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Midland, TX 79703

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APPROVED
By Olivia Yu at 11:56 am, Sep 04, 2018

NMOCD approves of the proposed additional vertical delineation for NTT-1A and proposed remediation for 1RP-5024.

August 20, 2018

Olivia Yu & Christina Hernandez
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240

Ryan Mann
New Mexico State Land Office
2827 N. Dal Paso Suite 117
Hobbs, NM 88240

Re: Initial Investigation Summary and Proposed Remediation Workplan
Plains' Moore Sweet Historical
GPS: N 33.369369° W 103.66272°
Unit Letters "A & H", Section 13, Township 11 South, Range 32 East
Lea County, New Mexico

Dear Ms. Yu and Mr. Mann,

TRC Environmental Corporation (TRC) has prepared the following "Initial Investigation Summary and Proposed Remediation Workplan" on behalf of Plains Marketing, L.P. (Plains), for the Moore Sweet Historical Release Site. The Site is located approximately three (3) miles East of Caprock in Lea County, New Mexico, in Unit Letters "A & H", Section 13, Township 11 South, Range 32 East. The GPS coordinates for the Site are N 33.369369º and W 103.66272º. The affected property is located on land leased by Plains from the State of New Mexico. A "Site Location Map" is provided as Attachment #1.

On April 11, 2018, evidence of historical hydrocarbon impact was discovered during the decommissioning and reclamation of a former storage and pump station; the date and circumstance of the release are unknown. A copy of the Release Notification and Corrective Action (Form C-141) is provided as Attachment #5.

NMOCD Site Classification

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) indicated the average depth to groundwater in Section 13, Township 11 South, Range 32 East is sixty-three (63) feet below ground surface (bgs). The ChevronTexaco inferred depth of groundwater reference map utilized by The New Mexico Oil Conservation Division (NMOCD) indicates groundwater should

be encountered at approximately fifty (50) feet bgs. On January 17, 2018, NMOSE Well No. L-6588, formerly located on-site, was plugged by a licensed driller. During plugging activities the depth to groundwater was determined to be approximately fifty (50) ft. bgs. Based on the presence of impacted soil at depths up to fourteen (14) ft. bgs, twenty (20) points will be assigned to the Release Site ranking as a result of this criterion.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) suggests one (1) water well (NMOSE Well No. L 06273) was installed in 1968 approximately eight hundred fifty (850) ft. northwest of the Release Site; the current status of the water well is unknown. Based on the NMOCD Site Classification System, twenty (20) points will be assigned to the Release Site ranking as a result of this criterion.

There are no surface-water features located within a 1,000 ft. radius of the site. Based on the NMOCD Site Classification System, zero (0) points would be assigned to the site as a result of this criterion. The NMOCD guidelines indicate the Release Site has a ranking score of greater than nineteen (>19) points.

The Recommended Remediation Action Levels (RRAL) for a Release Site with a ranking score of greater than nineteen (>19) points are as follows:

- Benzene - 10 mg/kg
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) - 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 100 mg/kg

Field Activities

Beginning April 11, 2018, an initial soil investigation was conducted at the Site. During the initial soil investigation, one (1) test trench (TT-1) was advanced beneath the former above-ground storage tank (AST) location in an effort to determine the vertical extent of soil impact. During the advancement of the test trench, six (6) soil samples (TT-1 4ft., TT-1 6ft., TT-1 8ft., TT-1 10ft., TT-1 12ft. and TT-1 14ft.) were collected and submitted to the laboratory for TPH analysis in accordance with EPA Method SW 846-8015M Extended. Laboratory analytical results indicated TPH concentrations ranged from 103 mg/kg in soil sample TT-1 14ft. to 5,940.2 mg/kg in soil sample TT-1 4ft. Soil samples TT-1 4ft. and TT-1 14ft. were also analyzed for concentrations of BTEX in accordance with EPA Method SW 846-8021b. Laboratory analytical results indicated benzene concentrations were less than the applicable laboratory sample detection limit (SDL) in each of the analyzed soil samples. BTEX concentrations ranged from less than the laboratory SDL in soil sample TT-1 14ft to 0.548 mg/kg in soil sample TT-1 4ft.

In addition, five (5) test trenches (WTT-1, STT-1, NTT-1A, NTT-1B and ETT-1) were advanced in an effort to determine the horizontal extent of soil impact around the AST's former location.

Test trench WTT-1 was advanced on the west side of the former AST location. During the advancement of the test trench, four (4) soil samples (WTT-1 2ft., WTT-1 4ft., WTT-1 6ft. and WTT-1 8ft.) were collected and submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory SDL in soil sample WTT-1 2ft. to 293.7 mg/kg in soil sample WTT-1 8ft. Soil samples WTT-1 2ft. and WTT-1 8ft. were also analyzed for concentrations of BTEX. Laboratory analytical results indicated benzene concentrations were less than the applicable SDL in each of the analyzed soil samples. BTEX concentrations ranged from less than the

laboratory SDL in soil sample WTT-1 2ft to 0.246 mg/kg in soil sample WTT-1 8ft. Based on laboratory analytical results, additional vertical and horizontal delineation was required in the area characterized by test trench WTT-1.

Test trench STT-1 was advanced on the south side of the former AST location. During the advancement of the test trench, four (4) soil samples (STT-1 2ft., STT-1 4ft., STT-1 6ft. and STT-1 8ft.) were collected and submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated TPH concentrations were less than the applicable SDL in each of the submitted soil samples. Soil samples STT-1 2ft. and STT-1 8ft. were also analyzed for concentrations of BTEX. Laboratory analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory SDL in each of the analyzed soil samples.

Test trench NTT-1A was advanced on the north side of the former AST location. During the advancement of the test trench, one (1) soil sample (NTT-1A 7ft) was collected and submitted to the laboratory for analysis of TPH and BTEX. Laboratory analytical results indicated soil sample NTT-1A 7ft. exhibited a TPH concentration of 235.5 mg/kg and a BTEX concentration of less than the laboratory SDL.

Test trench NTT-1B was advanced approximately ten (10) ft. north of test trench NTT-1A. During the advancement of the test trench, two (2) soil samples (NTT-1B 5ft and NTT-1B 6ft.) were collected and submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated soil samples NTT-1B 5ft. and NTT-1B 6ft. exhibited TPH concentrations of 33.1 mg/kg and less than the laboratory SDL, respectively. Soil sample NTT-1B 5ft. was also analyzed for concentrations of BTEX, which were determined to be less than the applicable laboratory SDL.

Test trench ETT-1 was advanced on the east side of the former AST location. During the advancement of the test trench, four (4) soil samples (ETT-1 2ft., ETT-1 4ft., ETT-1 6ft. and ETT-1 8ft.) were collected and submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory SDL in soil samples ETT-1 @ 6ft. and ETT-1 @ 8ft. to 203.05 mg/kg in soil sample ETT-1 @ 4ft. Soil samples STT-1 2ft. and STT-1 8ft. were also analyzed for concentrations of BTEX, which were determined to be less than the applicable laboratory SDL. Based on laboratory analytical results, additional horizontal delineation was required in the area characterized by test trench ETT-1.

In addition, two (2) test trenches (TT-2 and TT-3) were advanced in an effort to investigate surface staining in two (2) areas north of the former AST location. Test trench TT-2 was advanced to a depth of approximately two (2) ft. bgs. During the advancement of the test trench, two (2) soil samples (TT-2 @ Surface and TT-2 @ 2ft.) bgs were collected and submitted to the laboratory for analysis of TPH and BTEX concentrations. Laboratory analytical results indicated soil sample TT-2 @ Surface exhibited a TPH concentration of 694 mg/kg and a BTEX concentration less than the applicable SDL. Soil sample TT-2 @ 2ft. exhibited a TPH concentration of 20.4 mg/kg and a BTEX concentration less than the applicable SDL.

Test trench TT-3 was initially advanced to a depth of approximately two (2) ft. bgs. During the advancement of the test trench, one (1) soil sample (TT-3 @ 2ft.) bgs was collected and submitted to the laboratory for analysis of TPH and BTEX concentrations. Laboratory analytical results indicated soil sample TT-3 @ 2ft. exhibited a TPH concentrations of 336.6 mg/kg and a BTEX concentration of

0.00409 mg/kg. Based on laboratory analytical results, additional vertical delineation would be required in the area characterized by test trench TT-3.

On May 31, 2018, TRC revisited the Release Site. During the site visit, test trench WTT-1 was advanced an additional four (4) feet. During the advancement of the test trench, three (3) soil samples (WTT-1 8ft.*, WTT-1 10ft. and WTT-1 @ 12ft.) were collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from 103 mg/kg in soil sample WTT-1 12ft. to 386 mg/kg in soil sample WTT-1 10ft.

Test trench WTT-1a was advanced west of the area characterized by test trench WTT-1. During the advancement of the test trench, three (3) soil samples (WTT-1a 2ft., WTT-1a 4ft. and WTT-1a 8ft.) were collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory SDL in soil sample WTTa-1 8ft. to 147.5 mg/kg in soil sample WTT-1a 2ft. Based on laboratory analytical results, additional horizontal delineation was required in the area characterized by test trench WTT-1a.

Test trench ETT-1a was advanced east of the area characterized by test trench ETT-1. During the advancement of the test trench, two (2) soil samples (ETT-1a 4ft. and WTT-1a 6ft.) were collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from 47.5 mg/kg in soil sample ETTa-1 6ft. to 348.9 mg/kg in soil sample ETT-1a 4ft. Based on laboratory analytical results, additional horizontal delineation was required in the area characterized by test trench ETT-1a.

Test trench TT-3 was advanced an additional two (2) feet. During the advancement of the test trench, one (1) soil sample (TT-3 4ft) was collected and submitted to the laboratory for analysis of TPH concentrations, which were determined to be 51.9 mg/kg.

On June 29, 2018, TRC revisited the Release Site. During the site visit, a hand auger was utilized to collect four (4) additional horizontal delineation soil samples (WHA-1b @ 1', WHA-1c @ 1', EHA-1b @ 2' and EHA-1c @ 2'). Soil sample WHA-1b @ 1' was collected on the west side of the fence in the area characterized by test trench WTT-1a. The collected soil was submitted to the laboratory for analysis of TPH concentrations, which were determined to be 287.2 mg/kg. An additional soil sample (WHA-1c @ 1') was collected approximately five (5) ft. west of sample point WHA-1b. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations, which were determined to be less than the laboratory SDL.

Soil sample EHA-1b @ 2' was collected approximately five (5) ft. east of the area characterized by test trench ETT-1a. The collected soil was submitted to the laboratory for analysis of TPH concentrations, which were determined to be 39.76 mg/kg. An additional soil sample (EHA-1c @ 2') was collected approximately five (5) ft. east of sample point EHA-1b. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations, which were determined to be less than the laboratory SDL. A "Site & Sample Location Map" is provided as Attachment #2. A table summarizing Concentrations of Benzene, BTEX and TPH in Soil is provided as Attachment #3. Laboratory analytical reports are provided as Attachment #4.

Proposed Activities

- Advance test trench NTT-1A 7ft. vertically until laboratory analytical results indicate concentrations of TPH are below the NMOCD RRAL.
- Utilizing mechanical equipment, excavate impacted soil affected above the NMOCD RRAL in the area characterized by test trench TT-2 to a depth of two (2) ft. bgs and until laboratory analytical results from confirmation soil samples collected from the sidewalls of the excavated area indicate TPH and concentrations are below the NMOCD RRAL.
- Utilizing mechanical equipment, excavate impacted soil affected above the NMOCD RRAL in the area characterized by test trench TT-3 to a depth of four (4) ft. bgs and laboratory analytical results from confirmation soil samples collected from the sidewalls of the excavated area indicate TPH and concentrations are below the NMOCD RRAL.
- Utilizing mechanical equipment, excavate impacted soil affected above the NMOCD RRAL in the area characterized by test trench TT-1 to a depth of approximately four (4) ft. bgs. Excavation sidewalls will be advanced horizontally to the areas characterized by horizontal delineation soil samples NTT-1b, EHA-1b, STT-1 and WHA-1c.
- Upon excavating impacted soil in the area characterized by test trench TT-1 and the former location of the AST, install a 20-mil polyurethane liner at approximately four (4) ft. bgs atop impacted soil exhibiting benzene, BTEX and/or TPH concentrations above the NMOCD RRAL. This engineering control is designed to inhibit the vertical migration of contaminants left in-situ, by shedding moisture to the outside edges of the liner beyond the maximum horizontal extent of underlying impacted soil. The liner will be cushioned by an approximate six (6) inch layer of pad sand above and below the liner in an effort to maintain its integrity during backfilling activities.
- Upon receiving laboratory analytical from excavation confirmation soil samples, the excavated area will be backfilled with locally sourced, non-impacted material.
- Impacted soil excavated from the affected area will be temporarily stockpiled on-site, atop an impermeable liner, pending transportation to an NMOCD-permitted facility for disposal.

Upon completion of remediation activities, a "Remediation Summary and Soil Closure Request" will be prepared summarizing field activities and laboratory analytical results from confirmation soil samples. If you have any questions or need any additional information, please feel free to contact Amber Groves or myself by phone or email.

Joel Lowry
Project Manager
TRC Environmental Corporation

Curt Stanley
Senior Project Manager
TRC Environmental Corporation

Attachments:

Attachment #1: Figure 1 – Site Location Map
Attachment #2: Figure 2 – Site & Sample Map
Attachment #3: Table 1 – Concentrations of benzene, BTEX and TPH in Soil
Attachment #4: Laboratory Analytical Reports
Attachment #5: Release Notification and Corrective Action (Form C-141)

cc: Camille Bryant
Plains Marketing, L.P.

