod       Amount [A]       True Amount [A]       True Amount [B]         Analytes       110       100	Date Analyzed:         01/25/18 19:51         SURROGATE RECOVERY S           BTEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R [D]           Analytes         0.0271         0.0300         90           0.0271         0.0300         90         90           0.0271         0.0300         90         90           64         Sample: 7638117-1-BSD / BSD         Batch:         1         Matrix: Solid           Date Analyzed:         01/26/18 09:00         SURROGATE RECOVERY S         STEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R [D]           Analytes         0.0273         0.0300         91           0.0292         0.0300         97         97           09         Sample:         7638140-1-BSD / BSD         Batch:         1         Matrix: Solid           Date Analyzed:         01/26/18 12:59         SURROGATE RECOVERY S           PH By SW8015 Mod         Amount Found [A]         True Amount [B]         Recovery %R [D]           Analytes         110         100         110	Date Analyzed: 01/25/18 19:51         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R [D]         Control Limits %R           Analytes         0.0271         0.0300         90         80-120           64         Sample: 7638117-1-BSD/BSD         Batch:         1         Matrix: Solid           Date Analyzed: 01/26/18 09:00         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R [D]         Control Limits %R           Analytes         0.0273         0.0300         91         80-120           00         0.0273         0.0300         91         80-120           0         0.0273         0.0300         91         80-120           0         0.0273         0.0300         91         80-120           0         0.0292         0.0300         91         80-120           0         0.0292         0.0300         97         80-120           0         0.0292         0.0300         91         80-120           0         Date Analyzed: 01/26/18 12:59         Batch:         1         Matrix: Solid           PH By SW8015 Mod Analytes         Amount [A]

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

	rders : 57450 #: 3039315	Sample: 574500-019 S / MS	S Batcl	Project ID h: 1 Matrix			
U <b>nits:</b>	mg/kg	Date Analyzed: 01/25/18 20:10	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0273	0.0300	91	80-120	
4-Bromoflu	orobenzene		0.0320	0.0300	107	80-120	
Lab Batch	#: 3039364	Sample: 574549-006 S / MS	S Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 09:19	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	obenzene		0.0280	0.0300	93	80-120	
4-Bromoflu			0.0280	0.0300	118	80-120	
	#: 3039409	Sample: 574500-001 S / MS				00-120	
Units:	mg/kg	<b>Date Analyzed:</b> 01/26/18 13:39		RROGATE R		STUDV	
				1		1	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		129	99.6	130	70-135	
o-Terpheny	1		55.6	49.8	112	70-135	
Lab Batch	#: 3039315	Sample: 574500-019 SD / N	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/25/18 20:29	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0273	0.0300	91	80-120	
4-Bromoflu			0.0323	0.0300	108	80-120	
	<b>#:</b> 3039364	Sample: 574549-006 SD / N	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/26/18 09:45	SU	RROGATE R	ECOVERY S	STUDY	
		L by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluor			0.0274	0.0300	91	80-120	
4-Bromoflu	orobenzene		0.0340	0.0300	113	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1H

	rders : 57450 #: 3039409	0, Sample: 574500-001 SD / M	MSD Batch	Project ID: n: 1 Matrix:			
Units:	mg/kg	Date Analyzed: 01/26/18 13:58	SU	RROGATE RE	ECOVERY S	STUDY	
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tane		107	99.7	107	70-135	
o-Terpheny	/1		52.3	49.9	105	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

## Project Name: Marathon-Green Frog Cafe Federal #1H

Work Order #: 574500	Project ID:											
Analyst: ALJ	D	ate Prepai	red: 01/25/202	18			Date A	nalyzed: (	01/25/2018			
Lab Batch ID: 3039315 Sample: 7638086-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid			
Units: mg/kg		BLAN	K /BLANK	SPIKE / ]	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	)Y		
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Benzene	< 0.00200	0.100	0.0872	87	0.101	0.0898	89	3	70-130	35		
Toluene	< 0.00200	0.100	0.0897	90	0.101	0.0947	94	5	70-130	35		
Ethylbenzene	< 0.00200	0.100	0.0966	97	0.101	0.0978	97	1	71-129	35		
m,p-Xylenes	< 0.00401	0.200	0.190	95	0.202	0.194	96	2	70-135	35		
o-Xylene	< 0.00200	0.100	0.0948	95	0.101	0.0973	96	3	71-133	35		
Analyst: ALJ	D	ate Prepai	red: 01/26/202	18			Date A	nalyzed: (	01/26/2018			
Lab Batch ID: 3039364 Sample: 7638117-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid			
Units: mg/kg		BLAN	K /BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	)Y		
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Benzene	< 0.00200	0.0998	0.0936	94	0.100	0.0912	91	3	70-130	35		
Toluene	< 0.00200	0.0998	0.0969	97	0.100	0.0944	94	3	70-130	35		
Ethylbenzene	< 0.00200	0.0998	0.103	103	0.100	0.101	101	2	71-129	35		
m,p-Xylenes	<0.00399	0.200	0.203	102	0.201	0.200	100	1	70-135	35		
o-Xylene	< 0.00200	0.0998	0.100	100	0.100	0.0991	99	1	71-133	35		

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## **BS / BSD Recoveries**



## Project Name: Marathon-Green Frog Cafe Federal #1H

Work Order	• <b>#:</b> 574500							Pro	ject ID:			
Analyst:	ARM	D	ate Prepai	red: 01/26/201	8			Date A	nalyzed: (	01/26/2018		
Lab Batch ID	<b>:</b> 3039409 <b>Sample:</b> 7638140-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	θY	
	TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	vtes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline I	Range Hydrocarbons (GRO)	<15.0	1000	920	92	1000	850	85	8	70-135	35	
Diesel Rat	nge Organics (DRO)	<15.0	1000	1040	104	1000	946	95	9	70-135	35	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



## Project Name: Marathon-Green Frog Cafe Federal #1H

<b>Work Order # :</b> 574500						Project II	):				
Lab Batch ID: 3039315	QC- Sample ID:	574500	-019 S	Ba	tch #:	1 Matrix	k: Soil				
<b>Date Analyzed:</b> 01/25/20	18 Date Prepared:	: 01/25/2	018	An	alyst: A	ALJ					
<b>Reporting Units:</b> mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by	EPA 8021B Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Ana	lytes [A]	[B]	[-]	[D]	[E]	[-]	[G]	,.			
Benzene	<0.00202	0.101	0.0778	77	0.101	0.0684	68	13	70-130	35	X
Toluene	0.00207	0.101	0.0792	76	0.101	0.0695	67	13	70-130	35	X
Ethylbenzene	<0.00202	0.101	0.0835	83	0.101	0.0711	70	16	71-129	35	X
m,p-Xylenes	<0.00404	0.202	0.164	81	0.201	0.138	69	17	70-135	35	X
o-Xylene	<0.00202	0.101	0.0815	81	0.101	0.0698	69	15	71-133	35	X
Lab Batch ID: 3039364	QC- Sample ID:	574549	-006 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed: 01/26/20	18 Date Prepared:	01/26/2	018	An	alyst: A	ALJ					
<b>Reporting Units:</b> mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by	Y EPA 8021B Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.100	0.0729	73	0.101	0.0767	76	5	70-130	35	
Toluene	<0.00201	0.100	0.0745	75	0.101	0.0781	77	5	70-130	35	
Ethylbenzene	0.00442	0.100	0.0767	72	0.101	0.0799	75	4	71-129	35	
m,p-Xylenes	0.0124	0.201	0.151	69	0.201	0.157	72	4	70-135	35	X
o-Xylene	0.00981	0.100	0.0773	67	0.101	0.0850	74	9	71-133	35	X

Matrix Spike Percent Recovery  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}[(C-F)/(C+F)]$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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## Form 3 - MS / MSD Recoveries



## Project Name: Marathon-Green Frog Cafe Federal #1H

Work Order # :	574500						Project II	):				
Lab Batch ID:	3039409	QC- Sample ID:	574500	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	01/26/2018	Date Prepared:	01/26/2	018	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
,	TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range	Hydrocarbons (GRO)	<14.9	996	971	97	997	935	94	4	70-135	35	
Diesel Range O	rganics (DRO)	137	996	1150	102	997	1130	100	2	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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cceived by OCI	- 2/28/Helinqui	2023	Relinqui	Relinqui							Ι		Τ		LAB #			Comments:	Receiving	Project I state)	Project Name:		
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	Date: Time:		( jamme 1-25-18 935 Date: Time:	н #ο (υ- г) 1.5 ВЕВ Date: Time:	AH #5 (2'-2.5') 4.5' BEB	AH #5 (1'-1.5') 4.5' BEB	AH #5 (0-1') 4.5'BEB	AH #4 (0-1')	AH #3 (1'-1.5')	AH #3 (0-1')	AH #2 (0-6")	AH #1 (1'-1.5')	AH #1 (0-1')		SAMPLE IDENTIFICATION			Xenco Midland Tx	,	(county, Lea County, New Mexico	Green Frog Café Federal #1H	Marathon	Tetra Tech, Inc.
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Page 60 of 149

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	Helinquisned by:		Relinquished by:	Jolinguiehed by										LAB USE )	LAB #			Comments:	Invoice to:	Project Location: state)	Project Name:	Client Name:	<b>F</b>	Analysis Re
	y: Date: Time:	7	$\frac{1-2\varsigma-1}{2}$		AH #10 (1'-1.5') 1' BEB	AH #10 (0-1') 1' BEB	AH #9 (1'-1.5') 1' BEB	AH #9 (0-1') 1' BEB	AH #8 (1'-1.5') 0.5' BEB	AH #8 (0-1') 0.5' BEB	AH #7 (1'-1.5') 1' BEB	AH #7 (0-1') 1' BEB	AH #6 (1'-1.5') 1.5' BEB		SAMPLE IDENTIFICATION			Xenco Midland Tx	Tetra Tech, Inc.	r: (county, Lea County, New Mexico		Marathon	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:		Redeived by:		1/23/2018	1/23/2018	1/23/2018	1/23/2018	1/23/2018	1/23/2018	1/23/2018	1/23/2018	1/23/2018	DATE	YEAR: 2017	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
	Date:		Date:		×	×	×	×	×	×	×	×	×	WATEF SOIL HCL	3	MATRIX		Mike Carr				lke Tavarez	4000 N. Big Spring Street, 3 401 Midland, Texas 7970 Tel (422) 682-4559 Fax (432) 682-3946	
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Temp: () , () CF:(0-6: -0.2%C) (6-23: +0.2°C) Corrected Temp:			REMA											TCLP Vol TCLP Ser	latiles	S					Circle or Specify Method	ANAL	HL	
ıp: (), (↓ (0-6: -0.2°C ) (6-23: +0.2°C) (6cted Temp:	Special Re	Rush Charges Authorized	STANDARD											RCI GC/MS V GC/MS S				25				ANALYSIS REQUEST	S	
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Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



## Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 01/25/2018 09:35:00 AM Temperature Measuring device used : R8 Work Order #: 574500 Comments Sample Receipt Checklist .2 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? N/A #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Date: 01/25/2018

Checklist completed by: Jessica Kramer Checklist reviewed by: Markana Kelsey Brooks

Date: 01/25/2018

# Analytical Report 588620

for Tetra Tech- Midland

**Project Manager: Ike Tavarez** 

Marathon- Green Frog Cafe Federal #1H

212C-MD-01102 Task #100

## 11-JUN-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-17-16), 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 (T104704400-18-14) 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) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





11-JUN-18

Project Manager: **Ike Tavarez Tetra Tech- Midland** 4000 N. Big Spring Suite 401 Midland, TX 79705

Reference: XENCO Report No(s): **588620 Marathon- Green Frog Cafe Federal #1H** Project Address: Lea County, New Mexico

#### Ike Tavarez:

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) 588620. 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. 588620 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,

fession promer

Jessica Kramer Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

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#### Sample Id

AH#1B (0-1')
AH#2B (0-1')
AH#4B (0-1')
AH#5B BottomHole (2.5'-3') 4.5 BEB
AH#5B BottomHole (3.5'-4') 4.5 BEB
AH#5B Stockpile Composite
AH#6B (0-1') 1.5 BEB
AH#8B (0-1')0.5' BEB
AH#9B (0-1) 1'BEB
AH#10B (0-1) 1'BEB

# Sample Cross Reference 588620



Marathon- Green Frog Cafe Federal #1H

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	06-07-18 00:00		588620-001
S	06-07-18 00:00		588620-002
S	06-07-18 00:00		588620-003
S	06-07-18 00:00		588620-004
S	06-07-18 00:00		588620-005
S	06-07-18 00:00		588620-006
S	06-07-18 00:00		588620-007
S	06-07-18 00:00		588620-008
S	06-07-18 00:00		588620-009
S	06-07-18 00:00		588620-010







## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Marathon- Green Frog Cafe Federal #1H

 Project ID:
 212C-MD-01102 Task #10

 Work Order Number(s):
 588620

Report Date:11-JUN-18Date Received:06/08/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3052812 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





Project Location: Lea County, New Mexico

# Certificate of Analysis Summary 588620

Tetra Tech- Midland, Midland, TX

Project Name: Marathon- Green Frog Cafe Federal #1H



Date Received in Lab: Fri Jun-08-18 08:15 am Report Date: 11-JUN-18 Project Manager: Jessica Kramer

	Lab Id:	588620-0	01	588620-0	02	588620-0	03	588620-	004	588620-	005	588620-	006
Analysis Requested	Field Id:	AH#1B (0-	-1')	AH#2B (0	-1')	AH#4B (0	-1')	AH#5B BottomH	ole (2.5'-3')	AH#5B BottomH	lole (3.5'-4')	AH#5B Stockpile	e Composite
Analysis Kequestea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-07-18 0	0:00	Jun-07-18 0	0:00	Jun-07-18 0	00:00	Jun-07-18	00:00	Jun-07-18	00:00	Jun-07-18	00:00
BTEX by EPA 8021B	Extracted:		l					Jun-08-18	08:30	Jun-08-18	08:30	Jun-08-18	08:30
	Analyzed:							Jun-08-18	15:16	Jun-08-18	14:17	Jun-08-18	14:33
	Units/RL:							mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene								< 0.0200	0.0200	< 0.00200	0.00200	< 0.00202	0.00202
Toluene								0.168	0.0200	< 0.00200	0.00200	0.00706	0.00202
Ethylbenzene								0.368	0.0200	0.00366	0.00200	0.0207	0.00202
m,p-Xylenes								0.852	0.0401	0.00751	0.00399	0.0517	0.00403
o-Xylene								0.418	0.0200	0.00548	0.00200	0.0265	0.00202
Total Xylenes								1.27	0.0200	0.0130	0.00200	0.0782	0.00202
Total BTEX								1.81	0.0200	0.0167	0.00200	0.106	0.00202
TPH By SW8015 Mod	Extracted:	Jun-08-18 1	4:00	Jun-08-18 1	4:00	Jun-08-18 1	4:00	Jun-08-18	14:00	Jun-08-18	14:00	Jun-08-18	14:00
	Analyzed:	Jun-08-18 2	0:18	Jun-08-18 2	1:18	Jun-08-18 21:39		Jun-08-18 21:59		Jun-08-18 22:19		Jun-08-18	22:40
	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	17.4	15.0	<15.0	15.0	52.1	15.0	16.6	14.9	21.1	15.0
Diesel Range Organics (DRO)		<15.0	15.0	510	15.0	352	15.0	332	15.0	238	14.9	212	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	24.5	15.0	18.8	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	552	15.0	371	15.0	384	15.0	255	14.9	233	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer Project Assistant

