SITE INFORMATION

Report Type: Closure Report/Incident ID#NRM2026547329

General Site Information:						
Site:	**Mamba BQN State Com 001H**					
Company:	**EOG Resources**					
Section, Township and Range	**Unit N**	**Sec. 30**	**T 24S**	**R 33E**		
County:	**Lea County**					
GPS:	**32.182465**			**-103.613078**		
Surface Owner:						

Release Data:	
Date Released:	8/12/2020
Type Release:	Flowline Release
Source of Contamination:	Produced Water
Fluid Released:	40 bbls PW
Fluids Recovered:	35 bbls PW

Official Communication:			
Name:	Todd Wells		Mike Carmona
Company:	EOG Reources		Tetra Tech
Address:	5509 Champions Dr		901 West Wall Street
			Suite 100
City:	Midland Texas, 79706		Midland, Texas
Phone number:	432-686-3667		(432) 687-8121
Fax:			
Email:	Todd_Wells@eogresources.com		mike.carmona@tetratech.com

Site Characterization	
Depth to Groundwater:	*97' below surface*
Karst Potential:	*low*

Recommended Remedial Action Levels (RRALs)			
Benzene	***Total BTEX***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*100 mg/kg*	*600 mg/kg*

TETRA TECH

October 28, 2020

Environmental Specialist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Report for the EOG Resources, Mamba BQN State Com 1H, Unit N, Section 30, Township 24 South, Range 33 East, Lea County, New Mexico. Incident ID#NRM2026547329

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess and remediate a release that occurred at the EOG Resources, Mamba BQN State Com 1H, Unit N, Section 30, Township 24 South, Range 33 East, Lea County, New Mexico (Site). The site coordinates are 32.182465º, -103.613078º. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report the release was discovered on August 12, 2020, and released approximately 40 barrels of produced water, due to a hole that developed in a poly saltwater disposal line. Approximately 35 barrels of the released fluids were recovered. The release occurred on a pad, and impacted areas measuring approximately 278' x 65', staying confined to the pad. The C-141 form is included in Appendix A.

Site Characterization

A site characterization was performed for the site, no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances.

The site is in a low karst potential area. The nearest well is listed in the USGS National Water Information Database website in Section 17, approximately 2.57 miles Northeast of the site, and has a reported depth to groundwater of 97.37 feet below ground surface. Site characterization data is included in Appendix B.

Tetra Tech
901 West Wall St, Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. 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 site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

On August 26, 2020, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of six (6) auger holes (AH-1 through AH-6) were installed to total depths ranging from 0-1'–1.5' below surface. Additionally, eight (8) horizontal samples (Horizontal-1 through Horizontal-8) were collected at depths of 1.0' below surface. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole and horizontal sample locations are shown on Figure 3.

Referring to Table 1, none of the samples analyzed showed benzene or total BTEX concentrations above the laboratory reporting limits. However, elevated TPH and chloride concentrations were detected above RRALs. The areas of auger holes (AH-1, AH-3, AH-4, and AH-5) showed elevated TPH concentrations of 2,040 mg/kg, 683 mg/kg, 204 mg/kg, 165 mg/kg, 419 mg/kg, and 246 mg/kg, at depths ranging from surface to 1.5' below surface. Additionally, the area of Horizontal (H-7) showed an elevated TPH concentration of 761 mg/kg. The areas of auger holes (AH-1 through AH-6 showed high chloride concentration of 1,500 mg/kg, 1,040 mg/kg, 4,210 mg/kg, 2,040 mg/kg, 2,270 mg/kg, and 6,170 mg/kg at depths of 0-1.5', respectively.

Remediation Activities

Based on the results of the soil assessment, Tetra Tech personnel were onsite September 18, 2020, through October 1, 2020, to supervise the remediation activities and collect confirmation samples. Before remediation activities began, the flare was removed, and the facility was shut in to perform the remediation safely. All of the lines were hydro vacced and hand spotted. The impacted areas were excavated to total depths ranging from 2.0'-4.0' below surface, as shown on Figure 4 and Table 2.

A total of thirty-seven (37) bottom hole samples (Bottom Hole 1 through Bottom Hole 37) and sixteen (16) sidewall samples (SW-1 through SW-16) were collected every 200 square feet to ensure proper removal of the impacted soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 2. Copies of laboratory analysis and chain-

TETRA TECH

of-custody documentation are included in Appendix C. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 2, all final confirmation samples collected showed benzene, total BTEX, TPH, and chloride concentrations below the regulatory reporting limits.

Approximately 900 cubic yards of material was excavated and transported offsite for proper disposal. The areas were then backfilled with clean material to surface grade.

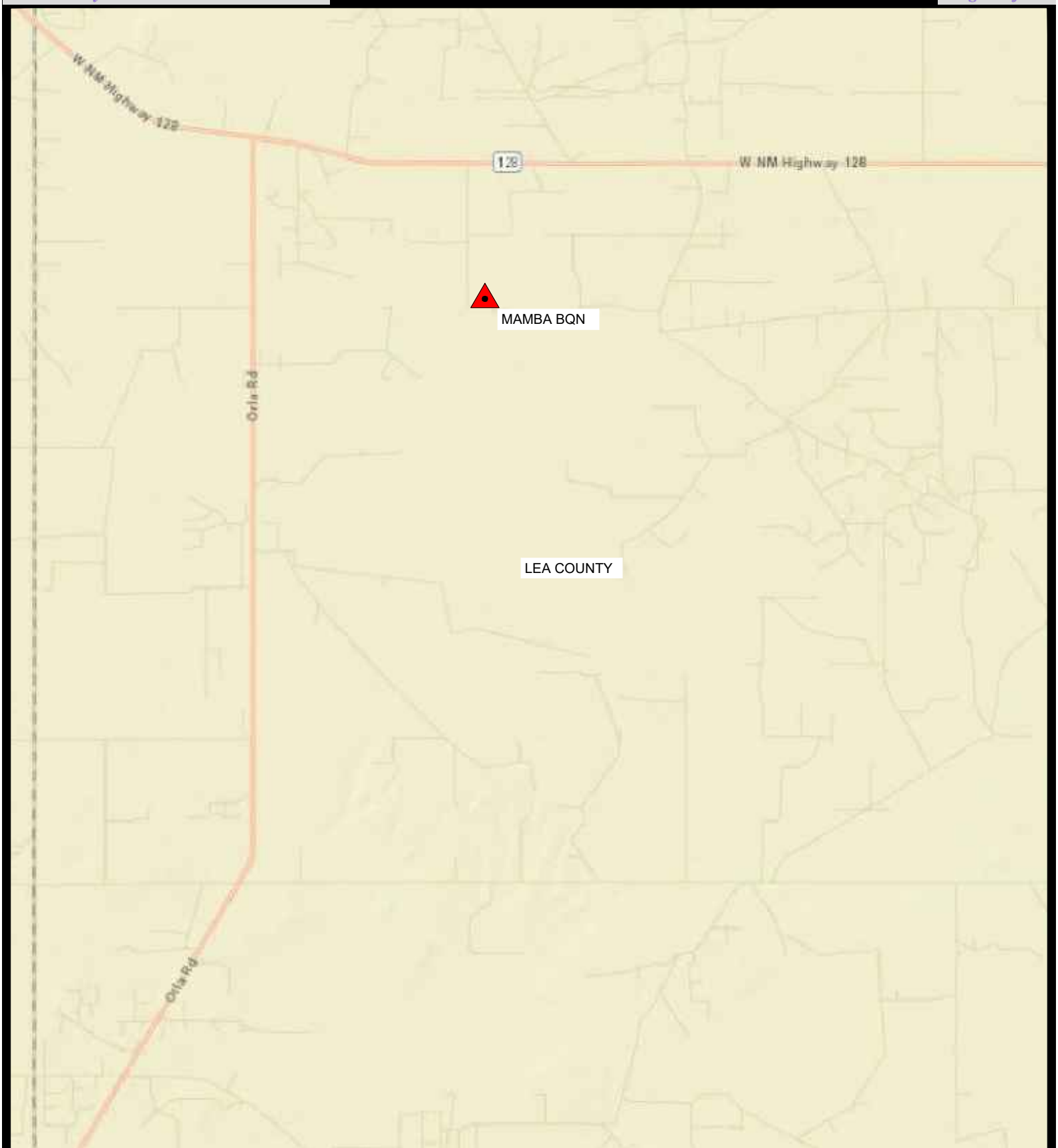
Conclusion

Based on the laboratory results and remediation activities performed EOG 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.

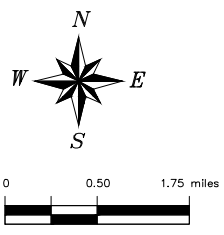
Respectfully submitted,
TETRA TECH

Mike Carmona,
Project Manager

Figures



SITE LOCATION



OVERVIEW MAP
MAMBA BQN STATE COM 001H
Property Located at coordinates 32.182465,-103.613078
LEA COUNTY, NEW MEXICO

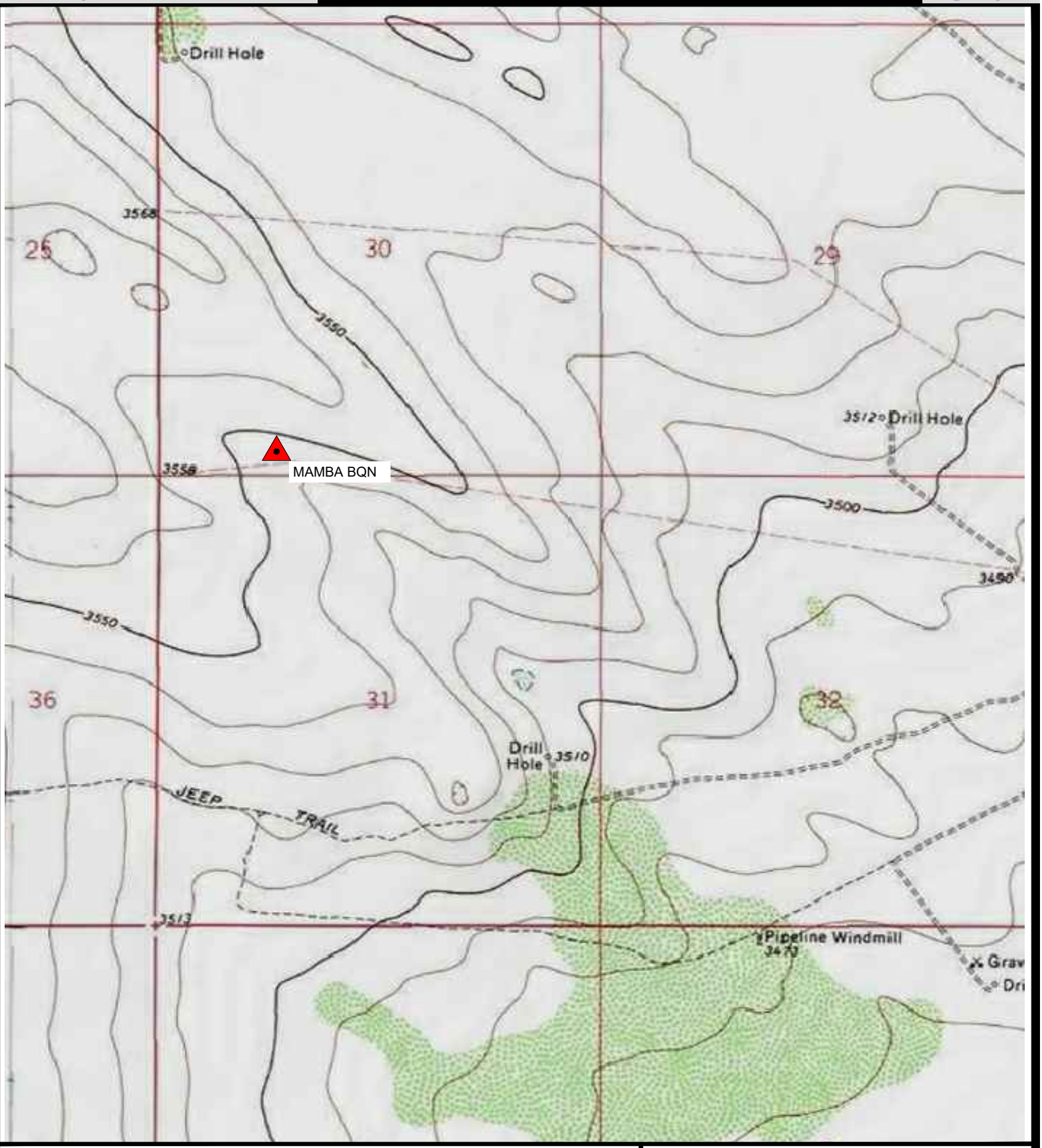
eog resources

TETRA TECH
901 W. Wall ST. Ste. 100
Midland, TX 79701
(432) 682-4559

Project #: 212C-MD-02299
Date: 8/31/20
Drawn By: DN

FIGURE 1

File: G:\LDIS_CAD_STANDARDS\LDIS\Pipeline Mapping\x - Projects Without Folder Yet\EOG Resources\Mamba BQN\Mapping\5 - Support Drawings\Mamba BQN



SITE LOCATION

N
W E
S

0 900' 1,800'

TOPOGRAPHIC MAP
MAMBA BQN STATE COM 001H
Property Located at coordinates 32.182465,-103.613078
LEA COUNTY, NEW MEXICO

eog resources

TETRA TECH
901 W. Wall ST. Ste. 100
Midland, TX 79701
(432) 682-4559

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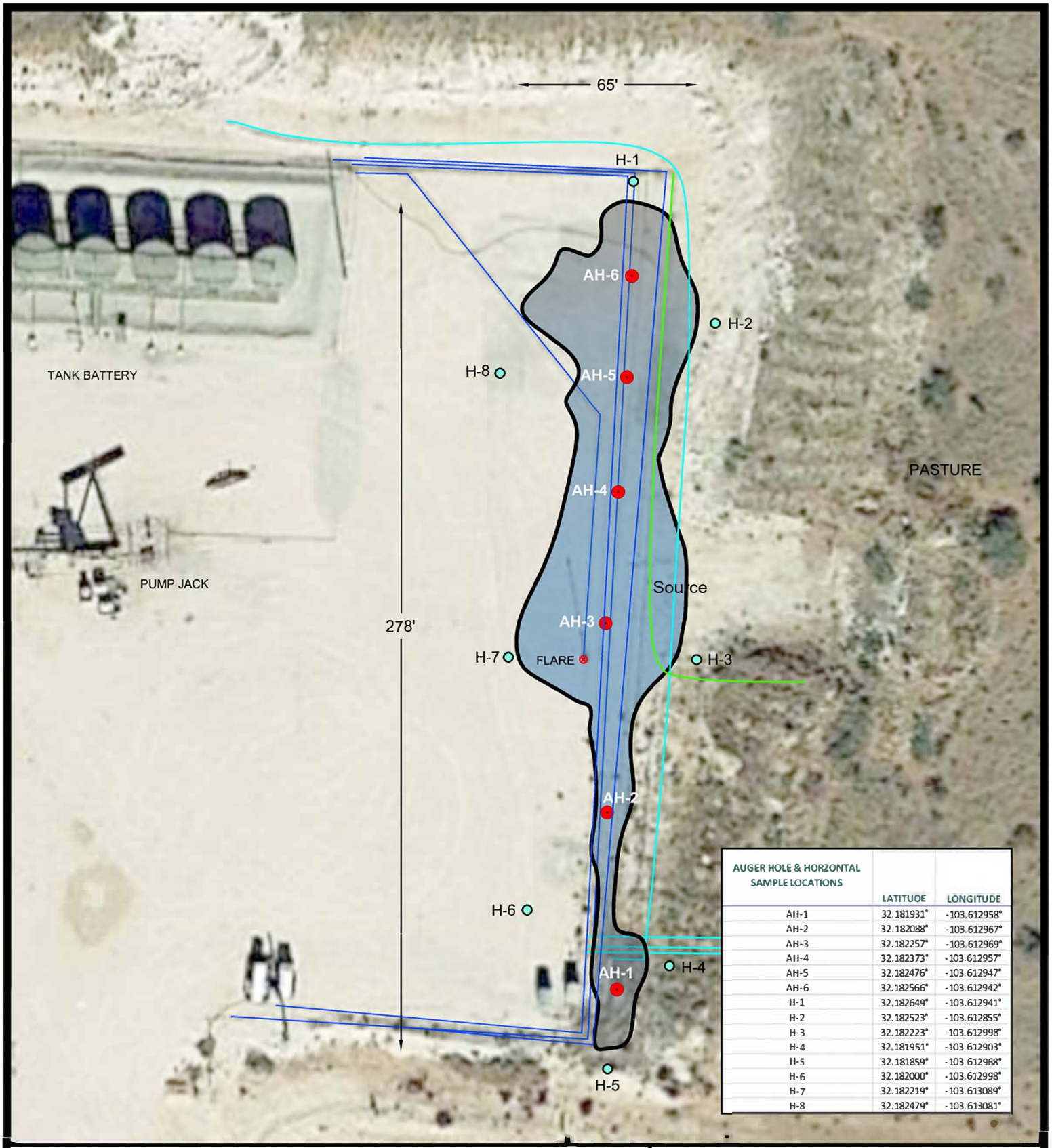
FIGURE 2

File: G:\LDIS_CAD_STANDARDS\LDIS\Pipeline Mapping\x - Projects Without Folder Yet\EOG Resources\Mamba BQN\Mapping\5 - Support Drawings\Mamba BQN



AUGER HOLE & HORZONTAL SAMPLE LOCATIONS	LATITUDE	LONGITUDE
AH-1	32.181931°	-103.612958°
AH-2	32.182088°	-103.612967°
AH-3	32.182257°	-103.612969°
AH-4	32.182373°	-103.612957°
AH-5	32.182476°	-103.612947°
AH-6	32.182566°	-103.612942°
H-1	32.182649°	-103.612941°
H-2	32.182523°	-103.612855°
H-3	32.182223°	-103.612998°
H-4	32.181951°	-103.612903°
H-5	32.181859°	-103.612968°
H-6	32.182000°	-103.612998°
H-7	32.182219°	-103.613089°
H-8	32.182479°	-103.613081°

