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10 Desta Drive Suite 150E Midland, TX 79705 **REVIEWED** By Olivia Yu at 7:19 am, Oct 25, 2018

October 19, 2018

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

Re: Site Assessment Summary and Deferral Request CS Caylor SR Estate #3 API No. 30-025-05430 GPS: Latitude 32.86762 Longitude -103.2976 UL "D", Sec. 6, T17S, R37E Lea County, New Mexico NMOCD Ref. No. 1RP-5195

TRC Environmental Corporation (TRC), on behalf of Vanguard Operating, LLC (Vanguard), has prepared this *Site Assessment Summary and Deferral Request* for the Release Site known as the **CS Caylor SR Estate #3.** Details of the release are summarized below:

		REI	LEASE DETAILS		
Type of Release: P	Produced	M/ator	Volume of Release:	100 bbls	
	FIGUICED	i vvalei	Volume Recovered:	250 bbls (Including	Rain)
Source of Release:	Tank	Battery	Date of Discovery:	9/3/2018	
Was Immediate Notice Giv	en?	Yes	If, YES, to Whom?	NMOCD Distric	tl
Was a Watercourse Reach	ed?	No	If YES, Volume Impactir	ng the Watercourse:	NA
Surface Owner:	R. Ri	се	Mineral Owner:	Federal	

Describe Cause of Problem and Remedial Action Taken:

The release was attributed lightning striking the tank, resulting in the tank being partially burned and the release of produced water to within the lined containment.

Topographical and Aerial Maps are provided as Attachments #1 and #2, respectively. General Site Photographs are provided as Attachment #8. A Copy of the Initial Release Notification and Corrective Action (NMODC Form C-141) is provided as Attachment #9.

REGULATORY FRAMEWORK

Surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste which occur during normal oilfield operations are generally regulated by the New Mexico Oil Conservation Division (NMOCD) in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). 19.15.29 NMAC establishes reporting, site assessment, remediation and closure procedures based on the type and volume of the release and site characterizations, including proximity to sensitive receptors and depth to groundwater, which may be used to determine a Total Ranking Score as follows:

SITE RANKING CRITERIA		
General Site Characteristics		Score
Within 300 ft. of any continuously flowing or significant watercourse;		
Within 200 ft. of any lakebed, sinkhole, or playa lake;		
Within 300 ft. of an occupied permanent residence, school, hospital, or institution;	Yes	20
Within 500 ft. of a spring or private, domestic fresh water well;		
Within 1,000 ft. of any fresh water well;		
Within the incorporated municipal boundaries or within a municipal well field;		
Within 300 ft. of a wetland;		
Within the area overlying a subsurface mine;	No	0
Within an unstable area; or		
Within a 100-year floodplain.		
Minimum distance between any point within the horizontal boundary of the release and	≤ 50 ft.	20
groundwater:	51-100 ft.	10
	> 100 ft.	0

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within a 1 Mile radius of the release site and identify any registered water wells within 1/2 Mile of the release site. If none were identified, the approximate depth to groundwater was extrapolated from a Depth to Groundwater Map utilized by the NMOCD. Siting Criteria Documentation is provided as Attachment #4.

TOTAL RANKING SCORE		
Ranking Score Criteria		Score
Within 300 ft. of any continuously flowing or significant watercourse?	No	0
Within 200 ft. of any lakebed, sinkhole, or playa lake?	No	0
Within 300 ft. of an occupied permanent residence, school, hospital, or institution?	No	0
Within 500 ft. of a spring or private, domestic fresh water well?	No	0
Within 1,000 ft. of any fresh water well?	No	0
Within the incorporated municipal boundaries or within a municipal well field?	No	0
Within 300 ft. of a wetland?	No	0
Within the area overlying a subsurface mine?	No	0
Within an unstable area?	No	0
Within a 100-year floodplain?	No	0
Inferred depth to groundwater	~60 ft	10
TOTAL RANKING SCORE FOR SITE		10

The NMOCD guidelines indicated the Site has a Total Ranking Score of **10 points**. The NMOCD Closure Criteria for Soil Impacted by a Release for a Site with a Total Ranking Score of **10 points** are as follows:

Closure Criteria for Soil Impacted by a Release	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons (TPH)	2,500 mg/kg
Combined GRO and DRO	1,000 mg/kg
Chloride @ >4 ft. bgs	10,000 mg/kg

INITIAL SITE ASSESSMENT

On September 6, 2018, TRC conducted an initial site assessment at the Site. During the initial site assessment, it was determine the release was confined to within the liner containment. Upon determining that the release was confined to within the lined containment, a liner inspection was conducted. During the liner inspection, approximately four (4) areas where the liner's integrity had been compromised were discovered, presumably as a result of the subject fire. Upon discovering the holes in the affected liner, a hand-auger was utilized to advance soil bores representing each of the affected areas. During the advancement of the hand-augered soil bores, seven (7) soil samples (HA-1 @ 6", HA-1 @ 1', HA-2 @ 6", HA-2 @ 1', HA-3 @ 6", HA-4 @ 6" and HA-4 @ 1') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil sample HA-1 @ 6", which exhibited a combined GRO and DRO concentration of 15,900 mg/kg and a TPH concentration of 17,700 mg/kg.