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Certificate of Analysis Summary 588620

Tetra Tech- Midland, Midland, TX

Project Name: Marathon- Green Frog Cafe Federal #1H



Project Id:212C-MD-01102 Task #100Contact:Ike TavarezProject Location:Lea County, New Mexico

Date Received in Lab:Fri Jun-08-18 08:15 amReport Date:11-JUN-18Project Manager:Jessica Kramer

	Lab Id:	588620-0	07	588620-0	08	588620-00	)9	588620-0	10		
Analysis Requested	Field Id:	AH#6B (0-1') 1	.5 BEB	AH#8B (0-1')0.	5' BEB	AH#9B (0-1) 1	'BEB	AH#10B (0-1)	1'BEB		
Analysis Kequestea	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jun-07-18 0	0:00	Jun-07-18 0	0:00	Jun-07-18 0	0:00	Jun-07-18 0	0:00		
TPH By SW8015 Mod	Extracted:	Jun-08-18 1	4:00	Jun-08-18 14	4:00	Jun-08-18 14	4:00	Jun-08-18 1	4:00		
	Analyzed:	Jun-08-18 2	3:00	Jun-08-18 2	3:21	Jun-08-18 23	3:41	Jun-09-18 0	0:02		
	Units/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		
Diesel Range Organics (DRO)		<15.0	15.0	91.7	15.0	324	15.0	189	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	30.3	15.0	<15.0	15.0		
Total TPH		<15.0	15.0	91.7	15.0	354	15.0	189	15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer Project Assistant

Released to Imaging: 3/23/2023 11:29:29 AM

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# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



# Project Name: Marathon- Green Frog Cafe Federal #1H

Units:	mg/kg	Date Analyzed: 06/08/18 14:17	A1		FOOTEDT					
Units:	mg/kg	Date Analyzeu: 00/08/18 14.17	SURROGATE RECOVERY STUDY							
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1,4-Difluoro	obenzene		0.0282	0.0300	94	70-130				
4-Bromoflu	orobenzene		0.0306	0.0300	102	70-130				
Lab Batch	#: 3052812	Sample: 588620-006 / SMP	Batc	h: 1 Matrix	: Soil	<u>.</u>				
Units:	mg/kg	Date Analyzed: 06/08/18 14:33	SU	JRROGATE R	ECOVERY	STUDY				
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1 4 Diffuor		Analytes	0.0292	0.0200		70.120				
1,4-Difluoro 4-Bromoflu			0.0282	0.0300	94	70-130 70-130				
	#: 3052812	Sample: 588620-004 / SMP	Batc			/0-130				
Units:	mg/kg	Date Analyzed: 06/08/18 15:16								
Units.	iiig/ Kg	Date Analyzed. 00/08/18 15:10	SU	STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1,4-Difluoro	obenzene		0.0231	0.0300	77	70-130				
4-Bromoflu			0.0248	0.0300	83	70-130				
Lab Batch	#: 3052902	Sample: 588620-001 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 06/08/18 20:18	SU	JRROGATE R	ECOVERY	STUDY				
	ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage			
1-Chlorooct	ane		93.4	99.8	94	70-135				
o-Terpheny	l		49.6	49.9	99	70-135				
	#: 3052902	Sample: 588620-002 / SMP	Batc		: Soil					
Units:	mg/kg	Date Analyzed: 06/08/18 21:18	SU	JRROGATE R	ECOVERY	STUDY				
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag			
ſ		Analytes			[D]					
1-Chlorooct			102	99.7	102	70-135				
o-Terphenyl			55.2	49.9	111	70-135				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon- Green Frog Cafe Federal #1H

Lab Batch	#: 3052902	Sample: 588620-003 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/08/18 21:39	st	RROGATE R	ECOVERY	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Anarytes	102	99.9	102	70-135	
o-Terphenyl			56.8	50.0	114	70-135	
1 2	#: 3052902	Sample: 588620-004 / SMP	Batc			10 100	
Units:	mg/kg	Date Analyzed: 06/08/18 21:59		RROGATE R		STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Analytes	98.9	99.7	99	70-135	
o-Terphenyl			52.3	49.9	105	70-135	
	#: 3052902	Sample: 588620-005 / SMP	Batc			10 100	
Units:	mg/kg	Date Analyzed: 06/08/18 22:19	su	RROGATE R		STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
_		Analytes			[D]		
1-Chlorooct	ane		103	99.6	103	70-135	
o-Terphenyl			57.6	49.8	116	70-135	
Lab Batch	#: 3052902	Sample: 588620-006 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/08/18 22:40	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		98.9	99.8	99	70-135	
o-Terphenyl			52.6	49.9	105	70-135	
Lab Batch	#: 3052902	Sample: 588620-007 / SMP	Batc	h: 1 Matrix	: Soil	1	
Units:	mg/kg	Date Analyzed: 06/08/18 23:00	su	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1 (11)	ane	· · · · · · · · · · · · · · · · · · ·	92.5	99.9	93	70-135	
1-Chlorooct							

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon- Green Frog Cafe Federal #1H

Lab Batch #:	3052902	Sample: 588620-008 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 06/08/18 23:21	SU	RROGATE R	ECOVERY	STUDY			
	TPH F	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctane	e		98.8	99.7	99	70-135			
o-Terphenyl			53.1	49.9	106	70-135			
Lab Batch #:	3052902	Sample: 588620-009 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 06/08/18 23:41	SURROGATE RECOVERY STUDY						
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane		Analy us	99.4	99.8	100	70-135			
o-Terphenyl			57.3	49.9	115	70-135			
Lab Batch #:	3052902	Sample: 588620-010 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	<b>Date Analyzed:</b> 06/09/18 00:02	0:02 SURROGATE RECOVERY ST						
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage		
		Analytes			[D]				
1-Chlorooctane	e		93.7	99.8	94	70-135			
o-Terphenyl			53.4	49.9	107	70-135			
Lab Batch #:	3052812	Sample: 7656308-1-BLK / E	ELK Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 06/08/18 13:22	SU	RROGATE R	ECOVERY S	STUDY			
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobe			0.0286	0.0300	95	70-130			
4-Bromofluoro			0.0295	0.0300	98	70-130			
Lab Batch #:		Sample: 7656356-1-BLK / E				, 0 150			
Units:	mg/kg	<b>Date Analyzed:</b> 06/08/18 19:17		RROGATE R		STUDY			
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage		
		Analytes			[D]				
1-Chlorooctane	e		101	100	101	70-135			
o-Terphenyl			52.9	50.0	106	70-135			

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon- Green Frog Cafe Federal #1H

U <b>nits:</b>	mg/kg	Date Analyzed: 06/08/18 02:47	CI	RROGATE R	ECOVERV	STUDY	
	6 6		50				1
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0308	0.0300	103	70-130	
4-Bromoflu	orobenzene		0.0253	0.0300	84	70-130	
Lab Batch	#: 3052902	Sample: 7656356-1-BKS / I	BKS Bate	h: 1 Matrix	: Solid		1
U <b>nits:</b>	mg/kg	Date Analyzed: 06/08/18 19:37	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct			122	100	122	70-135	
o-Terpheny			53.9	50.0	108	70-135	
	#: 3052812	Sample: 7656308-1-BSD / I	BSD Batc	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 06/08/18 08:07	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[ <sup>2</sup> ¥]	[10]	[D]	/01	
1,4-Difluor	obenzene		0.0280	0.0300	93	70-130	
4-Bromoflu	orobenzene		0.0262	0.0300	87	70-130	
Lab Batch	#: 3052902	Sample: 7656356-1-BSD / I	BSD Bate	h: 1 Matrix	: Solid		1
Units:	mg/kg	Date Analyzed: 06/08/18 19:57	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 (11)		Analytes	105	100		50.105	
1-Chlorooct			125	100	125	70-135	
o-Terpheny	#: 3052812	Sample: 587900-012 S / MS	53.4 5 Bate	50.0 h: 1 Matrix	107	70-135	
Units:	mg/kg	Date Analyzed: 06/08/18 08:25					
omo.	mg/Kg	Datt Analyzeu. 00/00/10 00.25	SU	RROGATE R	LCOVERY	STUDY	1
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0280	0.0300	93	70-130	
				1			

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon- Green Frog Cafe Federal #1H

<b>Work Orders :</b> 5886 Lab Batch #: 3052902	20, Sample: 588620-001 S / MS	5 Bate		212C-MD-0	01102 Task	#100
Units: mg/kg	Date Analyzed: 06/08/18 20:38	SU	JRROGATE R	ECOVERY S	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		122	99.8	122	70-135	
o-Terphenyl		53.5	49.9	107	70-135	
Lab Batch #: 3052812	Sample: 587900-012 SD / M	ASD Bate	h: 1 Matrix	: Soil		
Units: mg/kg	Date Analyzed: 06/08/18 08:43	SU	JRROGATE R	ECOVERY S	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Anarytes	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene		0.0231	0.0300	104	70-130	
<b>Lab Batch #:</b> 3052902	Sample: 588620-001 SD / N				70-130	
Units: mg/kg	Date Analyzed: 06/08/18 20:58	-	JRROGATE R		STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	• 	124	100	124	70-135	
o-Terphenyl		53.5	50.0	107	70-135	

\* Surrogate outside of Laboratory QC limits

- \*\* Surrogates outside limits; data and surrogates confirmed by reanalysis
- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

## Project Name: Marathon- Green Frog Cafe Federal #1H

Work Order #: 588620							Proj	ect ID:	212C-MD-(	01102 Tas	k #100
Analyst: ALJ	Da	ate Prepar	ed: 06/07/20	18			Date A	nalyzed: (	06/08/2018		
Lab Batch ID: 3052812 Sample: 7656308-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	< 0.00200	0.100	0.0782	78	0.100	0.0826	83	5	70-130	35	
Toluene	< 0.00200	0.100	0.0810	81	0.100	0.0878	88	8	70-130	35	
Ethylbenzene	< 0.00200	0.100	0.0813	81	0.100	0.0859	86	6	70-130	35	
m,p-Xylenes	< 0.00401	0.200	0.168	84	0.200	0.179	90	6	70-130	35	
o-Xylene	< 0.00200	0.100	0.0805	81	0.100	0.0861	86	7	70-130	35	
Analyst: ARM	Da	ate Prepar	ed: 06/08/20	18			Date A	nalyzed: (	06/08/2018		
Lab Batch ID: 3052902 Sample: 7656356-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	943	94	1000	954	95	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	993	99	1000	1000	100	1	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Marathon- Green Frog Cafe Federal #1H

Work Order # :	588620						Project II	<b>):</b> 212C-1	MD-01102	2 Task #100	)	
Lab Batch ID:	3052812	QC- Sample ID:	587900	-012 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	06/08/2018	Date Prepared:	06/07/2	018	An	alyst: A	ALJ					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		<0.00200	0.0998	0.0497	50	0.101	0.0459	45	8	70-130	35	X
Toluene		<0.00200	0.0998	0.0468	47	0.101	0.0374	37	22	70-130	35	X
Ethylbenzene		<0.00200	0.0998	0.0386	39	0.101	0.0243	24	45	70-130	35	XF
m,p-Xylenes		<0.00399	0.200	0.0787	39	0.201	0.0476	24	49	70-130	35	XF
o-Xylene		<0.00200	0.0998	0.0412	41	0.101	0.0245	24	51	70-130	35	XF
Lab Batch ID:	3052902	QC- Sample ID:	588620	-001 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	06/08/2018	Date Prepared:	06/08/2	018	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TPH By SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag

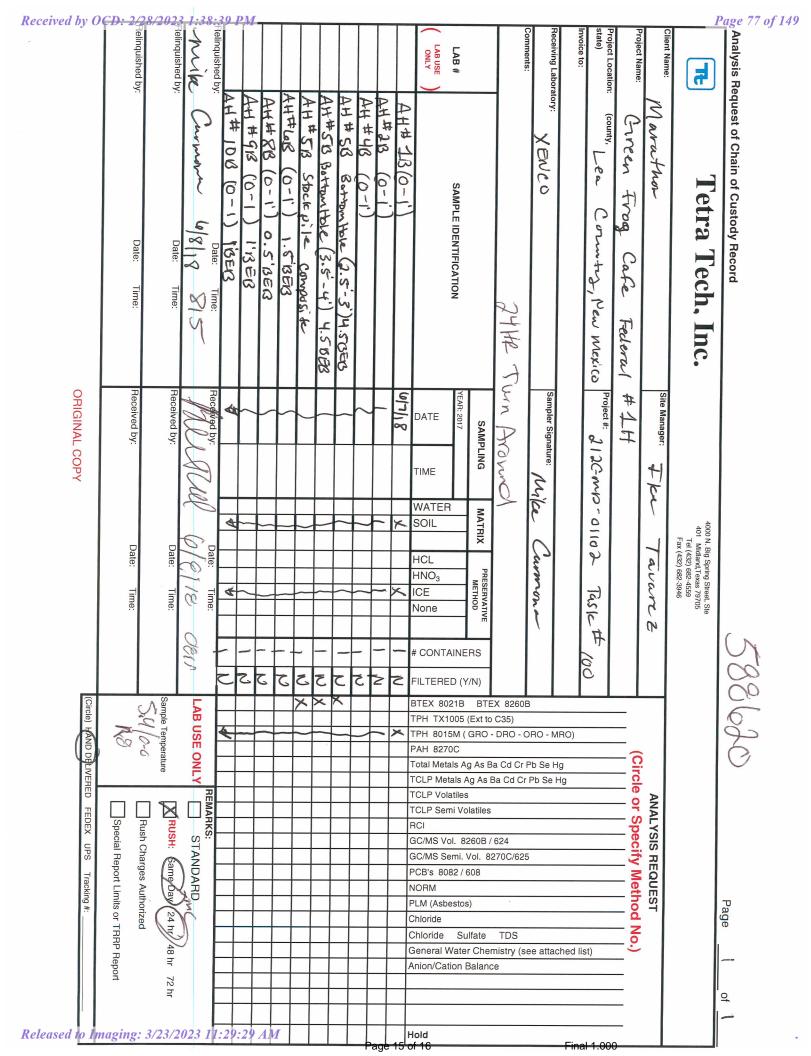
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	900 Bup. %R [G]	%	%R	%RPD	riag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	890	89	1000	903	90	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	998	924	93	1000	942	94	2	70-135	20	