AUGERHOLE SAMPLE LOCATION
HORIZONTAL SAMPLE LOCATION
STEEL LINE
POLYLINE
UG GAS METER LINE
SPILL AREA

N
W E
S

0 20 40ft

SPILL ASSESSMENT MAP
MAMBA BQN STATE COM 001H
Property Located at coordinates 32.182465°, -103.613078
LEA COUNTY, NEW MEXICO

eog resources

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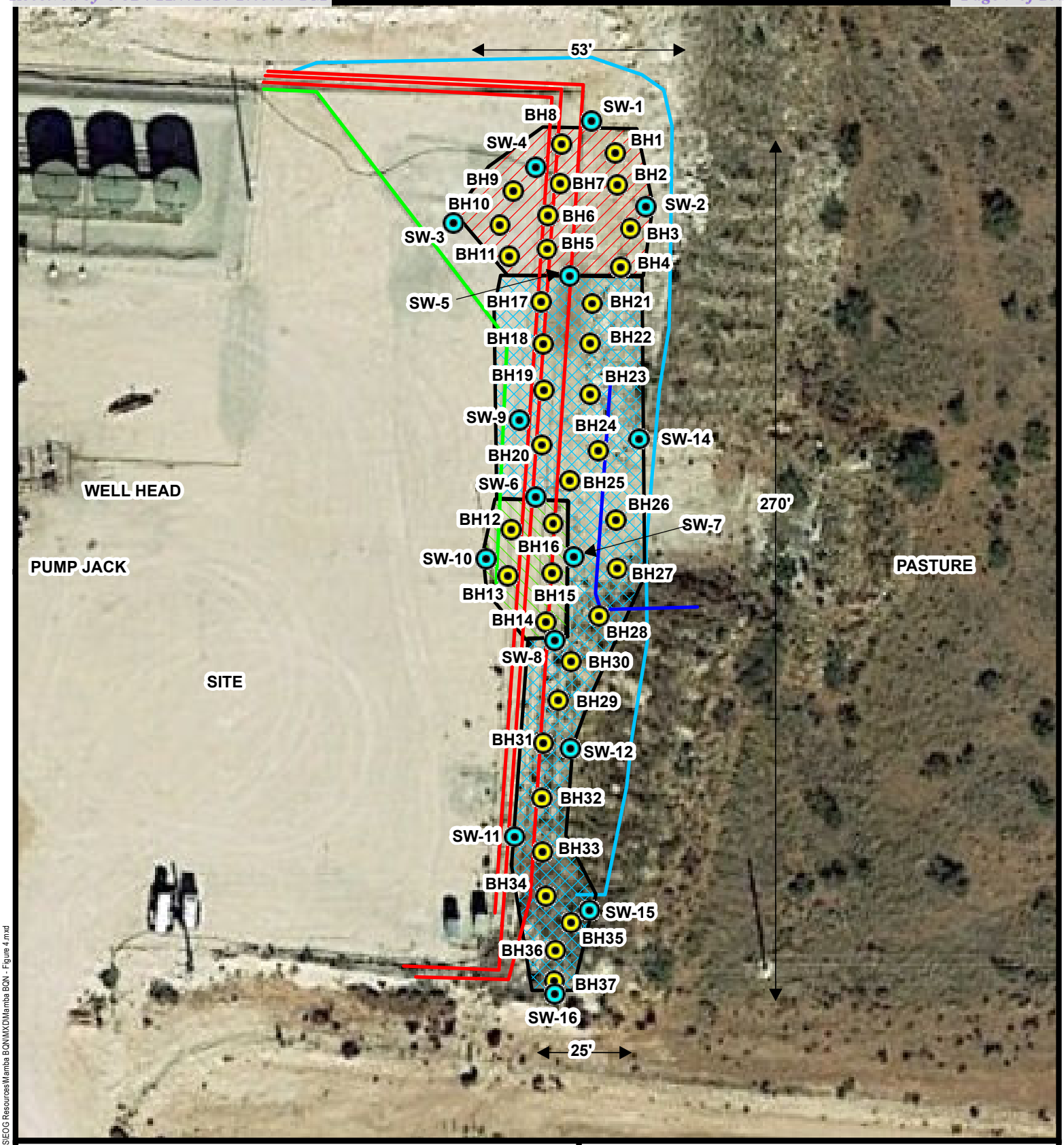
Project #: 212C-MD-02299
Date:09-01-2020
Drawn By: MLM

FIGURE 3

File: C:\Users\MISTI.MORGAN\Desktop\DANY\MAMBA BQN

Drawn By: MISTI MORGAN



SIDEWALL SAMPLE LOCATION

BOTTOM HOLE SAMPLE LOCATION

STEEL LINES

FLARE LINE

GAS METER UGL

LINE FROM HEADER (SOURCE)

2.0' EXCAVATION DEPTH

3.0' EXCAVATION DEPTH

4.0' EXCAVATION DEPTH

N

W E

S

0 25 50

Approximate Scale in Feet

EXCAVATION AREA & DEPTH MAP
MAMBA BQN STATE COM 001H
Property Located at coordinates 32.182465 -103.613078
LEA COUNTY, NEW MEXICO

eog resources

TETRA TECH
901 W Wall St Ste. 100,
Midland, TX 79701
(432) 682-4559

Project #: 212C-MD-02299
Date: 10/14/20
Drawn By: DN

FIGURE 4

Date: 10/14/2020 Document Path: G:\LDIS_CLIENT_PROJECTS\EOG Resources\Mamba BQN\MXD\Mamba BQN - Figure 4.mxd

Tables

Table 1
EOG
Mamba "BQN" State Com #1H
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
AH-1	8/26/2020	0-1	-	**X**	<50.0	**1,790**	**248**	**2,040**	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**1,500**
	"	1-1.5	-	**X**	<50.0	**525**	**158**	**683**	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**1,230**
AH-2	8/26/2020	0-1	-	**X**	<50.0	67.3	<50.0	67.3	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**1,040**
	"	1-1.5	-	**X**	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	508
AH-3	8/26/2020	0-0.5	-	**X**	<49.8	**204**	<49.8	**204**	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**4,210**
	"	0.5-1	-	**X**	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**3,660**
AH-4	8/26/2020	0-0.5	-	**X**	<50.0	**165**	<50.0	**165**	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**2,040**
	"	0.5-1	-	**X**	<49.9	**334**	84.8	**419**	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**1,060**
AH-5	8/26/2020	0-0.5	-	**X**	<49.9	**246**	<49.9	**246**	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	**2,270**
	"	0.5-1	-	**X**	<50.0	77.3	<50.0	77.3	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	**1,940**
AH-6	8/26/2020	0-0.5	-	**X**	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**873**
	"	0.5-1	-	**X**	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**6,170**
Horizontal 1	8/26/2020	0-1	**X**		<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	53.6
Horizontal 2	8/26/2020	0-1	**X**		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	35.4
Horizontal 3	8/26/2020	0-1	**X**		<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	32.1
Horizontal 4	8/26/2020	0-1	**X**		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	24.7
Horizontal 5	8/26/2020	0-1	**X**		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	31.8
Horizontal 6	8/26/2020	0-1	**X**		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	33.5
Horizontal 7	8/26/2020	0-1	-	**X**	<49.8	**636**	**125**	**761**	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	101
Horizontal 8	8/26/2020	0-1	**X**		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	51.8

(-) Not Analyzed

Excavated

Table 2
EOG Resources
Mamba BQN State Com 1
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
BH-1	9/18/2020	3.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	74.1
BH-2	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	52.8
BH-3	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	56.3
BH-4	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	51.2
BH-5	9/18/2020	3.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	47.7
BH-6	9/18/2020	3.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	54.4
BH-7	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	47.1
BH-8	9/18/2020	3.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	51.5
BH-9	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	51.6
BH-10	9/18/2020	3.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	48.6
BH-11	9/18/2020	3.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	50.8
BH-12	9/22/2020	4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	56.2
BH-13	9/22/2020	4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	55.1
BH-14	9/22/2020	4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	55.5
BH-15	9/22/2020	4.0	X	-	<50.2	<50.2	<50.2	<50.2	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	55.0
BH-16	9/22/2020	4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	52.4
BH-17	9/25/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	57.5
BH-18	9/25/2020	2.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	54.3
BH-19	9/25/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	55.3
BH-20	9/25/2020	2.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	56.1
BH-21	9/25/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	62.5
BH-22	9/25/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	60.3
BH-23	10/1/2020	2.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	127
BH-24	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	63.6
BH-25	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	91.3
BH-26	10/1/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	70.6
BH-27	10/1/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	289
BH-28	10/1/2020	2.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	72.0
BH-29	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	0.00563	<0.00198	<0.00198	0.00563	143
BH-30	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	103
BH-31	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	251
BH-32	10/1/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	87.1
BH-33	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	129
BH-34	10/1/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	277
BH-35	10/1/2020	2.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	60.3
BH-36	10/1/2020	2.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	65.0
BH-37	10/1/2020	2.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	89.4

Table 2
EOG Resources
Mamba BQN State Com 1
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SW-1	9/18/2020	-	X	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	54.2
SW-2	9/18/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	50.2
SW-3	9/18/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	53.6
SW-4	9/18/2020	-	X	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	59.1
SW-5	9/22/2020	-	X	-	<50.1	<50.1	<50.1	<50.1	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	51.3
SW-6	9/25/2020	-	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	61.5
SW-7	9/25/2020	-	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	56.9
SW-8	9/25/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	59.6
SW-9	10/1/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	195
SW-10	10/1/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	74.2
SW-11	10/1/2020	-	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	127
SW-12	10/1/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	79.5
SW-13	10/1/2020	-	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	76.6
SW-14	10/1/2020	-	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	370
SW-15	10/1/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	250
SW-16	10/1/2020	-	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	263

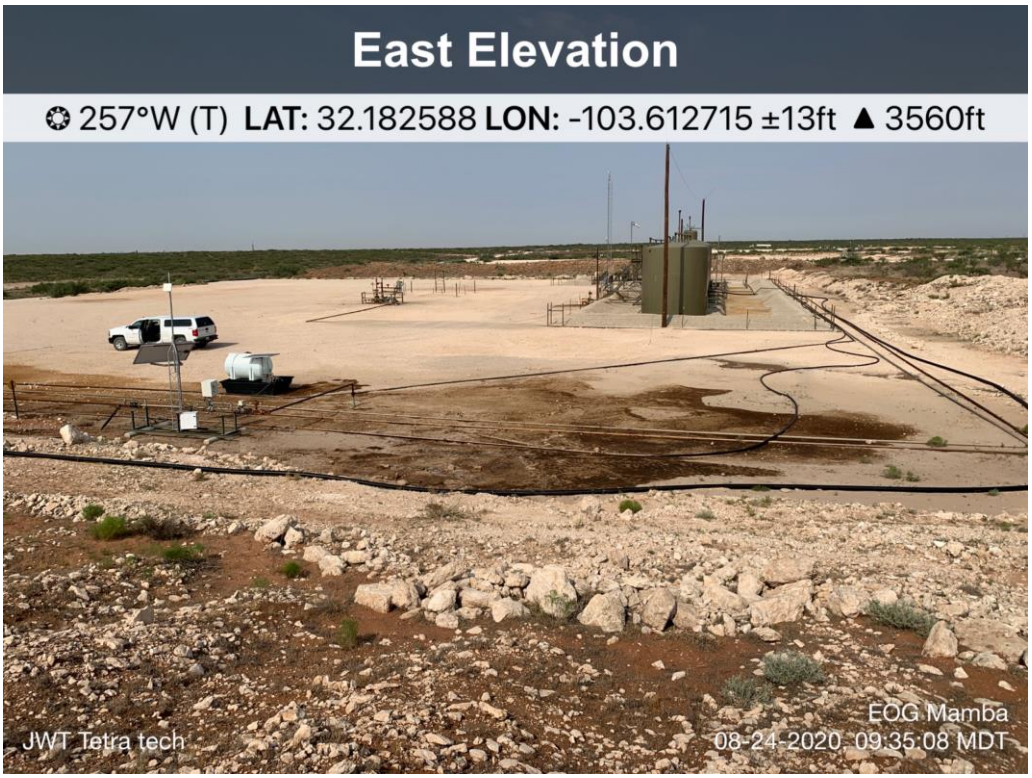
(-) Not Analyzed

Exceeds Thresholds

Photos

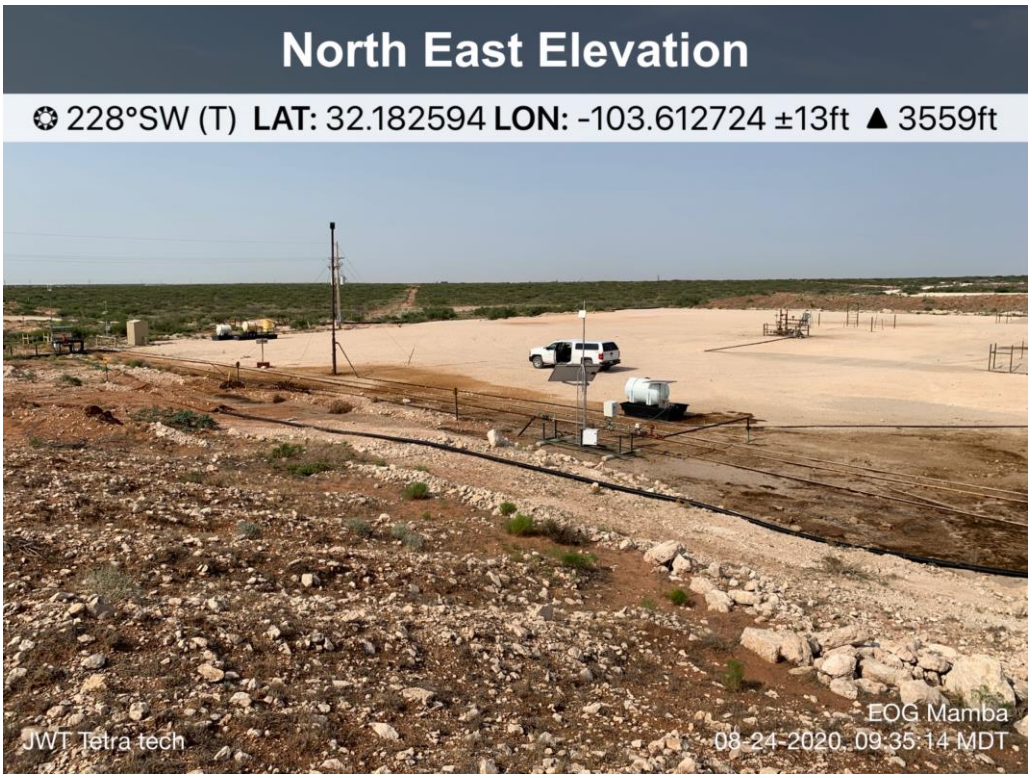
EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

View South, areas of Auger Holes (1-6)



View West, areas of Auger Holes (3-6)

EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

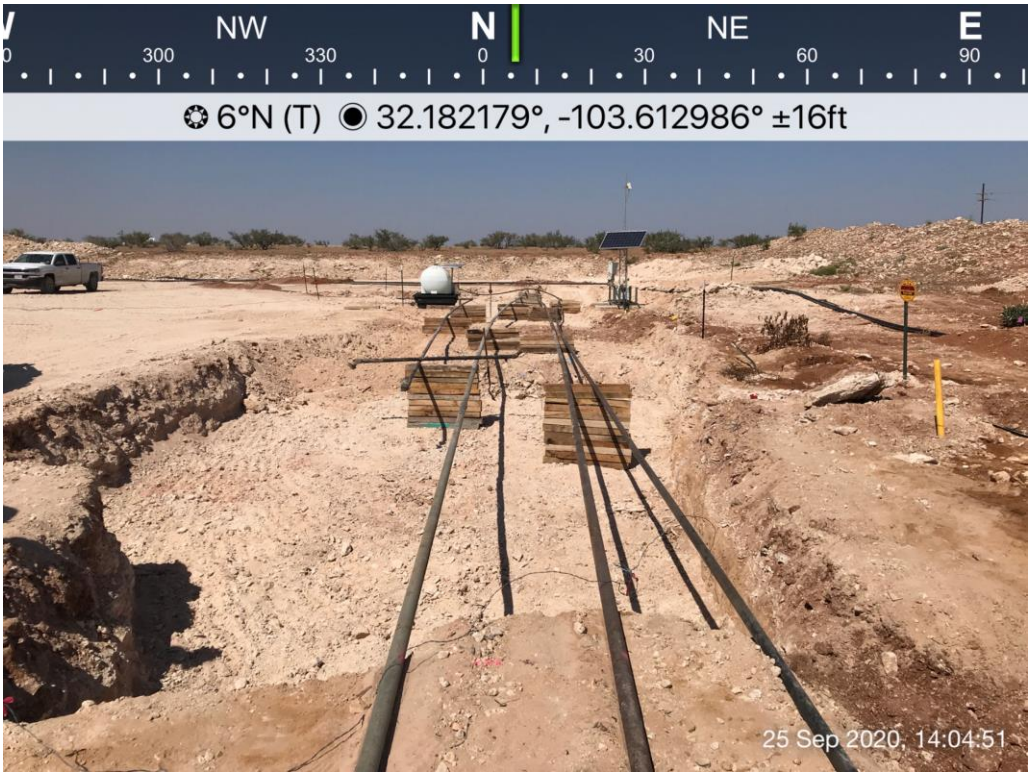


View Southwest, areas of Auger Hole (1-6)

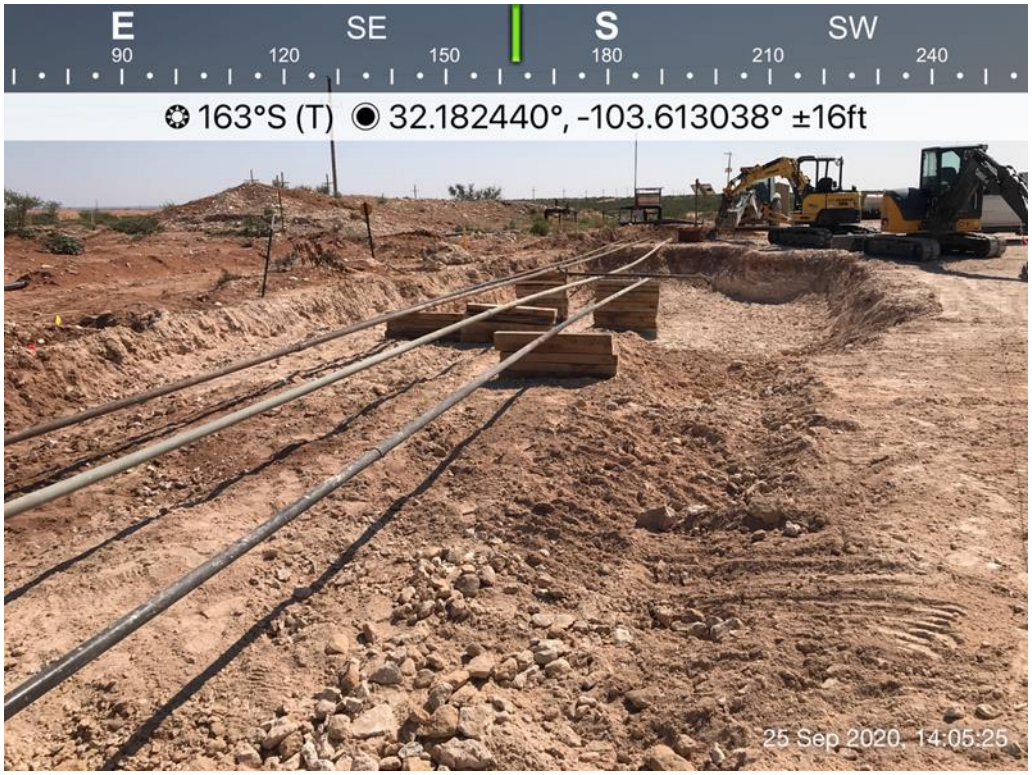
View North, looking areas of Bottom Holes (1-11)

EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

TETRA TECH



View North, areas of Bottom Holes (12-16)



View south areas of Bottom Holes (17-22)

EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

TETRA TECH

View North, areas of Bottom Holes (23-28)

View South, areas of Bottom Holes (29-33)

EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

TETRA TECH

View South, areas of Bottom Holes (23-30)

View South, areas of Bottom Holes (29-33)

EOG Resources
Mamba BQN State Com 001H
Lea County, New Mexico

View South, areas of Bottom Holes (34-37)

TETRA TECH

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM2026547329
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party EOG Resources	OGRID 7377
Contact Name Todd Wells	Contact Telephone (432) 686-3613
Contact email Todd_Wells@eogresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5509 Champions Drive Midland, TX 79706	

Location of Release Source

Latitude 32.182237° Longitude -103.612879°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mamba BQN State Com #1H	Site Type Tank Battery
Date Release Discovered 8/12/2020	API# *(if applicable)* 30-025-40039

Unit Letter	Section	Township	Range	County
N	30	24S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 40	Volume Recovered (bbls) 35
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The LO arrived on location and discovered a hole that developed in the poly saltwater disposal line. Approximately 40 bbls of produced water released and was contained on the pad and 35 bbls was recovered.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2026547329
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? More than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? E-mail notification to the District 1 Spills inbox on 8/20/20.	