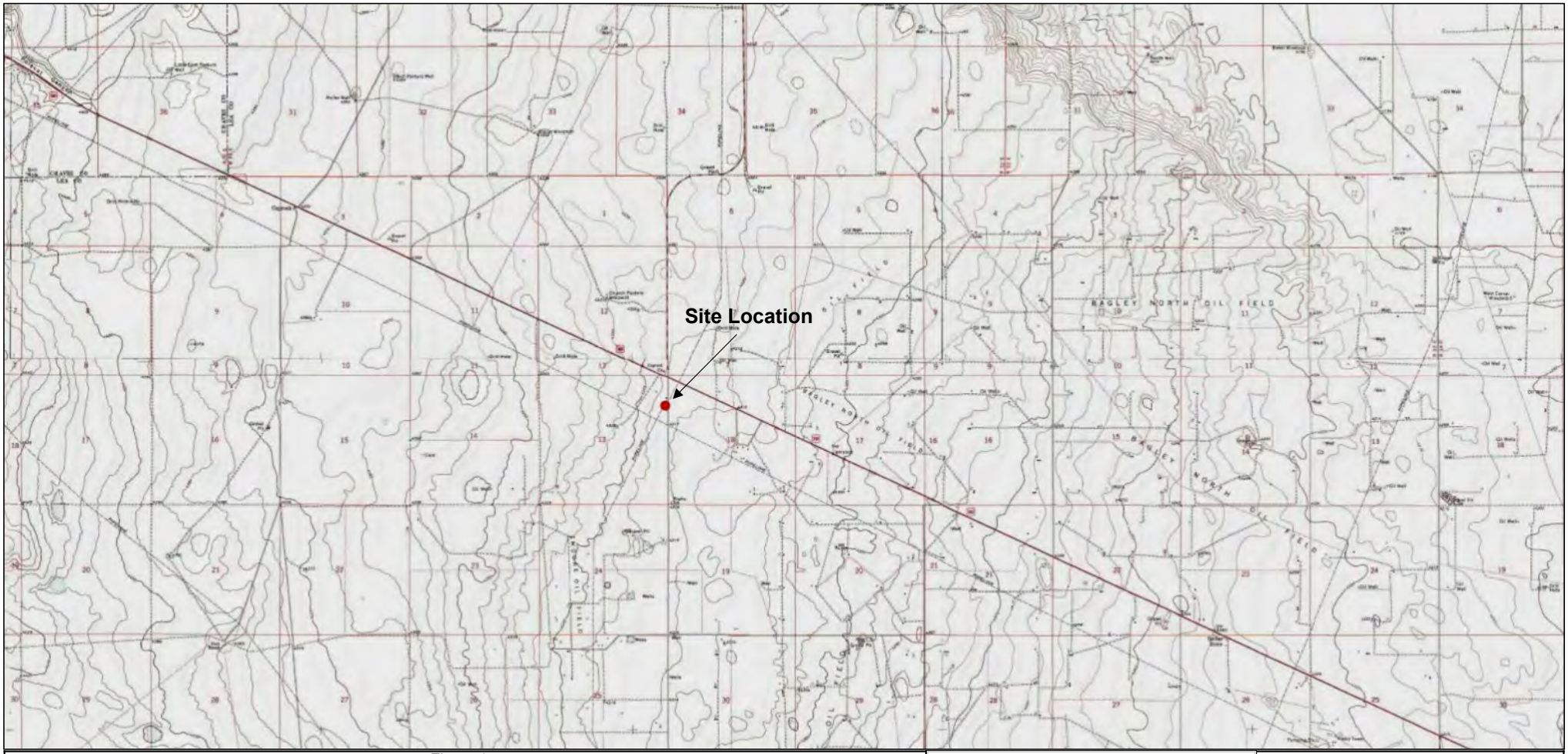


Figure 1

Site Location Map

Plains Marketing, L.P.

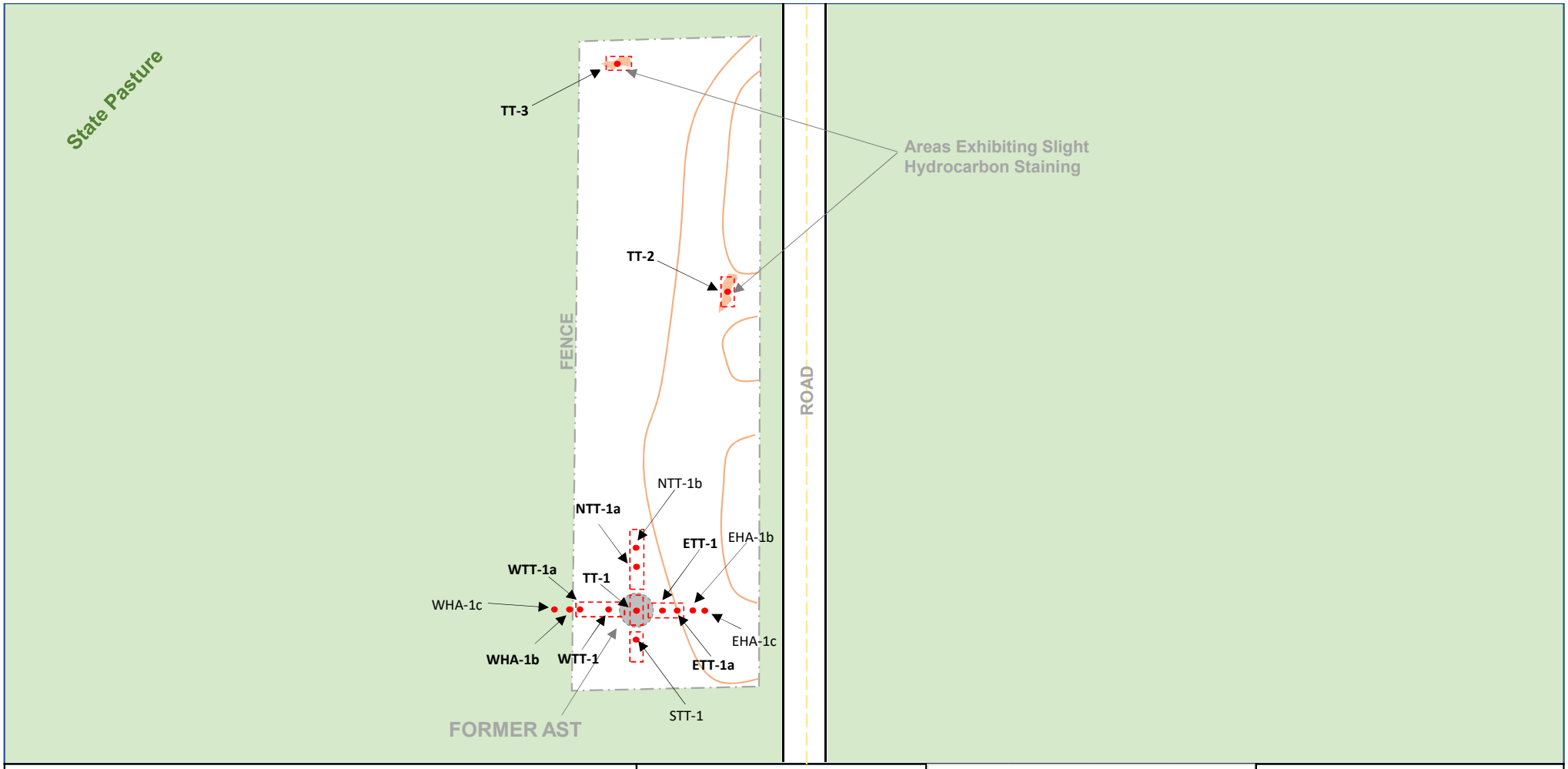
Moore Sweet Historical

Lea County, New Mexico

Scale 1" = ~6000'	
Drafted by: ZC	Checked by: JL
Draft: July 16, 2018	
Lat. N 33.369369 Long. W -103.66272	
UL "A&H", Sec. 13, T11S, R32E	
TRC Proj. No.: 303081	

TRC
Results you can rely on

2057 Commerce Drive
Midland, Texas 79703
432.520.7720



LEGEND:

- Test Trench
- Sample Location
- Fence
- Caliche Access Road
- Former Above Ground Storage Tank
- Hydrocarbon Stained Area
- Pasture Area

Figure 2

Site & Sample Location Map

Plains Marketing, L.P.

Moore Sweet Historical

Lea County, New Mexico

Scale 1" = ~100'	
Drafted by: ZC	Checked by: JL
Draft: July 16, 2018	
Lat. N 33.369369 Long. W -103.66272	
UL "A&H", Sec. 13, T11S, R32E	
TRC Proj. No.: 303081	

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2057 Commerce Drive
Midland, Texas 79703
432.520.7720

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL
MOORE SWEET
PLAINS MARKETING, L.P.
LEA COUNTY, NM

SAMPLE LOCATION	SAMPLE DATE	SAMPLE DEPTH	STATUS	Methods: EPA SW 846-8021B, 5030						Methods: EPA SW 846-8015M			
				BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	m,p, XYLENE (mg/kg)	o-XYLENE (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	TOTAL TPH (mg/kg)
TT-1 4ft.	4/11/2018	4'	In-Situ	<0.0962	<0.0962	<0.0962	0.548	<0.0962	0.548	45.2	5,180	715	**5,940.2**
TT-1 6ft.	4/11/2018	6'	In-Situ	-	-	-	-	-	-	175	3,030	394	**3,599**
TT-1 8ft.	4/11/2018	8'	In-Situ	-	-	-	-	-	-	97.0	1,650	204	**1,951**
TT-1 10ft.	4/11/2018	10'	In-Situ	-	-	-	-	-	-	16.3	368	59.7	**444**
TT-1 12ft.	4/11/2018	12'	In-Situ	-	-	-	-	-	-	<3.94	151	31.4	**182.4**
TT-1 14ft.	4/11/2018	14'	In-Situ	<0.0181	<0.0181	<0.0181	<0.0362	<0.0181	<0.0181	<3.62	103	<24.9	**103**
WTT-1 2ft	4/11/2018	2'	In-Situ	<0.0191	<0.0191	<0.0191	<0.0382	<0.0191	<0.0191	<3.82	<24.8	<24.8	<24.8
WTT-1 4ft	4/11/2018	4'	In-Situ	-	-	-	-	-	-	<3.66	26.4	<24.8	26.4
WTT-1 6ft	4/11/2018	6'	In-Situ	-	-	-	-	-	-	25.8	83.6	34.7	**144.1**
WTT-1 8ft	4/11/2018	8'	In-Situ	<0.0180	<0.0180	<0.0180	0.201	0.0450	0.246	19.9	213	60.8	**293.7**
WTT-1 8ft*	5/31/2018	8'	In-Situ	-	-	-	-	-	-	<7.99	163	15.1	**178.1**
WTT-1 10ft	5/31/2018	10'	In-Situ	-	-	-	-	-	-	<7.97	375	11.0	**386**
WTT-1 12ft	5/31/2018	12	In Situ	-	-	-	-	-	-	<7.99	103	<8.11	**103**
WTT-1a 2ft	5/31/2018	2'	In-Situ	-	-	-	-	-	-	<8.00	132	15.5	**147.5**
WTT-1a 4ft	5/31/2018	4'	In-Situ	-	-	-	-	-	-	8.82	67.4	<8.11	76.22
WTT-1a 8ft	5/31/2018	6'	In-Situ	-	-	-	-	-	-	<7.98	<8.10	<8.10	<7.98
WHA-1b @ 1'	6/29/2018	1'	In-Situ	-	-	-	-	-	-	10.5	265	11.7	**287.2**
WHA-1c @ 1'	6/29/2018	1'	In-Situ	-	-	-	-	-	-	<7.99	<8.11	<8.11	<7.99
STT-1 2ft	4/11/2018	2'	In-Situ	<0.0195	<0.0195	<0.0195	<0.0391	<0.0195	<0.0195	<3.91	<25.1	<25.1	<25.1
STT-1 4ft	4/11/2018	4'	In-Situ	-	-	-	-	-	-	<3.75	<25.2	<25.2	<25.2
STT-1 6ft	4/11/2018	6'	In-Situ	-	-	-	-	-	-	<3.60	<24.9	<24.9	<24.9
STT-1 8ft	4/11/2018	8'	In-Situ	<0.0196	<0.0196	<0.0196	<0.0392	<0.0196	<0.0196	<3.92	<25.2	<25.2	<25.2
NTT-1A 7ft.	4/11/2018	7'	In-Situ	<0.0180	<0.0180	<0.0180	<0.0360	<0.0180	<0.0180	11.1	197	27.4	**235.5**
NTT-1B 5ft.	4/11/2018	5'	In-Situ	<0.0171	<0.0171	<0.0171	<0.0342	<0.0171	<0.0171	<3.42	33.1	<25.0	33.1
NTT-1B 6ft.	4/11/2018	6'	In-Situ	-	-	-	-	-	-	<3.75	<25.1	<25.1	<25.1
ETT-1 @ 2ft	4/13/2018	2'	In-Situ	<0.000388	<0.000459	<0.000569	<0.00102	<0.000347	<0.000347	9.65	80.2	<8.12	89.85
ETT-1 @ 4ft	4/13/2018	4'	In-Situ	-	-	-	-	-	-	9.55	176	17.5	**203.05**
ETT-1 @ 6ft	4/13/2018	6'	In-Situ	-	-	-	-	-	-	<7.99	<8.12	<8.12	<7.99
ETT-1 @ 8ft	4/13/2018	8'	In-Situ	<0.000387	<0.000458	<0.000568	<0.00102	<0.000346	<0.000346	<7.99	<8.11	<8.11	<7.99
ETT-1a 4ft	5/31/2018	4'	In-Situ	-	-	-	-	-	-	<7.98	323	25.9	**348.9**
ETT-1a 6ft	5/31/2018	6'	In-Situ	-	-	-	-	-	-	<7.97	47.5	<8.10	47.5
EHA-1b @ 2'	6/29/2018	2'	In-Situ	-	-	-	-	-	-	9.76	30.0	<8.12	39.76
EHA-1c @ 2'	6/29/2018	2'	In-Situ	-	-	-	-	-	-	<7.97	<8.10	<8.10	<7.97
TT-2 @ Surface	4/13/2018	Surface	In-Situ	<0.000384	<0.000455	<0.000564	<0.00101	<0.000344	<0.000344	<7.99	492	202	**694**
TT-2 @ 2ft	4/13/2018	2'	In-Situ	<0.000389	<0.000460	<0.000570	<0.00102	<0.000348	<0.000348	<7.99	20.4	<8.12	20.4
TT-3 @ 2ft	4/13/2018	2'	In-Situ	<0.000388	<0.000459	<0.000569	0.00409	0.00409	0.00409	29.0	250	57.6	**336.6**
TT-3 4ft	5/31/2018	4'	In-Situ	-	-	-	-	-	-	<7.98	51.9	<8.10	51.9
NMOCD Recommended Remediation Action Level				**10**	**-**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**100**

* Denotes sample name has been used previously.