 $\begin{array}{ll} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100*(C-A)/B \\ Relative \ Percent \ Difference \quad RPD = 200*|(C-F)/(C+F)| \end{array}$ 

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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Received by OCD: 2/28/2023 1:38:39 PM



## **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 06/08/2018 08:15:00 AM Temperature Measuring device used : R8 Work Order #: 588620 Comments Sample Receipt Checklist 5.4 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes

#12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? N/A #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: But Tul Brianna Teel

Date: 06/08/2018

Checklist reviewed by: Jessign Warmer

Jessica Kramer

Date: 06/08/2018

# Analytical Report 602657

for Tetra Tech- Midland

**Project Manager: Clair Gonzales** 

Marathon-Green Frog Cafe Federal #1

212C-MD-01102.100

## 24-OCT-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





24-OCT-18

Project Manager: **Clair Gonzales Tetra Tech- Midland** 901 West Wall ST Midland, TX 79701

Reference: XENCO Report No(s): 602657 Marathon-Green Frog Cafe Federal #1 Project Address: Lea County, New Mexico

#### **Clair Gonzales**:

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) 602657. 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. 602657 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

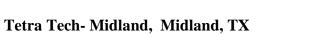
Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



#### Sample Id

AH#2C (0-1')
AH#4C (0-1')
AH#5C (0-1') 4.5'BEB
AH#9C (0-1')
AH#10C (0-1')
AH#5 Stockpile Composite

## Sample Cross Reference 602657



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Marathon-Green Frog Cafe Federal #1

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	10-17-18 00:00		602657-001
S	10-17-18 00:00		602657-002
S	10-17-18 00:00		602657-003
S	10-17-18 00:00		602657-004
S	10-17-18 00:00		602657-005
S	10-17-18 00:00		602657-006





## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Marathon-Green Frog Cafe Federal #1

 Project ID:
 212C-MD-01102.100

 Work Order Number(s):
 602657

 Report Date:
 24-OCT-18

 Date Received:
 10/17/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3067217 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 602657

Tetra Tech- Midland, Midland, TX

Project Name: Marathon-Green Frog Cafe Federal #1



**Project Id:** 212C-MD-01102.100 **Contact:** Clair Gonzales **Project Location:** Lea County, New Mexico

Date Received in Lab: Wed Oct-17-18 04:20 pm Report Date: 24-OCT-18 Project Manager: Kelsey Brooks

	Lab Id:	602657-	001	602657-0	002	602657-0	003	602657-0	004	602657-	005	602657-0	006
Analysis Boguested	Field Id:	AH#2C (	0-1')	AH#4C (	0-1')	AH#5C (0-1')	4.5'BEB	AH#9C (	0-1')	AH#10C (	(0-1')	AH#5 Stockpile	Composite
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL	,	SOIL		SOIL	,	SOIL	_	SOIL	,
	Sampled:	Oct-17-18	00:00	Oct-17-18	00:00	Oct-17-18	00:00	Oct-17-18	00:00	Oct-17-18	00:00	Oct-17-18	00:00
BTEX by EPA 8021B	Extracted:	Oct-22-18	13:00	Oct-22-18	13:00	Oct-22-18	13:00	Oct-22-18	13:00	Oct-22-18	13:00	Oct-22-18	13:00
	Analyzed:	Oct-22-18	21:45	Oct-22-18	22:05	Oct-22-18	22:25	Oct-22-18	22:45	Oct-22-18	23:05	Oct-22-18	23:25
	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	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	<0.00199	0.00199
Toluene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199
Ethylbenzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199
m,p-Xylenes		< 0.00398	0.00398	< 0.00399	0.00399	< 0.00401	0.00401	< 0.00402	0.00402	< 0.00402	0.00402	< 0.00398	0.00398
o-Xylene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199
Total Xylenes		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199
Total BTEX		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199
TPH By SW8015 Mod	Extracted:	Oct-18-18	13:00	Oct-18-18	13:00	Oct-18-18	13:00	Oct-19-18	07:00	Oct-19-18	07:00	Oct-19-18	07:00
	Analyzed:	Oct-19-18	00:00	Oct-19-18	00:18	Oct-19-18	00:37	Oct-19-18	15:19	Oct-19-18	15:38	Oct-19-18	15:57
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		360	14.9	<15.0	15.0	<14.9	14.9	127	14.9	57.2	15.0	64.9	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		360	14.9	<15.0	15.0	<14.9	14.9	127	14.9	57.2	15.0	64.9	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing,

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kms Boah

Kelsey Brooks Project Manager

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# LABORATORIES

# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



# Project Name: Marathon-Green Frog Cafe Federal #1

Lab Batch #:		Sample: 602657-001 / SMP					
Units:	mg/kg	Date Analyzed: 10/19/18 00:00	SU	RROGATE R	ECOVERYS	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chlorooctane	e		99.6	99.6	100	70-135	
o-Terphenyl			61.1	49.8	123	70-135	
Lab Batch #:	3066919	Sample: 602657-002 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/19/18 00:18	SU	RROGATE R	ECOVERYS	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooctane		Anaryus	97.1	99.7	97	70-135	
o-Terphenyl	-		51.1	49.9	102	70-135	
Lab Batch #:	3066919	Sample: 602657-003 / SMP	Batc		-	10 155	
Units:	mg/kg	Date Analyzed: 10/19/18 00:37		RROGATE R		STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chlorooctane	e		95.1	99.6	95	70-135	
o-Terphenyl			50.3	49.8	101	70-135	
Lab Batch #:	3066947	Sample: 602657-004 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/19/18 15:19	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooctane			87.2	99.6	88	70-135	
o-Terphenyl	-		47.2	49.8	95	70-135	
Lab Batch #:	3066947	Sample: 602657-005 / SMP	Batc				
Units:	mg/kg	Date Analyzed: 10/19/18 15:38		RROGATE R		STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chlorooctane	e		89.6	99.9	90	70-135	
o-Terphenyl			47.4	50.0	95	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1

Lab Batch #		Sample: 602657-006 / SMP	Batch	n: 1 Matrix	. 501		
U <b>nits:</b>	mg/kg	Date Analyzed: 10/19/18 15:57	SU	RROGATE R	ECOVERY S	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ine		85.4	100	85	70-135	
o-Terphenyl			46.9	50.0	94	70-135	
Lab Batch #	<b>#:</b> 3067217	Sample: 602657-001 / SMP	Batch	n: 1 Matrix	: Soil	<u> </u>	
Units:	mg/kg	Date Analyzed: 10/22/18 21:45	SU	RROGATE R	ECOVERY	STUDY	
		A polytos	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro		Analytes	0.0341	0.0300	114	70-130	
4-Bromofluc			0.0341	0.0300	97	70-130	
Lab Batch		Sample: 602657-002 / SMP	Batch			70-150	
Units:	mg/kg	Date Analyzed: 10/22/18 22:05					
omts.	ing/kg		50	RROGATE R		STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0335	0.0300	112	70-130	
4-Bromofluc	robenzene		0.0320	0.0300	107	70-130	
Lab Batch #	<b>#:</b> 3067217	Sample: 602657-003 / SMP	Batch	n: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/22/18 22:25	SU	RROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluoro			0.0330	0.0300	110	70-130	
4-Bromofluc			0.0315	0.0300	110	70-130	
Lab Batch #		Sample: 602657-004 / SMP	Batch			,0150	
Units:	mg/kg	Date Analyzed: 10/22/18 22:45		RROGATE R		STUDY	
		A nalvtes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1 4-Difluoro	Analytes 4-Difluorobenzene			0.0300	98	70-130	
	UCHILCHIC		0.0293	0.0300	90	/0-150	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1

	r <b>ders :</b> 60265 #: 3067217	7, <b>Sample:</b> 602657-005 / SMP	Batcl	0	: 212C-MD-0 : Soil	01102.100	
Units:	mg/kg	Date Analyzed: 10/22/18 23:05	SU	RROGATE R	ECOVERY	STUDY	
	ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0294	0.0300	98	70-130	
4-Bromoflu	orobenzene		0.0284	0.0300	95	70-130	
Lab Batch	#: 3067217	Sample: 602657-006 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/22/18 23:25	SU	RROGATE R	ECOVERY	STUDY	
	ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluor	obenzene	Analytes	0.0332	0.0200		70-130	
,	lorobenzene		0.0332	0.0300	111	70-130	
	#: 3066919	<b>Sample:</b> 7664441-1-BLK / H				/0-130	
Units:	mg/kg	<b>Date Analyzed:</b> 10/18/18 17:29		RROGATE R		STUDY	
		By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
		Analytes	[A]	[B]	%R [D]	%R	
1-Chlorooc	tane		94.5	100	95	70-135	
o-Terpheny	l		50.3	50.0	101	70-135	
Lab Batch	#: 3066947	Sample: 7664444-1-BLK / H	BLK Batel	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 10/19/18 09:02	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tane	Anarytes	92.8	100	93	70-135	
o-Terpheny			49.2	50.0	93		
	#: 3067217	Sample: 7664674-1-BLK / H				70-135	
Units:	mg/kg	<b>Date Analyzed:</b> 10/22/18 16:25		RROGATE R		STUDV	
				1			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		A NARAA V LUAT		1			
1,4-Difluor	ohenzene		0.0330	0.0300	110	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1

U <b>nits:</b>	mg/kg	Date Analyzed: 10/18/18 17:48	CT	RROGATE R	FCOVEDV	STUDY	
		2 400 12114292000 10, 10, 10, 10	50				
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chloroocta	ane		119	100	119	70-135	
o-Terphenyl			51.8	50.0	104	70-135	
Lab Batch #	<b>#:</b> 3066947	Sample: 7664444-1-BKS / ]	BKS Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 10/19/18 09:21	SU	RROGATE R	ECOVERY	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1 Chlorooste		Analytes	100	100		70.125	
1-Chloroocta	anc		126	100	126	70-135	
o-Terphenyl Lab Batch <del>i</del>	#. 2067217	Sample: 7664674-1-BKS / 1	51.3 BKS Bate	50.0 h: 1 Matrix	103	70-135	
		-					
Units:	mg/kg	Date Analyzed: 10/22/18 14:45	st	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0271	0.0300	90	70-130	
4-Bromofluc	orobenzene		0.0228	0.0300	76	70-130	
Lab Batch #	#: 3066919	Sample: 7664441-1-BSD / 1	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 10/18/18 18:06	SU	RROGATE R	ECOVERY	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[]	[2]	[D]	,,,,,,	
1-Chloroocta		-	130	100	130	70-135	
o-Terphenyl			53.0	50.0	106	70-135	
Lab Batch #	#: 3066947	Sample: 7664444-1-BSD / ]	BSD Bate	h: 1 Matrix	: Solid	1	<u> </u>
Units:	mg/kg	Date Analyzed: 10/19/18 09:41	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chloroocta	ane		127	100	127	70-135	
o-Terphenyl			51.6	50.0	103	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1

J <b>nits:</b>	mg/kg	Date Analyzed: 10/22/18 15:05	SU	RROGATE R	ECOVERY	STUDY	
		C by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0279	0.0300	93	70-130	
4-Bromofluc	orobenzene		0.0234	0.0300	78	70-130	
Lab Batch #	#: 3066919	Sample: 602472-001 S / MS	Batc	h: 1 Matrix	: Soil	· · · · · · · · · · · · · · · · · · ·	
Units:	mg/kg	Date Analyzed: 10/18/18 18:43	SU	RROGATE R	ECOVERY	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta		Anarytes	117	99.8		70-135	
o-Terphenyl	unc		50.9	49.9	117	70-135	
Lab Batch	<b>#• 3066947</b>	Sample: 602835-001 S / MS				70-133	
Units:	mg/kg	<b>Date Analyzed:</b> 10/19/18 10:20					
Units.	iiig/kg	Date Anaryzeu: 10/17/18 10:20	SU	RROGATE R	ECOVERY	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	nne		119	99.9	119	70-135	
o-Terphenyl			48.4	50.0	97	70-135	
Lab Batch #	#: 3067217	Sample: 602545-001 S / MS	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/22/18 15:26	SU	RROGATE R	ECOVERY	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro			0.0282	0.0300	94	70-130	
4-Bromofluc			0.0282	0.0300	79	70-130	
Lab Batch a		Sample: 602472-001 SD / N				10 150	
Units:	mg/kg	Date Analyzed: 10/18/18 19:02		RROGATE R		STUDY	
	TPH F	By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
		Analytes	[A]	[B]	%R [D]	%R	
1-Chloroocta	ine		128	99.7	128	70-135	
o-Terphenyl			56.4	49.9	113	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Marathon-Green Frog Cafe Federal #1

Work Orders : 602657,           Lab Batch #: 3066947         Sample: 602835-001 SD / 1	MSD Batcl	Project ID: h: 1 Matrix:		1102.100	
Units:         mg/kg         Date Analyzed: 10/19/18 10:40	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-135	
o-Terphenyl	52.9	50.0	106	70-135	
Lab Batch #: 3067217 Sample: 602545-001 SD / 1	MSD Batcl	h: 1 Matrix:	Soil	I I	
Units:         mg/kg         Date Analyzed: 10/22/18 15:46	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0250	0.0300	83	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

## Project Name: Marathon-Green Frog Cafe Federal #1

<b>Work Order #:</b> 602657							Proj	ect ID:	212C-MD-0	01102.100	
Analyst: ALJ	D	ate Prepar	red: 10/22/201	18			Date A	nalyzed: 1	0/22/2018		
Lab Batch ID: 3067217 Sample: 7664674-1	-BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	ЭY	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	< 0.00199	0.0996	0.125	126	0.0998	0.120	120	4	70-130	35	
Toluene	<0.00199	0.0996	0.116	116	0.0998	0.112	112	4	70-130	35	
Ethylbenzene	< 0.00199	0.0996	0.105	105	0.0998	0.102	102	3	70-130	35	
m,p-Xylenes	< 0.00398	0.199	0.204	103	0.200	0.196	98	4	70-130	35	
o-Xylene	< 0.00199	0.0996	0.0952	96	0.0998	0.0924	93	3	70-130	35	
Analyst: ARM	D	ate Prepar	red: 10/18/201	18			Date A	nalyzed:	0/18/2018		
Lab Batch ID: 3066919 Sample: 7664441-1	-BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	985	99	1000	957	96	3	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	984	98	1000	954	95	3	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## **BS / BSD Recoveries**