Initial Response

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

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Todd Wells Title: Environmental Specialist

Signature: Todd Wells Date: 9-15-20

email: Todd_Wells@eogresources.com Telephone: (432) 686-3613

OCD Only

Received by: Ramona Marcus Date: 9/21/2020

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Chad Hensley Date: 04/16/2021

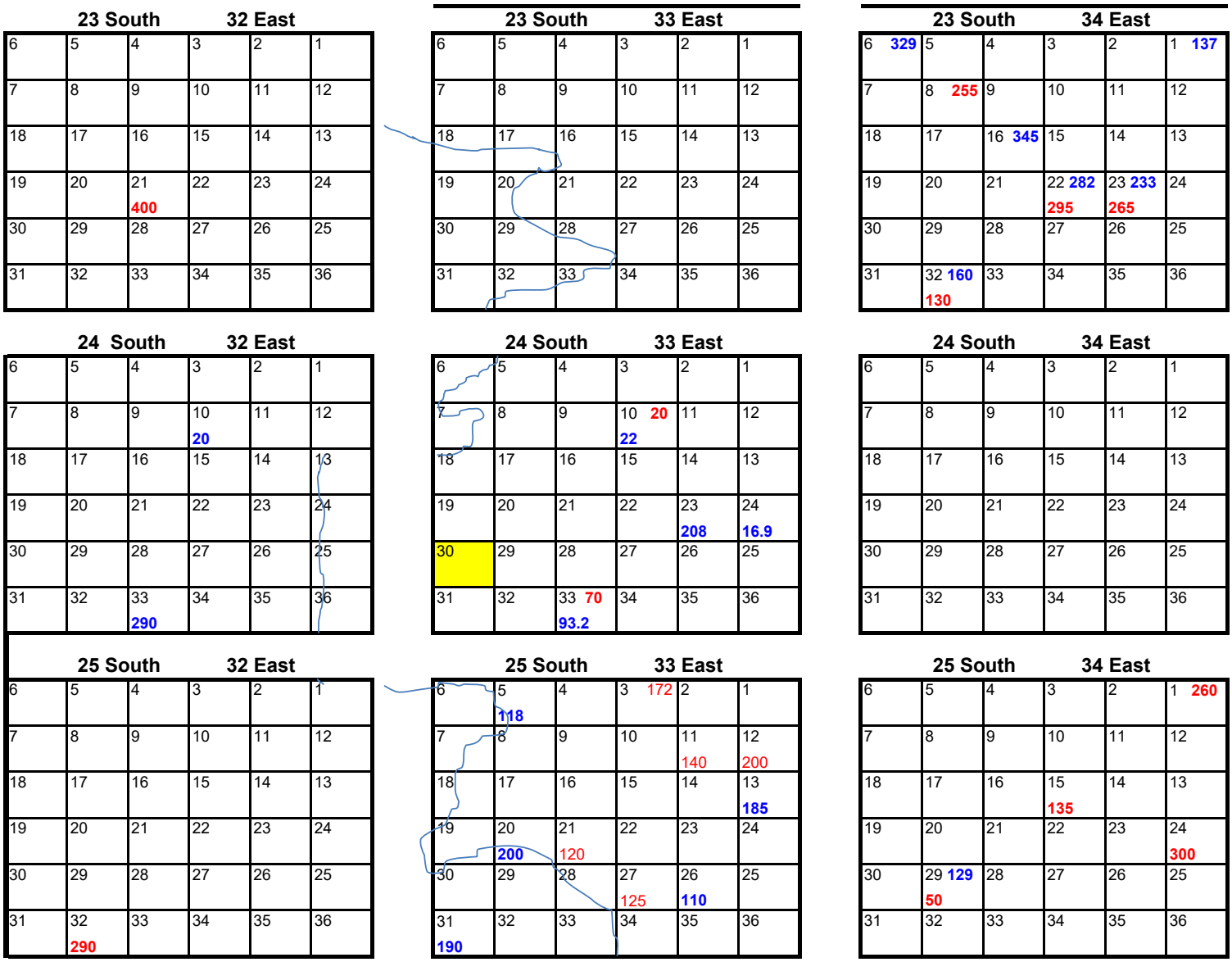
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: Chad Hensley Date: 04/16/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Mamba BQN State Com 001H
Lea County, New Mexico



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 serves a water right file.)

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02308	CUB	LE	1	3	1	10	24S	33E	634953	3567364*	40	20	20
C 02309	CUB	LE	2	2	2	25	24S	33E	639708	3562997	60	30	30
C 02310	CUB	LE	2	4	2	33	24S	33E	634420	3560893	120	70	50
C 02311	CUB	LE	2	3	2	33	24S	33E	634391	3560877	120	70	50
C 02430	CUB	LE	3	3	3	16	24S	33E	633377	3564732*	643	415	228
C 02431	CUB	LE	4	4	4	17	24S	33E	633175	3564728*	525	415	110
C 02432	CUB	LE	4	4	4	17	24S	33E	633175	3564728*	640	415	225
C 02563	CUB	LE	1	4	2	33	24S	33E	634639	3560923*	120		
C 02564	CUB	LE	2	4	2	33	24S	33E	634839	3560923*	120		
C 02890	C	LE		2	4	29	24S	33E	633114	3562012*	500		
C 03565 POD3	CUB	LE		3	4	08	24S	33E	632763	3566546		1533	
C 03591 POD1	CUB	LE	2	1	4	05	24S	33E	632731	3568518			
C 03600 POD1	CUB	LE	2	2	1	26	24S	33E	637275	3563023			
C 03600 POD2	CUB	LE	4	4	1	25	24S	33E	638824	3562329			
C 03600 POD3	CUB	LE	3	4	2	26	24S	33E	637784	3562340			
C 03600 POD4	CUB	LE	3	3	1	26	24S	33E	636617	3562293			
C 03600 POD5	CUB	LE	3	2	4	26	24S	33E	637857	3562020			
C 03600 POD6	CUB	LE	3	1	4	26	24S	33E	637383	3562026			
C 03600 POD7	CUB	LE	3	1	3	26	24S	33E	636726	3561968			
C 03601 POD1	CUB	LE	4	4	2	23	24S	33E	638124	3563937			
C 03601 POD2	CUB	LE	3	2	4	23	24S	33E	637846	3563588			
C 03601 POD3	CUB	LE	1	3	3	24	24S	33E	638142	3563413			
C 03601 POD4	CUB	LE	3	3	3	24	24S	33E	638162	3561375			
C 03601 POD5	CUB	LE	2	4	4	23	24S	33E	637988	3563334			
C 03601 POD6	CUB	LE	1	4	4	23	24S	33E	637834	3563338			
C 03601 POD7	CUB	LE	4	4	4	23	24S	33E	637946	3563170			

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

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

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

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

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03602 POD2	CUB	LE	4	4	1	25	24S	33E	638824	3562329			
C 03603 POD1	CUB	LE	3	2	2	35	24S	33E	637805	3561225			
C 03603 POD2	CUB	LE	3	1	2	35	24S	33E	637384	3561167			
C 03603 POD3	CUB	LE	4	1	1	35	24S	33E	636890	3561092			
C 03603 POD4	CUB	LE	3	2	4	35	24S	33E	637789	3560461			
C 03603 POD5	CUB	LE	3	3	2	35	24S	33E	636745	3560767			
C 03603 POD6	CUB	LE	3	1	3	35	24S	33E	636749	3560447			
C 03662 POD1	C	LE	3	1	2	23	24S	33E	637342	3564428	550	110	440
C 03666 POD1	C	LE	2	3	4	13	24S	33E	639132	3565078	650	390	260
C 03917 POD1	C	LE	4	1	3	13	24S	33E	638374	3565212	600	420	180
C 04014 POD2	CUB	LE	4	4	2	01	24S	33E	639656	3568917	95	81	14
C 04014 POD3	CUB	LE	2	4	2	01	24S	33E	639497	3569007	95	87	8
C 04014 POD4	CUB	LE	3	4	2	01	24S	33E	639295	3568859	96	86	10
C 04014 POD5	CUB	LE	1	4	2	01	24S	33E	639284	3569086	95	85	10
C 04339 POD1	CUB	LE	1	3	3	23	24S	33E	636525	3563309	47		
C 04339 POD10	CUB	LE	4	1	4	23	24S	33E	637688	3563503	49		
C 04339 POD2	CUB	LE	2	3	3	23	24S	33E	636789	3563315			
C 04339 POD3	CUB	LE	2	4	3	23	24S	33E	637273	3563323	38		
C 04339 POD4	CUB	LE	2	4	3	23	24S	33E	637273	3563323	47		
C 04339 POD5	CUB	LE	2	3	4	23	24S	33E	637580	3563328	54		
C 04339 POD6	CUB	LE	3	1	2	23	24S	33E	637340	3564386	60		
C 04339 POD7	CUB	LE	4	4	2	23	24S	33E	636473	3564011	43		
C 04339 POD8	CUB	LE	1	1	3	23	24S	33E	636519	3563681	30		
C 04339 POD9	CUB	LE	3	4	2	23	24S	33E	637731	3563913	45		

Average Depth to Water: **281 feet**

Minimum Depth: **20 feet**

Maximum Depth: **1533 feet**

Record Count: 50

Basin/County Search:

County: Lea

PLSS Search:

Township: 24S **Range:** 33E

USGS
science for a changing world

USGS Hom
Contact US
Search US

National Water Information System: Mapper

Site Information

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321236103350101

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321236103350101 24S.33E.17.444414

Lea County, New Mexico
Latitude 32°12'36", Longitude 103°35'01" NAD27
Land-surface elevation 3,573 feet above NAVD88
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1986-03-11		D	97.37			2		U		U	A

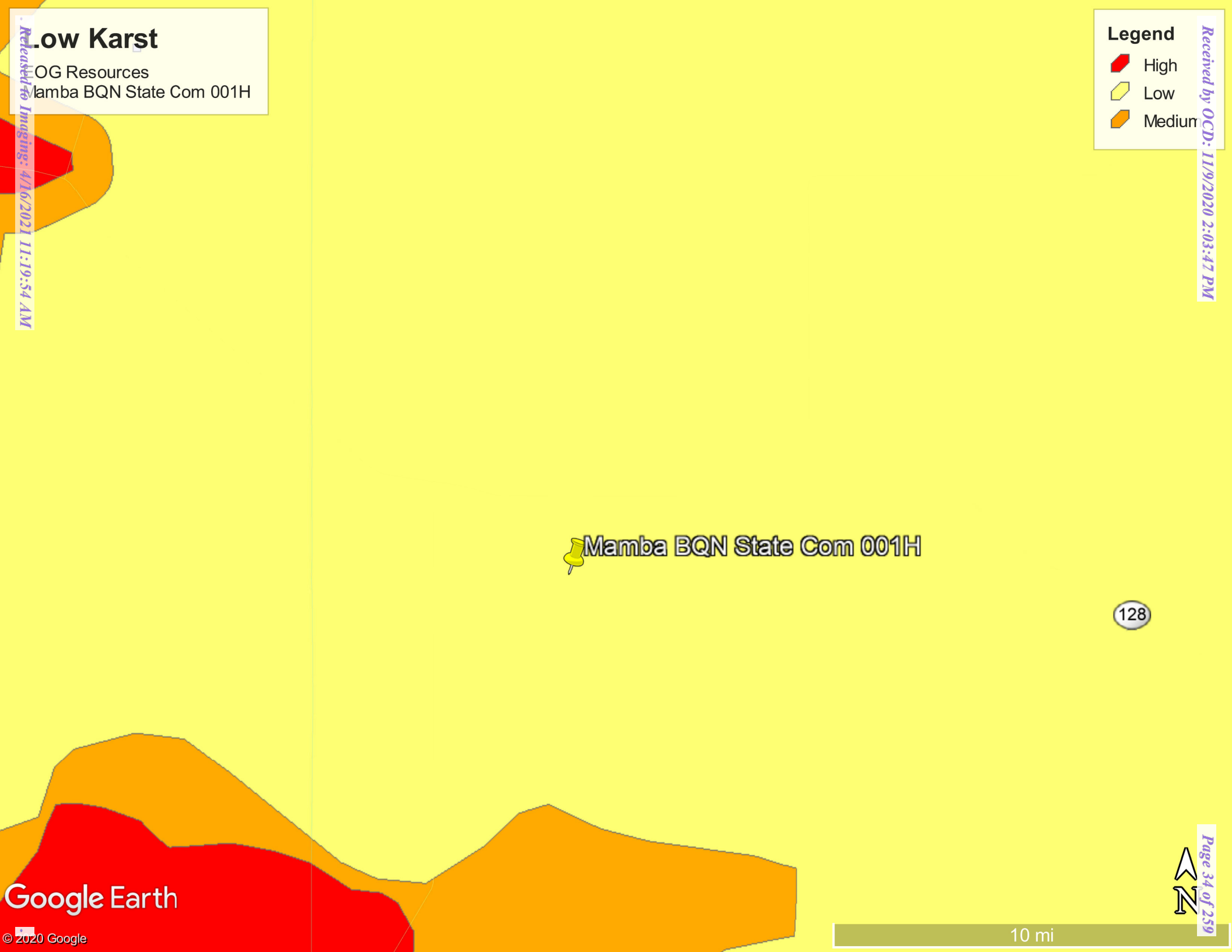
Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2020-08-26 15:58:03 EDT
0.27 0.24 nadww01



New Mexico NFHL Data

August 26, 2020

1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

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Appendix C

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Analytical Report 671124

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN State Com 001H

212C-MD-02299

08.31.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 671124

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN State Com 001H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu 08.27.2020 09:08
Report Date: 08.31.2020 17:03
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671124-001		671124-002		671124-003		671124-004		671124-005		671124-006	
	Field Id:	AH-1 0-1'		AH-1 1'-1.5'		AH-2 0-1'		AH-2 1'-1.5'		AH-3 0-6"		AH-3 6"-1'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	08.28.2020 10:00		08.28.2020 10:00		08.28.2020 10:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00	
	Analyzed:	08.28.2020 15:03		08.29.2020 00:23		08.29.2020 00:44		08.29.2020 04:31		08.29.2020 04:51		08.29.2020 05:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15	
	Analyzed:	08.27.2020 12:39		08.27.2020 12:55		08.27.2020 13:00		08.27.2020 13:05		08.27.2020 13:11		08.27.2020 13:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1500	25.2	1230	4.99	1040	4.95	508	5.02	4210	24.9	3660	25.0
TPH By SW8015 Mod	***Extracted:***	08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00	
	Analyzed:	08.29.2020 10:32		08.28.2020 18:43		08.28.2020 19:05		08.28.2020 19:27		08.28.2020 19:49		08.28.2020 20:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		1790 X	50.0	525	50.0	67.3	50.0	<49.9	49.9	204	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		248	50.0	158	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Total TPH		2040	50.0	683	50.0	67.3	50.0	<49.9	49.9	204	49.8	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 671124

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN State Com 001H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu 08.27.2020 09:08
Report Date: 08.31.2020 17:03
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671124-007		671124-008		671124-009		671124-010		671124-011		671124-012	
	Field Id:	AH-4 0-6"		AH-4 6"-1'		AH-5 0-6"		AH-5 6"-1'		AH-6 0-6"		AH-6 6"-1'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00	
	Analyzed:	08.29.2020 05:33		08.29.2020 05:53		08.29.2020 06:14		08.29.2020 06:34		08.29.2020 06:55		08.29.2020 09:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00397	0.00397	<0.00396	0.00396	<0.00402	0.00402	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	***Extracted:***	08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15	
	Analyzed:	08.27.2020 13:32		08.27.2020 13:37		08.27.2020 13:42		08.27.2020 13:48		08.27.2020 13:53		08.27.2020 14:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2040	25.0	1060	5.05	2270	24.8	1940	24.9	873	5.05	6170	49.7
TPH By SW8015 Mod	***Extracted:***	08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00	
	Analyzed:	08.28.2020 20:32		08.28.2020 20:54		08.28.2020 21:15		08.28.2020 21:36		08.28.2020 22:18		08.28.2020 22:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		165	50.0	334	49.9	246	49.9	77.3	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	84.8	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		165	50.0	419	49.9	246	49.9	77.3	50.0	<50.0	50.0	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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08.31.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **671124**
Mamba BQN State Com 001H
Project Address: Lea County, New Mexico

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 671124. 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 Eurofins Xenco, LLC. 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. 671124 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 0-1'	S	08.26.2020 00:00		671124-001
AH-1 1'-1.5'	S	08.26.2020 00:00		671124-002
AH-2 0-1'	S	08.26.2020 00:00		671124-003
AH-2 1'-1.5'	S	08.26.2020 00:00		671124-004
AH-3 0-6"	S	08.26.2020 00:00		671124-005
AH-3 6"-1'	S	08.26.2020 00:00		671124-006
AH-4 0-6"	S	08.26.2020 00:00		671124-007
AH-4 6"-1'	S	08.26.2020 00:00		671124-008
AH-5 0-6"	S	08.26.2020 00:00		671124-009
AH-5 6"-1'	S	08.26.2020 00:00		671124-010
AH-6 0-6"	S	08.26.2020 00:00		671124-011
AH-6 6"-1'	S	08.26.2020 00:00		671124-012

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN State Com 001H

Project ID: *212C-MD-02299*
Work Order Number(s): *671124*

Report Date: *08.31.2020*
Date Received: *08.27.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3135898 BTEX by EPA 8021B

Lab Sample ID 671124-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 671124-001, -002, -003.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3135948 TPH By SW8015 Mod

Lab Sample ID 671124-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 671124-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO), Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 671124-005.

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-1 0-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-001	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1500**	25.2	mg/kg	08.27.2020 12:39		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 10:32	UX	1
Diesel Range Organics (DRO)	C10C28DRO	**1790**	50.0	mg/kg	08.29.2020 10:32	X	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**248**	50.0	mg/kg	08.29.2020 10:32		1
Total TPH	PHC635	**2040**	50.0	mg/kg	08.29.2020 10:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	08.29.2020 10:32	
o-Terphenyl	84-15-1	130	%	70-130	08.29.2020 10:32	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-1 0-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-001	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 10:00	Basis:	Wet Weight
Seq Number:	3135898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 15:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 15:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 15:03	UX	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.28.2020 15:03	UX	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 15:03	UX	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 15:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 15:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.28.2020 15:03	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.28.2020 15:03	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **AH-1 1'-1.5'** Matrix: Soil Date Received:08.27.2020 09:08

Lab Sample Id: 671124-002 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1230**	4.99	mg/kg	08.27.2020 12:55		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**525**	50.0	mg/kg	08.28.2020 18:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**158**	50.0	mg/kg	08.28.2020 18:43		1
Total TPH	PHC635	**683**	50.0	mg/kg	08.28.2020 18:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	08.28.2020 18:43	
o-Terphenyl	84-15-1	80	%	70-130	08.28.2020 18:43	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-1 1'-1.5'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-002	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 10:00	Basis:	Wet Weight
Seq Number:	3135898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 00:23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 00:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 00:23	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 00:23	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-2 0-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-003	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1040**	4.95	mg/kg	08.27.2020 13:00		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 19:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**67.3**	50.0	mg/kg	08.28.2020 19:05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 19:05	U	1
Total TPH	PHC635	**67.3**	50.0	mg/kg	08.28.2020 19:05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	08.28.2020 19:05	
o-Terphenyl	84-15-1	78	%	70-130	08.28.2020 19:05	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-2 0-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-003	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 10:00	Basis:	Wet Weight
Seq Number:	3135898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 00:44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 00:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.29.2020 00:44	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.29.2020 00:44	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **AH-2 1'-1.5'** Matrix: Soil Date Received:08.27.2020 09:08

Lab Sample Id: 671124-004 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**508**	5.02	mg/kg	08.27.2020 13:05		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 19:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 19:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 19:27	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 19:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	08.28.2020 19:27	
o-Terphenyl	84-15-1	76	%	70-130	08.28.2020 19:27	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-2 1'-1.5'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-004	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 04:31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 04:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 04:31	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 04:31	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-3 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-005	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4210**	24.9	mg/kg	08.27.2020 13:11		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 19:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**204**	49.8	mg/kg	08.28.2020 19:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 19:49	U	1
Total TPH	PHC635	**204**	49.8	mg/kg	08.28.2020 19:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	68	%	70-130	08.28.2020 19:49	**
o-Terphenyl	84-15-1	78	%	70-130	08.28.2020 19:49	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-3 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-005	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.2020 04:51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.2020 04:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 04:51	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.29.2020 04:51	

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Mamba BQN State Com 001H

Sample Id: **AH-3 6"-1'** Matrix: Soil Date Received:08.27.2020 09:08

Lab Sample Id: 671124-006 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3660**	25.0	mg/kg	08.27.2020 13:26		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 20:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 20:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 20:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 20:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	08.28.2020 20:11	
o-Terphenyl	84-15-1	108	%	70-130	08.28.2020 20:11	

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Sample Id:	**AH-3 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-006	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 05:12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 05:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 05:12	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.29.2020 05:12	