On September 28, 2018, TRC revisited the release site in an effort to further characterize affected soil. During the site visit, a hand-auger was utilized to collect three (3) additional soil samples (HA-1 @ 2', HA-3 @ 1' and HA-4 @ 2'). The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples.

On October 10, 2018, after the affected tanks had been removed, TRC revisited the site to inspect the soil beneath the affected tanks and liner. During the site visit, one (1) test trench (T-1) was advanced in the approximate center of the northern portion of the tank battery. During the advancement of the test trench, three (3) soil samples (T-1 @ Surface, T-1 @ 4' and T-1 @ 8') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil sample T-1 @ Surface, which exhibited a combined GRO and DRO concentration of 41,400 mg/kg and a TPH concentration of 55,100 mg/kg.

In addition, five (5) horizontal delineation soil samples (N @ 4', E @ 4', S @ 4', W @ 4' and S2 @ 4') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil sample S @ 4', which exhibited a combined GRO and DRO concentration of 2,253 mg/kg and a TPH concentration of 2,760 mg/kg.

A table summarizing laboratory analytical results from soil samples collected during the initial site assessment is provided on the following page.

		Con	centratio	ons of BT	EX, TPH a	and/or C	hloride i	n Soil			
				SW 846	5 8021B		SW	846 8015M Ex	t.		E 300
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)
HA-1 @ 6"	9/6/18	6"	In-Situ	<0.00200	<0.00400	<74.8	15,900	15,900	1,870	17,770	3,050
HA-1 @ 1'	9/6/18	1'	In-Situ	<0.00201	0.00817	<14.9	741	741	152	893	172
HA-2 @ 6"	9/6/18	6"	In-Situ	<0.00201	<0.00402	<15.0	42.4	42.4	<15.0	42.4	72.8
HA-2 @ 1'	9/6/18	1'	In-Situ	<0.00199	0.02897	<15.0	61.0	61.0	15.2	76.2	38.0
HA-3 @ 6"	9/6/18	6"	In-Situ	<0.00199	<0.00398	<15.0	21.2	21.2	<15.0	21.2	785
HA-4 @ 6"	9/6/18	6"	In-Situ	<0.00200	<0.00401	<15.0	18.3	18.3	<15.0	18.3	119
HA-4 @ 1'	9/6/18	1'	In-Situ	<0.00201	0.09308	36.0	439	439.0	108	583	269
HA-1 @ 2'	9/28/18	2'	In-Situ	<0.175	13.833	84.5	645	645	199	928.5	1,480
HA-3 @ 1'	9/28/18	1'	In-Situ	<0.198	28.164	92.2	272	272	171	535.2	442
HA-4 @ 2'	9/28/18	2'	In-Situ	<0.195	2.714	28.5	78.5	78.5	55.1	162.1	570
T-1 @ Surface	10/10/18	Surf.	In-Situ	<0.0949	0.91100	<18.5	41,400	41,400	13,700	55,100	177
T-1 @ 4'	10/10/18	4'	In-Situ	<0.0182	0.3924	70.4	417	487.4	90.7	578.1	453
T-1 @ 8'	10/10/18	8'	In-Situ	<0.0199	<0.0398	<3.78	<24.8	<24.8	<24.8	<24.8	410
N @ 4'	10/10/18	4'	In-Situ	<0.0200	<0.0398	<3.84	<25.2	<25.2	<25.2	<25.2	48.0
E @ 4'	10/10/18	4'	In-Situ	<0.0199	<0.0398	<4.00	<24.9	<24.9	<24.9	<24.9	43.2
S @ 4'	10/10/18	4'	In-Situ	<0.0184	0.2487	13.0	2,240	2,240	507	2,760	418
W @ 4'	10/10/18	4'	In-Situ	<0.0198	<0.0397	<3.98	<25.2	<25.2	<25.2	<25.2	214
S2- @ 4'	10/10/18	4'	In-Situ	<0.0197	<0.0197	<3.94	<25.0	<25.0	<25.0	<25.0	<25.0
Cle	10	50	-	-	1,000	-	2,500	10,000			

Field data is provided as Attachment #5. Laboratory analytical reports are provided as Attachment #6. A "Site & Sample Location Map" is provided as Attachment #3.

DEFERRAL REQUEST

The release occurred on a lined tank battery facility. During the initial site assessment it was determined that portions of the liner had been compromised, presumably from the subject fire that caused the release. Upon determined that the integrity of the liner had been compromised, soil beneath the affected tank battery was delineated horizontally and vertically. Laboratory analytical results indicate soil was not affected above the NMOCD Closure Criteria beyond four (4) ft. bgs in the northern portion of the tank battery, where the integrity of the liner had been compromised.

Vanguard maintains excavation and backfilling of the affected area within the tank battery could result in hazardous conditions and/or property damage. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Vanguard requests remediation, restoration and reclamation be deferred until the equipment is removed during other operations and/or at time of abandonment, whichever comes first.

RESTORATION, RECLAMATION AND RE-VEGETATION

Final remediation and reclamation will be conducted in accordance with 19.15.29.12 and 19.15.29.13 NMAC, once the site is no longer being used for oil and gas operations.

If you have any questions, or if additional information is required, please feel free to contact Chuck Johnston or either of the undersigned by phone or email.