## Project Name: Marathon-Green Frog Cafe Federal #1

Work Order	• <b>#:</b> 602657							Pro	ject ID: 2	212C-MD-0	01102.100	
Analyst:	ARM	D	ate Prepar	red: 10/19/201	8			Date A	nalyzed: 1	10/19/2018		
Lab Batch ID	<b>:</b> 3066947 <b>Sample:</b> 7664444-1-	BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	PΥ	
	TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	vtes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline I	Range Hydrocarbons (GRO)	8.13	1000	932	93	1000	947	95	2	70-135	20	
Diesel Rai	nge Organics (DRO)	<8.13	1000	932	93	1000	948	95	2	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Marathon-Green Frog Cafe Federal #1

<b>Work Order # :</b> 602657					Project II	<b>):</b> 212C-1	MD-0110	2.100		
Lab Batch ID: 3067217	QC- Sample ID:	602545-001 S	Bate	ch #:	1 Matrix	: Soil				
<b>Date Analyzed:</b> 10/22/2018	Date Prepared:	10/22/2018	Ana	alyst: A	ALJ					
<b>Reporting Units:</b> mg/kg		ared:       10/22/2018       Analyst:       ALJ         MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY         t       Spike       Spiked       Spike       Spiked       Spiked <th></th>								
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Result Added [C]	Sample %R	Added	Spiked Sample	Dup. %R		Limits	Limits	Flag
Benzene	< 0.00199	0.0996 0.0978	98	0.0998	0.0914	92	7	70-130	35	
Toluene	<0.00199	0.0996 0.0838	84	0.0998	0.0796	80	5	70-130	35	
Ethylbenzene	<0.00199	0.0996 0.0676	68	0.0998	0.0667	67	1	70-130	35	X
m,p-Xylenes	<0.00398	0.199 0.135	68	0.200	0.137	69	1	70-130	35	X
o-Xylene	<0.00199	0.0996 0.0673	68	0.0998	0.0686	69	2	70-130	35	X
Lab Batch ID: 3066919	QC- Sample ID:	602472-001 S	Bate	ch #:	1 Matrix	: Soil				
<b>Date Analyzed:</b> 10/18/2018	Date Prepared:	10/18/2018	Ana	alyst: A	ARM					
Reporting Units: mg/kg		MATRIX SPIK	E / MATR	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample					-		Control		Flag
Analytes	Result [A]	Added [C]	%R	Added		%R				гад
Analytes Gasoline Range Hydrocarbons (GRO)		Added [C] [B]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
	[A]	Added         [C]           [B]         998         939	% <b>R</b> [ <b>D</b> ] 93	<b>Added</b> [E] 997	<b>Result [F]</b> 958	% <b>R</b> [G] 95	<b>%</b>	%R 70-135	% <b>RPD</b> 20	
Gasoline Range Hydrocarbons (GRO)	[A] 14.0 <8.11	Added         [C]           [B]         939           998         939           998         953	% <b>R</b> [ <b>D</b> ] 93 95	Added [E] 997 997	Result [F]           958           959	% <b>R</b> [G] 95 96	<b>%</b>	%R 70-135	% <b>RPD</b> 20	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Lab Batch ID: 3066947	[A] 14.0 <8.11 QC- Sample ID:	Added         [C]           [B]         939           998         939           998         953           602835-001 S	%R [D] 93 95 Bate	Added [E] 997 997 ch #:	Result [F]           958           959           1         Matrix	% <b>R</b> [G] 95 96	<b>%</b>	%R 70-135	% <b>RPD</b> 20	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Lab Batch ID: 3066947	[A] 14.0 <8.11 QC- Sample ID:	Added [B]         [C]           998         939           998         953           602835-001 S         10/19/2018	%Ř [D] 93 95 Bate Ana	Added [E] 997 997 ch #: Ilyst: A	Result [F]           958           959           1           Matrix           ARM	%R [G] 95 96 x: Soil	% 2 1	%R 70-135 70-135	% <b>RPD</b> 20	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Lab Batch ID: 3066947 Date Analyzed: 10/19/2018	[A] 14.0 <8.11 QC- Sample ID:	Added [B]         [C]           998         939           998         953           602835-001 S         10/19/2018           MATRIX SPIK           Spike Spike Sample Result	%R [D] 93 95 Bate Ana E / MATR Spiked Sample	Added [E] 997 997 ch #: ilyst: A RIX SPI Spike	Result [F]         958         959         1       Matrix         ARM         KE DUPLICA'         Duplicate         Spiked Sample	%R [G] 95 96 x: Soil TE REC Spiked Dup.	% 2 1 OVERY RPD	%R 70-135 70-135 STUDY Control Limits	%RPD     20     20     20     Limits	Flag
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Lab Batch ID: 3066947 Date Analyzed: 10/19/2018 Reporting Units: mg/kg	[A] 14.0 <8.11 QC- Sample ID: Date Prepared: Parent Sample	Added [B][C]998939998953602835-001 S10/19/2018MATRIX SPIKSpike AddedSpike [C]	%R [D] 93 95 Bate Ana E / MATR Spiked Sample %R	Added [E] 997 997 ch #: alyst: A RIX SPI Spike Added	Result [F]         958         959         1       Matrix         ARM         KE DUPLICA'         Duplicate         Spiked Sample	%R [G] 95 96 x: Soil TE REC Spiked Dup. %R	% 2 1 OVERY RPD	%R 70-135 70-135 STUDY Control Limits	%RPD     20     20     20     Limits	
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Lab Batch ID: 3066947 Date Analyzed: 10/19/2018 Reporting Units: mg/kg TPH By SW8015 Mod	[A] 14.0 <8.11 QC- Sample ID: Date Prepared: Parent Sample Result	Added [B]         [C]           998         939           998         953           602835-001 S         10/19/2018           10/19/2018         Spiked Sample Result           Spike Added [B]         Spiked Sample [C]	%R [D] 93 95 Bata Ana E / MATR Spiked Sample %R [D]	Added [E] 997 997 ch #: alyst: A RIX SPI Spike Added [E]	Result [F]         958         959         1       Matrix         ARM         KE DUPLICA         Duplicate         Spiked Sample         Result [F]	%R [G] 95 96 x: Soil TE REC Spiked Dup. %R [G]	%           2           1           OVERY           RPD           %	%R 70-135 70-135 STUDY Control Limits %R	%RPD     20     20     20     20	

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 15 of 17

Received by OC	D: 2/28/	2023	1.38.3	9 PM																		P	age 94 of 1
-	Relinquished by	-	Relinguished by:	Relinquished by:									LAB USE )	LAB #			Comments:	Receiving Laboratory	state)	Project Name.	Droiget Name.		
	Date: Time:	Date: Hille:	10-17-12	Date			AH #5 Stockpile Composite	AH #10C (0-1')	AH #9C (0-1')	AH #5C (0-1') 4.5'BEB	AH #4C (0-1')	AH #2C (0-1)		SAMPLE IDENTIFICATION			Xenco Midland Tx	Tetra Tech	Lea County, New Mexico		Marathon	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	Heceived by:	MUCUM				10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	DATE TIME	YEAR: 2018	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
	Date:	Daté:					×	×	×	×	X	×	WATEF SOIL HCL	3	MATRIX		Mike Carr		212C-MD		Clair Gonzales	4000 N. Big Spring Street, S 401 Midland,Texas 79703 Tel (432) 682-4559 Fax (432) 682-3946	
	Time:	f Time:	$\int_{18}^{\text{Time:}}  \psi \rangle 0$				XX					×	HNO <sub>3</sub> ICE None		PRESERVATIVE		Carmona		212C-MD-01102.100		es	ring Street, Ste ,Texas 79705 682-4559 682-3946	
		(0)									z	Ż	# CONTA	D (Y	/N)								
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Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 10/17/2018 04:20:00 PM Temperature Measuring device used : R8 Work Order #: 602657 Comments Sample Receipt Checklist .3 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes

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

Analyst:

PH Device/Lot#:

#16 All samples received within hold time?

#18 Water VOC samples have zero headspace?

#17 Subcontract of sample(s)?

Date: 10/17/2018

Yes

N/A

N/A

Checklist completed by: Bianna Teel Checklist reviewed by: Markoath Kelsey Brooks

Date: 10/18/2018

Released to Imaging: 3/23/2023 11:29:29 AM

# Analytical Report 608426

for Tetra Tech- Midland

**Project Manager: Clair Gonzales** 

Green Frog Cafe Federal #1 H

212C-MD-01102.100

17-DEC-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





17-DEC-18

Project Manager: **Clair Gonzales Tetra Tech- Midland** 901 West Wall ST Midland, TX 79701

Reference: XENCO Report No(s): 608426 Green Frog Cafe Federal #1 H Project Address: Lea County, New Mexico

#### **Clair Gonzales**:

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) 608426. 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. 608426 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

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Sample Cross Reference 608426



Tetra Tech- Midland, Midland, TX

Green Frog Cafe Federal #1 H

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	12-11-18 00:00		608426-001

**Sample Id** AH-5 1-1.5'(4.5' BEB)





## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Green Frog Cafe Federal #1 H

 Project ID:
 212C-MD-01102.100

 Work Order Number(s):
 608426

 Report Date:
 17-DEC-18

 Date Received:
 12/12/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3073054 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 608426

Tetra Tech- Midland, Midland, TX Project Name: Green Frog Cafe Federal #1 H



Project Id:212C-MD-01102.100Contact:Clair GonzalesProject Location:Lea County, New Mexico

Date Received in Lab:Wed Dec-12-18 01:48 pmReport Date:17-DEC-18Project Manager:Kelsey Brooks

	Lab Id:	608426-001		
Analysis Degrested	Field Id:	AH-5 1-1.5'(4.5' BEB)		
Analysis Requested	Depth:			
	Matrix:	SOIL		
	Sampled:	Dec-11-18 00:00		
BTEX by EPA 8021B	Extracted:	Dec-16-18 19:45		
	Analyzed:	Dec-17-18 06:31		
	Units/RL:	mg/kg RL		 
Benzene		<0.00200 0.00200		
Toluene		<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200		
m,p-Xylenes		<0.00401 0.00401		
o-Xylene		<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200		
Total BTEX		<0.00200 0.00200		
TPH By SW8015 Mod	Extracted:	Dec-14-18 14:00		
	Analyzed:	Dec-14-18 20:38		
	Units/RL:	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0		
Diesel Range Organics (DRO)		<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0		
Total TPH		<15.0 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Huns Boah

Kelsey Brooks Project Manager



# LABORATORIES

# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



# Project Name: Green Frog Cafe Federal #1 H

Lab Batch #	<b>ders :</b> 608426 #: 3072979	Sample: 608426-001 / SMP	Batc		: 212C-MD-0 : Soil		
U <b>nits:</b>	mg/kg	Date Analyzed: 12/14/18 20:38	SU	RROGATE R	ECOVERY S	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chloroocta	ine		93.2	99.7	93	70-135	
o-Terphenyl			45.3	49.9	91	70-135	
Lab Batch #	<b>#:</b> 3073054	Sample: 608426-001 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/17/18 06:31	SU	RROGATE R	ECOVERY S	STUDY	
		A by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro			0.0243	0.0300	81	70-130	
4-Bromofluo	robenzene		0.0374	0.0300	125	70-130	
Lab Batch #	<b>#:</b> 3072979	Sample: 7668112-1-BLK / B	LK Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/14/18 19:43	SU	RROGATE R	ECOVERYS	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ine		96.9	100	97	70-135	
o-Terphenyl			48.6	50.0	97	70-135	
Lab Batch #	<b>#:</b> 3073054	Sample: 7668158-1-BLK / B	LK Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/16/18 23:24	SU	RROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluoro			0.0277	0.0300	92	70-130	
4-Bromofluo	robenzene		0.0320	0.0300	107	70-130	
Lab Batch #		Sample: 7668112-1-BKS / B				1	
Units:	mg/kg	Date Analyzed: 12/14/18 20:01	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chloroocta	ine		118	100	118	70-135	
o-Terphenyl			49.3	50.0	99	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

T	/ <b>1</b> .	Data Amelinadi 10/16/19 01 07			_ ~ ~ ~ ~ ~ ~ ~		
Units:	mg/kg	Date Analyzed: 12/16/18 21:37	SU	JRROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0353	0.0300	118	70-130	
4-Bromoflue			0.0384	0.0300	128	70-130	
Lab Batch	#: 3072979	Sample: 7668112-1-BSD / H	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/14/18 20:19	SU	JRROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Anaryus	121	100	121	70-135	
o-Terphenyl			49.8	50.0	100	70-135	
	#: 3073054	Sample: 7668158-1-BSD / H	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/16/18 21:59		JRROGATE R	ECOVERY	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0378	0.0300	126	70-130	
4-Bromoflue	orobenzene		0.0372	0.0300	124	70-130	
Lab Batch	#: 3072979	Sample: 608426-001 S / MS	B Bate	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/14/18 20:56	SU	JRROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Anaryus	116	99.9	116	70-135	
o-Terphenyl			47.2	50.0	94	70-135	
	#: 3073054	Sample: 608195-021 S / MS					
Units:	mg/kg	Date Analyzed: 12/16/18 22:20		JRROGATE R		STUDY	
	BTEX	C by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0390	0.0300	130	70-130	
4 D	orobenzene		0.0357	0.0300	119	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

Work Orders : 608426,			Project ID:	212C-MD-0	1102.100								
Lab Batch #: 3072979	Sample: 608426-001 SD / M	ASD Batch	n: 1 Matrix:	Soil									
Units: mg/kg	Date Analyzed: 12/14/18 21:14	SURROGATE RECOVERY STUDY											
·	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags							
[	alytes	110		[D]	70.105								
1-Chlorooctane		110	99.9	110	70-135								
o-Terphenyl		43.7	50.0	87	70-135								
Lab Batch #: 3073054	Sample: 608195-021 SD / N	ASD Batch	n: 1 Matrix:	Soil									
Units: mg/kg	Date Analyzed: 12/16/18 22:41	SU	RROGATE RE	ECOVERY S	STUDY								
•	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags							
Ana	alytes			[D]									
1,4-Difluorobenzene		0.0308	0.0300	103	70-130								
4-Bromofluorobenzene		0.0380	0.0300	127	70-130								