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Sample Id:	**AH-4 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-007	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2040**	25.0	mg/kg	08.27.2020 13:32		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 20:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**165**	50.0	mg/kg	08.28.2020 20:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 20:32	U	1
Total TPH	PHC635	**165**	50.0	mg/kg	08.28.2020 20:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	08.28.2020 20:32	
o-Terphenyl	84-15-1	94	%	70-130	08.28.2020 20:32	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-4 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-007	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.2020 05:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.2020 05:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 05:33	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.29.2020 05:33	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-4 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-008	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1060**	5.05	mg/kg	08.27.2020 13:37		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 20:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**334**	49.9	mg/kg	08.28.2020 20:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**84.8**	49.9	mg/kg	08.28.2020 20:54		1
Total TPH	PHC635	**419**	49.9	mg/kg	08.28.2020 20:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	08.28.2020 20:54	
o-Terphenyl	84-15-1	91	%	70-130	08.28.2020 20:54	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-4 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-008	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 05:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 05:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 05:53	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 05:53	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-5 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-009	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2270**	24.8	mg/kg	08.27.2020 13:42		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 21:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**246**	49.9	mg/kg	08.28.2020 21:15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 21:15	U	1
Total TPH	PHC635	**246**	49.9	mg/kg	08.28.2020 21:15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	08.28.2020 21:15	
o-Terphenyl	84-15-1	102	%	70-130	08.28.2020 21:15	

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Mamba BQN State Com 001H

Sample Id:	**AH-5 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-009	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.29.2020 06:14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.29.2020 06:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 06:14	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 06:14	

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Mamba BQN State Com 001H

Sample Id:	**AH-5 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-010	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1940**	24.9	mg/kg	08.27.2020 13:48		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 21:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**77.3**	50.0	mg/kg	08.28.2020 21:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 21:36	U	1
Total TPH	PHC635	**77.3**	50.0	mg/kg	08.28.2020 21:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	08.28.2020 21:36	
o-Terphenyl	84-15-1	102	%	70-130	08.28.2020 21:36	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-5 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-010	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.29.2020 06:34	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.29.2020 06:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 06:34	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.29.2020 06:34	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-6 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-011	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**873**	5.05	mg/kg	08.27.2020 13:53		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 22:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 22:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 22:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 22:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	08.28.2020 22:18	
o-Terphenyl	84-15-1	104	%	70-130	08.28.2020 22:18	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-6 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-011	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.2020 06:55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.2020 06:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.29.2020 06:55	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.29.2020 06:55	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-6 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-012	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6170**	49.7	mg/kg	08.27.2020 14:09		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 22:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 22:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 22:39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 22:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	08.28.2020 22:39	
o-Terphenyl	84-15-1	102	%	70-130	08.28.2020 22:39	

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Certificate of Analytical Results 671124

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**AH-6 6"-1'**	Matrix:	Soil	Date Received:	08.27.2020 09:08
Lab Sample Id:	671124-012	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.2020 09:43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.2020 09:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.29.2020 09:43	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 09:43	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 671124

Tetra Tech- Midland

Mamba BQN State Com 001H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710261-1-BLK — LCS Sample Id: 7710261-1-BKS — LCSD Sample Id: 7710261-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	249	100	90-110	1	20	mg/kg	08.27.2020 12:28	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671124-001 — MS Sample Id: 671124-001 S — MSD Sample Id: 671124-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1500	1260	2820	105	2830	106	90-110	0	20	mg/kg	08.27.2020 12:44	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671124-011 — MS Sample Id: 671124-011 S — MSD Sample Id: 671124-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	873	253	1100	90	1100	90	90-110	0	20	mg/kg	08.27.2020 13:58	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135948 — Matrix: Solid — Date Prep: 08.28.2020
MB Sample Id: 7710458-1-BLK — LCS Sample Id: 7710458-1-BKS — LCSD Sample Id: 7710458-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	969	97	993	99	70-130	2	20	mg/kg	08.28.2020 16:02	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1090	109	70-130	2	20	mg/kg	08.28.2020 16:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		111		116		70-130	%	08.28.2020 16:02
o-Terphenyl	107		112		118		70-130	%	08.28.2020 16:02

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135948 — Matrix: Solid — Date Prep: 08.28.2020
MB Sample Id: 7710458-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 15:39	

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

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QC Summary 671124

Tetra Tech- Midland

Mamba BQN State Com 001H

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3135948 Matrix: Soil Date Prep: 08.28.2020
Parent Sample Id: 671124-001 MS Sample Id: 671124-001 S MSD Sample Id: 671124-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	658	66	686	69	70-130	4	20	mg/kg	08.28.2020 17:58	X
Diesel Range Organics (DRO)	1790	997	1600	0	1630	0	70-130	2	20	mg/kg	08.28.2020 17:58	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	74		74		70-130	%	08.28.2020 17:58
o-Terphenyl	90		93		70-130	%	08.28.2020 17:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135898 Matrix: Solid Date Prep: 08.28.2020
MB Sample Id: 7710440-1-BLK LCS Sample Id: 7710440-1-BKS LCSD Sample Id: 7710440-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0970	97	0.107	107	70-130	10	35	mg/kg	08.28.2020 12:35	
Toluene	<0.00200	0.100	0.0924	92	0.121	121	70-130	27	35	mg/kg	08.28.2020 12:35	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.112	112	70-130	12	35	mg/kg	08.28.2020 12:35	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.220	110	70-130	11	35	mg/kg	08.28.2020 12:35	
o-Xylene	<0.00200	0.100	0.0954	95	0.106	106	70-130	11	35	mg/kg	08.28.2020 12:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		95		96		70-130	%	08.28.2020 12:35
4-Bromofluorobenzene	106		106		106		70-130	%	08.28.2020 12:35

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135899 Matrix: Solid Date Prep: 08.28.2020
MB Sample Id: 7710441-1-BLK LCS Sample Id: 7710441-1-BKS LCSD Sample Id: 7710441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0936	94	0.0988	99	70-130	5	35	mg/kg	08.29.2020 01:47	
Toluene	<0.00200	0.100	0.0891	89	0.0947	95	70-130	6	35	mg/kg	08.29.2020 01:47	
Ethylbenzene	<0.00200	0.100	0.0899	90	0.0960	96	70-130	7	35	mg/kg	08.29.2020 01:47	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.189	95	70-130	7	35	mg/kg	08.29.2020 01:47	
o-Xylene	<0.00200	0.100	0.0868	87	0.0930	93	70-130	7	35	mg/kg	08.29.2020 01:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		98		70-130	%	08.29.2020 01:47
4-Bromofluorobenzene	103		101		101		70-130	%	08.29.2020 01:47

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 671124

Tetra Tech- Midland

Mamba BQN State Com 001H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3135898 Matrix: Soil Date Prep: 08.28.2020

Parent Sample Id: 671124-001 MS Sample Id: 671124-001 S MSD Sample Id: 671124-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0874	88	0.0928	94	70-130	6	35	mg/kg	08.28.2020 13:17	
Toluene	<0.00199	0.0996	0.0864	87	0.0885	89	70-130	2	35	mg/kg	08.28.2020 13:17	
Ethylbenzene	<0.00199	0.0996	0.0653	66	0.0641	65	70-130	2	35	mg/kg	08.28.2020 13:17	X
m,p-Xylenes	<0.00398	0.199	0.125	63	0.122	62	70-130	2	35	mg/kg	08.28.2020 13:17	X
o-Xylene	<0.00199	0.0996	0.0619	62	0.0609	61	70-130	2	35	mg/kg	08.28.2020 13:17	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		98		70-130	%	08.28.2020 13:17
4-Bromofluorobenzene	107		106		70-130	%	08.28.2020 13:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3135899 Matrix: Soil Date Prep: 08.28.2020

Parent Sample Id: 671095-001 MS Sample Id: 671095-001 S MSD Sample Id: 671095-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0605	61	0.0582	59	70-130	4	35	mg/kg	08.29.2020 02:28	X
Toluene	<0.00200	0.0998	0.0575	58	0.0551	56	70-130	4	35	mg/kg	08.29.2020 02:28	X
Ethylbenzene	<0.00200	0.0998	0.0551	55	0.0542	55	70-130	2	35	mg/kg	08.29.2020 02:28	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.112	57	70-130	0	35	mg/kg	08.29.2020 02:28	X
o-Xylene	<0.00200	0.0998	0.0571	57	0.0566	57	70-130	1	35	mg/kg	08.29.2020 02:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	08.29.2020 02:28
4-Bromofluorobenzene	105		107		70-130	%	08.29.2020 02:28

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

607124

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Mamba BQN State Com 001H	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02299
Invoice to: Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
	AH-1 0-1'	8/26/2020			X				X			1	N	X		X												X							
	AH-1 1'-1.5'	8/26/2020			X				X			1	N	X		X												X							
	AH-2 0-1'	8/26/2020			X				X			1	N	X		X												X							
	AH-2 1'-1.5'	8/26/2020			X				X			1	N	X		X												X							
	AH-3 0-6"	8/26/2020			X				X			1	N	X		X												X							
	AH-3 6"-1'	8/26/2020			X				X			1	N	X		X												X							
	AH-4 0-6"	8/26/2020			X				X			1	N	X		X												X							
	AH-4 6"-1'	8/26/2020			X				X			1	N	X		X												X							
	AH-5 0-6"	8/26/2020			X				X			1	N	X		X												X							
	AH-5 6"-1'	8/26/2020			X				X			1	N	X		X												X							

Relinquished by:	Date: 8/27	Time: 0935	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Received by: Date: 8/27 Time: 0935

LAB USE ONLY

Sample Temperature 1.5/1.1 -0.4

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

671124

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: ~~Mamba BQN State Com 001H~~	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02299
Invoice to: Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
	AH-6 0-6"	8/26/2020			X				X			1	N	X		X												X							
	AH-6 6"-1'	8/26/2020			X				X			1	N	X		X												X							

Relinquished by: Date: 8/27 Time: 0930 — Received by: Date: 8/27 Time: 0930

Relinquished by: Date: Time: — Received by: Date: Time:

Relinquished by: Date: Time: — Received by: Date: Time:

LAB USE ONLY

Sample Temperature 1.5/1.1

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr ~~72 hr~~
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 08.27.2020 09.08.00 AM

Work Order #: 671124

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

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.1	
#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**	BTEX was in bulk container
#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: Brianna Teel Date: 08.27.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08.28.2020
Jessica Kramer

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Analytical Report 671125

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN State Com 001H

212C-MD-02299

08.31.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 671125

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN State Com 001H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu 08.27.2020 08:38
Report Date: 08.31.2020 17:01
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	671125-001		671125-002		671125-003		671125-004		671125-005		671125-006	
	Field Id:	Horizontal-1 0-6"		Horizontal-2 0-6"		Horizontal-3 0-6"		Horizontal-4 0-6"		Horizontal-5 0-6"		Horizontal-6 0-6"	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00		08.26.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00		08.28.2020 17:00	
	Analyzed:	08.29.2020 11:08		08.29.2020 11:29		08.29.2020 11:50		08.29.2020 12:10		08.29.2020 12:31		08.29.2020 12:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	*Extracted:*	08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15		08.27.2020 11:15	
	Analyzed:	08.27.2020 14:14		08.27.2020 14:30		08.27.2020 14:35		08.27.2020 14:40		08.27.2020 14:46		08.27.2020 14:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		53.6	5.03	35.4	4.99	32.1	5.00	24.7	5.00	31.8	5.00	33.5	5.02
TPH By SW8015 Mod	*Extracted:*	08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00		08.28.2020 11:00	
	Analyzed:	08.28.2020 22:59		08.28.2020 23:19		08.28.2020 23:39		08.28.2020 23:59		08.29.2020 00:19		08.29.2020 00:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 671125

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN State Com 001H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu 08.27.2020 08:38
Report Date: 08.31.2020 17:01
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	671125-007		671125-008			
	Field Id:	Horizontal-7 0-6"		Horizontal-8 0-6"			
	Depth:						
	Matrix:	SOIL		SOIL			
	Sampled:	08.26.2020 00:00		08.26.2020 00:00			
BTEX by EPA 8021B	***Extracted:***	08.28.2020 17:00		08.28.2020 17:00			
	Analyzed:	08.29.2020 13:13		08.29.2020 13:33			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	<0.00199	0.00199		
Toluene		<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398		
o-Xylene		<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199		
Total BTEX		<0.00200	0.00200	<0.00199	0.00199		
Inorganic Anions by EPA 300/300.1	***Extracted:***	08.27.2020 11:15		08.27.2020 11:15			
	Analyzed:	08.27.2020 14:56		08.27.2020 15:01			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		101	4.97	51.8	4.99		
TPH By SW8015 Mod	***Extracted:***	08.28.2020 11:00		08.28.2020 11:00			
	Analyzed:	08.29.2020 00:59		08.29.2020 01:19			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0		
Diesel Range Organics (DRO)		636	49.8	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		125	49.8	<50.0	50.0		
Total TPH		761	49.8	<50.0	50.0		

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

08.31.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **671125**
Mamba BQN State Com 001H
Project Address: Lea County, New Mexico

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 671125. 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 Eurofins Xenco, LLC. 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. 671125 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Horizontal-1 0-6"	S	08.26.2020 00:00		671125-001
Horizontal-2 0-6"	S	08.26.2020 00:00		671125-002
Horizontal-3 0-6"	S	08.26.2020 00:00		671125-003
Horizontal-4 0-6"	S	08.26.2020 00:00		671125-004
Horizontal-5 0-6"	S	08.26.2020 00:00		671125-005
Horizontal-6 0-6"	S	08.26.2020 00:00		671125-006
Horizontal-7 0-6"	S	08.26.2020 00:00		671125-007
Horizontal-8 0-6"	S	08.26.2020 00:00		671125-008

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN State Com 001H

Project ID: *212C-MD-02299*
Work Order Number(s): *671125*

Report Date: *08.31.2020*
Date Received: *08.27.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-1 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-001	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.6**	5.03	mg/kg	08.27.2020 14:14		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 22:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.28.2020 22:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 22:59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.28.2020 22:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	08.28.2020 22:59	
o-Terphenyl	84-15-1	111	%	70-130	08.28.2020 22:59	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-1 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-001	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.2020 11:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.2020 11:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.29.2020 11:08	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.29.2020 11:08	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **Horizontal-2 0-6"** Matrix: Soil Date Received:08.27.2020 08:38

Lab Sample Id: 671125-002 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.4**	4.99	mg/kg	08.27.2020 14:30		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 23:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 23:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 23:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 23:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	08.28.2020 23:19	
o-Terphenyl	84-15-1	106	%	70-130	08.28.2020 23:19	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-2 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-002	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 11:29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 11:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.29.2020 11:29	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.29.2020 11:29	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **Horizontal-3 0-6"** Matrix: Soil Date Received:08.27.2020 08:38

Lab Sample Id: 671125-003 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.1**	5.00	mg/kg	08.27.2020 14:35		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 23:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 23:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 23:39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 23:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	08.28.2020 23:39	
o-Terphenyl	84-15-1	96	%	70-130	08.28.2020 23:39	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-3 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-003	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 11:50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 11:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.29.2020 11:50	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.2020 11:50	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-4 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-004	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.7**	5.00	mg/kg	08.27.2020 14:40		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 23:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 23:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 23:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 23:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	08.28.2020 23:59	
o-Terphenyl	84-15-1	105	%	70-130	08.28.2020 23:59	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-4 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-004	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.29.2020 12:10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.29.2020 12:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.29.2020 12:10	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 12:10	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **Horizontal-5 0-6"** Matrix: Soil Date Received:08.27.2020 08:38

Lab Sample Id: 671125-005 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.8**	5.00	mg/kg	08.27.2020 14:46		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 00:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 00:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 00:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 00:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	08.29.2020 00:19	
o-Terphenyl	84-15-1	104	%	70-130	08.29.2020 00:19	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-5 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-005	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.2020 12:31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.2020 12:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.29.2020 12:31	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.2020 12:31	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **Horizontal-6 0-6"** Matrix: Soil Date Received:08.27.2020 08:38

Lab Sample Id: 671125-006 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.5**	5.02	mg/kg	08.27.2020 14:51		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.29.2020 00:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.29.2020 00:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.29.2020 00:39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.29.2020 00:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	08.29.2020 00:39	
o-Terphenyl	84-15-1	96	%	70-130	08.29.2020 00:39	

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Mamba BQN State Com 001H

Sample Id:	**Horizontal-6 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-006	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.2020 12:52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.2020 12:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 12:52	
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.29.2020 12:52	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id: **Horizontal-7 0-6"** Matrix: Soil Date Received:08.27.2020 08:38

Lab Sample Id: 671125-007 Date Collected: 08.26.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.27.2020 11:15 Basis: Wet Weight

Seq Number: 3135768

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	4.97	mg/kg	08.27.2020 14:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.28.2020 11:00 Basis: Wet Weight

Seq Number: 3135948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.29.2020 00:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**636**	49.8	mg/kg	08.29.2020 00:59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**125**	49.8	mg/kg	08.29.2020 00:59		1
Total TPH	PHC635	**761**	49.8	mg/kg	08.29.2020 00:59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	08.29.2020 00:59	
o-Terphenyl	84-15-1	116	%	70-130	08.29.2020 00:59	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-7 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-007	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.29.2020 13:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.2020 13:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.29.2020 13:13	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 13:13	

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Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-8 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-008	Date Collected:	08.26.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 11:15	Basis:	Wet Weight
Seq Number:	3135768				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.8**	4.99	mg/kg	08.27.2020 15:01		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.2020 11:00	Basis:	Wet Weight
Seq Number:	3135948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 01:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 01:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 01:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 01:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	08.29.2020 01:19	
o-Terphenyl	84-15-1	111	%	70-130	08.29.2020 01:19	

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Certificate of Analytical Results 671125

Tetra Tech- Midland, Midland, TX

Mamba BQN State Com 001H

Sample Id:	**Horizontal-8 0-6"**	Matrix:	Soil	Date Received:	08.27.2020 08:38
Lab Sample Id:	671125-008	Date Collected:	08.26.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	08.28.2020 17:00	Basis:	Wet Weight
Seq Number:	3135899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 13:33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 13:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.29.2020 13:33	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.2020 13:33	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 671125

Tetra Tech- Midland

Mamba BQN State Com 001H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710261-1-BLK — LCS Sample Id: 7710261-1-BKS — LCSD Sample Id: 7710261-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	249	100	90-110	1	20	mg/kg	08.27.2020 12:28	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671124-001 — MS Sample Id: 671124-001 S — MSD Sample Id: 671124-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1500	1260	2820	105	2830	106	90-110	0	20	mg/kg	08.27.2020 12:44	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3135768 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671124-011 — MS Sample Id: 671124-011 S — MSD Sample Id: 671124-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	873	253	1100	90	1100	90	90-110	0	20	mg/kg	08.27.2020 13:58	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135948 — Matrix: Solid — Date Prep: 08.28.2020
MB Sample Id: 7710458-1-BLK — LCS Sample Id: 7710458-1-BKS — LCSD Sample Id: 7710458-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	969	97	993	99	70-130	2	20	mg/kg	08.28.2020 16:02	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1090	109	70-130	2	20	mg/kg	08.28.2020 16:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		111		116		70-130	%	08.28.2020 16:02
o-Terphenyl	107		112		118		70-130	%	08.28.2020 16:02

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135948 — Matrix: Solid — Date Prep: 08.28.2020
MB Sample Id: 7710458-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 15:39	