Respectfully, (20) un

Joel Lowry Senior Project Manager TRC Environmental Corp.

Circy Crain

Cindy Crain Senior Project Manager TRC Environmental Corp.

Attachments:	Attachment #1-	Figure 1 - Topographical Map
	Attachment #2-	Figure 2 - Aerial Map
	Attachment #3-	Figure 3 - Site & Sample Location Map
	Attachment #4-	Site Criteria Documentation
	Attachment #5	Field Data
	Attachment #6-	Laboratory Analytical Reports
	Attachment #7-	Soil Profile
	Attachment #8-	General Site Photographs
	Attachment #9-	Release Notification and Corrective Action (FORM C-141)









_ JOHN SHOMAKER & ASSOCIATES, INC. _



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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD replaced, O=orpha C=the fil closed)	ned,			· •				V 2=NE est to la	3=SW 4=S	E) IAD83 UTM in n	neters)	(In :	feet)	
POD Number	Code	POD Sub- basin	County	Q	Q	Q				X	Y	DistanceDep	X	W	/ater
<u>L 12562 POD11</u>	cout	L	LE				01	17S	36E	658989	3637831	318	112	97	15
<u>L 02508</u>		L	LE	2	2	2	01	17S	36E	659013	3638194* 🌍	405	120	40	80
<u>L 02561</u>		L	LE	3	3	3	31	16S	37E	659210	3638403* 😜	503	137	50	87
<u>L 10633</u>	R	L	LE			4	13	17S	36E	659026	3637389* 🌍	585	209	80	129
L 01220 POD1		L	LE		3	3	31	16S	37E	659311	3638504* 🌍	597	120	55	65
<u>L 02474</u>		L	LE		1	3	06	17S	37E	659331	3637296* 🌍	611	100	40	60
<u>L 14377 POD3</u>		L	LE	2	3	3	31	16S	37E	659423	3638586 🌍	690	115		
<u>L 14377 POD4</u>		L	LE	2	3	3	31	16S	37E	659492	3638571 🌍	691	120		
<u>L 14377 POD2</u>		L	LE	2	3	3	31	16S	37E	659504	3638600 🌍	723	120		
<u>L 14377 POD1</u>		L	LE	2	3	3	31	16S	37E	659484	3638621 🌍	737	118		
L 13332 POD1		L	LE	1	3	3	36	16S	37E	659161	3638638 🔵	744	106	102	4
<u>L 10633 S</u>	R	L	LE			4	13	17S	36E	659026	3637189* 🔵	768	228	120	108
<u>L 10652</u>		L	LE		4	3	31	16S	37E	659808	3638511* 🌍	789	248	72	176
											Avera	ge Depth to Wat	er:	72 fee	t
												Minimum Dep	oth:	40 fee	t
												Maximum Dep	oth:	120 fee	t
Record Count: 13															
UTMNAD83 Radius	Search (in	meters):	<u>.</u>												
Easting (X): 659	299		North	ning	(Y)):	3637	907			Radius: 804				
*UTM location was derived	from PLSS	- see Help													
The data is furnished by the Maccuracy, completeness, reliable										derstanding t	hat the OSE/ISC m	ake no warranties,	expressed or i	mplied, concer	ning the

10/19/18 9:31 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER





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Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2018-10-19 11:54:27 EDT 1.03 0.9 nadww01

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1:40	HA126"30	. 5	10.6	2.87	.44	1262	
	HALOI	30.4	10.0	3.04	,09	273	
	HAZ@6"	30.3	11.0	2.75	,07	192	
	AZQÍ	30.1	10.9	2.76	.07	193	
and the second s	14306"	30.0	10.6	2.83	.30	849	
	A406"	30.3	10.0	3.03	,10	303	-
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Π	1101		1		S. S.K.		56

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HAZ





Project Id:Contact:Joel LowryProject Location:Lea

Certificate of Analysis Summary 598367

TRC Solutions, Inc, Midland, TX Project Name: CS Caylor



Date Received in Lab:Fri Sep-07-18 01:15 pmReport Date:18-SEP-18Project Manage:Kelsey Brooks