Certificate of Analysis Summary 582241

TRC Solutions, Inc, Midland, TX

Project Name: Moore Sweet

Project Id:
Contact: Joel Lowry
Project Location: Lea Co, NM

Date Received in Lab: Thu Apr-12-18 06:20 pm
Report Date: 18-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	582241-001		582241-002		582241-003		582241-004		582241-005		582241-006	
	Field Id:	TT-1 4 ft.		TT-1 6 ft.		TT-1 8 ft.		TT-1 10 ft.		TT-1 12ft.		TT-1 14 ft.	
	Depth:	4- ft		6- ft		8- ft		10- ft		12- ft		14- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-11-18 09:00		Apr-11-18 09:05		Apr-11-18 09:10		Apr-11-18 09:15		Apr-11-18 09:20		Apr-11-18 09:20	
BTEX by EPA 8021B	***Extracted:***	Apr-13-18 09:15										Apr-13-18 09:15	
	Analyzed:	Apr-15-18 05:06										Apr-13-18 12:06	
	Units/RL:	mg/kg	RL									mg/kg	RL
Benzene		<0.0962	0.0962									<0.0181	0.0181
Toluene		<0.0962	0.0962									<0.0181	0.0181
Ethylbenzene		<0.0962	0.0962									<0.0181	0.0181
m_p-Xylenes		0.548	0.192									<0.0362	0.0362
o-Xylene		<0.0962	0.0962									<0.0181	0.0181
Xylenes, Total		0.548	0.0962									<0.0181	0.0181
Total BTEX		0.548	0.0962									<0.0181	0.0181
DRO-ORO By SW8015B	***Extracted:***	Apr-13-18 09:00		Apr-13-18 09:00		Apr-13-18 09:00		Apr-13-18 09:00		Apr-13-18 09:00		Apr-13-18 09:00	
	Analyzed:	Apr-13-18 21:25		Apr-13-18 21:59		Apr-13-18 22:33		Apr-13-18 23:06		Apr-13-18 23:39		Apr-13-18 14:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		5180 E	126	3030	126	1650 E	25.0	368	25.2	151	24.9	103	24.9
Oil Range Hydrocarbons (ORO)		715	126	394	126	204	25.0	59.7	25.2	31.4	24.9	<24.9	24.9
TPH GRO by EPA 8015 Mod.	***Extracted:***	Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15	
	Analyzed:	Apr-15-18 05:06		Apr-15-18 05:33		Apr-15-18 06:00		Apr-15-18 06:28		Apr-15-18 06:55		Apr-13-18 12:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		45.2	19.2	175	18.9	97.0	20.0	16.3	3.69	<3.94	3.94	<3.62	3.62

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 582241

TRC Solutions, Inc, Midland, TX

Project Name: Moore Sweet

Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Thu Apr-12-18 06:20 pm

Report Date: 18-APR-18

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	582241-007		582241-008		582241-009		582241-010		582241-011		582241-012	
	Field Id:	WTT-1 2 ft.		WTT-1 4 ft.		WTT-1 6 ft.		WTT-1 8 ft.		STT-1 2 ft.		STT-1 4 ft.	
	Depth:	2- ft		4- ft		6- ft		8- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-11-18 09:30		Apr-11-18 09:35		Apr-11-18 09:40		Apr-11-18 09:45		Apr-11-18 09:50		Apr-11-18 09:55	
BTEX by EPA 8021B	***Extracted:***	Apr-13-18 09:15						Apr-13-18 09:15		Apr-13-18 09:15			
	Analyzed:	Apr-15-18 07:22						Apr-15-18 08:44		Apr-15-18 11:27			
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL		
Benzene		<0.0191	0.0191					<0.0180	0.0180	<0.0195	0.0195		
Toluene		<0.0191	0.0191					<0.0180	0.0180	<0.0195	0.0195		
Ethylbenzene		<0.0191	0.0191					<0.0180	0.0180	<0.0195	0.0195		
m_p-Xylenes		<0.0382	0.0382					0.201	0.0360	<0.0391	0.0391		
o-Xylene		<0.0191	0.0191					0.0450	0.0180	<0.0195	0.0195		
Xylenes, Total		<0.0191	0.0191					0.246	0.018	<0.0195	0.0195		
Total BTEX		<0.0191	0.0191					0.246	0.018	<0.0195	0.0195		
DRO-ORO By SW8015B	***Extracted:***	Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00	
	Analyzed:	Apr-17-18 09:36		Apr-17-18 10:10		Apr-17-18 10:44		Apr-17-18 11:18		Apr-17-18 11:52		Apr-17-18 14:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<24.8	24.8	26.4	24.8	83.6	25.1	213	24.8	<25.1	25.1	<25.2	25.2
Oil Range Hydrocarbons (ORO)		<24.8	24.8	<24.8	24.8	34.7	25.1	60.8	24.8	<25.1	25.1	<25.2	25.2
TPH GRO by EPA 8015 Mod.	***Extracted:***	Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15	
	Analyzed:	Apr-15-18 07:22		Apr-15-18 07:50		Apr-15-18 08:17		Apr-15-18 08:44		Apr-15-18 11:27		Apr-15-18 11:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<3.82	3.82	<3.66	3.66	25.8	3.93	19.9	3.60	<3.91	3.91	<3.75	3.75

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 582241

TRC Solutions, Inc, Midland, TX

Project Name: Moore Sweet

Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Thu Apr-12-18 06:20 pm

Report Date: 18-APR-18

Project Manager: Kelsey Brooks

Analysis Requested																	
	Lab Id:	582241-013		582241-014		582241-015		582241-016		582241-017							
	Field Id:	STT-1 6 ft.		STT-1 8 ft.		NTT-1B 5 ft.		NTT-1B 6 ft.		NTT-1A 7 ft.							
	Depth:	6- ft		8- ft		5- ft		6- ft		7- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL							
	Sampled:	Apr-11-18 10:00		Apr-11-18 10:05		Apr-11-18 10:10		Apr-11-18 10:15		Apr-11-18 10:20							
BTEX by EPA 8021B	***Extracted:***			Apr-13-18 09:15		Apr-13-18 09:15				Apr-13-18 09:15							
	Analyzed:			Apr-15-18 12:47		Apr-15-18 13:14				Apr-15-18 02:23							
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL						
Benzene				<0.0196	0.0196	<0.0171	0.0171			<0.0180	0.0180						
Toluene				<0.0196	0.0196	<0.0171	0.0171			<0.0180	0.0180						
Ethylbenzene				<0.0196	0.0196	<0.0171	0.0171			<0.0180	0.0180						
m_p-Xylenes				<0.0392	0.0392	<0.0342	0.0342			<0.0360	0.0360						
o-Xylene				<0.0196	0.0196	<0.0171	0.0171			<0.0180	0.0180						
Xylenes, Total				<0.0196	0.0196	<0.0171	0.0171			<0.018	0.018						
Total BTEX				<0.0196	0.0196	<0.0171	0.0171			<0.018	0.018						
DRO-ORO By SW8015B	***Extracted:***	Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00		Apr-16-18 12:00							
	Analyzed:	Apr-17-18 14:38		Apr-17-18 15:11		Apr-17-18 15:44		Apr-17-18 16:17		Apr-17-18 16:52							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Diesel Range Organics (DRO)		<24.9	24.9	<25.2	25.2	33.1	25.0	<25.1	25.1	197	24.9						
Oil Range Hydrocarbons (ORO)		<24.9	24.9	<25.2	25.2	<25.0	25.0	<25.1	25.1	27.4	24.9						
TPH GRO by EPA 8015 Mod.	***Extracted:***	Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15		Apr-13-18 09:15							
	Analyzed:	Apr-15-18 12:20		Apr-15-18 12:47		Apr-15-18 13:14		Apr-15-18 13:41		Apr-15-18 02:23							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
TPH-GRO		<3.60	3.60	<3.92	3.92	<3.42	3.42	<3.75	3.75	11.1	3.60						

Kelsey Brooks
Project Manager

Analytical Report 582241

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Moore Sweet

18-APR-18

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

18-APR-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **582241**
Moore Sweet
Project Address: Lea Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 582241. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 582241 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 4 ft.	S	04-11-18 09:00	4 ft	582241-001
TT-1 6 ft.	S	04-11-18 09:05	6 ft	582241-002
TT-1 8 ft.	S	04-11-18 09:10	8 ft	582241-003
TT-1 10 ft.	S	04-11-18 09:15	10 ft	582241-004
TT-1 12ft.	S	04-11-18 09:20	12 ft	582241-005
TT-1 14 ft.	S	04-11-18 09:20	14 ft	582241-006
WTT-1 2 ft.	S	04-11-18 09:30	2 ft	582241-007
WTT-1 4 ft.	S	04-11-18 09:35	4 ft	582241-008
WTT-1 6 ft.	S	04-11-18 09:40	6 ft	582241-009
WTT-1 8 ft.	S	04-11-18 09:45	8 ft	582241-010
STT-1 2 ft.	S	04-11-18 09:50	2 ft	582241-011
STT-1 4 ft.	S	04-11-18 09:55	4 ft	582241-012
STT-1 6 ft.	S	04-11-18 10:00	6 ft	582241-013
STT-1 8 ft.	S	04-11-18 10:05	8 ft	582241-014
NTT-1B 5 ft.	S	04-11-18 10:10	5 ft	582241-015
NTT-1B 6 ft.	S	04-11-18 10:15	6 ft	582241-016
NTT-1A 7 ft.	S	04-11-18 10:20	7 ft	582241-017

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3046668 DRO-ORO By SW8015B
Lab Sample ID 582241-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 582241-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 582241-003.
Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 582241-001,582241-002,582241-003,582241-004.
Surrogate Tricosane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 582241-006 SD,582241-002,582241-001,582241-004,582241-005.

Batch: LBA-3046672 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3046705 BTEX by EPA 8021B
Sample 582241-001 was diluted due to hydrocarbons beyond xylenes.

Batch: LBA-3047041 DRO-ORO By SW8015B
Surrogate Tricosane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 582241-009,582241-010,582241-017.
Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 582241-010.

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 4 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-001	Date Collected:	04.11.18 09.00	Sample Depth:	4 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**5180**	126	mg/kg	04.13.18 21.25	E	5
Oil Range Hydrocarbons (ORO)	PHCG2835	**715**	126	mg/kg	04.13.18 21.25		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	2287	%	65-144	04.13.18 21.25	**
n-Triacontane	638-68-6	1109	%	46-152	04.13.18 21.25	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0962	0.0962	mg/kg	04.15.18 05.06	U	5
Toluene	108-88-3	<0.0962	0.0962	mg/kg	04.15.18 05.06	U	5
Ethylbenzene	100-41-4	<0.0962	0.0962	mg/kg	04.15.18 05.06	U	5
m_p-Xylenes	179601-23-1	**0.548**	0.192	mg/kg	04.15.18 05.06		5
o-Xylene	95-47-6	<0.0962	0.0962	mg/kg	04.15.18 05.06	U	5
Xylenes, Total	1330-20-7	**0.548**	0.0962	mg/kg	04.15.18 05.06		5
Total BTEX		**0.548**	0.0962	mg/kg	04.15.18 05.06		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	04.15.18 05.06	
a,a,a-Trifluorotoluene	98-08-8	96	%	71-121	04.15.18 05.06	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 4 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-001	Date Collected:	04.11.18 09.00	Sample Depth:	4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**45.2**	19.2		mg/kg	04.15.18 05.06		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	04.15.18 05.06	
a,a,a-Trifluorotoluene	98-08-8	78	%	69-120	04.15.18 05.06	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 6 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-002	Date Collected:	04.11.18 09.05	Sample Depth:	6 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**3030**	126	mg/kg	04.13.18 21.59		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**394**	126	mg/kg	04.13.18 21.59		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	1280	%	65-144	04.13.18 21.59	**
n-Triacontane	638-68-6	711	%	46-152	04.13.18 21.59	**

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**175**	18.9	mg/kg	04.15.18 05.33		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	76-123	04.15.18 05.33	
a,a,a-Trifluorotoluene	98-08-8	93	%	69-120	04.15.18 05.33	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 8 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-003	Date Collected:	04.11.18 09.10	Sample Depth:	8 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**1650**	25.0	mg/kg	04.13.18 22.33	E	1
Oil Range Hydrocarbons (ORO)	PHCG2835	**204**	25.0	mg/kg	04.13.18 22.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	0	%	65-144	04.13.18 22.33	**
n-Triacontane	638-68-6	414	%	46-152	04.13.18 22.33	**

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**97.0**	20.0	mg/kg	04.15.18 06.00		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	76-123	04.15.18 06.00	
a,a,a-Trifluorotoluene	98-08-8	81	%	69-120	04.15.18 06.00	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 10 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-004	Date Collected:	04.11.18 09.15	Sample Depth:	10 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**368**	25.2		mg/kg	04.13.18 23.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**59.7**	25.2		mg/kg	04.13.18 23.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	248	%	65-144	04.13.18 23.06	**
n-Triacontane	638-68-6	185	%	46-152	04.13.18 23.06	**