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

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QC Summary 671125

Tetra Tech- Midland

Mamba BQN State Com 001H

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3135948 Matrix: Soil Date Prep: 08.28.2020
Parent Sample Id: 671124-001 MS Sample Id: 671124-001 S MSD Sample Id: 671124-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	658	66	686	69	70-130	4	20	mg/kg	08.28.2020 17:58	X
Diesel Range Organics (DRO)	1790	997	1600	0	1630	0	70-130	2	20	mg/kg	08.28.2020 17:58	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	74		74		70-130	%	08.28.2020 17:58
o-Terphenyl	90		93		70-130	%	08.28.2020 17:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135899 Matrix: Solid Date Prep: 08.28.2020
MB Sample Id: 7710441-1-BLK LCS Sample Id: 7710441-1-BKS LCSD Sample Id: 7710441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0936	94	0.0988	99	70-130	5	35	mg/kg	08.29.2020 01:47	
Toluene	<0.00200	0.100	0.0891	89	0.0947	95	70-130	6	35	mg/kg	08.29.2020 01:47	
Ethylbenzene	<0.00200	0.100	0.0899	90	0.0960	96	70-130	7	35	mg/kg	08.29.2020 01:47	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.189	95	70-130	7	35	mg/kg	08.29.2020 01:47	
o-Xylene	<0.00200	0.100	0.0868	87	0.0930	93	70-130	7	35	mg/kg	08.29.2020 01:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		98		70-130	%	08.29.2020 01:47
4-Bromofluorobenzene	103		101		101		70-130	%	08.29.2020 01:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135899 Matrix: Soil Date Prep: 08.28.2020
Parent Sample Id: 671095-001 MS Sample Id: 671095-001 S MSD Sample Id: 671095-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0605	61	0.0582	59	70-130	4	35	mg/kg	08.29.2020 02:28	X
Toluene	<0.00200	0.0998	0.0575	58	0.0551	56	70-130	4	35	mg/kg	08.29.2020 02:28	X
Ethylbenzene	<0.00200	0.0998	0.0551	55	0.0542	55	70-130	2	35	mg/kg	08.29.2020 02:28	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.112	57	70-130	0	35	mg/kg	08.29.2020 02:28	X
o-Xylene	<0.00200	0.0998	0.0571	57	0.0566	57	70-130	1	35	mg/kg	08.29.2020 02:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	08.29.2020 02:28
4-Bromofluorobenzene	105		107		70-130	%	08.29.2020 02:28

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland,Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

671175

Client Name: EOG	Site Manager: Mike Carmona
Project Name: Mamba BQN State Com 001H	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-02299
Invoice to: Todd Wells	
Receiving Laboratory: Xenco	Sampler Signature: Devin Dominguez
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCBs 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
	Horizontal-1 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-2 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-3 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-4 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-5 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-6 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-7 0-6"	8/26/2020			X				X		1	N	X		X												X							
	Horizontal-8 0-6"	8/26/2020			X				X		1	N	X		X												X							

Relinquished by:	Date: 8/27	Time: 0938	Received by: Date: 8/27 Time: 0938
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature 1.0/1.1 -0.4

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 08.27.2020 08.38.00 AM

Work Order #: 671125

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

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.1	
#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**	BTEX was in bulk container
#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: Brianna Teel Date: 08.27.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08.28.2020
Jessica Kramer

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Analytical Report 673183

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN St Com #1H

212C-MD-02299

09.24.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 673183

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co,NM

Date Received in Lab: Tue 09.22.2020 11:48
Report Date: 09.24.2020 15:00
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	673183-001		673183-002		673183-003		673183-004		673183-005		673183-006	
	Field Id:	Bottom Hole #1 (3'BEB)		Bottom Hole #2 (3'BEB)		Bottom Hole #3 (3'BEB)		Bottom Hole #4 (3'BEB)		Bottom Hole #5 (3'BEB)		Bottom Hole #6 (3'BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00	
	Analyzed:	09.23.2020 13:10		09.23.2020 13:31		09.23.2020 13:51		09.23.2020 12:50		09.23.2020 14:12		09.23.2020 14:32	
	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	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00397	0.00397	<0.00398	0.00398	<0.00396	0.00396	<0.00399	0.00399
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	*Extracted:*	09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15	
	Analyzed:	09.23.2020 12:23		09.23.2020 12:28		09.23.2020 12:33		09.23.2020 12:38		09.23.2020 12:54		09.23.2020 12:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		74.1	4.96	52.8	5.00	56.3	4.97	51.2	5.05	47.7	4.99	54.4	4.95
TPH By SW8015 Mod	*Extracted:*	09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00	
	Analyzed:	09.23.2020 12:17		09.23.2020 12:39		09.23.2020 13:01		09.23.2020 13:23		09.23.2020 13:45		09.23.2020 14:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH		<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 673183

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co,NM

Date Received in Lab: Tue 09.22.2020 11:48
Report Date: 09.24.2020 15:00
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	673183-007		673183-008		673183-009		673183-010		673183-011		673183-012	
	Field Id:	Bottom Hole #7 (3'BEB)		Bottom Hole #8 (3'BEB)		Bottom Hole #9 (3'BEB)		Bottom Hole #10 (3'BEB)		Bottom Hole #11 (3'BEB)		Sidewall #1	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00	
	Analyzed:	09.23.2020 14:53		09.23.2020 15:13		09.23.2020 15:34		09.23.2020 15:54		09.23.2020 17:17		09.23.2020 17:38	
	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	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198
Inorganic Anions by EPA 300/300.1	*Extracted:*	09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15	
	Analyzed:	09.23.2020 13:05		09.23.2020 13:10		09.23.2020 13:15		09.23.2020 13:20		09.23.2020 13:36		09.23.2020 13:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		47.1	4.95	51.5	5.03	51.6	4.96	48.6	5.00	50.8	5.03	54.2	5.02
TPH By SW8015 Mod	*Extracted:*	09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00	
	Analyzed:	09.23.2020 14:53		09.23.2020 15:15		09.23.2020 15:37		09.23.2020 15:59		09.23.2020 16:21		09.23.2020 16:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Total TPH		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8

BRL - Below Reporting Limit

Jessica Kramer

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Certificate of Analysis Summary 673183

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1H

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co,NM

Date Received in Lab: Tue 09.22.2020 11:48
Report Date: 09.24.2020 15:00
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	673183-013		673183-014		673183-015					
	Field Id:	Sidewall #2		Sidewall #3		Sidewall #4					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	09.18.2020 00:00		09.18.2020 00:00		09.18.2020 00:00					
BTEX by EPA 8021B	***Extracted:***	09.23.2020 09:00		09.23.2020 09:00		09.23.2020 09:00					
	Analyzed:	09.23.2020 17:58		09.23.2020 18:19		09.23.2020 18:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402				
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Inorganic Anions by EPA 300/300.1	***Extracted:***	09.23.2020 11:15		09.23.2020 11:15		09.23.2020 11:15					
	Analyzed:	09.23.2020 13:57		09.23.2020 14:02		09.23.2020 14:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		50.2	4.98	53.6	5.00	59.1	5.04				
TPH By SW8015 Mod	***Extracted:***	09.22.2020 12:00		09.22.2020 12:00		09.22.2020 12:00					
	Analyzed:	09.23.2020 17:07		09.23.2020 17:29		09.23.2020 17:51					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9				
Total TPH		<50.0	50.0	<50.0	50.0	<49.9	49.9				

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

09.24.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **673183**
Mamba BQN St Com #1H
Project Address: Lea Co,NM

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 673183. 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 Eurofins Xenco, LLC. 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. 673183 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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Sample Cross Reference 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #1 (3'BEB)	S	09.18.2020 00:00		673183-001
Bottom Hole #2 (3'BEB)	S	09.18.2020 00:00		673183-002
Bottom Hole #3 (3'BEB)	S	09.18.2020 00:00		673183-003
Bottom Hole #4 (3'BEB)	S	09.18.2020 00:00		673183-004
Bottom Hole #5 (3'BEB)	S	09.18.2020 00:00		673183-005
Bottom Hole #6 (3'BEB)	S	09.18.2020 00:00		673183-006
Bottom Hole #7 (3'BEB)	S	09.18.2020 00:00		673183-007
Bottom Hole #8 (3'BEB)	S	09.18.2020 00:00		673183-008
Bottom Hole #9 (3'BEB)	S	09.18.2020 00:00		673183-009
Bottom Hole #10 (3'BEB)	S	09.18.2020 00:00		673183-010
Bottom Hole #11 (3'BEB)	S	09.18.2020 00:00		673183-011
Sidewall #1	S	09.18.2020 00:00		673183-012
Sidewall #2	S	09.18.2020 00:00		673183-013
Sidewall #3	S	09.18.2020 00:00		673183-014
Sidewall #4	S	09.18.2020 00:00		673183-015

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN St Com #1H

Project ID: *212C-MD-02299*
Work Order Number(s): *673183*

Report Date: *09.24.2020*
Date Received: *09.22.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3137999 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7711993-1-BLK.

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #1 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-001 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.1**	4.96	mg/kg	09.23.2020 12:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.23.2020 12:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.23.2020 12:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.23.2020 12:17	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.23.2020 12:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-130	09.23.2020 12:17	
o-Terphenyl	84-15-1	80	%	70-130	09.23.2020 12:17	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #1 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-001	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.23.2020 13:10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.23.2020 13:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.23.2020 13:10	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.23.2020 13:10	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #2 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-002	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.8**	5.00	mg/kg	09.23.2020 12:28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 12:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 12:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 12:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 12:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-130	09.23.2020 12:39	
o-Terphenyl	84-15-1	79	%	70-130	09.23.2020 12:39	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #2 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-002	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.23.2020 13:31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.23.2020 13:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.23.2020 13:31	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.23.2020 13:31	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #3 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-003	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.3**	4.97	mg/kg	09.23.2020 12:33		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 13:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 13:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 13:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 13:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-130	09.23.2020 13:01	
o-Terphenyl	84-15-1	75	%	70-130	09.23.2020 13:01	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #3 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-003	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.23.2020 13:51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.23.2020 13:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.2020 13:51	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.23.2020 13:51	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #4 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-004	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.2**	5.05	mg/kg	09.23.2020 12:38		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 13:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 13:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 13:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 13:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-130	09.23.2020 13:23	
o-Terphenyl	84-15-1	75	%	70-130	09.23.2020 13:23	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #4 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-004	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.23.2020 12:50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.23.2020 12:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	70-130	09.23.2020 12:50	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 12:50	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #5 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-005 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.7**	4.99	mg/kg	09.23.2020 12:54		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 13:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 13:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 13:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 13:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-130	09.23.2020 13:45	
o-Terphenyl	84-15-1	76	%	70-130	09.23.2020 13:45	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #5 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-005	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.23.2020 14:12	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.23.2020 14:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	09.23.2020 14:12	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.23.2020 14:12	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #6 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-006	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.4**	4.95	mg/kg	09.23.2020 12:59		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 14:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 14:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 14:30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 14:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.23.2020 14:30	
o-Terphenyl	84-15-1	78	%	70-130	09.23.2020 14:30	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #6 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-006	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.23.2020 14:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 14:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.23.2020 14:32	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.23.2020 14:32	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #7 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-007 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.1**	4.95	mg/kg	09.23.2020 13:05		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 14:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 14:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-130	09.23.2020 14:53	
o-Terphenyl	84-15-1	75	%	70-130	09.23.2020 14:53	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #7 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-007	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.23.2020 14:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.23.2020 14:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.23.2020 14:53	
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.23.2020 14:53	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #8 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-008 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.5**	5.03	mg/kg	09.23.2020 13:10		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 15:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 15:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 15:15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 15:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-130	09.23.2020 15:15	
o-Terphenyl	84-15-1	74	%	70-130	09.23.2020 15:15	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #8 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-008	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.23.2020 15:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 15:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	09.23.2020 15:13	
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.23.2020 15:13	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #9 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-009 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.6**	4.96	mg/kg	09.23.2020 13:15		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 15:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 15:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 15:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 15:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-130	09.23.2020 15:37	
o-Terphenyl	84-15-1	79	%	70-130	09.23.2020 15:37	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #9 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-009	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.23.2020 15:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 15:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.23.2020 15:34	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.2020 15:34	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #10 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-010 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**48.6**	5.00	mg/kg	09.23.2020 13:20		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 15:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 15:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 15:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 15:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-130	09.23.2020 15:59	
o-Terphenyl	84-15-1	73	%	70-130	09.23.2020 15:59	

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Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #10 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-010	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.23.2020 15:54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.23.2020 15:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	09.23.2020 15:54	
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.23.2020 15:54	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id: **Bottom Hole #11 (3'BEB)** Matrix: Soil Date Received:09.22.2020 11:48

Lab Sample Id: 673183-011 Date Collected: 09.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.23.2020 11:15 Basis: Wet Weight

Seq Number: 3137995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**50.8**	5.03	mg/kg	09.23.2020 13:36		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.22.2020 12:00 Basis: Wet Weight

Seq Number: 3138026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 16:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 16:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 16:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 16:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-130	09.23.2020 16:21	
o-Terphenyl	84-15-1	78	%	70-130	09.23.2020 16:21	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Bottom Hole #11 (3'BEB)**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-011	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.23.2020 17:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.23.2020 17:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	09.23.2020 17:17	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 17:17	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #1**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-012	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.2**	5.02	mg/kg	09.23.2020 13:41		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.23.2020 16:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.23.2020 16:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.23.2020 16:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.23.2020 16:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-130	09.23.2020 16:43	
o-Terphenyl	84-15-1	79	%	70-130	09.23.2020 16:43	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #1**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-012	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.23.2020 17:38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.23.2020 17:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.23.2020 17:38	
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.23.2020 17:38	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #2**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-013	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**50.2**	4.98	mg/kg	09.23.2020 13:57		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 17:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 17:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 17:07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 17:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	09.23.2020 17:07	
o-Terphenyl	84-15-1	85	%	70-130	09.23.2020 17:07	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #2**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-013	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.23.2020 17:58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.23.2020 17:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	09.23.2020 17:58	
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.23.2020 17:58	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #3**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-014	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.6**	5.00	mg/kg	09.23.2020 14:02		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 17:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 17:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 17:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 17:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.23.2020 17:29	
o-Terphenyl	84-15-1	80	%	70-130	09.23.2020 17:29	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #3**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-014	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.23.2020 18:19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.23.2020 18:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.23.2020 18:19	
4-Bromofluorobenzene	460-00-4	86	%	70-130	09.23.2020 18:19	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #4**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-015	Date Collected:	09.18.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.23.2020 11:15	Basis:	Wet Weight
Seq Number:	3137995				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.1**	5.04	mg/kg	09.23.2020 14:08		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.22.2020 12:00	Basis:	Wet Weight
Seq Number:	3138026				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 17:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 17:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 17:51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 17:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-130	09.23.2020 17:51	
o-Terphenyl	84-15-1	74	%	70-130	09.23.2020 17:51	

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Certificate of Analytical Results 673183

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1H

Sample Id:	**Sidewall #4**	Matrix:	Soil	Date Received:	09.22.2020 11:48
Lab Sample Id:	673183-015	Date Collected:	09.18.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	09.23.2020 09:00	Basis:	Wet Weight
Seq Number:	3137999				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.23.2020 18:39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.23.2020 18:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	70-130	09.23.2020 18:39	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.23.2020 18:39	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 673183

Tetra Tech- Midland

Mamba BQN St Com #1H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137995 — Matrix: Solid — Date Prep: 09.23.2020
MB Sample Id: 7711926-1-BLK — LCS Sample Id: 7711926-1-BKS — LCSD Sample Id: 7711926-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	263	105	258	103	90-110	2	20	mg/kg	09.23.2020 11:56	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137995 — Matrix: Soil — Date Prep: 09.23.2020
Parent Sample Id: 673086-144 — MS Sample Id: 673086-144 S — MSD Sample Id: 673086-144 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	513	252	754	96	748	93	90-110	1	20	mg/kg	09.23.2020 12:12	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137995 — Matrix: Soil — Date Prep: 09.23.2020
Parent Sample Id: 673183-010 — MS Sample Id: 673183-010 S — MSD Sample Id: 673183-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.6	250	307	103	304	102	90-110	1	20	mg/kg	09.23.2020 13:26	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3138026 — Matrix: Solid — Date Prep: 09.22.2020
MB Sample Id: 7711968-1-BLK — LCS Sample Id: 7711968-1-BKS — LCSD Sample Id: 7711968-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	885	89	947	95	70-130	7	20	mg/kg	09.23.2020 08:59	
Diesel Range Organics (DRO)	<50.0	1000	848	85	942	94	70-130	11	20	mg/kg	09.23.2020 08:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	79		83		92		70-130	%	09.23.2020 08:59
o-Terphenyl	81		75		93		70-130	%	09.23.2020 08:59

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3138026 — Matrix: Solid — Date Prep: 09.22.2020
MB Sample Id: 7711968-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.23.2020 08:37	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 673183

Tetra Tech- Midland

Mamba BQN St Com #1H

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3138026 Matrix: Soil Date Prep: 09.22.2020
Parent Sample Id: 673087-021 MS Sample Id: 673087-021 S MSD Sample Id: 673087-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	862	86	917	92	70-130	6	20	mg/kg	09.23.2020 10:05	
Diesel Range Organics (DRO)	<49.9	998	851	85	904	91	70-130	6	20	mg/kg	09.23.2020 10:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		88		70-130	%	09.23.2020 10:05
o-Terphenyl	72		74		70-130	%	09.23.2020 10:05

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3137999 Matrix: Solid Date Prep: 09.23.2020
MB Sample Id: 7711993-1-BLK LCS Sample Id: 7711993-1-BKS LCSD Sample Id: 7711993-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0914	91	0.102	102	70-130	11	35	mg/kg	09.23.2020 10:08	
Toluene	<0.00200	0.100	0.0985	99	0.106	106	70-130	7	35	mg/kg	09.23.2020 10:08	
Ethylbenzene	<0.00200	0.100	0.105	105	0.111	111	70-130	6	35	mg/kg	09.23.2020 10:08	
m,p-Xylenes	<0.00400	0.200	0.211	106	0.217	109	70-130	3	35	mg/kg	09.23.2020 10:08	
o-Xylene	<0.00200	0.100	0.107	107	0.104	104	70-130	3	35	mg/kg	09.23.2020 10:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		99		70-130	%	09.23.2020 10:08
4-Bromofluorobenzene	67	**	123		107		70-130	%	09.23.2020 10:08

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3137999 Matrix: Soil Date Prep: 09.23.2020
Parent Sample Id: 673183-004 MS Sample Id: 673183-004 S MSD Sample Id: 673183-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0943	95	0.0951	95	70-130	1	35	mg/kg	09.23.2020 11:09	
Toluene	<0.00199	0.0994	0.103	104	0.0987	99	70-130	4	35	mg/kg	09.23.2020 11:09	
Ethylbenzene	<0.00199	0.0994	0.109	110	0.101	101	70-130	8	35	mg/kg	09.23.2020 11:09	
m,p-Xylenes	<0.00398	0.199	0.218	110	0.197	99	70-130	10	35	mg/kg	09.23.2020 11:09	
o-Xylene	<0.00199	0.0994	0.106	107	0.0956	96	70-130	10	35	mg/kg	09.23.2020 11:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	09.23.2020 11:09
4-Bromofluorobenzene	121		106		70-130	%	09.23.2020 11:09

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

673183 Page 1 of 2

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Mamba BQN St Com #1H	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2020)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	Bottom Hole #1 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #2 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #3 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #4 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #5 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #6 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #7 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #8 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #9 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Bottom Hole #10 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	9/22/2020	11:48	[signature]	9/22/2020	11:48
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature: -2.9/-2.4

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

nalysis Request of Chain of Custody Record

673183

Page 2 of 2

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Mamba BQN St Com #1H	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	TIME	MATRIX WATER	SOIL		PRESERVATIVE METHOD HCL	HNO_3	ICE	None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	Bottom Hole #11 (3' BEB)	9/18/2020			X				X			1	N	X		X												X							
	Sidewall #1	9/18/2020			X				X			1	N	X		X												X							
	Sidewall #2	9/18/2020			X				X			1	N	X		X												X							
	Sidewall #3	9/18/2020			X				X			1	N	X		X												X							
	Sidewall #4	9/18/2020			X				X			1	N	X		X												X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	9/22/2020			9/22/2020	11:48
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature
-2.9/-2.4

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 09.22.2020 11.48.00 AM

Work Order #: 673183

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

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	-2.4	
#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**	BTEX was in bulk container
#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: Brianna Teel Date: 09.22.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 09.23.2020
Jessica Kramer

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Analytical Report 673275

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN St Com1

09.24.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 673275

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com1

Project Id:

Contact: Mike Carmona

Project Location: Lea County, New Mexico

Date Received in Lab: Tue 09.22.2020 16:40

Report Date: 09.24.2020 11:27

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	673275-001		673275-002		673275-003		673275-004		673275-005		673275-006	
	Field Id:	Bottom Hole #12 (4' BEB		Bottom Hole #13 (4' BEB		Bottom Hole #14 (4' BEB		Bottom Hole #15 (4' BEB		Bottom Hole #16 (4' BEB		Sidewall #5	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.22.2020 00:00		09.22.2020 00:00		09.22.2020 00:00		09.22.2020 00:00		09.22.2020 00:00		09.22.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	09.23.2020 09:28		09.23.2020 09:28		09.23.2020 09:28		09.23.2020 09:28		09.23.2020 09:28		09.23.2020 09:28	
	Analyzed:	09.23.2020 18:14		09.23.2020 18:36		09.23.2020 18:58		09.23.2020 19:21		09.23.2020 19:43		09.23.2020 20:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00401	0.00401	<0.00399	0.00399	<0.00403	0.00403	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
Inorganic Anions by EPA 300/300.1	***Extracted:***	09.23.2020 10:23		09.23.2020 10:23		09.23.2020 10:23		09.23.2020 10:23		09.23.2020 10:23		09.23.2020 10:23	
	Analyzed:	09.23.2020 12:30		09.23.2020 12:36		09.23.2020 12:41		09.23.2020 12:47		09.23.2020 12:52		09.23.2020 12:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		56.2	9.98	55.1	10.1	55.5	10.0	55.0	9.94	52.4	9.90	51.3	9.98
TPH By SW8015 Mod	***Extracted:***	09.23.2020 11:30		09.23.2020 11:30		09.23.2020 11:30		09.23.2020 11:30		09.23.2020 11:30		09.23.2020 11:30	
	Analyzed:	09.23.2020 13:34		09.23.2020 13:55		09.23.2020 14:15		09.23.2020 14:35		09.23.2020 15:16		09.23.2020 15:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.0	50.0	<50.1	50.1
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.0	50.0	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.0	50.0	<50.1	50.1
Total TPH		<49.9	49.9	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.0	50.0	<50.1	50.1

BRL - Below Reporting Limit

Jessica Kramer

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

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09.24.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **673275**
Mamba BQN St Com1
Project Address: Lea County, New Mexico

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 673275. 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 Eurofins Xenco, LLC. 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. 673275 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 673275

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #12 (4' BEB)	S	09.22.2020 00:00		673275-001
Bottom Hole #13 (4' BEB)	S	09.22.2020 00:00		673275-002
Bottom Hole #14 (4' BEB)	S	09.22.2020 00:00		673275-003
Bottom Hole #15 (4' BEB)	S	09.22.2020 00:00		673275-004
Bottom Hole #16 (4' BEB)	S	09.22.2020 00:00		673275-005
Sidewall #5	S	09.22.2020 00:00		673275-006

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN St Com1

Project ID:
Work Order Number(s): *673275*

Report Date: *09.24.2020*
Date Received: *09.22.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 673275

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id: **Bottom Hole #12 (4' BEB)** Matrix: Soil Date Received:09.22.2020 16:40

Lab Sample Id: 673275-001 Date Collected: 09.22.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.23.2020 10:23 Basis: Wet Weight

Seq Number: 3137897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.2**	9.98	mg/kg	09.23.2020 12:30		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.23.2020 11:30 Basis: Wet Weight

Seq Number: 3137906

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 13:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 13:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 13:34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 13:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.23.2020 13:34	
o-Terphenyl	84-15-1	95	%	70-135	09.23.2020 13:34	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #12 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-001	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.23.2020 18:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 18:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.23.2020 18:14	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.2020 18:14	

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Certificate of Analytical Results 673275

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id: **Bottom Hole #13 (4' BEB)** Matrix: Soil Date Received:09.22.2020 16:40

Lab Sample Id: 673275-002 Date Collected: 09.22.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.23.2020 10:23 Basis: Wet Weight

Seq Number: 3137897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.1**	10.1	mg/kg	09.23.2020 12:36		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.23.2020 11:30 Basis: Wet Weight

Seq Number: 3137906

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.23.2020 13:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.23.2020 13:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.23.2020 13:55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.23.2020 13:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.23.2020 13:55	
o-Terphenyl	84-15-1	97	%	70-135	09.23.2020 13:55	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #13 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-002	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.23.2020 18:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 18:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 18:36	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.23.2020 18:36	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #14 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-003	Date Collected:	09.22.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 10:23	Basis:	Wet Weight
Seq Number:	3137897				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.5**	10.0	mg/kg	09.23.2020 12:41		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.2020 11:30	Basis:	Wet Weight
Seq Number:	3137906				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.23.2020 14:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.23.2020 14:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.23.2020 14:15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.23.2020 14:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	09.23.2020 14:15	
o-Terphenyl	84-15-1	94	%	70-135	09.23.2020 14:15	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #14 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-003	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.23.2020 18:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 18:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 18:58	
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.23.2020 18:58	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id: **Bottom Hole #15 (4' BEB)** Matrix: Soil Date Received:09.22.2020 16:40

Lab Sample Id: 673275-004 Date Collected: 09.22.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.23.2020 10:23 Basis: Wet Weight

Seq Number: 3137897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.0**	9.94	mg/kg	09.23.2020 12:47		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.23.2020 11:30 Basis: Wet Weight

Seq Number: 3137906

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.23.2020 14:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.23.2020 14:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.23.2020 14:35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.23.2020 14:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.23.2020 14:35	
o-Terphenyl	84-15-1	95	%	70-135	09.23.2020 14:35	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #15 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-004	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.23.2020 19:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.23.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.23.2020 19:21	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.2020 19:21	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #16 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-005	Date Collected:	09.22.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 10:23	Basis:	Wet Weight
Seq Number:	3137897				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.4**	9.90	mg/kg	09.23.2020 12:52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.2020 11:30	Basis:	Wet Weight
Seq Number:	3137906				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.2020 15:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.2020 15:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.2020 15:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.2020 15:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.23.2020 15:16	
o-Terphenyl	84-15-1	95	%	70-135	09.23.2020 15:16	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Bottom Hole #16 (4' BEB)**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-005	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.23.2020 19:43	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.23.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.23.2020 19:43	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 19:43	

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Certificate of Analytical Results 673275

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Sidewall #5**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-006	Date Collected:	09.22.2020 00:00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 10:23	Basis:	Wet Weight
Seq Number:	3137897				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.3**	9.98	mg/kg	09.23.2020 12:58		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.2020 11:30	Basis:	Wet Weight
Seq Number:	3137906				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.23.2020 15:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.23.2020 15:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.23.2020 15:36	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.23.2020 15:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.23.2020 15:36	
o-Terphenyl	84-15-1	98	%	70-135	09.23.2020 15:36	

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Certificate of Analytical Results 673275

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com1

Sample Id:	**Sidewall #5**	Matrix:	Soil	Date Received:	09.22.2020 16:40
Lab Sample Id:	673275-006	Date Collected:	09.22.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.2020 09:28	Basis:	Wet Weight
Seq Number:	3137953				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.23.2020 20:06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.23.2020 20:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.2020 20:06	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.2020 20:06	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 673275

Tetra Tech- Midland

Mamba BQN St Com1

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137897 — Matrix: Solid — Date Prep: 09.23.2020
MB Sample Id: 7711903-1-BLK — LCS Sample Id: 7711903-1-BKS — LCSD Sample Id: 7711903-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	255	102	90-110	0	20	mg/kg	09.23.2020 10:20	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137897 — Matrix: Soil — Date Prep: 09.23.2020
Parent Sample Id: 673298-001 — MS Sample Id: 673298-001 S — MSD Sample Id: 673298-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	359	200	553	97	550	96	90-110	1	20	mg/kg	09.23.2020 10:37	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3137897 — Matrix: Soil — Date Prep: 09.23.2020
Parent Sample Id: 673298-011 — MS Sample Id: 673298-011 S — MSD Sample Id: 673298-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	129	202	325	97	321	96	90-110	1	20	mg/kg	09.23.2020 11:57	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3137906 — Matrix: Solid — Date Prep: 09.23.2020
MB Sample Id: 7711922-1-BLK — LCS Sample Id: 7711922-1-BKS — LCSD Sample Id: 7711922-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	924	92	861	86	70-135	7	35	mg/kg	09.23.2020 10:12	
Diesel Range Organics (DRO)	<50.0	1000	970	97	908	91	70-135	7	35	mg/kg	09.23.2020 10:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		103		99		70-135	%	09.23.2020 10:12
o-Terphenyl	90		93		89		70-135	%	09.23.2020 10:12

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3137906 — Matrix: Solid — Date Prep: 09.23.2020
MB Sample Id: 7711922-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.23.2020 09:52	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 673275

Tetra Tech- Midland

Mamba BQN St Com1

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3137906 Matrix: Soil Date Prep: 09.23.2020
Parent Sample Id: 673298-001 MS Sample Id: 673298-001 S MSD Sample Id: 673298-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	875	88	827	83	70-135	6	35	mg/kg	09.23.2020 11:13	
Diesel Range Organics (DRO)	<49.8	995	899	90	866	87	70-135	4	35	mg/kg	09.23.2020 11:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		109		70-135	%	09.23.2020 11:13
o-Terphenyl	106		99		70-135	%	09.23.2020 11:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3137953 Matrix: Solid Date Prep: 09.23.2020
MB Sample Id: 7711904-1-BLK LCS Sample Id: 7711904-1-BKS LCSD Sample Id: 7711904-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.101	101	70-130	5	35	mg/kg	09.23.2020 10:23	
Toluene	<0.00200	0.100	0.102	102	0.0977	98	70-130	4	35	mg/kg	09.23.2020 10:23	
Ethylbenzene	<0.00200	0.100	0.0954	95	0.0908	91	71-129	5	35	mg/kg	09.23.2020 10:23	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.182	91	70-135	5	35	mg/kg	09.23.2020 10:23	
o-Xylene	<0.00200	0.100	0.0951	95	0.0907	91	71-133	5	35	mg/kg	09.23.2020 10:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		100		70-130	%	09.23.2020 10:23
4-Bromofluorobenzene	88		89		92		70-130	%	09.23.2020 10:23

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3137953 Matrix: Soil Date Prep: 09.23.2020
Parent Sample Id: 673298-001 MS Sample Id: 673298-001 S MSD Sample Id: 673298-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.119	119	0.124	124	70-130	4	35	mg/kg	09.23.2020 11:08	
Toluene	<0.00200	0.100	0.115	115	0.121	121	70-130	5	35	mg/kg	09.23.2020 11:08	
Ethylbenzene	<0.00200	0.100	0.107	107	0.113	113	71-129	5	35	mg/kg	09.23.2020 11:08	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.229	115	70-135	6	35	mg/kg	09.23.2020 11:08	
o-Xylene	<0.00200	0.100	0.105	105	0.111	111	71-133	6	35	mg/kg	09.23.2020 11:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	09.23.2020 11:08
4-Bromofluorobenzene	93		89		70-130	%	09.23.2020 11:08

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech. Inc.

901 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

673275

Client Name:	EOG	Site Manager:	Mike Carmona
Project Name:	Mamba BQN St Com 1		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02299
Invoice to:	EOG - Todd Wells		
Receiving Laboratory:	Xenco	Sampler Signature:	Conner Moehring
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)
	Bottom Hole #12 (4' BEB)	9/22/2020			X				X			1	N
	Bottom Hole #13 (4' BEB)	9/23/2020			X				X			1	N
	Bottom Hole #14 (4' BEB)	9/24/2020			X				X			1	N
	Bottom Hole #15 (4' BEB)	9/25/2020			X				X			1	N
	Bottom Hole #16 (4' BEB)	9/26/2020			X				X			1	N
	Sidewall #5	9/27/2020			X				X			1	N

9/22/20 CAC

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							

Relinquished by: Date: 9/22/20 Time: 16:40 — Received by: Date: 9.22.20 Time: 16:40

Relinquished by: Date: Time: — Received by: Date: Time:

Relinquished by: Date: Time: — Received by: Date: Time:

LAB USE ONLY

Sample Temperature 10.6/10.4

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 09.22.2020 04.40.00 PM

Work Order #: 673275

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

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	10.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#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**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.22.2020

Checklist reviewed by: Jessica Kramer Date: 09.23.2020

Jessica Kramer

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Analytical Report 673712

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN St Com 1

212C-MD-02299

09.29.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 673712

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com 1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea CO NM

Date Received in Lab: Mon 09.28.2020 13:06
Report Date: 09.29.2020 14:18
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	673712-001		673712-002		673712-003		673712-004		673712-005		673712-006	
	Field Id:	Bottom Hole #17 (2' BEB		Bottom Hole #18 (2' BEB		Bottom Hole #19 (2' BEB		Bottom Hole #20 (2' BEB		Bottom Hole #21 (2' BEB		Bottom Hole #22 (2' BEB	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.25.2020 00:00		09.25.2020 00:00		09.25.2020 00:00		09.25.2020 00:00		09.25.2020 00:00		09.25.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	09.28.2020 16:00		09.28.2020 16:00		09.28.2020 15:00		09.28.2020 15:00		09.28.2020 15:00		09.28.2020 15:00	
	Analyzed:	09.29.2020 09:11		09.29.2020 09:32		09.28.2020 18:28		09.28.2020 18:49		09.28.2020 19:09		09.28.2020 19:30	
	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	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	09.28.2020 16:50		09.28.2020 16:50		09.28.2020 16:50		09.28.2020 16:50		09.28.2020 16:50		09.28.2020 16:50	
	Analyzed:	09.28.2020 17:09		09.28.2020 18:10		09.28.2020 18:16		09.28.2020 18:21		09.28.2020 18:27		09.28.2020 18:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		57.5 X	4.95	54.3	5.00	55.3	4.99	56.1	5.03	62.5	5.00	60.3	4.98
TPH by SW8015 Mod	*Extracted:*	09.28.2020 16:00		09.28.2020 16:00		09.28.2020 16:00		09.28.2020 16:00		09.28.2020 16:00		09.28.2020 16:00	
	Analyzed:	09.29.2020 00:28		09.29.2020 01:33		09.29.2020 01:54		09.29.2020 02:16		09.29.2020 02:38		09.29.2020 03:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 673712

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com 1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea CO NM

Date Received in Lab: Mon 09.28.2020 13:06
Report Date: 09.29.2020 14:18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	673712-007		673712-008		673712-009					
	Field Id:	Sidewall 6		Sidewall 7		Sidewall 8					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	09.25.2020 00:00		09.25.2020 00:00		09.25.2020 00:00					
BTEX by EPA 8021B	***Extracted:***	09.28.2020 15:00		09.28.2020 15:00		09.28.2020 15:00					
	Analyzed:	09.28.2020 19:51		09.28.2020 20:12		09.28.2020 20:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	09.28.2020 16:50		09.28.2020 16:50		09.28.2020 16:50					
	Analyzed:	09.28.2020 18:49		09.28.2020 19:06		09.28.2020 19:11					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		61.5	5.04	56.9	4.96	59.6	5.00				
TPH by SW8015 Mod	***Extracted:***	09.28.2020 16:00		09.28.2020 16:00		09.28.2020 16:00					
	Analyzed:	09.29.2020 03:21		09.29.2020 03:43		09.29.2020 04:05					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0				
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0				
Total TPH		<49.9	49.9	<49.8	49.8	<50.0	50.0				

BRL - Below Reporting Limit

Jessica Kramer

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

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09.29.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **673712**
Mamba BQN St Com 1
Project Address: Lea CO NM

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 673712. 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 Eurofins Xenco, LLC. 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. 673712 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 673712

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #17 (2' BEB)	S	09.25.2020 00:00		673712-001
Bottom Hole #18 (2' BEB)	S	09.25.2020 00:00		673712-002
Bottom Hole #19 (2' BEB)	S	09.25.2020 00:00		673712-003
Bottom Hole #20 (2' BEB)	S	09.25.2020 00:00		673712-004
Bottom Hole #21 (2' BEB)	S	09.25.2020 00:00		673712-005
Bottom Hole #22 (2' BEB)	S	09.25.2020 00:00		673712-006
Sidewall 6	S	09.25.2020 00:00		673712-007
Sidewall 7	S	09.25.2020 00:00		673712-008
Sidewall 8	S	09.25.2020 00:00		673712-009

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN St Com 1

Project ID: *212C-MD-02299*
Work Order Number(s): *673712*

Report Date: *09.29.2020*
Date Received: *09.28.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3138336 Chloride by EPA 300

Lab Sample ID 673712-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 673712-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 673712

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Bottom Hole #17 (2' BEB)** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-001 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.5**	4.95	mg/kg	09.28.2020 17:09	X	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.29.2020 00:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.29.2020 00:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.29.2020 00:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.29.2020 00:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	09.29.2020 00:28	
o-Terphenyl	84-15-1	80	%	70-130	09.29.2020 00:28	

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Certificate of Analytical Results 673712

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #17 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-001	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3138375				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.29.2020 09:11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.29.2020 09:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.29.2020 09:11	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.29.2020 09:11	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Bottom Hole #18 (2' BEB)** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-002 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.3**	5.00	mg/kg	09.28.2020 18:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.29.2020 01:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.29.2020 01:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.29.2020 01:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.29.2020 01:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	09.29.2020 01:33	
o-Terphenyl	84-15-1	79	%	70-130	09.29.2020 01:33	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #18 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-002	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3138375				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.29.2020 09:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.29.2020 09:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.29.2020 09:32	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.29.2020 09:32	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Bottom Hole #19 (2' BEB)** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-003 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.3**	4.99	mg/kg	09.28.2020 18:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.29.2020 01:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.29.2020 01:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.29.2020 01:54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.29.2020 01:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.29.2020 01:54	
o-Terphenyl	84-15-1	78	%	70-130	09.29.2020 01:54	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #19 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-003	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 18:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 18:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	09.28.2020 18:28	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.28.2020 18:28	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #20 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-004	Date Collected:	09.25.2020 00:00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.28.2020 16:50	Basis:	Wet Weight
Seq Number:	3138336				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.1**	5.03	mg/kg	09.28.2020 18:21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3138367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.29.2020 02:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.29.2020 02:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.29.2020 02:16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.29.2020 02:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.29.2020 02:16	
o-Terphenyl	84-15-1	76	%	70-130	09.29.2020 02:16	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #20 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-004	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 18:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.28.2020 18:49	
4-Bromofluorobenzene	460-00-4	97	%	70-130	09.28.2020 18:49	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Bottom Hole #21 (2' BEB)** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-005 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.5**	5.00	mg/kg	09.28.2020 18:27		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.29.2020 02:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.29.2020 02:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.29.2020 02:38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.29.2020 02:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	09.29.2020 02:38	
o-Terphenyl	84-15-1	82	%	70-130	09.29.2020 02:38	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #21 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-005	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 19:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 19:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.28.2020 19:09	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.28.2020 19:09	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Bottom Hole #22 (2' BEB)** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-006 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.3**	4.98	mg/kg	09.28.2020 18:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.29.2020 03:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.29.2020 03:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.29.2020 03:00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.29.2020 03:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.29.2020 03:00	
o-Terphenyl	84-15-1	79	%	70-130	09.29.2020 03:00	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Bottom Hole #22 (2' BEB)**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-006	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 19:30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 19:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.28.2020 19:30	
4-Bromofluorobenzene	460-00-4	101	%	70-130	09.28.2020 19:30	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id: **Sidewall 6** Matrix: Soil Date Received:09.28.2020 13:06

Lab Sample Id: 673712-007 Date Collected: 09.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.28.2020 16:50 Basis: Wet Weight

Seq Number: 3138336

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.5**	5.04	mg/kg	09.28.2020 18:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.28.2020 16:00 Basis: Wet Weight

Seq Number: 3138367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.29.2020 03:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.29.2020 03:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.29.2020 03:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.29.2020 03:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-130	09.29.2020 03:21	
o-Terphenyl	84-15-1	78	%	70-130	09.29.2020 03:21	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Sidewall 6**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-007	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 19:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 19:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.28.2020 19:51	
4-Bromofluorobenzene	460-00-4	105	%	70-130	09.28.2020 19:51	