	1 1				1								
	Lab Id:	598367-	001	598367-	002	598367-	003	598367-	004	598367-	005	598367-0	006
Analysis Requested	Field Id:	HA 1@	6"	HA 1 @	21'	HA 2@	6"	HA 2 @ 1'		HA 3 @	6"	HA 4 @ 6"	
Analysis Kequestea	Depth:	6- In		1- ft		6- In		1- ft		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-06-18	13:40	Sep-06-18	13:40	Sep-06-18	13:40	Sep-06-18	13:40	Sep-06-18	13:40	Sep-06-18	13:40
BTEX by EPA 8021B	Extracted:	Sep-11-18	08:30	Sep-11-18	08:30	Sep-11-18	08:30	Sep-11-18	08:30	Sep-11-18	08:30	Sep-11-18	08:30
	Analyzed:	Sep-11-18	19:01	Sep-11-18	19:21	Sep-11-18	19:41	Sep-11-18	20:02	Sep-11-18	20:22	Sep-11-18	20:42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200
Toluene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200
Ethylbenzene		< 0.00200	0.00200	0.00250	0.00201	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200
m,p-Xylenes		<0.00400 0.00400		< 0.00402	0.00402	< 0.00402	0.00402	0.0214	0.00398	< 0.00398	0.00398	< 0.00401	0.00401
o-Xylene		< 0.00200	0.00200	0.00567	0.00201	< 0.00201	0.00201	0.00757	0.00199	< 0.00199	0.00199	< 0.00200	0.00200
Total Xylenes		< 0.002	0.002	0.00567	0.00201	< 0.00201	0.00201	0.02897	0.00199	< 0.00199	0.00199	< 0.002	0.002
Total BTEX		< 0.002	0.002	0.00817	0.00201	< 0.00201	0.00201	0.02897	0.00199	< 0.00199	0.00199	< 0.002	0.002
Chloride by EPA 300	Extracted:	Sep-13-18	12:00	Sep-13-18	12:00	Sep-13-18	Sep-13-18 12:00 Sep-13-18 12:00		12:00	Sep-13-18 12:00		Sep-13-18 12:00	
	Analyzed:	Sep-14-18	00:33	Sep-14-18	00:41	Sep-14-18	00:48	Sep-14-18	00:56	Sep-14-18	01:03	Sep-14-18	01:26
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3050	50.1	172	25.0	72.8	4.95	38.0	4.97	785	5.01	119	4.95
TPH By SW8015 Mod	Extracted:	Sep-07-18	17:00	Sep-07-18	17:00	Sep-07-18	17:00	Sep-07-18	17:00	Sep-07-18	17:00	Sep-07-18	17:00
	Analyzed:	Sep-08-18	15:55	Sep-08-18	16:13	Sep-08-18	16:32	Sep-08-18	16:51	Sep-08-18	17:10	Sep-08-18	17:28
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<74.8	74.8	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		15900	74.8	741	14.9	42.4	15.0	61.0	15.0	21.2	15.0	18.3	15.0
Motor Oil Range Hydrocarbons (MRO)		1870	74.8	152	14.9	<15.0	15.0	15.2	15.0	<15.0	15.0	<15.0	15.0
Total TPH		17770	74.8	893	14.9	42.4	15	76.2	15	21.2	15	18.3	15

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

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

Huns Boah

Kelsey Brooks Project Manager



Project Id:Contact:Joel LowryProject Location:Lea

Certificate of Analysis Summary 598367

TRC Solutions, Inc, Midland, TX Project Name: CS Caylor



Date Received in Lab:Fri Sep-07-18 01:15 pmReport Date:18-SEP-18Project Manage:Kelsey Brooks

	Lab Id:	598367-007			
An aluaia De au este d	Field Id:	HA 4@ 1'			
Analysis Requested	Depth:	1- ft			
	Matrix:	SOIL			
	Sampled:	Sep-06-18 13:40			
BTEX by EPA 8021B	Extracted:	Sep-11-18 08:30			
	Analyzed:	Sep-11-18 21:03			
	Units/RL:	mg/kg RL			
Benzene		<0.00201 0.00201			
Toluene		<0.00201 0.00201			
Ethylbenzene		0.0804 0.00201			
m,p-Xylenes		0.00901 0.00402			
o-Xylene		0.00367 0.00201			
Total Xylenes		0.01268 0.00201			
Total BTEX		0.09308 0.00201			
Chloride by EPA 300	Extracted:	Sep-13-18 12:00			
	Analyzed:	Sep-14-18 01:33			
	Units/RL:	mg/kg RL			
Chloride		269 5.03			
TPH By SW8015 Mod	Extracted:	Sep-07-18 17:00			
	Analyzed:	Sep-08-18 18:24			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		36.0 15.0			
Diesel Range Organics (DRO)		439 15.0			
Motor Oil Range Hydrocarbons (MRO)		108 15.0			
Total TPH		583 15			

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

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

Huns Boah

Kelsey Brooks Project Manager

Analytical Report 598367

for TRC Solutions, Inc

Project Manager: Joel Lowry

CS Caylor

18-SEP-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)



18-SEP-18

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

Reference: XENCO Report No(s): **598367 CS Caylor** Project Address: Lea

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) 598367. 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. 598367 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Sample Id HA 1 @ 6" HA 2 @ 1' HA 2 @ 1' HA 3 @ 6" HA 4 @ 6" HA 4@ 1'

Sample Cross Reference 598367



TRC Solutions, Inc, Midland, TX

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	09-06-18 13:40	6 In	598367-001
S	09-06-18 13:40	1 ft	598367-002
S	09-06-18 13:40	6 In	598367-003
S	09-06-18 13:40	1 ft	598367-004
S	09-06-18 13:40	6 In	598367-005
S	09-06-18 13:40	6 In	598367-006
S	09-06-18 13:40	1 ft	598367-007



Client Name: TRC Solutions, Inc Project Name: CS Caylor

Project ID: Work Order Number(s): 598367 Report Date: 18-SEP-18 Date Received: 09/07/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3062569 TPH By SW8015 Mod Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 598367-001.

Batch: LBA-3062939 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 598367-007,598367-004.