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**16.3**	3.69		mg/kg	04.15.18 06.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	76-123	04.15.18 06.28	
a,a,a-Trifluorotoluene	98-08-8	91	%	69-120	04.15.18 06.28	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 12ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-005	Date Collected:	04.11.18 09.20	Sample Depth:	12 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**151**	24.9		mg/kg	04.13.18 23.39		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**31.4**	24.9		mg/kg	04.13.18 23.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	177	%	65-144	04.13.18 23.39	**
n-Triacontane	638-68-6	145	%	46-152	04.13.18 23.39	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.94	3.94		mg/kg	04.15.18 06.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	76-123	04.15.18 06.55	
a,a,a-Trifluorotoluene	98-08-8	90	%	69-120	04.15.18 06.55	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 14 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-006	Date Collected:	04.11.18 09.20	Sample Depth:	14 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.13.18 09.00	Basis:	Wet Weight
Seq Number:	3046668				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**103**	24.9		mg/kg	04.13.18 14.28		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<24.9	24.9		mg/kg	04.13.18 14.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	143	%	65-144	04.13.18 14.28	
n-Triacontane	638-68-6	120	%	46-152	04.13.18 14.28	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046672				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1
Toluene	108-88-3	<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1
Ethylbenzene	100-41-4	<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1
m_p-Xylenes	179601-23-1	<0.0362	0.0362		mg/kg	04.13.18 12.06	U	1
o-Xylene	95-47-6	<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1
Xylenes, Total	1330-20-7	<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1
Total BTEX		<0.0181	0.0181		mg/kg	04.13.18 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	68-120	04.13.18 12.06	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	04.13.18 12.06	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**TT-1 14 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-006	Date Collected:	04.11.18 09.20	Sample Depth:	14 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046675				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.62	3.62		mg/kg	04.13.18 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	76-123	04.13.18 12.06	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	04.13.18 12.06	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 2 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-007	Date Collected:	04.11.18 09.30	Sample Depth:	2 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<24.8	24.8	mg/kg	04.17.18 09.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<24.8	24.8	mg/kg	04.17.18 09.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	112	%	65-144	04.17.18 09.36	
n-Triacontane	638-68-6	103	%	46-152	04.17.18 09.36	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1
Toluene	108-88-3	<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1
Ethylbenzene	100-41-4	<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1
m_p-Xylenes	179601-23-1	<0.0382	0.0382	mg/kg	04.15.18 07.22	U	1
o-Xylene	95-47-6	<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1
Xylenes, Total	1330-20-7	<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1
Total BTEX		<0.0191	0.0191	mg/kg	04.15.18 07.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	04.15.18 07.22	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	04.15.18 07.22	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 2 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-007	Date Collected:	04.11.18 09.30	Sample Depth:	2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.82	3.82		mg/kg	04.15.18 07.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	76-123	04.15.18 07.22	
a,a,a-Trifluorotoluene	98-08-8	90	%	69-120	04.15.18 07.22	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 4 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-008	Date Collected:	04.11.18 09.35	Sample Depth:	4 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**26.4**	24.8	mg/kg	04.17.18 10.10		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<24.8	24.8	mg/kg	04.17.18 10.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	121	%	65-144	04.17.18 10.10	
n-Triacontane	638-68-6	109	%	46-152	04.17.18 10.10	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.66	3.66	mg/kg	04.15.18 07.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	76-123	04.15.18 07.50	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	04.15.18 07.50	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 6 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-009	Date Collected:	04.11.18 09.40	Sample Depth:	6 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**83.6**	25.1	mg/kg	04.17.18 10.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**34.7**	25.1	mg/kg	04.17.18 10.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	147	%	65-144	04.17.18 10.44	**
n-Triacontane	638-68-6	140	%	46-152	04.17.18 10.44	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**25.8**	3.93	mg/kg	04.15.18 08.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	76-123	04.15.18 08.17	
a,a,a-Trifluorotoluene	98-08-8	88	%	69-120	04.15.18 08.17	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 8 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-010	Date Collected:	04.11.18 09.45	Sample Depth:	8 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**213**	24.8	mg/kg	04.17.18 11.18		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**60.8**	24.8	mg/kg	04.17.18 11.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	207	%	65-144	04.17.18 11.18	**
n-Triacontane	638-68-6	177	%	46-152	04.17.18 11.18	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0180	0.0180	mg/kg	04.15.18 08.44	U	1
Toluene	108-88-3	<0.0180	0.0180	mg/kg	04.15.18 08.44	U	1
Ethylbenzene	100-41-4	<0.0180	0.0180	mg/kg	04.15.18 08.44	U	1
m_p-Xylenes	179601-23-1	**0.201**	0.0360	mg/kg	04.15.18 08.44		1
o-Xylene	95-47-6	**0.0450**	0.0180	mg/kg	04.15.18 08.44		1
Xylenes, Total	1330-20-7	**0.246**	0.018	mg/kg	04.15.18 08.44		1
Total BTEX		**0.246**	0.018	mg/kg	04.15.18 08.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	04.15.18 08.44	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	04.15.18 08.44	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**WTT-1 8 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-010	Date Collected:	04.11.18 09.45	Sample Depth:	8 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**19.9**	3.60		mg/kg	04.15.18 08.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	76-123	04.15.18 08.44	
a,a,a-Trifluorotoluene	98-08-8	91	%	69-120	04.15.18 08.44	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 2 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-011	Date Collected:	04.11.18 09.50	Sample Depth:	2 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	04.17.18 11.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.1	25.1	mg/kg	04.17.18 11.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	04.17.18 11.52	
n-Triacontane	638-68-6	105	%	46-152	04.17.18 11.52	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1
Toluene	108-88-3	<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1
m_p-Xylenes	179601-23-1	<0.0391	0.0391	mg/kg	04.15.18 11.27	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1
Xylenes, Total	1330-20-7	<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1
Total BTEX		<0.0195	0.0195	mg/kg	04.15.18 11.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	04.15.18 11.27	
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	04.15.18 11.27	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 2 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-011	Date Collected:	04.11.18 09.50	Sample Depth:	2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.91	3.91		mg/kg	04.15.18 11.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	76-123	04.15.18 11.27	
a,a,a-Trifluorotoluene	98-08-8	90	%	69-120	04.15.18 11.27	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 4 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-012	Date Collected:	04.11.18 09.55	Sample Depth:	4 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.2	25.2	mg/kg	04.17.18 14.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.2	25.2	mg/kg	04.17.18 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	115	%	65-144	04.17.18 14.05	
n-Triacontane	638-68-6	105	%	46-152	04.17.18 14.05	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.75	3.75	mg/kg	04.15.18 11.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	76-123	04.15.18 11.54	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	04.15.18 11.54	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 6 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-013	Date Collected:	04.11.18 10.00	Sample Depth:	6 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	04.17.18 14.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<24.9	24.9	mg/kg	04.17.18 14.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	114	%	65-144	04.17.18 14.38	
n-Triacontane	638-68-6	97	%	46-152	04.17.18 14.38	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.60	3.60	mg/kg	04.15.18 12.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	76-123	04.15.18 12.20	
a,a,a-Trifluorotoluene	98-08-8	89	%	69-120	04.15.18 12.20	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 8 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-014	Date Collected:	04.11.18 10.05	Sample Depth:	8 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.2	25.2	mg/kg	04.17.18 15.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.2	25.2	mg/kg	04.17.18 15.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	105	%	65-144	04.17.18 15.11	
n-Triacontane	638-68-6	92	%	46-152	04.17.18 15.11	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1
m_p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	04.15.18 12.47	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1
Xylenes, Total	1330-20-7	<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1
Total BTEX		<0.0196	0.0196	mg/kg	04.15.18 12.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	68-120	04.15.18 12.47	
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	04.15.18 12.47	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**STT-1 8 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-014	Date Collected:	04.11.18 10.05	Sample Depth:	8 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.92	3.92		mg/kg	04.15.18 12.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	76-123	04.15.18 12.47	
a,a,a-Trifluorotoluene	98-08-8	89	%	69-120	04.15.18 12.47	

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TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**NTT-1B 5 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-015	Date Collected:	04.11.18 10.10	Sample Depth:	5 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**33.1**	25.0	mg/kg	04.17.18 15.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.0	25.0	mg/kg	04.17.18 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	118	%	65-144	04.17.18 15.44	
n-Triacontane	638-68-6	100	%	46-152	04.17.18 15.44	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1
Toluene	108-88-3	<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1
Ethylbenzene	100-41-4	<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1
m_p-Xylenes	179601-23-1	<0.0342	0.0342	mg/kg	04.15.18 13.14	U	1
o-Xylene	95-47-6	<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1
Xylenes, Total	1330-20-7	<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1
Total BTEX		<0.0171	0.0171	mg/kg	04.15.18 13.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	04.15.18 13.14	
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	04.15.18 13.14	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**NTT-1B 5 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-015	Date Collected:	04.11.18 10.10	Sample Depth:	5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.42	3.42		mg/kg	04.15.18 13.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	76-123	04.15.18 13.14	
a,a,a-Trifluorotoluene	98-08-8	87	%	69-120	04.15.18 13.14	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**NTT-1B 6 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-016	Date Collected:	04.11.18 10.15	Sample Depth:	6 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	04.17.18 16.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.1	25.1	mg/kg	04.17.18 16.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	108	%	65-144	04.17.18 16.17	
n-Triacontane	638-68-6	92	%	46-152	04.17.18 16.17	

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.75	3.75	mg/kg	04.15.18 13.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	76-123	04.15.18 13.41	
a,a,a-Trifluorotoluene	98-08-8	88	%	69-120	04.15.18 13.41	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**NTT-1A 7 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-017	Date Collected:	04.11.18 10.20	Sample Depth:	7 ft

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	04.16.18 12.00	Basis:	Wet Weight
Seq Number:	3047041				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**197**	24.9		mg/kg	04.17.18 16.52		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**27.4**	24.9		mg/kg	04.17.18 16.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	182	%	65-144	04.17.18 16.52	**
n-Triacontane	638-68-6	135	%	46-152	04.17.18 16.52	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046705				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0180	0.0180		mg/kg	04.15.18 02.23	U	1
Toluene	108-88-3	<0.0180	0.0180		mg/kg	04.15.18 02.23	U	1
Ethylbenzene	100-41-4	<0.0180	0.0180		mg/kg	04.15.18 02.23	U	1
m_p-Xylenes	179601-23-1	<0.0360	0.0360		mg/kg	04.15.18 02.23	U	1
o-Xylene	95-47-6	<0.0180	0.0180		mg/kg	04.15.18 02.23	U	1
Xylenes, Total	1330-20-7	<0.018	0.018		mg/kg	04.15.18 02.23	U	1
Total BTEX		<0.018	0.018		mg/kg	04.15.18 02.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	68-120	04.15.18 02.23	
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	04.15.18 02.23	

Certificate of Analytical Results 582241

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id:	**NTT-1A 7 ft.**	Matrix:	Soil	Date Received:	04.12.18 18.20
Lab Sample Id:	582241-017	Date Collected:	04.11.18 10.20	Sample Depth:	7 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.13.18 09.15	Basis:	Wet Weight
Seq Number:	3046710				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**11.1**	3.60		mg/kg	04.15.18 02.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	76-123	04.15.18 02.23	
a,a,a-Trifluorotoluene	98-08-8	86	%	69-120	04.15.18 02.23	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 582241

TRC Solutions, Inc

Moore Sweet

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3046668 Matrix: Solid Date Prep: 04.13.18
MB Sample Id: 7642543-1-BLK LCS Sample Id: 7642543-1-BKS LCSD Sample Id: 7642543-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<25.0	100	88.2	88	78.6	79	63-139	12	20	mg/kg	04.13.18 17:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	132		110		104		65-144	%	04.13.18 17:30
n-Triacontane	118		86		85		46-152	%	04.13.18 17:30

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3047041 Matrix: Solid Date Prep: 04.16.18
MB Sample Id: 7642690-1-BLK LCS Sample Id: 7642690-1-BKS LCSD Sample Id: 7642690-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<25.0	100	72.3	72	74.5	75	63-139	3	20	mg/kg	04.17.18 03:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	101		97		99		65-144	%	04.17.18 03:49
n-Triacontane	94		83		82		46-152	%	04.17.18 03:49

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3046668 Matrix: Soil Date Prep: 04.13.18
Parent Sample Id: 582241-006 MS Sample Id: 582241-006 S MSD Sample Id: 582241-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	103	100	160	57	195	92	63-139	20	20	mg/kg	04.13.18 15:09	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	138		173	**	65-144	%	04.13.18 15:09
n-Triacontane	114		140		46-152	%	04.13.18 15:09

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

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

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

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

QC Summary 582241

TRC Solutions, Inc

Moore Sweet

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3047041 Matrix: Soil Date Prep: 04.16.18
Parent Sample Id: 582357-001 MS Sample Id: 582357-001 S MSD Sample Id: 582357-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<24.9	99.7	78.6	79	77.1	77	63-139	2	20	mg/kg	04.17.18 05:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	113		113		65-144	%	04.17.18 05:33
n-Triacontane	93		89		46-152	%	04.17.18 05:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3046672 Matrix: Solid Date Prep: 04.13.18
MB Sample Id: 7642631-1-BLK LCS Sample Id: 7642631-1-BKS LCSD Sample Id: 7642631-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.67	84	1.70	85	55-120	2	20	mg/kg	04.13.18 15:31	
Toluene	<0.0200	2.00	1.59	80	1.63	82	77-120	2	20	mg/kg	04.13.18 15:31	
Ethylbenzene	<0.0200	2.00	1.61	81	1.65	83	77-120	2	20	mg/kg	04.13.18 15:31	
m_p-Xylenes	<0.0400	4.00	3.20	80	3.30	83	78-120	3	20	mg/kg	04.13.18 15:31	
o-Xylene	<0.0200	2.00	1.60	80	1.65	83	78-120	3	20	mg/kg	04.13.18 15:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	91		90		91		68-120	%	04.13.18 15:31
a,a,a-Trifluorotoluene	88		80		86		71-121	%	04.13.18 15:31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3046705 Matrix: Solid Date Prep: 04.13.18
MB Sample Id: 7642667-1-BLK LCS Sample Id: 7642667-1-BKS LCSD Sample Id: 7642667-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.91	96	1.67	84	55-120	13	20	mg/kg	04.14.18 14:06	
Toluene	<0.0200	2.00	1.93	97	1.93	97	77-120	0	20	mg/kg	04.14.18 14:06	
Ethylbenzene	<0.0200	2.00	1.91	96	1.91	96	77-120	0	20	mg/kg	04.14.18 14:06	
m_p-Xylenes	<0.0400	4.00	3.85	96	3.85	96	78-120	0	20	mg/kg	04.14.18 14:06	
o-Xylene	<0.0200	2.00	1.91	96	1.91	96	78-120	0	20	mg/kg	04.14.18 14:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		88		88		68-120	%	04.14.18 14:06
a,a,a-Trifluorotoluene	96		88		86		71-121	%	04.14.18 14:06