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

## Project Name: Green Frog Cafe Federal #1 H

<b>Work Order #:</b> 608426							Pro	ject ID: 🤇	212C-MD-(	01102.100				
Analyst: SCM	D	ate Prepar	red: 12/16/201	<b>Date Analyzed:</b> 12/16/2018										
Lab Batch ID: 3073054 Sample: 7668158-1	-BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid					
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY				
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Benzene	<0.00200	0.0998	0.106	106	0.0998	0.109	109	3	70-130	35				
Toluene	< 0.00200	0.0998	0.0928	93	0.0998	0.0979	98	5	70-130	35				
Ethylbenzene	< 0.00200	0.0998	0.122	122	0.0998	0.119	119	2	70-130	35				
m,p-Xylenes	< 0.00399	0.200	0.247	124	0.200	0.238	119	4	70-130	35				
o-Xylene	< 0.00200	0.0998	0.120	120	0.0998	0.116	116	3	70-130	35				
Analyst: ARM	D	ate Prepar	red: 12/14/201	18	<b>Date Analyzed:</b> 12/14/2018									
Lab Batch ID: 3072979 Sample: 7668112-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid					
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK SPIKE DUPLICATE RECOVERY STUDY									
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	968	97	1000	993	99	3	70-135	20				
Diesel Range Organics (DRO)	<8.13	1000	997	100	1000	1020	102	2	70-135	20				

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Green Frog Cafe Federal #1 H

Work Order # :	608426						Project II	<b>):</b> 212C-1	MD-0110	2.100		
Lab Batch ID:	3073054	QC- Sample ID:	608195	-021 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/16/2018	Date Prepared:	12/16/2	018	An	alyst: S	SCM					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
-	BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	-	Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		<0.00202	0.101	0.0807	80	0.0994	0.0721	73	11	70-130	35	
Toluene		<0.00202	0.101	0.0764	76	0.0994	0.0688	69	10	70-130	35	X
Ethylbenzene		<0.00202	0.101	0.0927	92	0.0994	0.0873	88	6	70-130	35	
m,p-Xylenes		<0.00403	0.202	0.171	85	0.199	0.161	81	6	70-130	35	
o-Xylene		<0.00202	0.101	0.0850	84	0.0994	0.0794	80	7	70-130	35	
Lab Batch ID:	3072979	QC- Sample ID:	608426	-001 S	Ba	tch #:	1 Matrix					
Date Analyzed:	12/14/2018	Date Prepared:	12/14/2	018	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
r	FPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

Analytes	Sample Result [A]	Spike Added [B]	Result [C]	Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Dup. %R [G]	RPD %	Limits %R	Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	12.1	999	977	97	999	957	95	2	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	1010	101	999	999	100	1	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 11 of 13

A. Fr.c.     Add N. Big Spring Street, Signature: Tel (420) 862-3946       H     Project #: Int (420) 862-3946       Sampler Signature: NE     Mike Carmona       Sampler Signature: Intervention     MatTRIX     Pressenvire METHOD       Sampler Signature: Intervention     MatTRIX     Pressenv	Image: Site Manager: Clair Gonzales     Clair Gonzales       Image: Clair Gonzales     Mike Carmona       Image: Clair Gonzales     Mike Carmona       Image: Clair Gonzales     Mike Carmona       Image: Clair Gonzales     Mathematic Free Solutions       Image: Clair Gonzales     Mathematic Free Solutions       Image: Clair Gonzales     Mathematic Free Solutions       Image: Clair Gonzales     Image: Clair Gonzales       Image: Clair Gonzero     Image: Clair Gonzales <tr< th=""><th>Tetra Tech, Inc.     environ market and sets and set</th><th>N. Inc.     and Managering Steps Managering Step</th><th>N. Inc.     environment of the service o</th><th>y o c</th><th>2/2 (minuted by )</th><th>alinnuiehad hv:</th><th>23 mellinquished by:</th><th>S A C</th><th>Relinquished by:</th><th>1774</th><th></th><th></th><th></th><th></th><th>( ONLY )</th><th>LAB IISE</th><th></th><th>Comments:</th><th>Receiving Laboratory</th><th>Project Location: state) Invoice to:</th><th>Project Name:</th><th></th><th></th></tr<>	Tetra Tech, Inc.     environ market and sets and set	N. Inc.     and Managering Steps Managering Step	N. Inc.     environment of the service o	y o c	2/2 (minuted by )	alinnuiehad hv:	23 mellinquished by:	S A C	Relinquished by:	1774					( ONLY )	LAB IISE		Comments:	Receiving Laboratory	Project Location: state) Invoice to:	Project Name:		
4000 N. Big Spring Street, Signing Street, Signed, Texas 79705       101 Midland, Texas 79705       Tel (422) 682:3946       Clair Gonzales       Mike Carmona       Mike Carmona       WATER       Nike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Matrix       Mike Carmona       Matrix       None       Date:       Date:       Time:	A000 N. Big Spring Streat, Ste 401 Midland, Texes 79705 Far (422) 882:9396 Far (422) 882:9396 Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Date: Time: Date: Date: Time: Date: Time: Date: Da	A00 N. Big Spring Street, Sig Tar (40) Bez-Sig Spring Far (42) Bez-Si	Add N High Spring Street, Sing Ter (Malanch Terrors So So Fact (Ag) 882-3846 Ter (Malanch Terrors So So Fact (Ag) 882-3846 Terror	Additional and spring streat, se Terr (439) 882-836 Terr (439) 8				Date:	N-21-21						чн-5 1-1,5 (4.5 ВЕВ)					Tetra Tech,		Green Frog Café	Marathon	
4000 N. Big Spring Street, Signing Street, Signed, Texas 79705       101 Midland, Texas 79705       Tel (422) 682:3946       Clair Gonzales       Mike Carmona       Mike Carmona       WATER       Nike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Mike Carmona       Matrix       Mike Carmona       Matrix       None       Date:       Date:       Time:	A000 N. Big Spring Streat, Ste 401 Midland, Texes 79705 Far (422) 882:9396 Far (422) 882:9396 Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Mike Carmona Date: Time: Date: Date: Time: Date: Time: Date: Da	Mike Carmona     Mike Carmona       Mike Carmona     1       Date:     1       Time:     1       Date:     1       Total Metals Ag As Ba Cd Cr Pb Se Hg       Circle     1       Total Metals Ag As Ba Cd Cr Pb Se Hg       Total Metals Ag As Ba Cd Cr Pb Se Hg       Total Metals Ag As Ba Cd Cr Pb Se Hg       Total Metals Ag As Ba Cd Cr Pb Se Hg       Total Metals Ag As Ba Cd Cr Pb Se Hg	Add N. Big Spring Street, Sir The (Value Acess 27) The Value Ac	Add N. Big Spring Street, Sir The (Value Acess 27) So The Carmona Mike Ca	ORIGINAL COPY	Heceived by:		Received by:	MAUL	Ê.			· · · · · · · · · · · · · · · · · · ·		12/11/2018			SAMPLING	Sampler Signature:	2	Project #:		Site Manager:	
Time:	Time:     ICE     ICE<	Time:     AB     AB     AB     AB       Time:     AB     AB     AB     AB     AB       Time:     AB     AB     AB     AB     AB       Circle     AB     AB     AB     AB     AB	Time:     AB     Circle of Services       Time:     1     2       Filtrenci     1       Filtrenci     1 <td>Time: Ti</td> <td>~</td> <td>Date</td> <td></td> <td>Date</td> <td>LI P</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>×</td> <td>WA1 SOII</td> <td>ER</td> <td>MATRIX</td> <td>Mike Ca</td> <td></td> <td>212C-MI</td> <td></td> <td>Clair Gonza</td> <td>4000 N. Big S 401 Midlan Tel (432 Fax (432</td>	Time: Ti	~	Date		Date	LI P						×	WA1 SOII	ER	MATRIX	Mike Ca		212C-MI		Clair Gonza	4000 N. Big S 401 Midlan Tel (432 Fax (432
	Image: Second	Correl       Harmonic       FILL FRED (1/N)         Correl       Harmonic       BTEX 8021B       BTEX 8260B         Correl       TPH TX1005 (Ext to C35)       TPH 3015M (GRO - DRO - ORO - MRO)         Correl       Correl       PAH 8270C         Correl       Total Metals Ag As Ba Cd Cr Pb Se Hg       Correl         Correl       TCLP Metals Ag As Ba Cd Cr Pb Se Hg       Correl	Circle       FILTERED (1/N)         FILTERED (1/N)       BTEX 8021B BTEX 8260B         Sample Temperature       TPH TX1005 (Ext to C35)         FILTERED (1/N)       X TPH 8015M (GRO - DRO - ORO - MRO)         PAH 8270C       Circle ORD - ORO - MRO)         PAH 8270C       TCLP Metals Ag As Ba Cd Cr Pb Se Hg         PAH 90       Circle ORD - MRO         PAH 90       TCLP Volatiles         PAH 90       TCLP Semi Volatiles	Circle       FILTERED (T/N)         FILTERED (T/N)       BTEX 8021B BTEX 8260B         Sample Temperature       TPH TX1005 (Ext to C35)         FILTERED (T/N)       X TPH 8015M (GRO - DRO - ORO - MRO)         PAH 8270C       PAH 8270C         COLLP Metals Ag As Ba Cd Cr Pb Se Hg       TCLP Metals Ag As Ba Cd Cr Pb Se Hg         FILTERED (T/N)       TCLP Volatiles					HAR 1						×	HNC ICE None	}	- À	rmona				lles	pring Street, Ste id,Texas 79705 ) 682-4559 2) 682-3946

Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 12/12/2018 01:48:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 608426	Temperature Measuring device used : R8
Sample Rece	ipt Checklist Comments
#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	Νο
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A

#18 Water VOC samples have zero headspace?

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

Analyst:

PH Device/Lot#:

Date: 12/12/2018

N/A

 Checklist completed by:
 Bit Mark

 Brianna Teel

 Checklist reviewed by:
 Mark

 Kelsey Brooks

Date: 12/13/2018

# Analytical Report 608427

for Tetra Tech- Midland

**Project Manager: Clair Gonzales** 

Green Frog Cafe Federal #1 H

212C-MD-01102.100

17-DEC-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





17-DEC-18

Project Manager: **Clair Gonzales Tetra Tech- Midland** 901 West Wall ST Midland, TX 79701

Reference: XENCO Report No(s): 608427 Green Frog Cafe Federal #1 H Project Address: Lea County, New Mexico

#### **Clair Gonzales**:

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) 608427. 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. 608427 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 608427



Tetra Tech- Midland, Midland, TX

Green Frog Cafe Federal #1 H

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	12-11-18 00:00		608427-001

**Sample Id** AH-5 0.1 (6.5' BEB)





## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Green Frog Cafe Federal #1 H

 Project ID:
 212C-MD-01102.100

 Work Order Number(s):
 608427

 Report Date:
 17-DEC-18

 Date Received:
 12/12/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3073054 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 608427

Tetra Tech- Midland, Midland, TX Project Name: Green Frog Cafe Federal #1 H



Project Id:212C-MD-01102.100Contact:Clair GonzalesProject Location:Lea County, New Mexico

Date Received in Lab:Wed Dec-12-18 03:18 pmReport Date:17-DEC-18Project Manager:Kelsey Brooks

	Lab Id:	608427-001	
Amaluaia Doguostad	Field Id:	AH-5 0.1 (6.5' BEB)	
Analysis Requested	Depth:		
	Matrix:	SOIL	
	Sampled:	Dec-11-18 00:00	
BTEX by EPA 8021B	Extracted:	Dec-16-18 19:45	
	Analyzed:	Dec-17-18 06:52	
	Units/RL:	mg/kg RL	
Benzene		<0.00201 0.00201	
Toluene		<0.00201 0.00201	
Ethylbenzene		<0.00201 0.00201	
m,p-Xylenes		<0.00402 0.00402	
o-Xylene		<0.00201 0.00201	
Total Xylenes		<0.00201 0.00201	
Total BTEX		<0.00201 0.00201	
TPH By SW8015 Mod	Extracted:	Dec-14-18 14:00	
	Analyzed:	Dec-14-18 21:32	
	Units/RL:	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	
Total TPH		<15.0 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Boah

Kelsey Brooks Project Manager



# LABORATORIES

# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



# Project Name: Green Frog Cafe Federal #1 H

	: 3072979						
Units:	mg/kg	<b>Date Analyzed:</b> 12/14/18 21:32	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chlorooctar	ne		92.5	99.8	93	70-135	
o-Terphenyl			46.0	49.9	92	70-135	
Lab Batch #	: 3073054	Sample: 608427-001 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/17/18 06:52	2 SURROGATE RECOVERY STUDY				
		A by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluorob		A mary tes	0.0257	0.0300	86	70-130	
4-Bromofluor			0.0353	0.0300	118	70-130	
Lab Batch #		Sample: 7668112-1-BLK / E			-		
Units:	mg/kg	<b>Date Analyzed:</b> 12/14/18 19:43		RROGATE R		STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chlorooctar	ne		96.9	100	97	70-135	
o-Terphenyl			48.6	50.0	97	70-135	
Lab Batch #	: 3073054	Sample: 7668158-1-BLK / E	BLK Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/16/18 23:24	SU	RROGATE R	ECOVERY S	STUDY	
Units:		Date Analyzed: 12/16/18 23:24	SU Amount Found [A]	RROGATE R True Amount [B]	ECOVERY S Recovery %R [D]	STUDY Control Limits %R	Flage
Units:	BTEX	C by EPA 8021B	Amount Found	True Amount	Recovery %R	Control Limits	Flags
	BTEX	C by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluorob 4-Bromofluor	BTEX	C by EPA 8021B	Amount Found [A] 0.0277 0.0320	True Amount [B] 0.0300 0.0300	Recovery %R [D]           92           107	Control Limits %R	Flag
1,4-Difluorob 4-Bromofluor <b>Lab Batch #</b>	BTEX	X by EPA 8021B Analytes	Amount Found [A] 0.0277 0.0320 3KS Batch	True Amount [B] 0.0300 0.0300	Recovery %R [D] 92 107 : Solid	Control Limits %R 70-130 70-130	Flag
1,4-Difluorob	BTEX benzene : 3072979 mg/kg TPH H	Sample:         7668112-1-BKS / E           Date Analyzed:         12/14/18 20:01           By SW8015 Mod         B	Amount Found [A] 0.0277 0.0320 3KS Batch	True Amount [B] 0.0300 0.0300 n: 1 Matrix	Recovery %R [D] 92 107 : Solid ECOVERY S Recovery %R	Control Limits %R 70-130 70-130	
1,4-Difluorob 4-Bromofluor <b>Lab Batch #</b>	BTEX BTEX Denzene Cobenzen	<b>X by EPA 8021B</b> Analytes Sample: 7668112-1-BKS / E Date Analyzed: 12/14/18 20:01	Amount Found [A] 0.0277 0.0320 3KS Batcl SU Amount Found	True Amount [B] 0.0300 0.0300 h: 1 Matrix RROGATE R True Amount	Recovery %R [D] 92 107 : Solid ECOVERY S Recovery	Control Limits %R 70-130 70-130 STUDY Control Limits	Flag