TRC Solutions, Inc, Midland, TX

Sample Id: HA 1@ 6"		Matrix:	Soil		Date Received:09.	07.18 13.1	5
Lab Sample Id: 598367-001		Date Collec	cted: 09.06.18 13.40		Sample Depth: 6 In	1	
Analytical Method: Chloride by EF	A 300				Prep Method: E3	00P	
Tech: SCM					% Moisture:		
Analyst: SCM		Date Prep:	09.13.18 12.00		Basis: We	t Weight	
Seq Number: 3063359							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3050	50.1	mg/kg	09.14.18 00.33		10
Analytical Method: TPH By SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	09.07.18 17.00		Basis: We	t Weight	
Seq Number: 3062569							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.8	74.8	mg/kg	09.08.18 15.55	U	5

Gasonne Range Hydrocarbons (GRO)	THEOR	4.8</th <th>74.0</th> <th></th> <th>mg/kg</th> <th>09.08.18 15.55</th> <th>0</th> <th>5</th> <th></th>	74.0		mg/kg	09.08.18 15.55	0	5	
Diesel Range Organics (DRO)	C10C28DRO	15900	74.8		mg/kg	09.08.18 15.55		5	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1870	74.8		mg/kg	09.08.18 15.55		5	
Total TPH	PHC635	17770	74.8		mg/kg	09.08.18 15.55		5	
			%						
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane		111-85-3	91	%	70-135	09.08.18 15.55			
o-Terphenyl		84-15-1	285	%	70-135	09.08.18 15.55	**		
o respicanji		04-13-1	285	/0	70-155	07.00.10 15.55			





TRC Solutions, Inc, Midland, TX

Sample Id: HA 1@ 6'' Lab Sample Id: 598367-001	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.11.18 19.01	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.11.18 19.01	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.11.18 19.01	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	09.11.18 19.01	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.11.18 19.01	U	1
Total Xylenes	1330-20-7	< 0.002	0.002		mg/kg	09.11.18 19.01	U	1
Total BTEX		< 0.002	0.002		mg/kg	09.11.18 19.01	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	87	%	70-130	09.11.18 19.01		
1,4-Difluorobenzene		540-36-3	93	%	70-130	09.11.18 19.01		





TRC Solutions, Inc, Midland, TX

Sample Id:	HA 1 @ 1'		Matrix: Soil			Date Received:09.07.18 13.15				
Lab Sample	Id: 598367-002		Date Colle	cted: 09.06.18 13.40		Sample Depth: 1 ft				
Analytical M	lethod: Chloride by EP.	A 300				Prep Method: E30)0P			
Tech:	SCM					% Moisture:				
Analyst:	SCM		Date Prep:	09.13.18 12.00		Basis: We	t Weight			
Seq Number:	3063359									
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Chloride		16887-00-6	172	25.0	mg/kg	09.14.18 00.41		5		

Analytical Method: TPH By SW801	5 Mod				P	rep Method: TX	1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Prep	p: 09.07	.18 17.00	E	Basis: We	et Weight	
Seq Number: 3062569								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	09.08.18 16.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	741	14.9		mg/kg	09.08.18 16.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	152	14.9		mg/kg	09.08.18 16.13		1
Total TPH	PHC635	893	14.9		mg/kg	09.08.18 16.13		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	89	%	70-135	09.08.18 16.13		
o-Terphenyl		84-15-1	93	%	70-135	09.08.18 16.13		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 1 @ 1' Lab Sample Id: 598367-002	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	09.11.18 19.21	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	09.11.18 19.21	U	1
Ethylbenzene	100-41-4	0.00250	0.00201		mg/kg	09.11.18 19.21		1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	09.11.18 19.21	U	1
o-Xylene	95-47-6	0.00567	0.00201		mg/kg	09.11.18 19.21		1
Total Xylenes	1330-20-7	0.00567	0.00201		mg/kg	09.11.18 19.21		1
Total BTEX		0.00817	0.00201		mg/kg	09.11.18 19.21		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	90	%	70-130	09.11.18 19.21		
1,4-Difluorobenzene		540-36-3	84	%	70-130	09.11.18 19.21		





TRC Solutions, Inc, Midland, TX

Sample Id:	HA 2@ 6''		Matrix:	Soil		Date Received:09	07.18 13.1	5
Lab Sample I	d: 598367-003		Date Colle	cted: 09.06.18 13.40		Sample Depth: 6 I	n	
Analytical M	ethod: Chloride by EPA	300				Prep Method: E3	00P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	09.13.18 12.00		Basis: We	et Weight	
Seq Number:	3063359							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	72.8	4.95	mg/kg	09.14.18 00.48		1

Analytical Method: TPH By SW801 Tech: ARM Analyst: ARM Seq Number: 3062569	5 Mod	Date Prep	p: 09.07.	18 17.00	%	rep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	09.08.18 16.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	42.4	15.0		mg/kg	09.08.18 16.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	09.08.18 16.32	U	1
Total TPH	PHC635	42.4	15		mg/kg	09.08.18 16.32		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	09.08.18 16.32		
o-Terphenyl		84-15-1	96	%	70-135	09.08.18 16.32		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 2@ 6'' Lab Sample Id: 598367-003	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	09.11.18 19.41	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	09.11.18 19.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	97	%	70-130	09.11.18 19.41		
4-Bromofluorobenzene		460-00-4	91	%	70-130	09.11.18 19.41		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 2 @ 1' Lab Sample Id: 598367-004		Matrix: Soil Date Collected: 09.06.18 13.40		Date Received:09.07.18 13.15 Sample Depth: 1 ft			5
Analytical Method:Chloride by EPTech:SCMAnalyst:SCMSeq Number:3063359	A 300	Date Prep:	09.13.18 12.00		Prep Method: E30 % Moisture: Basis: We	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.0	4.97	mg/kg	09.14.18 00.56		1
Analytical Method: TPH By SW80 Tech: ARM Analyst: ARM Seq Number: 3062569	15 Mod	Date Prep:	09.07.18 17.00		Prep Method: TX % Moisture: Basis: We	1005P et Weight	