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

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

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

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

QC Summary 582241

TRC Solutions, Inc

Moore Sweet

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3046672 Matrix: Soil Date Prep: 04.13.18
Parent Sample Id: 582241-006 MS Sample Id: 582241-006 S MSD Sample Id: 582241-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0193	1.93	1.58	82	1.44	73	54-120	9	25	mg/kg	04.13.18 12:34	
Toluene	<0.0193	1.93	1.60	83	1.57	80	57-120	2	25	mg/kg	04.13.18 12:34	
Ethylbenzene	<0.0193	1.93	1.66	86	1.64	84	58-131	1	25	mg/kg	04.13.18 12:34	
m_p-Xylenes	<0.0385	3.85	3.36	87	3.28	83	62-124	2	25	mg/kg	04.13.18 12:34	
o-Xylene	<0.0193	1.93	1.68	87	1.62	83	62-124	4	25	mg/kg	04.13.18 12:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		103		68-120	%	04.13.18 12:34
a,a,a-Trifluorotoluene	91		86		71-121	%	04.13.18 12:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3046705 Matrix: Soil Date Prep: 04.13.18
Parent Sample Id: 582241-017 MS Sample Id: 582241-017 S MSD Sample Id: 582241-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0198	1.98	2.10	106	2.19	114	54-120	4	25	mg/kg	04.15.18 02:50	
Toluene	<0.0198	1.98	2.15	109	2.15	112	57-120	0	25	mg/kg	04.15.18 02:50	
Ethylbenzene	<0.0198	1.98	2.26	114	2.22	116	58-131	2	25	mg/kg	04.15.18 02:50	
m_p-Xylenes	<0.0396	3.96	4.51	114	4.42	115	62-124	2	25	mg/kg	04.15.18 02:50	
o-Xylene	<0.0198	1.98	2.25	114	2.34	122	62-124	4	25	mg/kg	04.15.18 02:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		104		68-120	%	04.15.18 02:50
a,a,a-Trifluorotoluene	95		96		71-121	%	04.15.18 02:50

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3046675 Matrix: Solid Date Prep: 04.13.18
MB Sample Id: 7642632-1-BLK LCS Sample Id: 7642632-1-BKS LCSD Sample Id: 7642632-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<4.00	20.0	16.6	83	17.7	89	35-129	6	20	mg/kg	04.13.18 16:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		91		97		76-123	%	04.13.18 16:52
a,a,a-Trifluorotoluene	110		99		94		69-120	%	04.13.18 16:52

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

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

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

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

QC Summary 582241

TRC Solutions, Inc

Moore Sweet

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3046710 Matrix: Solid Date Prep: 04.13.18
MB Sample Id: 7642673-1-BLK LCS Sample Id: 7642673-1-BKS LCSD Sample Id: 7642673-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<4.00	20.0	17.9	90	18.8	94	35-129	5	20	mg/kg	04.15.18 00:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	88		91		93		76-123	%	04.15.18 00:06
a,a,a-Trifluorotoluene	119		93		71		69-120	%	04.15.18 00:06

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3046675 Matrix: Soil Date Prep: 04.13.18
Parent Sample Id: 582241-006 MS Sample Id: 582241-006 S MSD Sample Id: 582241-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<3.89	19.5	14.7	75	15.3	78	35-129	4	20	mg/kg	04.13.18 13:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	115		122		76-123	%	04.13.18 13:28
a,a,a-Trifluorotoluene	82		81		69-120	%	04.13.18 13:28

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3046710 Matrix: Soil Date Prep: 04.13.18
Parent Sample Id: 582241-017 MS Sample Id: 582241-017 S MSD Sample Id: 582241-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	11.1	19.0	31.6	108	29.4	92	35-129	7	20	mg/kg	04.15.18 03:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	102		98		76-123	%	04.15.18 03:44
a,a,a-Trifluorotoluene	74		69		69-120	%	04.15.18 03:44

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

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

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

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

CHAIN OF CUSTODY

XENCO LABORATORIES
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Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

582241

Xenco Job # 582241

Client / Reporting Information	Project Information
Company Name / Branch: TRC Environmental Corporation	Project Name/Number: Moore Sweet
Company Address: 2057 Commerce Drive, Midland, TX 79703	Project Location: Lea County, NM
Email: jlowry@trcsolutions.com, zconder@trcsolutions.com — Phone No: 432-466-4450	Invoice To: PAALP C/O Camille Bryant
Project Contact: Joel Lowry	Invoice:
Samplers's Name: Zach Conder	

Analytical Information

Matrix Codes: W = Water; S = Soil/Sed/Solid; GW =Ground Water; DW = Drinking Water; P = Product; SW = Surface water; SL = Sludge; OW =Ocean/Sea Water; WI = Wipe; O = Oil; WW= Waste Water; A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Rush	Field Comments
1	TT-1 4 ft	4'	4/11/2018	9:00	S	1									X		X		1
2	TT-1 6 ft	6'	4/11/2018	9:05	S	1									X				2
3	TT-1 8 ft	8'	4/11/2018	9:10	S	1									X				3
4	TT-1 10 ft	10'	4/11/2018	9:15	S	1									X				4
5	TT-1 12 ft	12'	4/11/2018	9:20	S	1									X				5
6	TT-1 14 ft	14'	4/11/2018	9:25	S	1									X		X	X	6
7	WTT-1 2 ft	2'	4/11/2018	9:30	S	1									X		X		7
8	WTT-1 4 ft	4'	4/11/2018	9:35	S	1									X				8
9	WTT-1 6 ft	6'	4/11/2018	9:40	S	1									X				9
10	WTT-1 8 ft	8'	4/11/2018	9:45	S	1									X		X		10
11	STT-1 2 ft	2'	4/11/2018	9:50	S	1									X		X		11
12	STT-1 4 ft	4'	4/11/2018	9:55	S	1									X				12
13	STT-1 6 ft	6'	4/11/2018	10:00	S	1									X				13
14	STT-1 8 ft	8'	4/11/2018	10:05	S	1									X		X		14
15	NTT-1B 5 ft	5'	4/11/2018	10:10	S	1									X		X		15
16	NTT-1B 6 ft	6'	4/11/2018	10:15	S	1									X				16
17	NTT-1A 7 ft	7'	4/11/2018	10:20	S	1									X		X		17

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

jlowry@trcsolutions.com zconder@trcsolutions.com
CJBryant@paalp.com algroves@paalp.com
kblackburn@trcsolutions.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Relinquished by Sampler:	4/12/18 14:07	1	2		2
3 Relinquished by:	Date Time:	3	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor: 5.2

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 04/12/2018 06:20:39 PM

Work Order #: 582241

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

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 04/12/2018
Brenda Ward

Checklist reviewed by: Holly Taylor Date: 04/16/2018
Holly Taylor

Analytical Report 582464

for

TRC Solutions, Inc

Project Manager: Joel Lowry

NM Moore Sweet

303081

26-APR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

26-APR-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **582464**
NM Moore Sweet
Project Address: Lea Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 582464. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 582464 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 582464

TRC Solutions, Inc, Midland, TX

NM Moore Sweet

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
ETT-1 @ 2ft	S	04-13-18 08:20	2 ft	582464-001
ETT-1 @ 4ft	S	04-13-18 08:30	4 ft	582464-002
ETT-1 @ 6ft	S	04-13-18 08:40	6 ft	582464-003
ETT-1 @ 8ft	S	04-13-18 08:50	8 ft	582464-004
TT-2 @ Surface	S	04-13-18 09:10	ft	582464-005
TT-2 @ 2ft	S	04-13-18 09:20	2 ft	582464-006
TT-3 @ 2ft	S	04-13-18 09:30	2 ft	582464-007

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3047055 BTEX by EPA 8021
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3047058 BTEX by EPA 8021
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3047180 BTEX by EPA 8021
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **ETT-1 @ 2ft** | Matrix: Soil | Sample Depth: 2 ft

Lab Sample Id: 582464-001 | Date Collected: 04.13.18 08.20 | Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod | Prep Method: 1005

Analyst: ARM | % Moist: | Tech: ARM

Seq Number: 3046890 | Date Prep: 04.16.18 16.00

Prep seq: 7642747

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**9.65**	15.0	7.99	mg/kg	04.17.18 09:23	J	1
Diesel Range Organics (DRO)	C10C28DRO	**80.2**	15.0	8.12	mg/kg	04.17.18 09:23		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.12	15.0	8.12	mg/kg	04.17.18 09:23	U	1
Total TPH	PHC635	**89.85**		7.99	mg/kg	04.17.18 09:23		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	111	70 - 135	%		

Analytical Method: BTEX by EPA 8021 | Prep Method: 5030B

Analyst: ALJ | % Moist: | Tech: ALJ

Seq Number: 3047055 | Date Prep: 04.17.18 08.00

Prep seq: 7642819

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	04.17.18 15:42	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	04.17.18 15:42	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	04.17.18 15:42	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	04.17.18 15:42	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	04.17.18 15:42	U	1
Xylenes, Total	1330-20-7	<0.000347		0.000347	mg/kg	04.17.18 15:42	U	
Total BTEX		<0.000347		0.000347	mg/kg	04.17.18 15:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **ETT-1 @ 4ft** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 582464-002 Date Collected: 04.13.18 08.30 Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3046890 Date Prep: 04.16.18 16.00

Prep seq: 7642747

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**9.55**	15.0	7.99	mg/kg	04.17.18 09:49	J	1
Diesel Range Organics (DRO)	C10C28DRO	**176**	15.0	8.11	mg/kg	04.17.18 09:49		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**17.5**	15.0	8.11	mg/kg	04.17.18 09:49		1
Total TPH	PHC635	**203.05**		7.99	mg/kg	04.17.18 09:49		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Sample Id: **ETT-1 @ 6ft** Matrix: Soil Sample Depth: 6 ft

Lab Sample Id: 582464-003 Date Collected: 04.13.18 08.40 Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3046890 Date Prep: 04.16.18 16.00

Prep seq: 7642747

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	04.17.18 10:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.12	15.0	8.12	mg/kg	04.17.18 10:15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.12	15.0	8.12	mg/kg	04.17.18 10:15	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	04.17.18 10:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **ETT-1 @ 8ft** Matrix: Soil Sample Depth: 8 ft

Lab Sample Id: 582464-004 Date Collected: 04.13.18 08.50 Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3047233 Date Prep: 04.18.18 07.00

Prep seq: 7642935

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	04.18.18 09:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	04.18.18 09:39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.11	15.0	8.11	mg/kg	04.18.18 09:39	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	04.18.18 09:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3047058 Date Prep: 04.18.18 11.15

Prep seq: 7642865

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	04.18.18 19:58	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	04.18.18 19:58	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	04.18.18 19:58	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	04.18.18 19:58	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	04.18.18 19:58	U	1
Xylenes, Total	1330-20-7	<0.000346		0.000346	mg/kg	04.18.18 19:58	U	
Total BTEX		<0.000346		0.000346	mg/kg	04.18.18 19:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	88	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **TT-2 @ Surface** | Matrix: Soil | Sample Depth:

Lab Sample Id: 582464-005 | Date Collected: 04.13.18 09.10 | Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod | Prep Method: 1005

Analyst: ARM | % Moist: | Tech: ARM

Seq Number: 3047233 | Date Prep: 04.18.18 07.00

Prep seq: 7642935

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	04.19.18 03:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**492**	15.0	8.11	mg/kg	04.19.18 03:55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**202**	15.0	8.11	mg/kg	04.19.18 03:55		1
Total TPH	PHC635	**694**		7.99	mg/kg	04.19.18 03:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	83	70 - 135	%		

Analytical Method: BTEX by EPA 8021 | Prep Method: 5030B

Analyst: ALJ | % Moist: | Tech: ALJ

Seq Number: 3047058 | Date Prep: 04.18.18 11.15

Prep seq: 7642865

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	04.18.18 20:17	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	04.18.18 20:17	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	04.18.18 20:17	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	04.18.18 20:17	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	04.18.18 20:17	U	1
Xylenes, Total	1330-20-7	<0.000344		0.000344	mg/kg	04.18.18 20:17	U	
Total BTEX		<0.000344		0.000344	mg/kg	04.18.18 20:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	80	70 - 130	%		
4-Bromofluorobenzene	72	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **TT-2 @ 2ft** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 582464-006 Date Collected: 04.13.18 09.20 Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3047233 Date Prep: 04.18.18 07.00

Prep seq: 7642935

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	04.18.18 10:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**20.4**	15.0	8.12	mg/kg	04.18.18 10:57		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.12	15.0	8.12	mg/kg	04.18.18 10:57	U	1
Total TPH	PHC635	**20.4**		7.99	mg/kg	04.18.18 10:57		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3047058 Date Prep: 04.18.18 11.15

Prep seq: 7642865

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	04.18.18 20:37	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	04.18.18 20:37	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	04.18.18 20:37	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	04.18.18 20:37	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	04.18.18 20:37	U	1
Xylenes, Total	1330-20-7	<0.000348		0.000348	mg/kg	04.18.18 20:37	U	
Total BTEX		<0.000348		0.000348	mg/kg	04.18.18 20:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	88	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **TT-3 @ 2ft** | Matrix: Soil | Sample Depth: 2 ft

Lab Sample Id: 582464-007 | Date Collected: 04.13.18 09.30 | Date Received: 04.13.18 15.53

Analytical Method: TPH by SW8015 Mod | Prep Method: 1005

Analyst: ARM | % Moist: | Tech: ARM

Seq Number: 3047233 | Date Prep: 04.18.18 07.00

Prep seq: 7642935

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**29.0**	15.0	7.99	mg/kg	04.18.18 11:17		1
Diesel Range Organics (DRO)	C10C28DRO	**250**	15.0	8.12	mg/kg	04.18.18 11:17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**57.6**	15.0	8.12	mg/kg	04.18.18 11:17		1
Total TPH	PHC635	**336.6**		7.99	mg/kg	04.18.18 11:17		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021 | Prep Method: 5030B

Analyst: ALJ | % Moist: | Tech: ALJ

Seq Number: 3047180 | Date Prep: 04.18.18 17.00

Prep seq: 7642949

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	04.19.18 09:51	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	04.19.18 09:51	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	04.19.18 09:51	U	1
m_p-Xylenes	179601-23-1	**0.00409**	0.00403	0.00102	mg/kg	04.19.18 09:51		1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	04.19.18 09:51	U	1
Xylenes, Total	1330-20-7	**0.00409**		0.000347	mg/kg	04.19.18 09:51		
Total BTEX		**0.00409**		0.000347	mg/kg	04.19.18 09:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **7642747-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7642747-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3046890 Date Prep: 04.16.18 16.00

Prep seq: 7642747

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	04.16.18 23:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	04.16.18 23:30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	04.16.18 23:30	U	1
Total TPH	PHC635	<8		8	mg/kg	04.16.18 23:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	104	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Sample Id: **7642819-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7642819-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3047055 Date Prep: 04.17.18 08.00