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

U <b>nits:</b>	mg/kg	Date Analyzed: 12/16/18 21:37	CI	RROGATE R	FCOVERV	STUDV	
	88		50				
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0353	0.0300	118	70-130	
4-Bromoflue	orobenzene		0.0384	0.0300	128	70-130	
Lab Batch	#: 3072979	Sample: 7668112-1-BSD / E	BSD Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/14/18 20:19	9 SURROGATE RECOVERY STUDY				
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Analytes	121	100		70.125	
o-Terphenyl			121	100	121	70-135	
	#: 3073054	Sample: 7668158-1-BSD / E	49.8 BSD Batcl	50.0 50.0	: Solid	70-135	
Units:	mg/kg	Date Analyzed: 12/16/18 21:59					
Units.	iiig/kg	Date Analyzeu. 12/10/18 21.57	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0378	0.0300	126	70-130	
4-Bromoflue	orobenzene		0.0372	0.0300	124	70-130	
Lab Batch	#: 3072979	Sample: 608426-001 S / MS	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/14/18 20:56	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct			116	99.9	116	70-135	
o-Terphenyl			47.2	50.0	94	70-135	
	#: 3073054	Sample: 608195-021 S / MS	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/16/18 22:20	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
140.0	1	Analytes	0.0070	0.0700			
1,4-Difluoro			0.0390	0.0300	130	70-130	
⊥/L Bromothu	orobenzene		0.0357	0.0300	119	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

Work Orders : @	508427,		Project ID:	212C-MD-0	01102.100	
Lab Batch #: 30729	Sample:         608426-001 SD / 1	MSD Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	<b>Date Analyzed:</b> 12/14/18 21:14	SU	RROGATE RI	ECOVERY	STUDY	
T	TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytes	110	99.9	110	70-135	
o-Terphenyl		43.7	50.0	87	70-135	
Lab Batch #: 30730	<b>Sample:</b> 608195-021 SD / 1	MSD Batc	h: 1 Matrix:	Soil		
Units: mg/kg	<b>Date Analyzed:</b> 12/16/18 22:41	SU	RROGATE RI	ECOVERY	STUDY	
I	BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	2	0.0380	0.0300	127	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

### Project Name: Green Frog Cafe Federal #1 H

<b>Work Order #:</b> 608427							Pro	ject ID:	212C-MD-0	01102.100	
Analyst: SCM	D	ate Prepar	red: 12/16/202	18			Date A	nalyzed:	12/16/2018		
Lab Batch ID: 3073054 Sample: 7668158-1	-BKS	Bate	<b>h #:</b> 1				Matrix: Solid				
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.106	106	0.0998	0.109	109	3	70-130	35	
Toluene	< 0.00200	0.0998	0.0928	93	0.0998	0.0979	98	5	70-130	35	
Ethylbenzene	< 0.00200	0.0998	0.122	122	0.0998	0.119	119	2	70-130	35	
m,p-Xylenes	< 0.00399	0.200	0.247	124	0.200	0.238	119	4	70-130	35	
o-Xylene	< 0.00200	0.0998	0.120	120	0.0998	0.116	116	3	70-130	35	
Analyst: ARM	D	ate Prepar	red: 12/14/20	18			Date A	nalyzed:	12/14/2018		
Lab Batch ID: 3072979 Sample: 7668112-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	968	97	1000	993	99	3	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	997	100	1000	1020	102	2	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Green Frog Cafe Federal #1 H

Work Order # :	608427						Project II	<b>):</b> 212C-1	MD-0110	2.100		
Lab Batch ID:	3073054	QC- Sample ID:	608195	-021 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/16/2018	Date Prepared:	12/16/2	018	An	alyst: S	SCM					
<b>Reporting Units:</b>	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		<0.00202	0.101	0.0807	80	0.0994	0.0721	73	11	70-130	35	
Toluene		<0.00202	0.101	0.0764	76	0.0994	0.0688	69	10	70-130	35	X
Ethylbenzene		<0.00202	0.101	0.0927	92	0.0994	0.0873	88	6	70-130	35	
m,p-Xylenes		<0.00403	0.202	0.171	85	0.199	0.161	81	6	70-130	35	
o-Xylene		<0.00202	0.101	0.0850	84	0.0994	0.0794	80	7	70-130	35	
Lab Batch ID:	3072979	QC- Sample ID:	608426	-001 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/14/2018	Date Prepared:	12/14/2	018	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
, r	TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

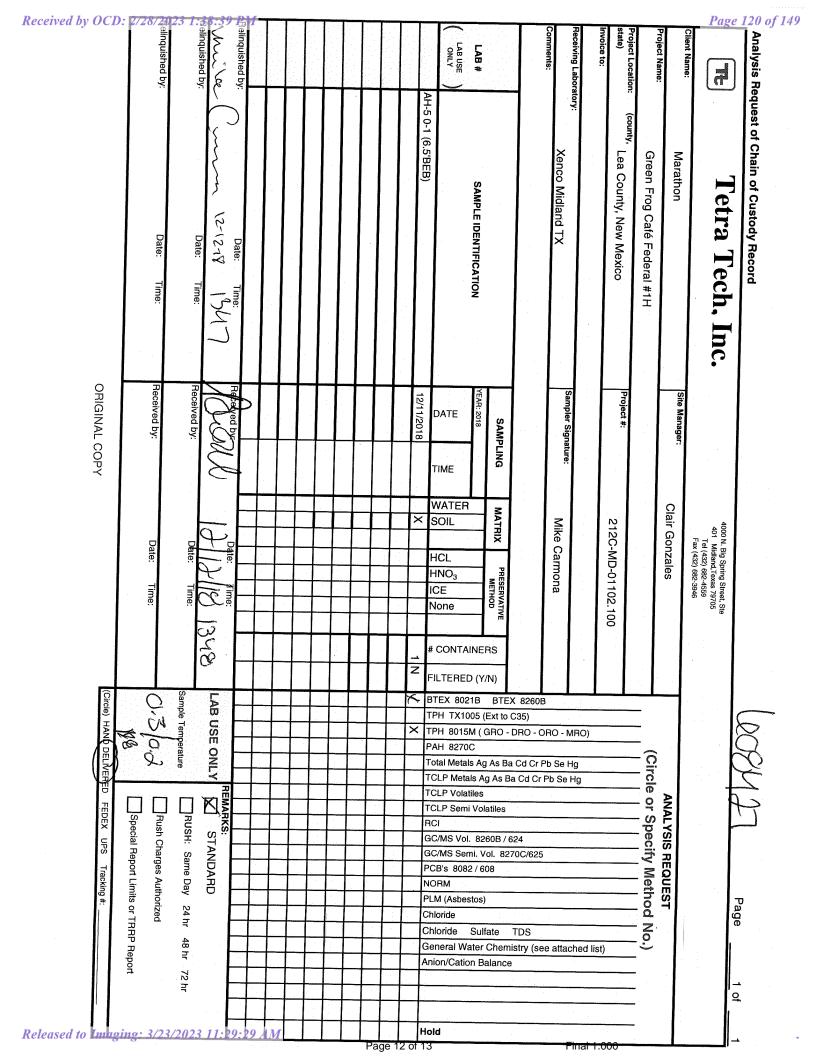
Analytes	Sample Result [A]	Spike Added [B]	Result [C]	Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Dup. %R [G]	RPD %	Limits %R	Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	12.1	999	977	97	999	957	95	2	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	1010	101	999	999	100	1	70-135	20	

 $\begin{array}{ll} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100*(C-A)/B \\ Relative \ Percent \ Difference \quad RPD = 200*|(C-F)/(C+F)| \end{array}$ 

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 11 of 13



Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 12/12/2018 03:18:12 PM Temperature Measuring device used : R8 Work Order #: 608427 Comments Sample Receipt Checklist .2 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes

#18 Water VOC samples have zero headspace?

#15 Sufficient sample amount for indicated test(s)?

#16 All samples received within hold time?

#17 Subcontract of sample(s)?

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

Analyst:

PH Device/Lot#:

Date: 12/12/2018

Yes

Yes

N/A

N/A

Checklist completed by: Bianna Teel Checklist reviewed by: Markoath Kelsey Brooks

Date: 12/13/2018

# Analytical Report 608428

for Tetra Tech- Midland

**Project Manager: Clair Gonzales** 

Green Frog Cafe Federal #1 H

212C-MD-01102.100

17-DEC-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





17-DEC-18

Project Manager: **Clair Gonzales Tetra Tech- Midland** 901 West Wall ST Midland, TX 79701

Reference: XENCO Report No(s): 608428 Green Frog Cafe Federal #1 H Project Address: Lea County, New Mexico

#### **Clair Gonzales**:

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) 608428. 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. 608428 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 608428



Tetra Tech- Midland, Midland, TX

Green Frog Cafe Federal #1 H

Mat	trix	Date Collected	Sample Depth	Lab Sample Id
	S	12-11-18 00:00		608428-001

**Sample Id** AH-5 2'-2.5'(4.5' BEB)





## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Green Frog Cafe Federal #1 H

 Project ID:
 212C-MD-01102.100

 Work Order Number(s):
 608428

 Report Date:
 17-DEC-18

 Date Received:
 12/12/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3073054 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 608428

Tetra Tech- Midland, Midland, TX Project Name: Green Frog Cafe Federal #1 H



Project Id:212C-MD-01102.100Contact:Clair GonzalesProject Location:Lea County, New Mexico

Date Received in Lab:Wed Dec-12-18 03:18 pmReport Date:17-DEC-18Project Manager:Kelsey Brooks

	Lab Id:	608428-001
Analysis Requested	Field Id:	AH-5 2'-2.5'(4.5' BEB)
Analysis Kequestea	Depth:	
	Matrix:	SOIL
	Sampled:	Dec-11-18 00:00
BTEX by EPA 8021B	Extracted:	Dec-16-18 19:45
	Analyzed:	Dec-17-18 07:13
	Units/RL:	mg/kg RL
Benzene		<0.00200 0.00200
Toluene		<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200
m,p-Xylenes		< 0.00400 0.00400
o-Xylene		<0.00200 0.00200
Total Xylenes		<0.00200 0.00200
Total BTEX		<0.00200 0.00200
TPH By SW8015 Mod	Extracted:	Dec-13-18 17:00
	Analyzed:	Dec-14-18 01:07
	Units/RL:	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0
Diesel Range Organics (DRO)		79.5 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0
Total TPH		79.5 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kms Boah

Kelsey Brooks Project Manager



# LABORATORIES

# **Flagging Criteria**



Page 127 of 149

- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



# Project Name: Green Frog Cafe Federal #1 H

	rders : 60842 #: 3073061	8, Sample: 608428-001 / SMP	Batel	-	: 212C-MD-0	)1102.100	
Units:	mg/kg	Date Analyzed: 12/14/18 01:07	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		106	99.7	106	70-135	
o-Terpheny			47.1	49.9	94	70-135	
Lab Batch	#: 3073054	Sample: 608428-001 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/17/18 07:13	SU	RROGATE R	ECOVERY	STUDY	
	ΒΤΕΣ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluor	ohanzana	Anarytes	0.0254	0.0200		70.120	
,	orobenzene		0.0254	0.0300	85	70-130	
	#: 3073061	Sample: 7668079-1-BLK / 1	0.0356 BLK Batcl	0.0300 h: 1 Matrix	119 :: Solid	70-130	
Lab Batch		-					
Units:	mg/kg	Date Analyzed: 12/13/18 19:26	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		83.0	100	83	70-135	
o-Terpheny	n		42.2	50.0	84	70-135	
Lab Batch	#: 3073054	Sample: 7668158-1-BLK / 1	BLK Batc	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/16/18 23:24	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	ohanzana	Anarytes	0.0277	0.0200		70.120	
1	orobenzene		0.0277	0.0300	92	70-130	
	#: 3073061	Sample: 7668079-1-BKS / 1	0.0320 BKS Batcl	0.0300	107	70-130	
Units:	mg/kg	<b>Date Analyzed:</b> 12/13/18 19:42					
omus.	111 <sub>6</sub> / Nğ	Date Analyzett, 12/15/10 17.42	SU	RROGATE R	LUVERY	51001	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1-Chlorooc			104	100	104	70-135	
o-Terpheny	7 <b>1</b>		43.6	50.0	87	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

Units:	mg/kg	Date Analyzed: 12/16/18 21:37	SU	RROGATE R	ECOVERY 9	STUDY	
		K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0353	0.0300	118	70-130	
4-Bromoflu	orobenzene		0.0384	0.0300	128	70-130	
Lab Batch	<b>#:</b> 3073061	Sample: 7668079-1-BSD / E	BSD Batcl	h: 1 Matrix	: Solid		
U <b>nits:</b>	mg/kg	Date Analyzed: 12/13/18 19:57	SU	RROGATE R	RECOVERY	STUDY	
	TPH I	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane	Anarytes	110	100	110	70-135	
o-Terpheny			44.4	50.0	89	70-135	
	#: 3073054	Sample: 7668158-1-BSD / E			: Solid	70-155	
Units:	mg/kg	Date Analyzed: 12/16/18 21:59		RROGATE R		STUDY	
	BTEX	K by EPA 8021B	Amount Found	True Amount	Recovery	Control Limits	Flags
		Analytes	[A]	[B]	%R [D]	%R	8
1,4-Difluor	obenzene		0.0378	0.0300	126	70-130	
4-Bromoflu	orobenzene		0.0372	0.0300	124	70-130	
Lab Batch	#: 3073061	Sample: 608540-021 S / MS	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/13/18 20:28	SU	RROGATE R	RECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Analytes	109	00.8		70.125	
o-Terpheny			108	99.8	108	70-135	
	#: 3073054	Sample: 608195-021 S / MS	43.6 Batc	49.9 h: 1 Matrix	87 . Soil	70-135	
Units:	mg/kg	Date Analyzed: 12/16/18 22:20					
cinto.	1116/ KB	Date Analyzett. 12/10/10 22.20	SU	RROGATE R	LCOVERY		
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0390	0.0300	130	70-130	
	orobenzene		0.0357	0.0300	119	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

Work Oi	rders : 60842	8,		Project ID:	212C-MD-0	01102.100	
Lab Batch	#: 3073061	Sample: 608540-021 SD / M	MSD Batc	h: 1 Matrix:	Soil		
Units:	mg/kg	Date Analyzed: 12/13/18 20:44	SU	JRROGATE RI	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tana	Analytes	112	99.8	112	70-135	
o-Terpheny			43.4	49.9	87	70-135	
	#: 3073054	Sample: 608195-021 SD / N			Soil		
Units:	mg/kg	Date Analyzed: 12/16/18 22:41	SU	RROGATE R	ECOVERYS	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0308	0.0300	103	70-130	
4-Bromoflu	orobenzene		0.0380	0.0300	127	70-130	