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	09.08.18 16.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	61.0	15.0		mg/kg	09.08.18 16.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	15.2	15.0		mg/kg	09.08.18 16.51		1
Total TPH	PHC635	76.2	15		mg/kg	09.08.18 16.51		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	93	%	70-135	09.08.18 16.51		
o-Terphenyl		84-15-1	98	%	70-135	09.08.18 16.51		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 2 @ 1' Lab Sample Id: 598367-004	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 1 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	09.11.18 20.02	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	09.11.18 20.02	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	09.11.18 20.02	U	1
m,p-Xylenes	179601-23-1	0.0214	0.00398		mg/kg	09.11.18 20.02		1
o-Xylene	95-47-6	0.00757	0.00199		mg/kg	09.11.18 20.02		1
Total Xylenes	1330-20-7	0.02897	0.00199		mg/kg	09.11.18 20.02		1
Total BTEX		0.02897	0.00199		mg/kg	09.11.18 20.02		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	79	%	70-130	09.11.18 20.02		
4-Bromofluorobenzene		460-00-4	140	%	70-130	09.11.18 20.02	**	





TRC Solutions, Inc, Midland, TX

Sample Id:	HA 3 @ 6"		Matrix:	Soil		Date Received:0	9.07.18 13.1	5
Lab Sample I	d: 598367-005		Date Colle	ected: 09.06.18 13.40	Sample Depth: 6 In			
Analytical M	ethod: Chloride by EPA	A 300				Prep Method: E	300P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	09.13.18 12.00		Basis: W	Vet Weight	
Seq Number:	3063359							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	785	5.01	mg/kg	09.14.18 01.03		1

Analytical Method: TPH By SW80 Tech: ARM	15 Mod					Prep Method: TX 6 Moisture:	1005P	
Analyst: ARM		Date Pre	p: 09.07	18 17.00	E	Basis: We	t Weight	
Seq Number: 3062569								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	09.08.18 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	21.2	15.0		mg/kg	09.08.18 17.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	09.08.18 17.10	U	1
Total TPH	PHC635	21.2	15		mg/kg	09.08.18 17.10		1
Surrogate		Cas Number	%	Units	Limits	Analysis Date	Flag	
0			Recovery			ĩ	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	09.08.18 17.10		
o-Terphenyl		84-15-1	96	%	70-135	09.08.18 17.10		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 3 @ 6'' Lab Sample Id: 598367-005	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	09.11.18 20.22	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	09.11.18 20.22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	94	%	70-130	09.11.18 20.22		
4-Bromofluorobenzene		460-00-4	92	%	70-130	09.11.18 20.22		





TRC Solutions, Inc, Midland, TX

Chloride		16887-00-6	119	4.95	mg/kg	09.14.18 01.26		1
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3063359							
Analyst:	SCM		Date Prep:	09.13.18 12.00		Basis: Wet	t Weight	
Tech:	SCM					% Moisture:		
Analytical Mo	ethod: Chloride by EPA	300				Prep Method: E30	OP	
Lab Sample I	d: 598367-006		Date Colle	cted: 09.06.18 13.40		Sample Depth: 6 In		
Sample Id:	HA 4 @ 6''		Matrix:	Soil		Date Received:09.0	07.18 13.15	5

Analytical Method: TPH By SW802 Tech: ARM	15 Mod					Prep Method: TX 6 Moisture:	1005P	
Analyst: ARM		Date Pre	p: 09.07	.18 17.00			t Weight	
Seq Number: 3062569								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	09.08.18 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.3	15.0		mg/kg	09.08.18 17.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	09.08.18 17.28	U	1
Total TPH	PHC635	18.3	15		mg/kg	09.08.18 17.28		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	90	%	70-135	09.08.18 17.28		
o-Terphenyl		84-15-1	94	%	70-135	09.08.18 17.28		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 4 @ 6'' Lab Sample Id: 598367-006	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 6 In
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	09.11.18 20.42	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	09.11.18 20.42	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	09.11.18 20.42	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	09.11.18 20.42	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	09.11.18 20.42	U	1
Total Xylenes	1330-20-7	< 0.002	0.002		mg/kg	09.11.18 20.42	U	1
Total BTEX		< 0.002	0.002		mg/kg	09.11.18 20.42	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	116	%	70-130	09.11.18 20.42		
1,4-Difluorobenzene		540-36-3	99	%	70-130	09.11.18 20.42		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 4@ 1' Lab Sample Id: 598367-007		Matrix: Date Collec	Soil cted: 09.06.18 13.40		Date Received:09.07.18 13.1 Sample Depth: 1 ft			
Analytical Method: Chloride by EPA	A 300				Prep Method: E3	00P		
Tech: SCM					% Moisture:			
Analyst: SCM		Date Prep:	09.13.18 12.00		Basis: We	t Weight		
Seq Number: 3063359		1				-		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	269	5.03	mg/kg	09.14.18 01.33		1	
Analytical Method:TPH By SW801Tech:ARMAnalyst:ARMSeq Number:3062569	5 Mod	Date Prep:	09.07.18 17.00		Prep Method: TX % Moisture: Basis: We	1005P et Weight		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	36.0	15.0	mg/kg	09.08.18 18.24		1	
Diesel Range Organics (DRO)	C10C28DRO	439	15.0	mg/kg	09.08.18 18.24		1	
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	108	15.0	mg/kg	09.08.18 18.24		1	
Total TPH	PHC635	583	15	mg/kg	09.08.18 18.24		1	
			%					