Prep seq: 7642819

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	04.17.18 09:20	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	04.17.18 09:20	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	04.17.18 09:20	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	04.17.18 09:20	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	04.17.18 09:20	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	95	70 - 130	%		
4-Bromofluorobenzene	83	70 - 130	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **7642865-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7642865-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3047058 Date Prep: 04.18.18 08.00

Prep seq: 7642865

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	04.18.18 09:03	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	04.18.18 09:03	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	04.18.18 09:03	U	1
m_p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	04.18.18 09:03	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	04.18.18 09:03	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		

Sample Id: **7642935-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7642935-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3047233 Date Prep: 04.18.18 07.00

Prep seq: 7642935

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	04.18.18 08:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	04.18.18 08:38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	04.18.18 08:38	U	1
Total TPH	PHC635	<8		8	mg/kg	04.18.18 08:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	111	70 - 135	%		

Certificate of Analytical Results
582464

TRC Solutions, Inc, Midland, TX
NM Moore Sweet

Sample Id: **7642949-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7642949-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021 Prep Method: 5030B

Analyst: ALJ % Moist: Tech: ALJ

Seq Number: 3047180 Date Prep: 04.18.18 17.00

Prep seq: 7642949

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	04.19.18 00:46	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	04.19.18 00:46	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	04.19.18 00:46	U	1
m_p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	04.19.18 00:46	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	04.19.18 00:46	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	70 - 130	%		
4-Bromofluorobenzene	83	70 - 130	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: NM Moore Sweet

Work Orders : 582464,

Project ID: 303081

Lab Batch #: 3047055 **Sample:** 7642819-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/17/18 07:44

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

Lab Batch #: 3047055 **Sample:** 7642819-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/17/18 08:03

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0315	0.0300	105	70-130	

Lab Batch #: 3047055 **Sample:** 582469-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/17/18 08:22

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3047055 **Sample:** 7642819-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/17/18 09:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0248	0.0300	83	70-130	

Lab Batch #: 3047055 **Sample:** 582469-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/17/18 12:49

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: NM Moore Sweet

Work Orders : 582464,

Project ID: 303081

Lab Batch #: 3047058 **Sample:** 7642865-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 07:08

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0316	0.0300	105	70-130	

Lab Batch #: 3047058 **Sample:** 7642865-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 07:27

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	70-130	
4-Bromofluorobenzene	0.0313	0.0300	104	70-130	

Lab Batch #: 3047058 **Sample:** 582705-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 07:46

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0324	0.0300	108	70-130	

Lab Batch #: 3047058 **Sample:** 582705-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 08:05

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

Lab Batch #: 3047058 **Sample:** 7642865-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 09:03

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	70-130	
4-Bromofluorobenzene	0.0271	0.0300	90	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: NM Moore Sweet

Work Orders : 582464,

Project ID: 303081

Lab Batch #: 3047180 **Sample:** 7642949-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 22:51

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0261	0.0300	87	70-130	

Lab Batch #: 3047180 **Sample:** 7642949-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 23:10

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3047180 **Sample:** 582461-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 23:29

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

Lab Batch #: 3047180 **Sample:** 582461-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 23:49

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

Lab Batch #: 3047180 **Sample:** 7642949-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/19/18 00:46

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	70-130	
4-Bromofluorobenzene	0.0249	0.0300	83	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: NM Moore Sweet

Work Orders : 582464,

Project ID: 303081

Lab Batch #: 3046890 **Sample:** 7642747-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/16/18 23:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 3046890 **Sample:** 7642747-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/16/18 23:57

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	55.9	50.0	112	70-135	

Lab Batch #: 3046890 **Sample:** 7642747-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/17/18 00:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	60.1	50.0	120	70-135	

Lab Batch #: 3046890 **Sample:** 582461-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/17/18 01:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	54.1	49.9	108	70-135	

Lab Batch #: 3046890 **Sample:** 582461-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/17/18 01:44

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	54.7	49.9	110	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: NM Moore Sweet

Work Orders : 582464,

Project ID: 303081

Lab Batch #: 3047233 **Sample:** 7642935-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 08:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	55.7	50.0	111	70-135	

Lab Batch #: 3047233 **Sample:** 7642935-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 08:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	53.4	50.0	107	70-135	

Lab Batch #: 3047233 **Sample:** 7642935-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/18 09:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3047233 **Sample:** 582464-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 09:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.9	99	70-135	
o-Terphenyl	43.6	50.0	87	70-135	

Lab Batch #: 3047233 **Sample:** 582464-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/18 10:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	41.1	49.9	82	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: NM Moore Sweet

Work Order #: 582464 **Project ID:** 303081

Analyst: ALJ **Date Prepared:** 04/17/2018 **Date Analyzed:** 04/17/2018

Lab Batch ID: 3047055 **Sample:** 7642819-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000388	0.101	0.117	116	0.100	0.105	105	11	70-130	35	
Toluene	<0.000459	0.101	0.112	111	0.100	0.0984	98	13	70-130	35	
Ethylbenzene	<0.000569	0.101	0.113	112	0.100	0.0960	96	16	70-130	35	
m_p-Xylenes	<0.00102	0.202	0.232	115	0.200	0.198	99	16	70-130	35	
o-Xylene	<0.000347	0.101	0.114	113	0.100	0.0988	99	14	70-130	35	

Analyst: ALJ **Date Prepared:** 04/18/2018 **Date Analyzed:** 04/18/2018

Lab Batch ID: 3047058 **Sample:** 7642865-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000388	0.101	0.128	127	0.100	0.127	127	1	70-130	35	
Toluene	<0.000459	0.101	0.122	121	0.100	0.122	122	0	70-130	35	
Ethylbenzene	<0.000569	0.101	0.122	121	0.100	0.122	122	0	70-130	35	
m_p-Xylenes	<0.00102	0.202	0.251	124	0.200	0.251	126	0	70-130	35	
o-Xylene	<0.000347	0.101	0.122	121	0.100	0.123	123	1	70-130	35	

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

BS / BSD Recoveries

Project Name: NM Moore Sweet

Work Order #: 582464 **Project ID:** 303081

Analyst: ALJ **Date Prepared:** 04/18/2018 **Date Analyzed:** 04/18/2018

Lab Batch ID: 3047180 **Sample:** 7642949-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000386	0.100	0.115	115	0.101	0.121	120	5	70-130	35	
Toluene	<0.000457	0.100	0.108	108	0.101	0.116	115	7	70-130	35	
Ethylbenzene	<0.000567	0.100	0.108	108	0.101	0.116	115	7	70-130	35	
m_p-Xylenes	<0.00102	0.201	0.222	110	0.202	0.239	118	7	70-130	35	
o-Xylene	<0.000346	0.100	0.111	111	0.101	0.119	118	7	70-130	35	

Analyst: ARM **Date Prepared:** 04/16/2018 **Date Analyzed:** 04/16/2018

Lab Batch ID: 3046890 **Sample:** 7642747-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1020	102	1000	1080	108	6	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1000	1100	110	6	70-135	20	

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

BS / BSD Recoveries

Project Name: NM Moore Sweet

Work Order #: 582464 **Project ID:** 303081

Analyst: ARM **Date Prepared:** 04/18/2018 **Date Analyzed:** 04/18/2018

Lab Batch ID: 3047233 **Sample:** 7642935-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	979	98	1000	942	94	4	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	1000	1030	103	1	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: NM Moore Sweet

Work Order # : 582464 **Project ID:** 303081

Lab Batch ID: 3047055 **QC- Sample ID:** 582469-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/17/2018 **Date Prepared:** 04/17/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000384	0.0998	0.0902	90	0.100	0.104	104	14	70-130	35	
Toluene	<0.000455	0.0998	0.0836	84	0.100	0.0957	96	13	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.0795	80	0.100	0.0924	92	15	70-130	35	
m_p-Xylenes	<0.00101	0.200	0.163	82	0.201	0.189	94	15	70-130	35	
o-Xylene	<0.000344	0.0998	0.0799	80	0.100	0.0931	93	15	70-130	35	

Lab Batch ID: 3047058 **QC- Sample ID:** 582705-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/18/2018 **Date Prepared:** 04/18/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000383	0.0994	0.0853	86	0.0998	0.0921	92	8	70-130	35	
Toluene	<0.000453	0.0994	0.0812	82	0.0998	0.0870	87	7	70-130	35	
Ethylbenzene	<0.000561	0.0994	0.0798	80	0.0998	0.0863	86	8	70-130	35	
m_p-Xylenes	<0.00101	0.199	0.166	83	0.200	0.176	88	6	70-130	35	
o-Xylene	<0.000342	0.0994	0.0816	82	0.0998	0.0878	88	7	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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

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

Form 3 - MS / MSD Recoveries

Project Name: NM Moore Sweet

Work Order # : 582464 **Project ID:** 303081

Lab Batch ID: 3047180 **QC- Sample ID:** 582461-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/18/2018 **Date Prepared:** 04/18/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000387	0.101	0.0787	78	0.100	0.0951	95	19	70-130	35	
Toluene	<0.000458	0.101	0.0750	74	0.100	0.0896	90	18	70-130	35	
Ethylbenzene	<0.000568	0.101	0.0765	76	0.100	0.0886	89	15	70-130	35	
m_p-Xylenes	<0.00102	0.201	0.159	79	0.200	0.181	91	13	70-130	35	
o-Xylene	<0.000346	0.101	0.0823	81	0.100	0.0912	91	10	70-130	35	

Lab Batch ID: 3046890 **QC- Sample ID:** 582461-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/17/2018 **Date Prepared:** 04/16/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1020	102	998	1020	102	0	70-135	20	
Diesel Range Organics (DRO)	<8.10	997	1050	105	998	1050	105	0	70-135	20	

Lab Batch ID: 3047233 **QC- Sample ID:** 582464-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/18/2018 **Date Prepared:** 04/18/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	826	83	997	870	87	5	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	857	86	997	875	88	2	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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

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

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

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CHAIN OF CUSTODY

Page 1 Of 1

Xenco Job # 582464

Client / Reporting Information	Project Information
Company Name / Branch: TRC Environmental Corporation	Project Name/Number: NM Moore Sweet Number: 303081
Company Address: 2057 Commerce Drive, Midland, TX 79703	Project Location: Lea Co, NM
Email: jlowry@trcsolutions.com Phone No: 432-466-4450	Invoice To: Plains Pipeline, LP c/o Camille Bryant
Project Contact: Joel Lowry	Invoice:
Samplers's Name Joel Lowry	

Analytical Information

Matrix Codes: W = Water; S = Soil/Sed/Solid; GW = Ground Water; DW = Drinking Water; P = Product; SW = Surface water; SL = Sludge; OW = Ocean/Sea Wat; WI = Wipe; O = Oil; WW = Waste Water; A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Field Comments
1	ETT-1@2ft	2ft	4/13/2018	8:20	S	1									X		X	
2	ETT-1@4ft	4ft	4/13/2018	8:30	S	1									X			
3	ETT-1@6ft	6ft	4/13/2018	8:40	S	1									X			
4	ETT-1@8ft	8ft	4/13/2018	8:50	S	1									X		X	
5	TT-2@surface	Surface	4/13/2018	9:10	S	1									X		X	
6	TT-2@2ft	2ft	4/13/2018	9:20	S	1									X		X	
7	TT-3@2ft	2ft	4/13/2018	9:30	S	1									X		X	
8																		
9																		
10																		

Turnaround Time (Business days)

Date Deliverable Information

Notes:

[ ] Same Day TAT	[ ] 5 Day TAT	[ ] Level II Std QC	[ ] Level IV (Full Data Pkg /raw data)
[ ] Next Day EMERGENCY	[ ] 7 Day TAT	[ ] Level III Std QC+ Forms	[ ] TRRP Level IV
[ ] 2 Day EMERGENCY	[x] Contract TAT	[ ] Level 3 (CLP Forms)	[ ] UST / RG -411
[ ] 3 Day EMERGENCY		[ ] TRRP Checklist	
TAT Starts Day received by Lab, if received by 5:00 pm			

jlowry@trcsolutions.com
srreynolds@trcsolutions.com algroves@paalp.com
zconder@trcsolutions cibryant@paalp.com
FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Reynolds	4/19/18 15:53	1	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control

Temp: 4.0 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.4

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 04/13/2018 03:53:00 PM

Work Order #: 582464

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.4	
#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**	TPH received 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)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 04/16/2018

Checklist reviewed by: Kelsey Brooks Date: 04/17/2018

Analytical Report 587933

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Sweet Moore

303081

05-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

05-JUN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **587933**
Sweet Moore
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 587933. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 587933 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 587933

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-3 4ft	S	05-31-18 13:00	4 ft	587933-001
TT-3 6ft	S	05-31-18 13:15	6 ft	Not Analyzed
TT-3 8ft	S	05-31-18 13:30	8 ft	Not Analyzed
TT-3 10ft	S	05-31-18 13:45	10 ft	Not Analyzed
TT-3 11ft	S	05-31-18 14:00	11 ft	Not Analyzed

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Sweet Moore

Project ID: *303081*
Work Order Number(s): *587933*

Report Date: *05-JUN-18*
Date Received: *06/01/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
587933

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id:	**TT-3 4ft**	Matrix:	Soil	Sample Depth:	4 ft
Lab Sample Id:	587933-001	Date Collected:	05.31.18 13.00	Date Received:	06.01.18 15.10
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3052160	Date Prep:	06.02.18 15.00		
		Prep seq:	7655909		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.03.18 18:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**51.9**	15.0	8.10	mg/kg	06.03.18 18:57		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.10	15.0	8.10	mg/kg	06.03.18 18:57	U	1
Total TPH	PHC635	**51.9**		7.98	mg/kg	06.03.18 18:57		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Certificate of Analytical Results
587933

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id:	**7655909-1-BLK**	Matrix:	Solid	Sample Depth:	
Lab Sample Id:	7655909-1-BLK	Date Collected:		Date Received:	
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3052160	Date Prep:	06.02.18 15.00		
		Prep seq:	7655909		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.03.18 10:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Total TPH	PHC635	<8		8	mg/kg	06.03.18 10:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587933, **Project ID:** 303081

Lab Batch #: 3052160 **Sample:** 7655909-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 11:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 12:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	50.8	49.9	102	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 13:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.8	114	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Sweet Moore