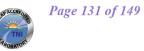
\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

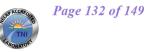
### Project Name: Green Frog Cafe Federal #1 H

Work Order #: 608428							Pro	ject ID:	212C-MD-0	01102.100	
Analyst: SCM	D	ate Prepar	red: 12/16/202	18			Date A	nalyzed: 1	12/16/2018		
Lab Batch ID: 3073054 Sample: 7668158-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.106	106	0.0998	0.109	109	3	70-130	35	
Toluene	< 0.00200	0.0998	0.0928	93	0.0998	0.0979	98	5	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.122	122	0.0998	0.119	119	2	70-130	35	
m,p-Xylenes	< 0.00399	0.200	0.247	124	0.200	0.238	119	4	70-130	35	
o-Xylene	<0.00200	0.0998	0.120	120	0.0998	0.116	116	3	70-130	35	
Analyst: ARM	D	ate Prepar	red: 12/13/202	18			Date A	nalyzed:	12/13/2018		
Lab Batch ID: 3073061 Sample: 7668079-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1090	109	1000	1150	115	5	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	966	97	1000	984	98	2	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Green Frog Cafe Federal #1 H

Work Order # :	608428						Project II	<b>):</b> 212C-1	MD-0110	2.100		
Lab Batch ID:	3073054	QC- Sample ID:	608195	-021 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/16/2018	Date Prepared:	12/16/2	018	An	alyst: S	SCM					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
]	BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	-	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene		<0.00202	0.101	0.0807	80	0.0994	0.0721	73	11	70-130	35	
Toluene		<0.00202	0.101	0.0764	76	0.0994	0.0688	69	10	70-130	35	X
Ethylbenzene		<0.00202	0.101	0.0927	92	0.0994	0.0873	88	6	70-130	35	
m,p-Xylenes		<0.00403	0.202	0.171	85	0.199	0.161	81	6	70-130	35	
o-Xylene		<0.00202	0.101	0.0850	84	0.0994	0.0794	80	7	70-130	35	
Lab Batch ID:	3073061	QC- Sample ID:	608540	-021 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/13/2018	Date Prepared:	12/13/2	018	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
7	TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

Analytes	Sample Result [A]	Spike Added [B]	Result [C]	Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Dup. %R [G]	RPD %	Limits %R	Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1140	114	998	1180	118	3	70-135	20	
Diesel Range Organics (DRO)	14.5	998	959	95	998	992	98	3	70-135	20	

 $\begin{array}{ll} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100*(C-A)/B \\ Relative \ Percent \ Difference \quad RPD = 200*|(C-F)/(C+F)| \end{array}$ 

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Page 11 of 13

eceived by OC	7-2/28/2 Relinquished by:	Pelinquished by						Þ		LAB #		Comments:	Heceiving Laboratory:	Invoice to:	Project Location: state)	Project Name:	Client Name:		e 133 of 1 Analysis Req
	Date: Time:	Date: Time: Date: Time:						AH-5 2'-2.5' (4.5' BEB)		SAMPLE IDENTIFICATION			y: Xenco Midland TX	Tetra Tech, Inc.	(county, Lea County, New Mexico	Green Frog Café Federal #1H	Marathon	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	Received by:						12/11/2018	DATE	YEAR: 2018	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
СОРҮ		Z					1	1	TIME			-	ure:			-			· .
	D							×	WATE SOIL	H	MATRIX		Mike Carmona		212C-N		Clair Gonzales	4000 N. Big 401 Midla Tel (43 Fax (4:	
	Date: Time:								HCL HNO₃ ICE None	·	PRESERVATIVE		armona		212C-MD-01102.1		ales	4000 N. Big Spring Street, Ste 401 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 682-3946	-
		1348						<u> </u>	# CONT						100				
(C)					_				FILTER BTEX 8			X 8260	3						8
(Circie) HAN		LAB USE ONLY						×		15M ( C		- DRO - (	DRO -	MRO)					208418
	60						 			tals Ag		Ba Cd Cr Ba Cd Cr					(C::>		<del>D</del>
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FEDEX L	]Rush ( ]Specia	ARKS: X ST, RUSH:							RCI GC/MS \	Vol. 82	260B /	624	-				ANALYSIS		
UPS Tr	Charges I Repor	STANDARD STANDARD SH: Same Day							PCB's 8			270C/62	5				REQUEST		
Fracking #:	Rush Charges Authorized	-							NORM PLM (As		)						UEST		Page
	ized or TRRI	24 hr 🗸							Chloride Chloride	s Sul	lfate	TDS							, Э
	Rush Charges Authorized Special Report Limits or TRRP Report	48 hr 7							General Anion/C			mistry (s ce	ee att	ached	ust)		-		
	<u></u> . −	72 hr												· ·			-		1 of
leased to Im	aina · 2/2	3/2023 11.1	9.20	AM		╞			Hold					- 					-

Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 12/12/2018 03:18:23 PM Temperature Measuring device used : R8 Work Order #: 608428 Comments Sample Receipt Checklist .2 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes

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

Analyst:

#17 Subcontract of sample(s)?

PH Device/Lot#:

#18 Water VOC samples have zero headspace?

Date: 12/12/2018

N/A

N/A

Checklist completed by: Bianna Teel Checklist reviewed by: Markoath Kelsey Brooks

Date: 12/13/2018

# Analytical Report 608429

for Tetra Tech- Midland

**Project Manager: Clair Gonzales** 

Green Frog Cafe Federal #1 H

212C-MD-01102.100

19-DEC-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





19-DEC-18

Project Manager: **Clair Gonzales Tetra Tech- Midland** 901 West Wall ST Midland, TX 79701

Reference: XENCO Report No(s): 608429 Green Frog Cafe Federal #1 H Project Address: Lea County, New Mexico

#### **Clair Gonzales**:

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) 608429. 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. 608429 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,

Huns hoah

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Id

AH-2 (1'BEB) AH-2 Stockpile Composite AH-9D (0-1')

## Sample Cross Reference 608429



## Tetra Tech- Midland, Midland, TX

Green Frog Cafe Federal #1 H

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	12-11-18 00:00		608429-001
S	12-11-18 00:00		608429-002
S	12-11-18 00:00		608429-003





## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Green Frog Cafe Federal #1 H

 Project ID:
 212C-MD-01102.100

 Work Order Number(s):
 608429

 Report Date:
 19-DEC-18

 Date Received:
 12/12/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3073258 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected. Samples affected are: 608429-001.



Certificate of Analysis Summary 608429

Tetra Tech- Midland, Midland, TX Project Name: Green Frog Cafe Federal #1 H



Project Id:212C-MD-01102.100Contact:Clair GonzalesProject Location:Lea County, New Mexico

Date Received in Lab:Wed Dec-12-18 03:18 pmReport Date:19-DEC-18Project Manager:Kelsey Brooks

	Lab Id:	608429-0	001	608429-0	002	608429-0	)03		
An alusia De au este d	Field Id:	AH-2 (1'E	BEB)	AH-2 Stockpile	Composite	AH-9D ((	)-1')		
Analysis Requested	Depth:								
	Matrix:	SOIL	,	SOIL		SOIL			
	Sampled:	Dec-11-18	00:00	Dec-11-18	00:00	Dec-11-18	00:00		
BTEX by EPA 8021B	Extracted:	Dec-17-18	08:45	Dec-17-18	08:45	Dec-17-18	08:45		
	Analyzed:	Dec-17-18	10:58	Dec-17-18	11:17	Dec-17-18	11:36		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
Toluene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
Ethylbenzene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
m,p-Xylenes		< 0.00400	0.00400	< 0.00403	0.00403	< 0.00401	0.00401		
o-Xylene		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
Total Xylenes		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
Total BTEX		< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200		
TPH By SW8015 Mod	Extracted:	Dec-13-18	17:00	Dec-13-18	17:00	Dec-13-18	17:00		
	Analyzed:	Dec-15-18	10:45	Dec-14-18	01:38	Dec-14-18	01:53		
	Units/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		
Diesel Range Organics (DRO)		<15.0	15.0	71.0	15.0	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	20.6	15.0	<15.0	15.0		
Total TPH		35.6	15.0	91.6	15.0	<15.0	15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Kms Boah

Kelsey Brooks Project Manager

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# LABORATORIES

# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



# Project Name: Green Frog Cafe Federal #1 H

Lab Batch		Sample: 608429-002 / SMP	Batc	h: 1 Matrix			
Units:	mg/kg	Date Analyzed: 12/14/18 01:38	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	ane		109	99.8	109	70-135	
o-Terpheny			47.7	49.9	96	70-135	
Lab Batch	<b>#:</b> 3073061	Sample: 608429-003 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/14/18 01:53	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Analytes	105	00.0		70.125	
o-Terpheny			105	99.9	105	70-135	
	#: 3073061	Sample: 608429-001 / SMP	44.9 Batc	50.0 h: 1 Matrix	90 • Soil	70-135	
Lab batch Units:		<b>Date Analyzed:</b> 12/15/18 10:45			-		
Units:	mg/kg	Date Analyzed: 12/13/18 10.43	SU	RROGATE R	ECOVERYS	STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	ane		97.7	99.9	98	70-135	
o-Terpheny	1		44.2	50.0	88	70-135	
Lab Batch	#: 3073258	Sample: 608429-001 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/17/18 10:58	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene	Analytes	0.0243	0.0300	[ <b>D</b> ] 81	70-130	
1,4-Difluoro 4-Bromoflu		Analytes		0.0300		70-130 70-130	**
4-Bromoflu		Analytes  Sample: 608429-002 / SMP	0.0243	0.0300	81           34		**
4-Bromoflu Lab Batch	orobenzene		0.0243 0.0103 Batc	0.0300	81 34 : Soil	70-130	**
4-Bromoflu	orobenzene #: 3073258 mg/kg BTEX	Sample: 608429-002 / SMP Date Analyzed: 12/17/18 11:17	0.0243 0.0103 Batc	0.0300 h: 1 Matrix	81 34 Soil ECOVERY S Recovery %R	70-130	
4-Bromoflu Lab Batch	orobenzene #: 3073258 mg/kg BTEX	Sample: 608429-002 / SMP Date Analyzed: 12/17/18 11:17	0.0243 0.0103 Bate SU Amount Found	0.0300 h: 1 Matrix JRROGATE R True Amount	81 34 Soil ECOVERY S	70-130 STUDY Control Limits	** Flags