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	98	%	70-135	09.08.18 18.24		
o-Terphenyl	84-15-1	103	%	70-135	09.08.18 18.24		





TRC Solutions, Inc, Midland, TX

Sample Id: HA 4@ 1' Lab Sample Id: 598367-007	Matrix: Soil Date Collected: 09.06.18 13.40	Date Received:09.07.18 13.15 Sample Depth: 1 ft			
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3062939	Date Prep: 09.11.18 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight			

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	09.11.18 21.03	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	09.11.18 21.03	U	1
Ethylbenzene	100-41-4	0.0804	0.00201		mg/kg	09.11.18 21.03		1
m,p-Xylenes	179601-23-1	0.00901	0.00402		mg/kg	09.11.18 21.03		1
o-Xylene	95-47-6	0.00367	0.00201		mg/kg	09.11.18 21.03		1
Total Xylenes	1330-20-7	0.01268	0.00201		mg/kg	09.11.18 21.03		1
Total BTEX		0.09308	0.00201		mg/kg	09.11.18 21.03		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	95	%	70-130	09.11.18 21.03		
4-Bromofluorobenzene		460-00-4	226	%	70-130	09.11.18 21.03	**	


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

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

+ NELAC certification not offered for this compound.

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



TRC Solutions, Inc

CS Caylor

Analytical Method:	Chloride by EPA 30	00						P	rep Metho	od: E30	0P	
Seq Number:	3063359			Matrix:	Solid				Date Pro	ep: 09.1	3.18	
MB Sample Id:	7662256-1-BLK		LCS Sar	nple Id:	7662256-	1-BKS		LCS	D Sample	e Id: 7662	2256-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 5.00	250	271	108	270	108	90-110	0	20	mg/kg	09.13.18 23:04	

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	d: E30	0P	
Seq Number:	3063359			Matrix:	Soil				Date Pre	ep: 09.1	3.18	
Parent Sample Id:	598367-005		MS Sar	nple Id:	598367-00)5 S		MSI	O Sample	Id: 598	367-005 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD	MSD	Limits	%RPD I	RPD Limi	t Units	Analysis Date	Flag
	Result	Amount	Result	70 Kec	Result	%Rec					Date	

Analytical Method:	Chloride by EPA 30	00						P	rep Meth	od: E30	0P	
Seq Number:	3063359			Matrix:	Soil				Date Pr	ep: 09.1	3.18	
Parent Sample Id:	598803-001		MS Sar	nple Id:	598803-00	01 S		MS	D Sample	e Id: 598	303-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	98.9	250	364	106	366	107	90-110	1	20	mg/kg	09.13.18 23:27	

Analytical Method:	TPH By S	W8015 M	lod							Prep Method	l: TXI	005P	
Seq Number:	3062569				Matrix:	Solid				Date Prep	p: 09.0	07.18	
MB Sample Id:	7661909-1	-BLK		LCS Sar	nple Id:	7661909-	1-BKS		LC	SD Sample	Id: 766	1909-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	O RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<8.00	1000	906	91	904	90	70-135	0	20	mg/kg	09.08.18 13:25	
Diesel Range Organics	(DRO)	<8.13	1000	981	98	969	97	70-135	1	20	mg/kg	09.08.18 13:25	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1-Chlorooctane		102		1	16		119			70-135	%	09.08.18 13:25	
o-Terphenyl		106		1	03		109			70-135	%	09.08.18 13:25	

[D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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



TRC Solutions, Inc

CS Caylor

Analytical Method: Seq Number: Parent Sample Id:	TPH By S 3062569 598366-00		lod		Matrix: nple Id:	Soil 598366-00	01 S			Prep Metho Date Pre SD Sample	ep: 09.0	1005P 17.18 366-001 SD
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date
Gasoline Range Hydrocarb	ons (GRO)	8.90	1000	868	86	842	83	70-135	3	20	mg/kg	09.08.18 14:21
Diesel Range Organics	(DRO)	9.36	1000	983	97	953	95	70-135	3	20	mg/kg	09.08.18 14:21
Surrogate					AS Rec	MS Flag	MSD %Ree		-	Limits	Units	Analysis Date
1-Chlorooctane				1	23		120		,	70-135	%	09.08.18 14:21
o-Terphenyl				1	21		119		,	70-135	%	09.08.18 14:21