Work Order #: 587933 **Project ID:** 303081

Analyst: ARM **Date Prepared:** 06/02/2018 **Date Analyzed:** 06/03/2018

Lab Batch ID: 3052160 **Sample:** 7655909-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	918	92	1000	931	93	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	964	96	1000	987	99	2	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Sweet Moore

Work Order # : 587933 **Project ID:** 303081

Lab Batch ID: 3052160 **QC- Sample ID:** 587900-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/03/2018 **Date Prepared:** 06/02/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	895	90	998	924	93	3	70-135	20	
Diesel Range Organics (DRO)	14.4	998	992	98	998	1010	100	2	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

587933

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Joel Lowry

Company Name: TRC Solutions, Inc

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432-466-4450 Fax No: 432.520.7701

Sampler Signature: Sylwia Reynolds

e-mail: jlowry@trcsolutions.com; sreynolds@trcsolutions.com; algroves@paalp.com; cjbryant@paalp.com

Project Name: Sweet Moore

Project #: 303081

Project Loc: Lea County, NM

Invoice to: Plains Pipeline, LP c/o Camille Bryant

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH 8015 M Ext	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	TCLP Benzene	Special Instructions	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	TT-3 4ft	4ft		5/31/2018	13:00		1	x								SS				x												x	
	TT-3 6ft	6ft		5/31/2018	13:15		1	x								SS				x												x	
	TT-3 8ft	8ft		5/31/2018	13:30		1	x								SS				x												x	
	TT-3 10ft	10ft		5/31/2018	13:45		1	x								SS				x												x	
	TT-3 11ft	11ft		5/31/2018	14:00		1	x								SS				x												x	

Special Instructions:

Run deeper sample for TPH if TPH is > 100 mg/Kg

Relinquished by: S Reynolds	Date 6/11/18	Time 1510	Received by:	Date 6/11/18	Time 1510
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 1.8/0.0 °C

KB

Final 1.000

Analytical Report 587934

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Sweet Moore

303081

05-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

05-JUN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **587934**
Sweet Moore
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 587934. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 587934 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 587934

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
ETT-1a 4ft	S	05-31-18 14:15	4	587934-001
ETT-1a 6ft	S	05-31-18 14:30	6	587934-002
ETT-1a 8ft	S	05-31-18 14:45	8	Not Analyzed
ETT-1a 10ft	S	05-31-18 15:00	10	Not Analyzed
ETT-1a 12ft	S	05-31-18 15:15	12	Not Analyzed
ETT-1a 14ft	S	05-31-18 15:30	14	Not Analyzed

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Sweet Moore

Project ID: *303081*
Work Order Number(s): *587934*

Report Date: *05-JUN-18*
Date Received: *06/01/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
587934

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id: **ETT-1a 4ft** Matrix: Soil Sample Depth: 4

Lab Sample Id: 587934-001 Date Collected: 05.31.18 14.15 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.03.18 19:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**323**	15.0	8.10	mg/kg	06.03.18 19:17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**25.9**	15.0	8.10	mg/kg	06.03.18 19:17		1
Total TPH	PHC635	**348.9**		7.98	mg/kg	06.03.18 19:17		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Sample Id: **ETT-1a 6ft** Matrix: Soil Sample Depth: 6

Lab Sample Id: 587934-002 Date Collected: 05.31.18 14.30 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	06.05.18 01:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**47.5**	14.9	8.10	mg/kg	06.05.18 01:33		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.10	14.9	8.10	mg/kg	06.05.18 01:33	U	1
Total TPH	PHC635	**47.5**		7.97	mg/kg	06.05.18 01:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Certificate of Analytical Results

587934

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id: **7655909-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655909-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.03.18 10:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Total TPH	PHC635	<8		8	mg/kg	06.03.18 10:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Sample Id: **7655985-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655985-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.04.18 18:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Total TPH	PHC635	<8		8	mg/kg	06.04.18 18:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587934, **Project ID:** 303081

Lab Batch #: 3052160 **Sample:** 7655909-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:40

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 11:01

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 12:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	50.8	49.9	102	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 13:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.8	114	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587934, **Project ID:** 303081

Lab Batch #: 3052253 **Sample:** 7655985-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:02

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	100	90	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:24

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Sweet Moore

Work Order #: 587934 **Project ID:** 303081

Analyst: ARM **Date Prepared:** 06/02/2018 **Date Analyzed:** 06/03/2018

Lab Batch ID: 3052160 **Sample:** 7655909-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	918	92	1000	931	93	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	964	96	1000	987	99	2	70-135	20	

Analyst: ARM **Date Prepared:** 06/04/2018 **Date Analyzed:** 06/04/2018

Lab Batch ID: 3052253 **Sample:** 7655985-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	866	87	1000	913	91	5	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	911	91	1000	955	96	5	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Sweet Moore

Work Order # : 587934 **Project ID:** 303081

Lab Batch ID: 3052160 **QC- Sample ID:** 587900-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/03/2018 **Date Prepared:** 06/02/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	895	90	998	924	93	3	70-135	20	
Diesel Range Organics (DRO)	14.4	998	992	98	998	1010	100	2	70-135	20	

Lab Batch ID: 3052253 **QC- Sample ID:** 587962-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2018 **Date Prepared:** 06/04/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	842	84	999	916	92	8	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	878	88	999	960	96	9	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

587934

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Joel Lowry

Company Name: TRC Solutions, Inc

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432-466-4450 Fax No: 432.520.7701

Sampler Signature: Sylwia Reynolds

e-mail: jlowry@trcsolutions.com; sreynolds@trcsolutions.com; algroves@paalp.com; cjbryant@paalp.com

Project Name: Sweet Moore

Project #: 303081

Project Loc: Lea County, NM

Invoice to: Plains Pipeline, LP c/o Camille Bryant

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH 8015 M Ext	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	TCLP Benzene	Special Instructions	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	ETT-1a 4ft	4ft		5/31/2018	14:15		1	x								SS		x												x		x
	ETT-1a 6ft	6ft		5/31/2018	14:30		1	x								SS		x												x		x
	ETT-1a 8ft	8ft		5/31/2018	14:45		1	x								SS		x												x		x
	ETT-1a 10ft	10ft		5/31/2018	15:00		1	x								SS		x												x		x
	ETT-1a 12ft	12ft		5/31/2018	15:15		1	x								SS		x												x		x
	ETT-1a 14ft	14ft		5/31/2018	15:30		1	x								SS		x												x		x

Special Instructions:

Run deeper sample for TPH if TPH is > 100 mg/Kg

Relinquished by:	Date	Time	Received by:	Date	Time
Reynolds	6/1/18	15:10		6/1/18	1516
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1-6 / 0.0 °C

KS

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 06/01/2018 03:10:00 PM

Work Order #: 587934

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 06/01/2018

Checklist reviewed by: Kelsey Brooks Date: 06/04/2018

Analytical Report 587937

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Sweet Moore

303081

07-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

07-JUN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **587937**
Sweet Moore
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 587937. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 587937 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 587937

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WTT-1a 2ft	S	05-31-18 15:45	2 ft	587937-001
WTT-1a 4ft	S	05-31-18 16:00	4 ft	587937-002
WTT-1a 8ft	S	05-31-18 16:30	8 ft	587937-004
WTT-1a 6ft	S	05-31-18 16:15	6 ft	Not Analyzed
WTT-1a 10ft	S	05-31-18 16:45	10 ft	Not Analyzed
WTT-1a 12ft	S	05-31-18 17:00	12 ft	Not Analyzed

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Sweet Moore

Project ID: *303081*
Work Order Number(s): *587937*

Report Date: *07-JUN-18*
Date Received: *06/01/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results

587937

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id: **WTT-1a 2ft** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 587937-001 Date Collected: 05.31.18 15.45 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.03.18 19:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	**132**	15.0	8.13	mg/kg	06.03.18 19:38		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**15.5**	15.0	8.13	mg/kg	06.03.18 19:38		1
Total TPH	PHC635	**147.5**		8	mg/kg	06.03.18 19:38		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Sample Id: **WTT-1a 4ft** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 587937-002 Date Collected: 05.31.18 16.00 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**8.82**	15.0	7.99	mg/kg	06.05.18 01:53	J	1
Diesel Range Organics (DRO)	C10C28DRO	**67.4**	15.0	8.11	mg/kg	06.05.18 01:53		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.05.18 01:53	U	1
Total TPH	PHC635	**76.22**		7.99	mg/kg	06.05.18 01:53		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Certificate of Analytical Results
587937

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id:	**WTT-1a 8ft**	Matrix:	Soil	Sample Depth:	8 ft
Lab Sample Id:	587937-004	Date Collected:	05.31.18 16.30	Date Received:	06.01.18 15.10
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3052528	Date Prep:	06.06.18 16.00		
		Prep seq:	7656149		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.07.18 02:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	15.0	8.10	mg/kg	06.07.18 02:48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.10	15.0	8.10	mg/kg	06.07.18 02:48	U	1
Total TPH	PHC635	<7.98		7.98	mg/kg	06.07.18 02:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Certificate of Analytical Results

587937

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id: **7655909-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655909-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.03.18 10:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Total TPH	PHC635	<8		8	mg/kg	06.03.18 10:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Sample Id: **7655985-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655985-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.04.18 18:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Total TPH	PHC635	<8		8	mg/kg	06.04.18 18:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Certificate of Analytical Results

587937

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id:	**7656149-1-BLK**	Matrix:	Solid	Sample Depth:	
Lab Sample Id:	7656149-1-BLK	Date Collected:		Date Received:	
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3052528	Date Prep:	06.06.18 16.00		
		Prep seq:	7656149		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.06.18 17:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.06.18 17:55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.06.18 17:55	U	1
Total TPH	PHC635	<8		8	mg/kg	06.06.18 17:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587937, **Project ID:** 303081

Lab Batch #: 3052160 **Sample:** 7655909-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 11:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 12:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	50.8	49.9	102	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 13:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.8	114	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587937, **Project ID:** 303081

Lab Batch #: 3052253 **Sample:** 7655985-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:02

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	100	90	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:24

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587937, **Project ID:** 303081

Lab Batch #: 3052528 **Sample:** 7656149-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/18 17:55

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

Lab Batch #: 3052528 **Sample:** 7656149-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/18 18:16

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.9	50.0	116	70-135	

Lab Batch #: 3052528 **Sample:** 7656149-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/18 18:36

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	64.7	50.0	129	70-135	

Lab Batch #: 3052528 **Sample:** 588290-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/18 19:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 3052528 **Sample:** 588290-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/18 19:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Sweet Moore

Work Order #: 587937 **Project ID:** 303081

Analyst: ARM **Date Prepared:** 06/02/2018 **Date Analyzed:** 06/03/2018

Lab Batch ID: 3052160 **Sample:** 7655909-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	918	92	1000	931	93	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	964	96	1000	987	99	2	70-135	20	

Analyst: ARM **Date Prepared:** 06/04/2018 **Date Analyzed:** 06/04/2018

Lab Batch ID: 3052253 **Sample:** 7655985-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	866	87	1000	913	91	5	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	911	91	1000	955	96	5	70-135	20	

Analyst: ARM **Date Prepared:** 06/06/2018 **Date Analyzed:** 06/06/2018

Lab Batch ID: 3052528 **Sample:** 7656149-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	934	93	1000	1090	109	15	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	994	99	1000	1120	112	12	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Sweet Moore

Work Order # : 587937 **Project ID:** 303081

Lab Batch ID: 3052160 **QC- Sample ID:** 587900-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/03/2018 **Date Prepared:** 06/02/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	895	90	998	924	93	3	70-135	20	
Diesel Range Organics (DRO)	14.4	998	992	98	998	1010	100	2	70-135	20	

Lab Batch ID: 3052253 **QC- Sample ID:** 587962-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2018 **Date Prepared:** 06/04/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	842	84	999	916	92	8	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	878	88	999	960	96	9	70-135	20	

Lab Batch ID: 3052528 **QC- Sample ID:** 588290-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/06/2018 **Date Prepared:** 06/06/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	8.70	1000	880	87	999	876	87	0	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	943	94	999	933	93	1	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Xenco Laboratories

The Environmental Lab of Texas

587937

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Joel Lowry

Company Name: TRC Solutions, Inc

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432-466-4450 Fax No: 432.520.7701

Sampler Signature: Sylwia Reynolds

e-mail: jlowry@trcsolutions.com; sreynolds@trcsolutions.com; algroves@paalp.com; cjbryant@paalp.com

Project Name: Sweet Moore

Project #: 303081

Project Loc: Lea County, NM

Invoice to: Plains Pipeline, LP c/o Camille Bryant

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1	8015M	TPH 8015 M Ext	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	TCLP Benzene	Special Instructions	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	WTT-1a 2ft	2ft		5/31/2018	15:45		1	x								SS			x												x		x
	WTT-1a 4ft	4ft		5/31/2018	16:00		1	x								SS			x												x		x
	WTT-1a 6ft	6ft		5/31/2018	16:15		1	x								SS			x												x		x
	WTT-1a 8ft	8ft		5/31/2018	16:30		1	x								SS			x												x		x
	WTT-1a 10ft	10ft		5/31/2018	16:45		1	x								SS			x												x		x
	WTT-1a 12ft	12ft		5/31/2018	17:00		1	x								SS			x												x		x

Special Instructions:

Run deeper sample for TPH if TPH is > 100 mg/Kg

Relinquished by: Reynolds	Date 6/1/18	Time 15:00	Received by:	Date 6/1/18	Time 1510
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 11.6/11.0°C

RS

Final 1.001

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 06/01/2018 03:10:00 PM

Work Order #: 587937

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 06/01/2018

Checklist reviewed by: Kelsey Brooks Date: 06/04/2018

Analytical Report 587939

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Sweet Moore

303081

05-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

05-JUN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **587939**
Sweet Moore
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 587939. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 587939 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 587939

TRC Solutions, Inc, Midland, TX

Sweet Moore

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WTT-1 8ft	S	05-31-18 17:15	8 ft	587939-001
WTT-1 10ft	S	05-31-18 17:30	10 ft	587939-002
WTT-1 12ft	S	05-31-18 17:45	12 ft	587939-003

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Sweet Moore

Project ID: *303081*
Work Order Number(s): *587939*

Report Date: *05-JUN-18*
Date Received: *06/01/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
587939
TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id: **WTT-1 8ft** Matrix: Soil Sample Depth: 8 ft