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Mamba BQN St Com 1

Sample Id:	**Sidewall 7**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-008	Date Collected:	09.25.2020 00:00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.28.2020 16:50	Basis:	Wet Weight
Seq Number:	3138336				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.9**	4.96	mg/kg	09.28.2020 19:06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3138367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.29.2020 03:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.29.2020 03:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.29.2020 03:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.29.2020 03:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	09.29.2020 03:43	
o-Terphenyl	84-15-1	78	%	70-130	09.29.2020 03:43	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Sidewall 7**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-008	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 20:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 20:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.28.2020 20:12	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.28.2020 20:12	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Sidewall 8**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-009	Date Collected:	09.25.2020 00:00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.28.2020 16:50	Basis:	Wet Weight
Seq Number:	3138336				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.6**	5.00	mg/kg	09.28.2020 19:11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3138367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.29.2020 04:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.29.2020 04:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.29.2020 04:05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.29.2020 04:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-130	09.29.2020 04:05	
o-Terphenyl	84-15-1	79	%	70-130	09.29.2020 04:05	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com 1

Sample Id:	**Sidewall 8**	Matrix:	Soil	Date Received:	09.28.2020 13:06
Lab Sample Id:	673712-009	Date Collected:	09.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	ALJ	Date Prep:	09.28.2020 15:00	Basis:	Wet Weight
Seq Number:	3138317				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.28.2020 20:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.28.2020 20:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	09.28.2020 20:33	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.28.2020 20:33	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 673712

Tetra Tech- Midland

Mamba BQN St Com 1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3138336 — Matrix: Solid — Date Prep: 09.28.2020
MB Sample Id: 7712247-1-BLK — LCS Sample Id: 7712247-1-BKS — LCSD Sample Id: 7712247-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	269	108	269	108	90-110	0	20	mg/kg	09.28.2020 16:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3138336 — Matrix: Soil — Date Prep: 09.28.2020
Parent Sample Id: 673712-001 — MS Sample Id: 673712-001 S — MSD Sample Id: 673712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.5	248	337	113	326	108	90-110	3	20	mg/kg	09.28.2020 17:15	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3138336 — Matrix: Soil — Date Prep: 09.28.2020
Parent Sample Id: 673712-005 — MS Sample Id: 673712-005 S — MSD Sample Id: 673712-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	62.5	250	336	109	328	106	90-110	2	20	mg/kg	09.28.2020 18:32	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3138367 — Matrix: Solid — Date Prep: 09.28.2020
MB Sample Id: 7712244-1-BLK — LCS Sample Id: 7712244-1-BKS — LCSD Sample Id: 7712244-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1050	105	70-130	3	20	mg/kg	09.28.2020 23:02	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	995	100	70-130	2	20	mg/kg	09.28.2020 23:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		97		96		70-130	%	09.28.2020 23:02
o-Terphenyl	86		88		89		70-130	%	09.28.2020 23:02

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3138367 — Matrix: Solid — Date Prep: 09.28.2020
MB Sample Id: 7712244-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.29.2020 00:07	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 673712

Tetra Tech- Midland

Mamba BQN St Com 1

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3138367 Matrix: Soil Date Prep: 09.28.2020
Parent Sample Id: 673712-001 MS Sample Id: 673712-001 S MSD Sample Id: 673712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	988	99	1020	102	70-130	3	20	mg/kg	09.29.2020 00:49	
Diesel Range Organics (DRO)	<49.9	998	969	97	978	98	70-130	1	20	mg/kg	09.29.2020 00:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		92		70-130	%	09.29.2020 00:49
o-Terphenyl	71		80		70-130	%	09.29.2020 00:49

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3138317 Matrix: Solid Date Prep: 09.28.2020
MB Sample Id: 7712245-1-BLK LCS Sample Id: 7712245-1-BKS LCSD Sample Id: 7712245-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.117	117	0.112	112	70-130	4	35	mg/kg	09.28.2020 15:52	
Toluene	<0.00200	0.100	0.112	112	0.105	105	70-130	6	35	mg/kg	09.28.2020 15:52	
Ethylbenzene	<0.00200	0.100	0.107	107	0.102	102	70-130	5	35	mg/kg	09.28.2020 15:52	
m,p-Xylenes	<0.00400	0.200	0.230	115	0.218	109	70-130	5	35	mg/kg	09.28.2020 15:52	
o-Xylene	<0.00200	0.100	0.110	110	0.104	104	70-130	6	35	mg/kg	09.28.2020 15:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		104		99		70-130	%	09.28.2020 15:52
4-Bromofluorobenzene	97		106		103		70-130	%	09.28.2020 15:52

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3138375 Matrix: Solid Date Prep: 09.28.2020
MB Sample Id: 7712264-1-BLK LCS Sample Id: 7712264-1-BKS LCSD Sample Id: 7712264-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.107	107	70-130	2	35	mg/kg	09.28.2020 23:40	
Toluene	<0.00200	0.100	0.115	115	0.113	113	70-130	2	35	mg/kg	09.28.2020 23:40	
Ethylbenzene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	09.28.2020 23:40	
m,p-Xylenes	<0.00400	0.200	0.219	110	0.214	107	70-130	2	35	mg/kg	09.28.2020 23:40	
o-Xylene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	09.28.2020 23:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		99		96		70-130	%	09.28.2020 23:40
4-Bromofluorobenzene	108		100		98		70-130	%	09.28.2020 23:40

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 673712

Tetra Tech- Midland

Mamba BQN St Com 1

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3138317 Matrix: Soil Date Prep: 09.28.2020

Parent Sample Id: 673712-003 MS Sample Id: 673712-003 S MSD Sample Id: 673712-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.104	104	70-130	3	35	mg/kg	09.28.2020 16:34	
Toluene	<0.00200	0.100	0.102	102	0.0981	98	70-130	4	35	mg/kg	09.28.2020 16:34	
Ethylbenzene	<0.00200	0.100	0.0971	97	0.0933	93	70-130	4	35	mg/kg	09.28.2020 16:34	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.197	99	70-130	4	35	mg/kg	09.28.2020 16:34	
o-Xylene	<0.00200	0.100	0.0996	100	0.0974	97	70-130	2	35	mg/kg	09.28.2020 16:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	09.28.2020 16:34
4-Bromofluorobenzene	106		112		70-130	%	09.28.2020 16:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3138375 Matrix: Soil Date Prep: 09.28.2020

Parent Sample Id: 673704-008 MS Sample Id: 673704-008 S MSD Sample Id: 673704-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.102	101	0.0957	96	70-130	6	35	mg/kg	09.29.2020 00:21	
Toluene	<0.00201	0.101	0.105	104	0.0987	99	70-130	6	35	mg/kg	09.29.2020 00:21	
Ethylbenzene	<0.00201	0.101	0.0896	89	0.0840	85	70-130	6	35	mg/kg	09.29.2020 00:21	
m,p-Xylenes	<0.00402	0.201	0.196	98	0.183	92	70-130	7	35	mg/kg	09.29.2020 00:21	
o-Xylene	<0.00201	0.101	0.0964	95	0.0899	90	70-130	7	35	mg/kg	09.29.2020 00:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		97		70-130	%	09.29.2020 00:21
4-Bromofluorobenzene	107		102		70-130	%	09.29.2020 00:21

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

673712

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: Mamba BQN St Com 1	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	Bottom Hole #17 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Bottom Hole #18 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Bottom Hole #19 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Bottom Hole #20 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Bottom Hole #21 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Bottom Hole #22 (2' BEB)	9/25/2020			X				X			1	N	X		X												X							
	Sidewall 6	9/25/2020			X				X			1	N	X		X												X							
	Sidewall 7	9/25/2020			X				X			1	N	X		X												X							
	Sidewall 8	9/25/2020			X				X			1	N	X		X												X							

Relinquished by: Conner Moehring	Date: 9/28/20	Time: 1306
Relinquished by:	Date:	Time:
Relinquished by:	Date:	Time:

Received by: [signature]	Date: 9/28	Time: 1306
Received by:	Date:	Time:
Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature
-2.1

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

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Analytical Report 674332

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Mamba BQN St Com #1

212C-MD-02299

10.07.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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Certificate of Analysis Summary 674332

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Mon 10.05.2020 16:42
Report Date: 10.07.2020 16:59
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	674332-001		674332-002		674332-003		674332-004		674332-005		674332-006	
	Field Id:	Sidewall 9		Sidewall 10		Sidewall 11		Sidewall 12		Sidewall13		Sidewall 14	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00	
	Analyzed:	10.06.2020 17:27		10.06.2020 17:48		10.06.2020 18:08		10.06.2020 18:29		10.06.2020 18:49		10.06.2020 19:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00403	0.00403	<0.00396	0.00396	<0.00398	0.00398	<0.00396	0.00396	<0.00400	0.00400	<0.00398	0.00398
o-Xylene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	10.06.2020 12:40		10.06.2020 12:40		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30	
	Analyzed:	10.06.2020 19:07		10.06.2020 19:12		10.06.2020 19:44		10.06.2020 20:00		10.06.2020 20:05		10.06.2020 20:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		195	4.98	74.2	5.02	127	5.02	79.5	4.98	76.6	5.00	370	4.99
TPH By SW8015 Mod	***Extracted:***	10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00	
	Analyzed:	10.06.2020 11:31		10.06.2020 12:29		10.06.2020 12:49		10.06.2020 13:08		10.06.2020 13:27		10.06.2020 13:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<49.9	49.9
Total TPH		<50.0	50.0	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 674332

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Mon 10.05.2020 16:42
Report Date: 10.07.2020 16:59
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	674332-007		674332-008		674332-009		674332-010		674332-011		674332-012	
	Field Id:	Sidewall 15		Sidewall 16		Bottom Hole #23 (2'BEB)		Bottom Hole #24 (2'BEB)		Bottom Hole #25 (2'BEB)		Bottom Hole #26 (2'BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 16:00	
	Analyzed:	10.06.2020 19:30		10.06.2020 19:51		10.06.2020 20:11		10.06.2020 20:32		10.06.2020 13:34		10.07.2020 09:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00396	0.00396	<0.00397	0.00397	<0.00397	0.00397	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	*Extracted:*	10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30	
	Analyzed:	10.06.2020 20:16		10.06.2020 20:31		10.06.2020 20:37		10.06.2020 20:42		10.06.2020 20:47		10.06.2020 20:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		250	4.97	263	5.04	127	4.95	63.6	5.03	91.3	4.99	70.6	5.05
TPH By SW8015 Mod	*Extracted:*	10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00	
	Analyzed:	10.06.2020 14:06		10.06.2020 14:25		10.06.2020 14:45		10.06.2020 15:23		10.06.2020 16:02		10.06.2020 16:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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Certificate of Analysis Summary 674332

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Mon 10.05.2020 16:42
Report Date: 10.07.2020 16:59
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	674332-013		674332-014		674332-015		674332-016		674332-017		674332-018	
	Field Id:	Bottom Hole #27 (2'BEB)		Bottom Hole #28 (2'BEB)		Bottom Hole #29 (2'BEB)		Bottom Hole #30 (2'BEB)		Bottom Hole #31 (2'BEB)		Bottom Hole #32 (2'BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	10.06.2020 09:00		10.06.2020 16:00		10.06.2020 09:00		10.06.2020 09:00		10.06.2020 16:00		10.06.2020 09:00	
	Analyzed:	10.06.2020 14:18		10.07.2020 09:56		10.06.2020 15:00		10.06.2020 15:22		10.07.2020 10:16		10.06.2020 16:07	
	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	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	0.00563	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00397	0.00397	<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	0.00563	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	*Extracted:*	10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30	
	Analyzed:	10.06.2020 20:58		10.06.2020 21:13		10.06.2020 21:19		10.06.2020 21:35		10.06.2020 21:40		10.06.2020 21:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		289	5.00	72.0	4.97	143	4.99	103	5.00	251	5.00	87.1	4.98
TPH By SW8015 Mod	*Extracted:*	10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00		10.06.2020 11:00	
	Analyzed:	10.06.2020 16:41		10.06.2020 17:00		10.06.2020 17:19		10.06.2020 17:39		10.06.2020 17:58		10.06.2020 18:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 674332

Tetra Tech- Midland, Midland, TX

Project Name: Mamba BQN St Com #1

Project Id: 212C-MD-02299
Contact: Mike Carmona
Project Location: Lea Co, NM

Date Received in Lab: Mon 10.05.2020 16:42
Report Date: 10.07.2020 16:59
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	674332-019		674332-020		674332-021		674332-022		674332-023	
	Field Id:	Bottom Hole #33 (2'BEB)		Bottom Hole #34 (2'BEB)		Bottom Hole #35 (2'BEB)		Bottom Hole #36 (2'BEB)		Bottom Hole #37 (2'BEB)	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00		10.01.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	10.06.2020 09:00		10.06.2020 16:00		10.06.2020 09:00		10.06.2020 16:00		10.06.2020 09:00	
	Analyzed:	10.06.2020 16:29		10.07.2020 10:37		10.06.2020 18:35		10.07.2020 10:57		10.06.2020 19:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00400	0.00400	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	*Extracted:*	10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:30		10.06.2020 13:45	
	Analyzed:	10.06.2020 21:50		10.06.2020 21:56		10.06.2020 22:01		10.06.2020 22:06		10.06.2020 22:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		129	5.03	277	5.05	60.3	5.05	65.0	4.98	89.4	5.05
TPH By SW8015 Mod	*Extracted:*	10.06.2020 11:00		10.06.2020 11:00		10.06.2020 12:00		10.06.2020 12:00		10.06.2020 12:00	
	Analyzed:	10.06.2020 18:37		10.06.2020 18:56		10.06.2020 18:27		10.06.2020 18:49		10.06.2020 19:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0
Total TPH		<50.0	50.0	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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

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10.07.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **674332**
Mamba BQN St Com #1
Project Address: Lea Co, NM

Mike Carmona:

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 Eurofins Xenco, LLC Report Number(s) 674332. 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 Eurofins Xenco, LLC. 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. 674332 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sidewall 9	S	10.01.2020 00:00		674332-001
Sidewall 10	S	10.01.2020 00:00		674332-002
Sidewall 11	S	10.01.2020 00:00		674332-003
Sidewall 12	S	10.01.2020 00:00		674332-004
Sidewall13	S	10.01.2020 00:00		674332-005
Sidewall 14	S	10.01.2020 00:00		674332-006
Sidewall 15	S	10.01.2020 00:00		674332-007
Sidewall 16	S	10.01.2020 00:00		674332-008
Bottom Hole #23 (2'BEB)	S	10.01.2020 00:00		674332-009
Bottom Hole #24 (2'BEB)	S	10.01.2020 00:00		674332-010
Bottom Hole #25 (2'BEB)	S	10.01.2020 00:00		674332-011
Bottom Hole #26 (2'BEB)	S	10.01.2020 00:00		674332-012
Bottom Hole #27 (2'BEB)	S	10.01.2020 00:00		674332-013
Bottom Hole #28 (2'BEB)	S	10.01.2020 00:00		674332-014
Bottom Hole #29 (2'BEB)	S	10.01.2020 00:00		674332-015
Bottom Hole #30 (2'BEB)	S	10.01.2020 00:00		674332-016
Bottom Hole #31 (2'BEB)	S	10.01.2020 00:00		674332-017
Bottom Hole #32 (2'BEB)	S	10.01.2020 00:00		674332-018
Bottom Hole #33 (2'BEB)	S	10.01.2020 00:00		674332-019
Bottom Hole #34 (2'BEB)	S	10.01.2020 00:00		674332-020
Bottom Hole #35 (2'BEB)	S	10.01.2020 00:00		674332-021
Bottom Hole #36 (2'BEB)	S	10.01.2020 00:00		674332-022
Bottom Hole #37 (2'BEB)	S	10.01.2020 00:00		674332-023

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CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Mamba BQN St Com #1

Project ID: *212C-MD-02299*
Work Order Number(s): *674332*

Report Date: *10.07.2020*
Date Received: *10.05.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3139024 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 674332-015.

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Certificate of Analytical Results 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 9** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-001 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 12:40 % Moisture:

Seq Number: 3139035 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**195**	4.98	mg/kg	10.06.2020 19:07		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 11:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 11:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 11:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 11:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 11:31	
o-Terphenyl	84-15-1	101	%	70-130	10.06.2020 11:31	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 9**
Lab Sample Id: 674332-001

Matrix: Soil
Date Collected: 10.01.2020 00:00

Date Received:10.05.2020 16:42

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139027

Date Prep: 10.06.2020 09:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.06.2020 17:27	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.06.2020 17:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.06.2020 17:27	
4-Bromofluorobenzene	460-00-4	102	%	70-130	10.06.2020 17:27	

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Certificate of Analytical Results 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 10** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-002 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 12:40 % Moisture:

Seq Number: 3139035 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.2**	5.02	mg/kg	10.06.2020 19:12		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 12:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 12:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 12:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 12:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	10.06.2020 12:29	
o-Terphenyl	84-15-1	96	%	70-130	10.06.2020 12:29	

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Certificate of Analytical Results 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Sidewall 10**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-002	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.06.2020 17:48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 17:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.06.2020 17:48	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.06.2020 17:48	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 11** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-003 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	5.02	mg/kg	10.06.2020 19:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 12:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 12:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 12:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 12:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 12:49	
o-Terphenyl	84-15-1	100	%	70-130	10.06.2020 12:49	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Sidewall 11**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-003	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 18:08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 18:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.06.2020 18:08	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.06.2020 18:08	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 12** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-004 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**79.5**	4.98	mg/kg	10.06.2020 20:00		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 13:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 13:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 13:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 13:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 13:08	
o-Terphenyl	84-15-1	99	%	70-130	10.06.2020 13:08	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Sidewall 12**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-004	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.06.2020 18:29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 18:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.06.2020 18:29	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.06.2020 18:29	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall13** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-005 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**76.6**	5.00	mg/kg	10.06.2020 20:05		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.06.2020 13:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.06.2020 13:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.06.2020 13:27	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.06.2020 13:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	10.06.2020 13:27	
o-Terphenyl	84-15-1	102	%	70-130	10.06.2020 13:27	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Sidewall13**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-005	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.06.2020 18:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	10.06.2020 18:49	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.06.2020 18:49	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 14** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-006 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**370**	4.99	mg/kg	10.06.2020 20:10		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 13:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 13:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 13:47	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 13:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	10.06.2020 13:47	
o-Terphenyl	84-15-1	105	%	70-130	10.06.2020 13:47	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Sidewall 14**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-006	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 19:10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 19:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.06.2020 19:10	
4-Bromofluorobenzene	460-00-4	101	%	70-130	10.06.2020 19:10	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Sidewall 15** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-007 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**250**	4.97	mg/kg	10.06.2020 20:16		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 14:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 14:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 14:06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 14:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	10.06.2020 14:06	
o-Terphenyl	84-15-1	94	%	70-130	10.06.2020 14:06	

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Mamba BQN St Com #1

Sample Id: **Sidewall 15**
Lab Sample Id: 674332-007

Matrix: Soil
Date Collected: 10.01.2020 00:00

Date Received:10.05.2020 16:42

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139027

Date Prep: 10.06.2020 09:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.06.2020 19:30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 19:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.06.2020 19:30	
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.06.2020 19:30	

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Mamba BQN St Com #1

Sample Id: **Sidewall 16** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-008 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**263**	5.04	mg/kg	10.06.2020 20:31		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 14:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 14:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 14:25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 14:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 14:25	
o-Terphenyl	84-15-1	102	%	70-130	10.06.2020 14:25	

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Mamba BQN St Com #1

Sample Id:	**Sidewall 16**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-008	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.06.2020 19:51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 19:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.06.2020 19:51	
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.06.2020 19:51	

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Mamba BQN St Com #1

Sample Id: **Bottom Hole #23 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-009 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	4.95	mg/kg	10.06.2020 20:37		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.06.2020 14:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.06.2020 14:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.06.2020 14:45	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.06.2020 14:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	10.06.2020 14:45	
o-Terphenyl	84-15-1	98	%	70-130	10.06.2020 14:45	

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Mamba BQN St Com #1

Sample Id:	**Bottom Hole #23 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-009	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.06.2020 20:11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 20:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	10.06.2020 20:11	
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.06.2020 20:11	