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

rders : 608429 #: 3073258	9, <b>Sample:</b> 608429-003 / SMP	Batc	0		01102.100	
mg/kg	Date Analyzed: 12/17/18 11:36	SU	RROGATE R	ECOVERY	STUDY	
		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
obenzene		0.0322	0.0300	107	70-130	
		0.0286	0.0300	95	70-130	
#: 3073061	•	BLK Batc	h: 1 Matrix	: Solid		
mg/kg	<b>Date Analyzed:</b> 12/13/18 19:26	SU	RROGATE R	ECOVERY	STUDY	
		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes		100		70.105	
	Complet 7660222 1 DI V / F				70-135	
	•					
mg/kg	Date Analyzed: 12/17/18 10:40	SU	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
obenzene		0.0298	0.0300	99	70-130	
orobenzene		0.0265	0.0300	88	70-130	
#: 3073061	Sample: 7668079-1-BKS / E	KS Bate	h: 1 Matrix	: Solid		
mg/kg	Date Analyzed: 12/13/18 19:42	SU	RROGATE R	ECOVERY	STUDY	
TPH I		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
				-		
					70-135	
	•					
mg/kg	Date Analyzed: 12/17/18 09:06	SU	RROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytas					
obenzene	Analytes	0.0309	0.0300	103	70-130	
	<pre>#: 3073258 mg/kg BTEX bbenzene orobenzene #: 3073061 mg/kg TPH H ane #: 3073258 mg/kg BTEX bbenzene orobenzene #: 3073061 mg/kg TPH H ane ane #: 3073258 mg/kg</pre>	#: 3073258       Sample: 608429-003 / SMP         mg/kg       Date Analyzed: 12/17/18 11:36         BTEX by EPA 8021B       Analytes         ahalytes       Sobenzene         orobenzene       mg/kg         #: 3073061       Sample: 7668079-1-BLK / E         mg/kg       Date Analyzed: 12/13/18 19:26         TPH By SW8015 Mod       Analytes         ane       Mailytes         Img/kg       Date Analyzed: 12/17/18 10:40         BTEX by EPA 8021B       Mailytes         mg/kg       Date Analyzed: 12/17/18 10:40         BTEX by EPA 8021B       Mailytes         mg/kg       Date Analyzed: 12/17/18 10:40         BTEX by EPA 8021B       Mailytes         obenzene       Mailytes         obenzene       Mailytes         Malytes       Mailytes         Malytes       Mailytes         Malytes       Mailytes         orobenzene       Mailytes         mg/kg       Date Analyzed: 12/13/18 19:42         TPH By SW8015 Mod       Mailytes         ane       Mailytes         ane       Mailytes         ane       Mailytes         ane       Mailytes         ane       Mailytes	#: 3073258 Sample: 608429-003 / SMP Batcl mg/kg Date Analyzed: 12/17/18 11:36 SU BTEX by EPA 8021B Analyzed: 12/17/18 11:36 Found [A]   BTEX by EPA 8021B Amount Found [A]   Analytes 0.0322   orobenzene 0.0328   #: 3073061 Sample: 7668079-1-BLK / BLK   mg/kg Date Analyzed: 12/13/18 19:26   TPH By SW8015 Mod Amount Found [A]   ane 83.0   I 42.2   #: 3073258 Sample: 7668232-1-BLK / BLK   mg/kg Date Analyzed: 12/17/18 10:40   BTEX by EPA 8021B Amount Found [A]   Analytes 0.0286   #: 3073061 Sample: 7668079-1-BKK / BKK   benzene 0.0298   orobenzene 0.0225   #: 3073061 Sample: 7668079-1-BKS / BKS   mg/kg Date Analyzed: 12/13/18 19:42   Weig Date Analyzed: 12/13/18 19:42   mg/kg Date Analyzed: 12/13/18 19:42   mg/kg Date Analyzed: 12/13/18 19:42   mg/kg Date Analyzed: 12/13/18 19:42   TPH By SW8015 Mod Amount Found [A]   ane 104   i 43.6   #: 3073258 Sample: 7668232-1-BKS / BKS   mg/kg Date Analyzed: 12/17/18 09:06   With analytes 104   i 43.6   #: 3073258 Sample: 7668232-1-BKS / BKS   mg/kg Date Analyzed: 12/17/18 09:06   BTEX by EPA 8021B Amount	#: 3073258       Sample: 608429-003 / SMP       Batch: 1       Matrix         mg/kg       Date Analyzed: 12/17/18 11:36       SURROGATE R         BTEX by EPA 8021B       Amount       Found       IB         Analytes       0.0322       0.0300       IB         obenzene       0.0322       0.0300       IB         orobenzene       0.0326       0.0300         #: 3073061       Sample: 7668079-1-BLK / BLK       Batch: 1       Matrix         mg/kg       Date Analyzed: 12/13/18 19:26       SURROGATE R       Amount         TPH By SW8015 Mod       Amount       Found       IB       Amount         [B]       42.2       50.0       #       3073258       Sample: 7668232-1-BLK / BLK       Batch: 1       Matrix         mg/kg       Date Analyzed: 12/17/18 10:40       SURROGATE R       IB       IB       Amount       IB         Analytes       0.0298       0.0300       ID       IB       IB       IB       IB         Mg/g       Date Analyzed: 12/17/18 10:40       SURROGATE R       IB       IB <td>#: 3073258 Sample: 608429-003 / SMP Batch: 1 Matrix: Soil   mg/kg Date Analyzed: 12/17/18 11:36 SURROGATE RECOVERY   BTEX by EPA 8021B Amount [A] Amount [B] True Amount [B] Recovery (% [D]   Analytes 0.0322 0.0300 107   orobenzene 0.0322 0.0300 95   #: 3073061 Sample: 7668079-1-BLK / BLK Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/13/18 19:26 SURROGATE RECOVERY   TPH By SW8015 Mod Amount Found [A] True Amount [B] Recovery (% [D]   ane 83.0 100 83   1 42.2 50.0 84   #: 3073258 Sample: 7668232-1-BLK / BLK Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/17/18 10:40 SURROGATE RECOVERY ( Analytes Recovery (% R [D]   BTEX by EPA 8021B Amount Found [A] True Amount [B] Recovery (% R [D]   benzene 0.0298 0.0300 99   orobenzene 0.0298 0.0300 88   #: 3073061 Sample: 7668079-1-BKS / BKS Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/17/18 19:42 SURROGATE RECOVERY ( % R [D]   mg/kg Date Analyzed: 12/13/18 19:42 SURROGATE RECOVERY ( % R [D]   ane 104 100 104   mg/kg Date Analyzed: 12/13/18 19:42 SURCOGATE RECOVERY ( % R [D]   ane 104 100 104   mg/kg Date Analyzed: 12/13/18 19:42 SUROGATE RECOVERY ( % R [D]   ane &lt;</td> <td>#: 3073258       Sample: 608429-003 / SMP       Bateh:       1       Matrix: Soil         mg/kg       Date Analyzed:       12/17/18 11:36       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount found [A]       True Amount [B]       Recovery %R       Control Limits %R         obenzene       0.0322       0.0300       107       70-130         orobenzene       0.0286       0.0300       95       70-130         mg/kg       Date Analyzed:       12/13/18 19:26       SURROGATE RECOVERY STUDY         TPH By SW8015 Mod       Amount [A]       True Amount [A]       Recovery %R       Control Limits %R         ane       83.0       100       83       70-135         #: 3073258       Sample: 7668232-1-BLK / BLK       Batch:       1       Matrix: Solid         mg/kg       Date Analyzed:       12/17/18 10:40       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount [A]       Recovery %R       Control Limits %R         obenzene       0.0265       0.0300       99       70-130         mg/kg       Date Analyzed:       12/17/18 10:40       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount [A]       Amount [B]       Recovery %R       Control Limits %R</td>	#: 3073258 Sample: 608429-003 / SMP Batch: 1 Matrix: Soil   mg/kg Date Analyzed: 12/17/18 11:36 SURROGATE RECOVERY   BTEX by EPA 8021B Amount [A] Amount [B] True Amount [B] Recovery (% [D]   Analytes 0.0322 0.0300 107   orobenzene 0.0322 0.0300 95   #: 3073061 Sample: 7668079-1-BLK / BLK Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/13/18 19:26 SURROGATE RECOVERY   TPH By SW8015 Mod Amount Found [A] True Amount [B] Recovery (% [D]   ane 83.0 100 83   1 42.2 50.0 84   #: 3073258 Sample: 7668232-1-BLK / BLK Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/17/18 10:40 SURROGATE RECOVERY ( Analytes Recovery (% R [D]   BTEX by EPA 8021B Amount Found [A] True Amount [B] Recovery (% R [D]   benzene 0.0298 0.0300 99   orobenzene 0.0298 0.0300 88   #: 3073061 Sample: 7668079-1-BKS / BKS Batch: 1 Matrix: Solid   mg/kg Date Analyzed: 12/17/18 19:42 SURROGATE RECOVERY ( % R [D]   mg/kg Date Analyzed: 12/13/18 19:42 SURROGATE RECOVERY ( % R [D]   ane 104 100 104   mg/kg Date Analyzed: 12/13/18 19:42 SURCOGATE RECOVERY ( % R [D]   ane 104 100 104   mg/kg Date Analyzed: 12/13/18 19:42 SUROGATE RECOVERY ( % R [D]   ane <	#: 3073258       Sample: 608429-003 / SMP       Bateh:       1       Matrix: Soil         mg/kg       Date Analyzed:       12/17/18 11:36       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount found [A]       True Amount [B]       Recovery %R       Control Limits %R         obenzene       0.0322       0.0300       107       70-130         orobenzene       0.0286       0.0300       95       70-130         mg/kg       Date Analyzed:       12/13/18 19:26       SURROGATE RECOVERY STUDY         TPH By SW8015 Mod       Amount [A]       True Amount [A]       Recovery %R       Control Limits %R         ane       83.0       100       83       70-135         #: 3073258       Sample: 7668232-1-BLK / BLK       Batch:       1       Matrix: Solid         mg/kg       Date Analyzed:       12/17/18 10:40       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount [A]       Recovery %R       Control Limits %R         obenzene       0.0265       0.0300       99       70-130         mg/kg       Date Analyzed:       12/17/18 10:40       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount [A]       Amount [B]       Recovery %R       Control Limits %R

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

	rders: 608429 #: 3073061	9, Sample: 7668079-1-BSD / 1	BSD Bate	-	: 212C-MD-0 : Solid	01102.100									
Units:	mg/kg	Date Analyzed: 12/13/18 19:57	SU	RROGATE R	ECOVERYS	STUDY									
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags								
		Analytes			[D]										
1-Chlorooc	tane		110	100	110	70-135									
o-Terpheny			44.4	50.0	89	70-135									
Lab Batch	#: 3073258	Sample: 7668232-1-BSD / 1	BSD Batcl	h: 1 Matrix	: Solid										
Units:	mg/kg	Date Analyzed: 12/17/18 09:25	SURROGATE RECOVERY STUDY												
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags								
1,4-Difluor			0.0302	0.0300	101	70-130									
· · · · · · · · · · · · · · · · · · ·	orobenzene		0.0302	0.0300	88	70-130									
	#: 3073061	Sample: 608540-021 S / MS				10-150									
Units:	mg/kg	Date Analyzed: 12/13/18 20:28	SURROGATE RECOVERY STUDY												
	8			1		1									
	TPH F	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags								
		Analytes			[D]										
1-Chlorooc	tane		108	99.8	108	70-135									
o-Terpheny	1		43.6	49.9	87	70-135									
Lab Batch	#: 3073258	Sample: 608429-001 S / MS	S Batc	h: 1 Matrix	: Soil										
Units:	mg/kg	Date Analyzed: 12/17/18 09:44	SU	RROGATE R	ECOVERY S	STUDY									
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags								
		Analytes			[D]										
1,4-Difluor	obenzene		0.0305	0.0300	102	70-130									
4-Bromoflu	orobenzene		0.0267	0.0300	89	70-130									
Lab Batch	#: 3073061	Sample: 608540-021 SD / M	ASD Batel	h: 1 Matrix	: Soil										
Units:	mg/kg	Date Analyzed: 12/13/18 20:44	SU	RROGATE R	ECOVERY	STUDY									
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags								
		Analytes			[D]										
1-Chlorooc	tane		112	99.8	112	70-135									
o-Terpheny	1		43.4	49.9	87	70-135									

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# Project Name: Green Frog Cafe Federal #1 H

	rders : 608429 #: 3073258	9, Sample: 608429-001 SD / N	MSD Batch: 1 Matrix: Soil											
Units:	mg/kg	Date Analyzed: 12/17/18 10:03	SURROGATE RECOVERY STUDY											
	ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
1,4-Difluor	robenzene		0.0307	0.0300	102	70-130								
4-Bromoflu	uorobenzene		0.0274	0.0300	91	70-130								

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

- \*\*\* Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 \* A / B



## **BS / BSD Recoveries**



.

### Project Name: Green Frog Cafe Federal #1 H

<b>Work Order #:</b> 608429							Pro	ject ID:	212C-MD-0	01102.100	
Analyst: SCM	D	ate Prepar	red: 12/17/202	18			Date A	nalyzed:	12/17/2018		
Lab Batch ID: 3073258 Sample: 7668232-1-	BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000386	0.100	0.101	101	0.100	0.100	100	1	70-130	35	
Toluene	< 0.000457	0.100	0.0925	93	0.100	0.0921	92	0	70-130	35	
Ethylbenzene	< 0.000566	0.100	0.101	101	0.100	0.101	101	0	70-130	35	
m,p-Xylenes	< 0.00102	0.200	0.185	93	0.200	0.185	93	0	70-130	35	
o-Xylene	< 0.000345	0.100	0.0894	89	0.100	0.0898	90	0	70-130	35	
Analyst: ARM	D	ate Prepar	red: 12/13/202	18			Date A	nalyzed:	12/13/2018		
Lab Batch ID: 3073061 Sample: 7668079-1-	BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1090	109	1000	1150	115	5	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	966	97	1000	984	98	2	70-135	20	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



#### Project Name: Green Frog Cafe Federal #1 H

Work Order # :	608429						Project II	<b>):</b> 212C-1	MD-0110	2.100						
Lab Batch ID:	3073258	QC- Sample ID:	608429	-001 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil								
Date Analyzed:	12/17/2018	Date Prepared:	12/17/2	018	An	alyst: S	SCM									
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY	Control Limits %RPD           35           35           35           35           35           35           35           35           35           35           35					
	BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	uits Limits Fla					
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD					
Benzene		<0.000383	0.0996	0.0889	89	0.0998	0.0858	86	4	70-130	35					
Toluene		0.000590	0.0996	0.0819	82	0.0998	0.0807	80	1	70-130	35					
Ethylbenzene		0.00100	0.0996	0.0892	89	0.0998	0.0861	85	4	70-130	35					
m,p-Xylenes		0.00141	0.199	0.163	81	0.200	0.158	78	3	70-130	35					
o-Xylene		0.000670	0.0996	0.0797	79	0.0998	0.0770	76	3	70-130	35					
Lab Batch ID:	3073061	QC- Sample ID:	608540	-021 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil								
Date Analyzed:	12/13/2018	Date Prepared:	12/13/2	018	An	alyst: A	ARM									
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY						
,	TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag				

Analytes	Sample Result [A]	Spike Added [B]	Result [C]	Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Dup. %R [G]	RPD %	Limits %R	Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1140	114	998	1180	118	3	70-135	20	
Diesel Range Organics (DRO)	14.5	998	959	95	998	992	98	3	70-135	20	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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Received by OC	<b>D: 2/2</b> elinquished by:	2023 elinquished by:	mile	Pelinquished by:							LAB USE ONLY	₩		Comments:	Heceiving Laboratory:	Invoice to:	Project Location: state)	Project Name:	Client Name:	Pa	e 147 of 14 nalysis Re
	y: Date: Time:	y: Date: Time: /	for 1272-12	y: Date: Time:				AH-9D (0-1")	AH-2 Stockpile Composite	AH-2 (1' BEB)		SAMPLE IDENTIFICATION			xiory: Xenco Midland TX	Tetra Tech, Inc.	(county, Lea County, New Mexico		Marathon	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	Received by:	Madrie	Hegeiveg.by;				12/11/2018	12/11/2018	12/11/2018	DATE	YEAR: 2018	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
	Date: Time:	Date: Time:	6	A Date Time:				X X	X		WATEF SOIL HCL HNO <sub>3</sub> ICE None	<b>λ</b>	MATRIX PRESERVATIVE METHOD		Mike Carmona		212C-MD-01102.100		Clair Gonzales	4000 N. Big Spring Street, Ste 401 Midland,Texas 79705 Tel (422) 682-4559 Fax (432) 682-3946	
0		s	1348					1 N 1 7	1 N 1		# CONT FILTERE BTEX 80	ED (Y	//N)	EX 8260	B		-				
(Circle) HAND DELIVERED		Sample Temperature	LAB USE ONLY				· ·	✓  ×	×	X	TPH TX TPH 801 PAH 827 Total Met TCLP Me	1005 15M ( 70C tals A	(Ext to GRO	o C35) - DRO - ( Ba Cd Cr	ORO - Pb Se	Hg	· · ·		() :		600
FEDEX UPS	Special Rep	RUSH: Same Day 24 h		REMARKS:			· · ·				TCLP Vo TCLP Se RCI GC/MS V GC/MS S PCB's 80	omi Vo /ol. 8 Semi.	olatiles 260B Vol. 8	/ 624	5				AN N		129
Tracking #:	Special Report Limits or TRRP Report	ne Day 24 hr 48 hr es Authorized	•								NORM PLM (Asl Chloride Chloride General	besto Si Wate	s) ulfate er Che		see at	ached	list)				Page
Released to [m		72 hr			- 20	· · · · · ·			· · · · · · · · · · · · · · · · · · ·		Anion/Ca	ation	Balan	ce				<u> </u>	· ·		1 of

Received by OCD: 2/28/2023 1:38:39 PM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Date/ Time Received: 12/12/2018 03:18:31 PM Work Order #: 608429 Comments Sample Receipt Checklist .2 #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? Yes #3 \*Samples received on ice? Yes #4 \*Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6\*Custody Seals Signed and dated? N/A #7 \*Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes

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

Analyst:

PH Device/Lot#:

#16 All samples received within hold time?

#18 Water VOC samples have zero headspace?

#17 Subcontract of sample(s)?

Date: 12/12/2018

Checklist completed by: Bianna Teel Checklist reviewed by: Markoath Kelsey Brooks

Date: 12/12/2018

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

Temperature Measuring device used : R8

Yes

N/A

N/A

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
MARATHON OIL PERMIAN LLC	372098
990 Town & Country Blvd.	Action Number:
Houston, TX 77024	191592
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

#### CONDITIONS

Created By		Condition Date
jharimon	None	3/23/2023

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Action 191592