Lab Sample Id: 587939-001 Date Collected: 05.31.18 17.15 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.03.18 19:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**163**	15.0	8.11	mg/kg	06.03.18 19:58		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**15.1**	15.0	8.11	mg/kg	06.03.18 19:58		1
Total TPH	PHC635	**178.1**		7.99	mg/kg	06.03.18 19:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Sample Id: **WTT-1 10ft** Matrix: Soil Sample Depth: 10 ft

Lab Sample Id: 587939-002 Date Collected: 05.31.18 17.30 Date Received: 06.01.18 15.10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	06.05.18 02:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**375**	14.9	8.10	mg/kg	06.05.18 02:34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**11.0**	14.9	8.10	mg/kg	06.05.18 02:34	J	1
Total TPH	PHC635	**386**		7.97	mg/kg	06.05.18 02:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Certificate of Analytical Results
587939

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id:	**WTT-1 12ft**	Matrix:	Soil	Sample Depth:	12 ft
Lab Sample Id:	587939-003	Date Collected:	05.31.18 17.45	Date Received:	06.01.18 15.10
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3052253	Date Prep:	06.04.18 16.00		
		Prep seq:	7655985		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.05.18 02:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**103**	15.0	8.11	mg/kg	06.05.18 02:55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.05.18 02:55	U	1
Total TPH	PHC635	**103**		7.99	mg/kg	06.05.18 02:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Certificate of Analytical Results
587939

TRC Solutions, Inc, Midland, TX
Sweet Moore

Sample Id: **7655909-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655909-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052160 Date Prep: 06.02.18 15.00

Prep seq: 7655909

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.03.18 10:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.03.18 10:19	U	1
Total TPH	PHC635	<8		8	mg/kg	06.03.18 10:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Sample Id: **7655985-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7655985-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3052253 Date Prep: 06.04.18 16.00

Prep seq: 7655985

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.04.18 18:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.04.18 18:02	U	1
Total TPH	PHC635	<8		8	mg/kg	06.04.18 18:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587939, **Project ID:** 303081

Lab Batch #: 3052160 **Sample:** 7655909-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 10:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3052160 **Sample:** 7655909-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/18 11:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 12:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	50.8	49.9	102	70-135	

Lab Batch #: 3052160 **Sample:** 587900-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/18 13:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.8	114	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Sweet Moore

Work Orders : 587939, **Project ID:** 303081

Lab Batch #: 3052253 **Sample:** 7655985-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	100	90	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 3052253 **Sample:** 7655985-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/04/18 18:43

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 3052253 **Sample:** 587962-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/18 19:44

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Sweet Moore

Work Order #: 587939 **Project ID:** 303081

Analyst: ARM **Date Prepared:** 06/02/2018 **Date Analyzed:** 06/03/2018

Lab Batch ID: 3052160 **Sample:** 7655909-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	918	92	1000	931	93	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	964	96	1000	987	99	2	70-135	20	

Analyst: ARM **Date Prepared:** 06/04/2018 **Date Analyzed:** 06/04/2018

Lab Batch ID: 3052253 **Sample:** 7655985-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	866	87	1000	913	91	5	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	911	91	1000	955	96	5	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Sweet Moore

Work Order # : 587939 **Project ID:** 303081

Lab Batch ID: 3052160 **QC- Sample ID:** 587900-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/03/2018 **Date Prepared:** 06/02/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	895	90	998	924	93	3	70-135	20	
Diesel Range Organics (DRO)	14.4	998	992	98	998	1010	100	2	70-135	20	

Lab Batch ID: 3052253 **QC- Sample ID:** 587962-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2018 **Date Prepared:** 06/04/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	842	84	999	916	92	8	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	878	88	999	960	96	9	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

587939

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Joel Lowry

Company Name: TRC Solutions, Inc

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432-466-4450 Fax No: 432.520.7701

Sampler Signature: Sylwia Reynolds

e-mail: jlowry@trcsolutions.com; sreynolds@trcsolutions.com; algroves@paalp.com; cjbryant@paalp.com

Project Name: Sweet Moore

Project #: 303081

Project Loc: Lea County, NM

Invoice to: Plains Pipeline, LP c/o Camille Bryant

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TPH 8015 M Ext	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	TCLP Benzene	Special Instructions	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	WTT-1 8ft	8ft		5/31/2018	17:15		1	x								SS				x												x		x
	WTT-1 10ft	10ft		5/31/2018	17:30		1	x								SS				x												x		x
	WTT-1 12ft	12ft		5/31/2018	17:45		1	x								SS				x												x		x

Special Instructions:

Run deeper sample for TPH if TPH is > 100 mg/Kg

Relinquished by:	Date	Time	Received by:	Date	Time
Reynolds	6/1/18	15:10		6/1/18	810
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 11.9/0.0 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 06/01/2018 03:10:00 PM

Work Order #: 587939

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 06/01/2018

Checklist reviewed by: Kelsey Brooks Date: 06/04/2018

Analytical Report 591010

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Moore Sweet

09-JUL-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

Table of Contents

09-JUL-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **591010**
Moore Sweet
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 591010. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 591010 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 591010

TRC Solutions, Inc, Midland, TX

Moore Sweet

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WHA-1b @1'	S	06-29-18 14:00	1 ft	591010-001
WHA-1c @1'	S	06-29-18 14:10	1 ft	591010-002
EHA-1b @2'	S	06-29-18 14:30	2 ft	591010-003
EHA-1c @2'	S	06-29-18 14:40	2 ft	591010-004

CASE NARRATIVE

Client Name: TRC Solutions, Inc
Project Name: Moore Sweet

Project ID:
Work Order Number(s): *591010*

Report Date: *09-JUL-18*
Date Received: *06/30/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
591010
TRC Solutions, Inc, Midland, TX
Moore Sweet

Sample Id: **WHA-1b @1'** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 591010-001 Date Collected: 06.29.18 14.00 Date Received: 06.30.18 09.00

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3055782 Date Prep: 07.06.18 14.00

Prep seq: 7657984

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.5**	14.9	7.97	mg/kg	07.09.18 10:06	J	1
Diesel Range Organics (DRO)	C10C28DRO	**265**	14.9	8.10	mg/kg	07.09.18 10:06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**11.7**	14.9	8.10	mg/kg	07.09.18 10:06	J	1
Total TPH	PHC635	**287.2**		7.97	mg/kg	07.09.18 10:06		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

Sample Id: **WHA-1c @1'** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 591010-002 Date Collected: 06.29.18 14.10 Date Received: 06.30.18 09.00

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3055782 Date Prep: 07.06.18 14.00

Prep seq: 7657984

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	07.06.18 21:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	07.06.18 21:36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.11	15.0	8.11	mg/kg	07.06.18 21:36	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	07.06.18 21:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Certificate of Analytical Results
591010
TRC Solutions, Inc, Midland, TX
Moore Sweet

Sample Id: **EHA-1b @2'** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 591010-003 Date Collected: 06.29.18 14.30 Date Received: 06.30.18 09.00

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3055782 Date Prep: 07.06.18 14.00

Prep seq: 7657984

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**9.76**	15.0	7.99	mg/kg	07.06.18 22:35	J	1
Diesel Range Organics (DRO)	C10C28DRO	**30.0**	15.0	8.12	mg/kg	07.06.18 22:35		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.12	15.0	8.12	mg/kg	07.06.18 22:35	U	1
Total TPH	PHC635	**39.76**		7.99	mg/kg	07.06.18 22:35		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Sample Id: **EHA-1c @2'** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 591010-004 Date Collected: 06.29.18 14.40 Date Received: 06.30.18 09.00

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3055782 Date Prep: 07.06.18 14.00

Prep seq: 7657984

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	07.06.18 22:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	14.9	8.10	mg/kg	07.06.18 22:54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.10	14.9	8.10	mg/kg	07.06.18 22:54	U	1
Total TPH	PHC635	<7.97		7.97	mg/kg	07.06.18 22:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Certificate of Analytical Results
591010

TRC Solutions, Inc, Midland, TX
Moore Sweet

Sample Id:	**7657984-1-BLK**	Matrix:	Solid	Sample Depth:	
Lab Sample Id:	7657984-1-BLK	Date Collected:		Date Received:	
Analytical Method:	TPH by SW8015 Mod			Prep Method:	1005
Analyst:	ARM	% Moist:		Tech:	ARM
Seq Number:	3055782	Date Prep:	07.06.18 14.00		
		Prep seq:	7657984		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	07.06.18 20:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	07.06.18 20:18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	07.06.18 20:18	U	1
Total TPH	PHC635	<8		8	mg/kg	07.06.18 20:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Moore Sweet

Work Orders : 591010,

Project ID:

Lab Batch #: 3055782 **Sample:** 7657984-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/18 20:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3055782 **Sample:** 7657984-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/18 20:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 3055782 **Sample:** 7657984-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/18 20:57

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 3055782 **Sample:** 591010-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/18 21:56

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	51.6	49.9	103	70-135	

Lab Batch #: 3055782 **Sample:** 591010-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/18 22:15

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	52.6	49.9	105	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Moore Sweet

Work Order #: 591010 **Project ID:**

Analyst: ARM **Date Prepared:** 07/06/2018 **Date Analyzed:** 07/06/2018

Lab Batch ID: 3055782 **Sample:** 7657984-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	976	98	1000	992	99	2	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1000	1040	104	3	70-135	20	

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

Form 3 - MS / MSD Recoveries

Project Name: Moore Sweet

Work Order # : 591010 **Project ID:**

Lab Batch ID: 3055782 **QC- Sample ID:** 591010-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/06/2018 **Date Prepared:** 07/06/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	977	98	997	1030	103	5	70-135	20	
Diesel Range Organics (DRO)	<8.10	997	1010	101	997	1060	106	5	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

XENCO Laboratories

☐ 4143 Greenbriar Drive, Stafford, TX 77477 **281-240-4200**
☐ 5332, Blackberry Drive, San Antonio, TX 78238 **210-509-3334**
☐ 9701 Harry Hines Blvd., Dallas, TX 75220 **214-902-0300**
☐ 12600 West I-20 East, Odessa, TX 79765 **432-563-1800**

Serial #: 330919 Page of

Company-City TRC SOLUTIONS	**Phone** 432-466-4450
Project Name-Location MOORE SWEET LEA COUNTY, NM	☑ Previously done at XENCO **Project ID**
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other	**Proj. Manager (PM)** JOEL LOWRY
E-mail Results to ☑ PM and ALGROVES@PARLP.COM ZCONDER@TRCSOLUTIONS, BCOOPER@TRCSOLUTIONS.COM	**Fax No:**
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O. Bill to: PLAINS MARKETING C/O AMBER GROVES	
Quote/Pricing:	**P.O. No:** ☐ Call for P.O.
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW **TRRP** QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)	
Sampler Name	**Signature**

Lab Only: 591010

TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

	Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs	VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:	PAHs SIM 8310 8270	TX-1005 DRO GRO MA EPH MA VPH	SVOCs: Full-List DW BN&AE TCLP PP Appdx-2 CALL	OC Pesticides PCBs Herbicides OP Pesticides	Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx2	SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)	EDB / DBCP	TPH 8015 M EXT (NM)	TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d	Addn: PAH above mg/L W, mg/Kg S Highest Hit	Hold Samples (Surcharges will apply and are pre-approved)	Sample Clean-ups are pre-approved as needed	Remarks
1	WHA-1D@1'	6-29-18	2:00	1'	S			1			I										X					
2	WHA-1C@1'	6-29-18	2:10	1'	S			1			I										X					
3	EHA-1D@2'	6-29-18	2:30	2'	S			1			I										X					
4	EHA-1C@2'	6.29.18	2:40	2'	S			1			I										X					
5																										
6																										
7																										
8																										
9																										
10																										

Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1) Bucky	6-29-18 3:19	2) Esperanza Gonzalez	6-29-18 3:22
3)		4)	6-30-18 0910
5)		6)	

Total Containers per COC: Cooler Temp: 0.1 °C

Otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

Preservatives: Various (**V**), HCl pH<2 (**H**), H2SO4 pH<2 (**S**), HNO3 pH<2 (**N**), Asbc Acid&NaOH (**A**), ZnAc&NaOH (**Z**), (Cool, <4C) (**C**), None (**NA**),See Label (**L**), Other (**O**) _____
Cont. Size: 4oz (**4**), 8oz (**8**), 32oz (**32**), 40ml VOA (**40**), 1L (**1**), 500ml (**5**), Tedlar Bag (**B**), Various (**V**), Other _____ **Cont. Type:** Glass Amb (**A**), Glass Clear (**C**), Plastic (**P**), Various (**V**)

Matrix: Air (**A**), Product (**P**), Solid (**S**), Water (**W**), Liquid (**L**)

Committed to Excellence in Service and Quality *www.xenco.com*

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 06/30/2018 09:00:00 AM

Work Order #: 591010

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.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**
#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: 07/02/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 07/03/2018

Kelsey Brooks

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Plains Marketing, LP	Contact Camille Bryant
Address 505 N. Big Spring, Midland, TX 79701	Telephone No. (575) 441-1099
Facility Name Moore Sweet Historical	Facility Type Storage and Pump Station

Surface Owner NMSLO	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A, H	13	11S	32E					Lea

Latitude N 33.369369° Longitude W 103.66272°

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release Unknown	Volume Recovered Unknown
Source of Release Station piping and tank	Date and Hour of Occurrence Historical	Date and Hour of Discovery 04/11/2018 @ 10:00
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 9:57 am, Apr 23, 2018

Describe Cause of Problem and Remedial Action Taken.* Historical impact identified during reclamation of facility.

Describe Area Affected and Cleanup Action Taken. Visually stained crude oil impacted soil located at former facility. The impacted areas will be remediated as per applicable NMOCD guidelines.

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

Signature: Camille Bryant

Printed Name: Camille Bryant

Title: Remediation Supervisor

E-mail Address: cjbryant@paalp.com

Date: 4/20/18 Phone: (575) 441-1099

OIL CONSERVATION DIVISION

Approved by District Supervisor: OJ

Approval Date: 4/23/2018 Expiration Date:

Conditions of Approval: see attached directive

Attached ☑

* Attach Additional Sheets If Necessary

1RP-5024 nOY1811336341

fOY1811336081 pOY1811336594