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Mamba BQN St Com #1

Sample Id: **Bottom Hole #24 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-010 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**63.6**	5.03	mg/kg	10.06.2020 20:42		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 15:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 15:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 15:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 15:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	10.06.2020 15:23	
o-Terphenyl	84-15-1	101	%	70-130	10.06.2020 15:23	

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Mamba BQN St Com #1

Sample Id:	**Bottom Hole #24 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-010	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139027			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.06.2020 20:32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.06.2020 20:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.06.2020 20:32	
4-Bromofluorobenzene	460-00-4	99	%	70-130	10.06.2020 20:32	

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Mamba BQN St Com #1

Sample Id: **Bottom Hole #25 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-011 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**91.3**	4.99	mg/kg	10.06.2020 20:47		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 16:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 16:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 16:02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 16:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 16:02	
o-Terphenyl	84-15-1	97	%	70-130	10.06.2020 16:02	

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Mamba BQN St Com #1

Sample Id:	**Bottom Hole #25 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-011	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 13:34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 13:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	10.06.2020 13:34	
1,4-Difluorobenzene	540-36-3	97	%	70-130	10.06.2020 13:34	

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Mamba BQN St Com #1

Sample Id: **Bottom Hole #26 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-012 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.6**	5.05	mg/kg	10.06.2020 20:52		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 16:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 16:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 16:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 16:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	10.06.2020 16:21	
o-Terphenyl	84-15-1	102	%	70-130	10.06.2020 16:21	

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Mamba BQN St Com #1

Sample Id:	**Bottom Hole #26 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-012	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 16:00	% Moisture:	
Seq Number:	3139029			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.07.2020 09:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.07.2020 09:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.07.2020 09:35	
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.07.2020 09:35	

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Mamba BQN St Com #1

Sample Id: **Bottom Hole #27 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-013 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**289**	5.00	mg/kg	10.06.2020 20:58		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 16:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 16:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 16:41	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 16:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	10.06.2020 16:41	
o-Terphenyl	84-15-1	102	%	70-130	10.06.2020 16:41	

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Mamba BQN St Com #1

Sample Id:	**Bottom Hole #27 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-013	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 14:18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 14:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.06.2020 14:18	
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.06.2020 14:18	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #28 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-014 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.0**	4.97	mg/kg	10.06.2020 21:13		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.06.2020 17:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.06.2020 17:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.06.2020 17:00	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.06.2020 17:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	10.06.2020 17:00	
o-Terphenyl	84-15-1	100	%	70-130	10.06.2020 17:00	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #28 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-014	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 16:00	% Moisture:	
Seq Number:	3139029			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.07.2020 09:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.07.2020 09:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	10.07.2020 09:56	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.07.2020 09:56	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #29 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-015 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**143**	4.99	mg/kg	10.06.2020 21:19		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 17:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 17:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 17:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 17:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.06.2020 17:19	
o-Terphenyl	84-15-1	100	%	70-130	10.06.2020 17:19	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #29 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-015	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.06.2020 15:00	U	1
Toluene	108-88-3	**0.00563**	0.00198	mg/kg	10.06.2020 15:00		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.06.2020 15:00	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.06.2020 15:00	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.06.2020 15:00	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.06.2020 15:00	U	1
Total BTEX		**0.00563**	0.00198	mg/kg	10.06.2020 15:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	66	%	70-130	10.06.2020 15:00	**
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.06.2020 15:00	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #30 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-016 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**103**	5.00	mg/kg	10.06.2020 21:35		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 17:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 17:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 17:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 17:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	10.06.2020 17:39	
o-Terphenyl	84-15-1	99	%	70-130	10.06.2020 17:39	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #30 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-016	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 15:22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 15:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.06.2020 15:22	
4-Bromofluorobenzene	460-00-4	98	%	70-130	10.06.2020 15:22	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #31 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-017 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**251**	5.00	mg/kg	10.06.2020 21:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 17:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 17:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 17:58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 17:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.06.2020 17:58	
o-Terphenyl	84-15-1	95	%	70-130	10.06.2020 17:58	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #31 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-017	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 16:00	% Moisture:	
Seq Number:	3139029			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.07.2020 10:16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.07.2020 10:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	10.07.2020 10:16	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.07.2020 10:16	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #32 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-018 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**87.1**	4.98	mg/kg	10.06.2020 21:45		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 18:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 18:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 18:17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 18:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	10.06.2020 18:17	
o-Terphenyl	84-15-1	102	%	70-130	10.06.2020 18:17	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #32 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-018	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.06.2020 16:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 16:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	10.06.2020 16:07	
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.06.2020 16:07	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #33 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-019 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**129**	5.03	mg/kg	10.06.2020 21:50		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 18:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 18:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 18:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 18:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	10.06.2020 18:37	
o-Terphenyl	84-15-1	92	%	70-130	10.06.2020 18:37	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #33 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-019	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.06.2020 16:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 16:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.06.2020 16:29	
4-Bromofluorobenzene	460-00-4	102	%	70-130	10.06.2020 16:29	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #34 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-020 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**277**	5.05	mg/kg	10.06.2020 21:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 11:00 % Moisture:

Seq Number: 3139080 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 18:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 18:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 18:56	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 18:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.06.2020 18:56	
o-Terphenyl	84-15-1	93	%	70-130	10.06.2020 18:56	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #34 (2'BEB)**
Lab Sample Id: 674332-020
Matrix: Soil
Date Collected: 10.01.2020 00:00
Date Received:10.05.2020 16:42

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139029
Date Prep: 10.06.2020 16:00
Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.07.2020 10:37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.07.2020 10:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.07.2020 10:37	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.07.2020 10:37	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #35 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-021 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.3**	5.05	mg/kg	10.06.2020 22:01		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 12:00 % Moisture:

Seq Number: 3139087 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.06.2020 18:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.06.2020 18:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.06.2020 18:27	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.06.2020 18:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	10.06.2020 18:27	
o-Terphenyl	84-15-1	90	%	70-130	10.06.2020 18:27	

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Certificate of Analytical Results 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #35 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-021	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.06.2020 18:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2020 18:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.06.2020 18:35	
4-Bromofluorobenzene	460-00-4	105	%	70-130	10.06.2020 18:35	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #36 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-022 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.06.2020 13:30 % Moisture:

Seq Number: 3139051 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.0**	4.98	mg/kg	10.06.2020 22:06		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 12:00 % Moisture:

Seq Number: 3139087 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.06.2020 18:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.06.2020 18:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.06.2020 18:49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.06.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	10.06.2020 18:49	
o-Terphenyl	84-15-1	88	%	70-130	10.06.2020 18:49	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #36 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-022	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 16:00	% Moisture:	
Seq Number:	3139029			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.07.2020 10:57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.07.2020 10:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.07.2020 10:57	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.07.2020 10:57	

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Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id: **Bottom Hole #37 (2'BEB)** Matrix: Soil Date Received:10.05.2020 16:42

Lab Sample Id: 674332-023 Date Collected: 10.01.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.06.2020 13:45 % Moisture:

Seq Number: 3139039 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.4**	5.05	mg/kg	10.06.2020 22:38		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.06.2020 12:00 % Moisture:

Seq Number: 3139087 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.06.2020 19:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.06.2020 19:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.06.2020 19:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.06.2020 19:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	10.06.2020 19:11	
o-Terphenyl	84-15-1	88	%	70-130	10.06.2020 19:11	

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Certificate of Analytical Results 674332

Tetra Tech- Midland, Midland, TX

Mamba BQN St Com #1

Sample Id:	**Bottom Hole #37 (2'BEB)**	Matrix:	Soil	Date Received:	10.05.2020 16:42
Lab Sample Id:	674332-023	Date Collected:	10.01.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	10.06.2020 09:00	% Moisture:	
Seq Number:	3139024			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2020 19:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2020 19:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.06.2020 19:17	
4-Bromofluorobenzene	460-00-4	75	%	70-130	10.06.2020 19:17	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 674332

Tetra Tech- Midland

Mamba BQN St Com #1

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139035 — Matrix: Solid — Date Prep: 10.06.2020
MB Sample Id: 7712727-1-BLK — LCS Sample Id: 7712727-1-BKS — LCSD Sample Id: 7712727-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	265	106	267	107	90-110	1	20	mg/kg	10.06.2020 16:39	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139051 — Matrix: Solid — Date Prep: 10.06.2020
MB Sample Id: 7712729-1-BLK — LCS Sample Id: 7712729-1-BKS — LCSD Sample Id: 7712729-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	268	107	272	109	90-110	1	20	mg/kg	10.06.2020 19:33	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139039 — Matrix: Solid — Date Prep: 10.06.2020
MB Sample Id: 7712730-1-BLK — LCS Sample Id: 7712730-1-BKS — LCSD Sample Id: 7712730-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	270	108	268	107	90-110	1	20	mg/kg	10.06.2020 22:27	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139035 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674252-003 — MS Sample Id: 674252-003 S — MSD Sample Id: 674252-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	189	250	455	106	457	107	90-110	0	20	mg/kg	10.06.2020 18:09	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139035 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674306-026 — MS Sample Id: 674306-026 S — MSD Sample Id: 674306-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.4	250	280	105	286	107	90-110	2	20	mg/kg	10.06.2020 16:55	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139051 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674332-003 — MS Sample Id: 674332-003 S — MSD Sample Id: 674332-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	127	251	394	106	394	106	90-110	0	20	mg/kg	10.06.2020 19:49	

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

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QC Summary 674332

Tetra Tech- Midland

Mamba BQN St Com #1

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139051 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674332-013 — MS Sample Id: 674332-013 S — MSD Sample Id: 674332-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	289	250	540	100	543	102	90-110	1	20	mg/kg	10.06.2020 21:03	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139039 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674316-010 — MS Sample Id: 674316-010 S — MSD Sample Id: 674316-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.9	250	287	108	288	109	90-110	0	20	mg/kg	10.06.2020 23:57	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3139039 — Matrix: Soil — Date Prep: 10.06.2020
Parent Sample Id: 674332-023 — MS Sample Id: 674332-023 S — MSD Sample Id: 674332-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	89.4	253	360	107	360	107	90-110	0	20	mg/kg	10.06.2020 22:43	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3139080 — Matrix: Solid — Date Prep: 10.06.2020
MB Sample Id: 7712739-1-BLK — LCS Sample Id: 7712739-1-BKS — LCSD Sample Id: 7712739-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	927	93	902	90	70-130	3	20	mg/kg	10.06.2020 10:52	
Diesel Range Organics (DRO)	<50.0	1000	982	98	947	95	70-130	4	20	mg/kg	10.06.2020 10:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		104		102		70-130	%	10.06.2020 10:52
o-Terphenyl	103		112		108		70-130	%	10.06.2020 10:52

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3139087 — Matrix: Solid — Date Prep: 10.06.2020
MB Sample Id: 7712737-1-BLK — LCS Sample Id: 7712737-1-BKS — LCSD Sample Id: 7712737-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	913	91	875	88	70-130	4	20	mg/kg	10.06.2020 12:54	
Diesel Range Organics (DRO)	<50.0	1000	999	100	936	94	70-130	7	20	mg/kg	10.06.2020 12:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		106		102		70-130	%	10.06.2020 12:54
o-Terphenyl	93		106		98		70-130	%	10.06.2020 12:54

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 674332

Tetra Tech- Midland

Mamba BQN St Com #1

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3139080 Matrix: Solid Date Prep: 10.06.2020
MB Sample Id: 7712739-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.06.2020 10:32	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3139087 Matrix: Solid Date Prep: 10.06.2020
MB Sample Id: 7712737-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.06.2020 12:31	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3139080 Matrix: Soil Date Prep: 10.06.2020
Parent Sample Id: 674332-001 MS Sample Id: 674332-001 S MSD Sample Id: 674332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	923	92	916	92	70-130	1	20	mg/kg	10.06.2020 11:50	
Diesel Range Organics (DRO)	<49.9	998	996	100	996	100	70-130	0	20	mg/kg	10.06.2020 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		103		70-130	%	10.06.2020 11:50
o-Terphenyl	104		102		70-130	%	10.06.2020 11:50

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3139087 Matrix: Soil Date Prep: 10.06.2020
Parent Sample Id: 674306-001 MS Sample Id: 674306-001 S MSD Sample Id: 674306-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	876	88	819	82	70-130	7	20	mg/kg	10.06.2020 14:01	
Diesel Range Organics (DRO)	<49.8	996	895	90	886	89	70-130	1	20	mg/kg	10.06.2020 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		104		70-130	%	10.06.2020 14:01
o-Terphenyl	97		98		70-130	%	10.06.2020 14:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 674332

Tetra Tech- Midland

Mamba BQN St Com #1

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139024 Matrix: Solid Date Prep: 10.06.2020
MB Sample Id: 7712769-1-BLK LCS Sample Id: 7712769-1-BKS LCSD Sample Id: 7712769-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0991	99	0.101	101	70-130	2	35	mg/kg	10.06.2020 10:57	
Toluene	<0.00200	0.100	0.101	101	0.103	103	70-130	2	35	mg/kg	10.06.2020 10:57	
Ethylbenzene	<0.00200	0.100	0.0987	99	0.101	101	70-130	2	35	mg/kg	10.06.2020 10:57	
m,p-Xylenes	<0.00400	0.200	0.212	106	0.216	108	70-130	2	35	mg/kg	10.06.2020 10:57	
o-Xylene	<0.00200	0.100	0.0987	99	0.102	102	70-130	3	35	mg/kg	10.06.2020 10:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		102		99		70-130	%	10.06.2020 10:57
4-Bromofluorobenzene	87		93		94		70-130	%	10.06.2020 10:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139027 Matrix: Solid Date Prep: 10.06.2020
MB Sample Id: 7712771-1-BLK LCS Sample Id: 7712771-1-BKS LCSD Sample Id: 7712771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0987	99	0.0946	95	70-130	4	35	mg/kg	10.06.2020 10:56	
Toluene	<0.00200	0.100	0.0930	93	0.0891	89	70-130	4	35	mg/kg	10.06.2020 10:56	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0940	94	70-130	4	35	mg/kg	10.06.2020 10:56	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.189	95	70-130	4	35	mg/kg	10.06.2020 10:56	
o-Xylene	<0.00200	0.100	0.0979	98	0.0943	94	70-130	4	35	mg/kg	10.06.2020 10:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		99		98		70-130	%	10.06.2020 10:56
4-Bromofluorobenzene	102		97		98		70-130	%	10.06.2020 10:56

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139029 Matrix: Solid Date Prep: 10.06.2020
MB Sample Id: 7712772-1-BLK LCS Sample Id: 7712772-1-BKS LCSD Sample Id: 7712772-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0952	95	0.0996	100	70-130	5	35	mg/kg	10.06.2020 21:34	
Toluene	<0.00200	0.100	0.0980	98	0.0969	97	70-130	1	35	mg/kg	10.06.2020 21:34	
Ethylbenzene	<0.00200	0.100	0.0897	90	0.0970	97	70-130	8	35	mg/kg	10.06.2020 21:34	
m,p-Xylenes	<0.00400	0.200	0.179	90	0.194	97	70-130	8	35	mg/kg	10.06.2020 21:34	
o-Xylene	<0.00200	0.100	0.0913	91	0.0987	99	70-130	8	35	mg/kg	10.06.2020 21:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		98		99		70-130	%	10.06.2020 21:34
4-Bromofluorobenzene	105		94		99		70-130	%	10.06.2020 21:34

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

eurofins | Environment Testing Xenco

QC Summary 674332

Tetra Tech- Midland

Mamba BQN St Com #1

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139024 Matrix: Soil Date Prep: 10.06.2020
Parent Sample Id: 674332-011 MS Sample Id: 674332-011 S MSD Sample Id: 674332-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0751	75	0.0933	93	70-130	22	35	mg/kg	10.06.2020 11:39	
Toluene	<0.00200	0.100	0.0744	74	0.0960	96	70-130	25	35	mg/kg	10.06.2020 11:39	
Ethylbenzene	<0.00200	0.100	0.0705	71	0.0880	88	70-130	22	35	mg/kg	10.06.2020 11:39	
m,p-Xylenes	<0.00400	0.200	0.148	74	0.190	95	70-130	25	35	mg/kg	10.06.2020 11:39	
o-Xylene	<0.00200	0.100	0.0732	73	0.0899	90	70-130	20	35	mg/kg	10.06.2020 11:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		105		70-130	%	10.06.2020 11:39
4-Bromofluorobenzene	89		100		70-130	%	10.06.2020 11:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139027 Matrix: Soil Date Prep: 10.06.2020
Parent Sample Id: 674306-001 MS Sample Id: 674306-001 S MSD Sample Id: 674306-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0846	85	0.0906	90	70-130	7	35	mg/kg	10.06.2020 11:37	
Toluene	<0.00200	0.0998	0.0747	75	0.0788	78	70-130	5	35	mg/kg	10.06.2020 11:37	
Ethylbenzene	<0.00200	0.0998	0.0727	73	0.0726	72	70-130	0	35	mg/kg	10.06.2020 11:37	
m,p-Xylenes	<0.00399	0.200	0.145	73	0.144	72	70-130	1	35	mg/kg	10.06.2020 11:37	
o-Xylene	<0.00200	0.0998	0.0725	73	0.0736	73	70-130	2	35	mg/kg	10.06.2020 11:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	10.06.2020 11:37
4-Bromofluorobenzene	103		100		70-130	%	10.06.2020 11:37

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139029 Matrix: Soil Date Prep: 10.06.2020
Parent Sample Id: 674254-001 MS Sample Id: 674254-001 S MSD Sample Id: 674254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0690	69	0.0766	76	70-130	10	35	mg/kg	10.06.2020 22:15	X
Toluene	<0.00201	0.100	0.0338	34	0.0361	36	70-130	7	35	mg/kg	10.06.2020 22:15	X
Ethylbenzene	<0.00201	0.100	0.0422	42	0.0443	44	70-130	5	35	mg/kg	10.06.2020 22:15	X
m,p-Xylenes	<0.00402	0.201	0.0890	44	0.0933	46	70-130	5	35	mg/kg	10.06.2020 22:15	X
o-Xylene	<0.00201	0.100	0.0530	53	0.0575	57	70-130	8	35	mg/kg	10.06.2020 22:15	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	10.06.2020 22:15
4-Bromofluorobenzene	100		101		70-130	%	10.06.2020 22:15

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

6074332

Page 1 of 3

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: EOG - Mamba BQN St Com #1	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	Sidewall 9	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 10	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 11	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 12	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 13	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 14	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 15	10/1/2020			X				X			1	N	X		X												X								
	Sidewall 16	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #23 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #24 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								

Relinquished by: Conner Moehring	Date: 10/5/20	Time: 1637	Received by: J KRAMER
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Date: 10/5 Time: 1637

LAB USE ONLY
Sample Temperature

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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nalysis Request of Chain of Custody Record

674332

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: EOG - Mamba BQN St Com #1	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	Bottom Hole #25 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #26 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #27 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #28 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #29 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #30 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #31 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #32 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #33 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								
	Bottom Hole #34 (2' BEB)	10/1/2020			X				X			1	N	X		X												X								

elinquished by: Conner Moehring	Date: 10/5/20	Time: 1637	Received by: [illegible]
elinquished by:	Date:	Time:	Received by:
elinquished by:	Date:	Time:	Received by:

LAB USE ONLY
Sample Temperature

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

674332 Page 3 of 3

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	**Site Manager:** Mike Carmona
Project Name: EOG - Mamba BQN St Com #1	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-02299
Invoice to: EOG - Todd Wells	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	Bottom Hole #35 (2' BEB)	10/1/2020			X				X		1	N	X		X												X								
	Bottom Hole #36 (2' BEB)	10/1/2020			X				X		1	N	X		X												X								
	Bottom Hole #37 (2' BEB)	10/1/2020			X				X		1	N	X		X												X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tommy Montgomery	10/5/20	1637	[signature]	10/5	1637
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 10.05.2020 04.42.44 PM

Work Order #: 674332

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

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.5	
#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**	BTEX was in bulk container
#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: Brianna Teel Date: 10.05.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 10.06.2020
Jessica Kramer

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

Action 11122

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
EOG RESOURCES INC	P.O. Box 2267	Midland, TX79702	7377	11122	C-141

OCD Reviewer	Condition
chensley	None