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3062939 7662122-1-BLK	1B	LCS San	Matrix: nple Id:	Solid 7662122-	1-BKS			Prep Metho Date Pre SD Sample	p: 09.1	5030B 1.18 2122-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	t Units	Analysis Date	Flag
Benzene	< 0.00199	0.0994	0.108	109	0.0966	97	70-130	11	35	mg/kg	09.11.18 11:23	
Toluene	< 0.00199	0.0994	0.109	110	0.0969	97	70-130	12	35	mg/kg	09.11.18 11:23	
Ethylbenzene	< 0.00199	0.0994	0.114	115	0.100	100	70-130	13	35	mg/kg	09.11.18 11:23	
m,p-Xylenes	< 0.00398	0.199	0.230	116	0.198	99	70-130	15	35	mg/kg	09.11.18 11:23	
o-Xylene	< 0.00199	0.0994	0.111	112	0.0955	96	70-130	15	35	mg/kg	09.11.18 11:23	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	94		ç) 9		96			70-130	%	09.11.18 11:23	
4-Bromofluorobenzene	93		ç	90		91			70-130	%	09.11.18 11:23	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3062939 598443-010	1B		Matrix: nple Id:		10 S			Prep Metho Date Pre SD Sample	p: 09.1	5030B 1.18 443-010 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI) RPD Limit	t Units	Analysis Date	Flag
Benzene	< 0.00198	0.0992	0.0730	74	0.0693	69	70-130	5	35	mg/kg	09.11.18 12:04	Х
Toluene	< 0.00198	0.0992	0.0722	73	0.0693	69	70-130	4	35	mg/kg	09.11.18 12:04	Х
Ethylbenzene	< 0.00198	0.0992	0.0706	71	0.0685	69	70-130	3	35	mg/kg	09.11.18 12:04	Х
m,p-Xylenes	< 0.00397	0.198	0.139	70	0.134	67	70-130	4	35	mg/kg	09.11.18 12:04	Х
o-Xylene	< 0.00198	0.0992	0.0667	67	0.0647	65	70-130	3	35	mg/kg	09.11.18 12:04	Х
Surrogate				AS Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			ç	91		91		,	70-130	%	09.11.18 12:04	
4-Bromofluorobenzene			9	91		90		,	70-130	%	09.11.18 12:04	

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

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec Flag

In which we way a new or way way way way way way and way	Felinquished by:		Lat and the second	Relinquished by Sampter	SAMPLE CUSTO	TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY X Contract TAT	Next Day EMERGENCY	Same Day TAT 5 Day TAT	Turnaround Time (Business days)	10	9	6	THAY O I	6 H A H @ 6"	5 HA 3 @ 6"	4 HAZ @ 1'	3 NACOO	2 HALOI	HAIQ 6	No. Field ID / Point of Collection	sampuers's name: Kyle Schmaidt		Project Contact:	Email: Phone No: ilowny@trcsolutions.com 432-466-4450	10 Desta Dr. Sulte 150E Midland, TX 79705	Company Address:	Company Name / Branch: TRC Environmental Corporation	Client / Reporting Information			Dallas Texas (214-902-0300)	setting the standard since issu Stafford,Texas (281-240-4200)		
eyond the control of Xenco.	Date Time:	Date lime:	8.e-h	Date Time:	Y MUST BE DOCUMENTE	mqo					-				16+ 9-6-18	6:0 9-6-18		162 9-6-18	6:1 9-6-18	16+ 9-6-18	6 : n 9-6-18	Sample Depth Date	Pallastics	involce:	- Van	Invoice To:	a 1	Project Location	Project Nage/Number				Midland, Te	San Antoni		
. A minimum charge of \$75 will be ap	Received By:	Hecei ved By: 3	V VIDENT -	Received By:	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIEF		TRRP Checklist	Level 3 (CLP Forms)	Level III Std QC+ Forms	Level II Std QC	Data Delivera				0h:2	2:30	1 5 02:2	2:10 5 1	2:00		01:10	Time Matrix bottles			2000	-	Ca	¢	Mumber: Carlor	Project Information		www.xenco.com	Midland, Texas (432-704-5251)	San Antonio, Texas (210-509-3334)	Page 1	CHAIN OF
lates and subcontractors. It assignt plied to each project. Xenco's liabil	Custody Seal #	Heilingufshed	UNDER!	Remain Apply and By:	CHANGE POSSESSION, INCLUDI		۰.	UST / RG -411		Level IV (Full Data Pkg	Data Deliverable Information											NaOH/Zn Acetate HNO3 c H2SO4 g NaOH NaOH MEOH		L	churl Tal							com			Qf 1	OF CUSTODY
is standard terms and condition lity will be limited to the cost of	1# Preser				ING COURIER DELIVERY			1	V	II Data Pkg /raw data)					RR	RX	R X	R X	<u>8</u> 8	メメ	X X	NONE TPH TX10 Chloride E	005		Thicks						-	Xenco Quote #		Phoenix, Ar		YUU
ns of service. Xenco will be liable f samples. Any samples received	Preserved where applicable		4/4/18 4.252	Date Time:		FED-EX / UPS: Tracking #		bcooper@trcsolutions.com	zconder@trcsolutions.com	ilowry@trcsolutions.com	Notes:											NORM RCI TCLP Ber TCLP RC Chloride			etals	5					Analytical Information			Phoenix, Arizona (480-355-0900)		
only for the cost of samples an by Xenco but not analyzed will.	On Ice Cooler	Receivēd/By: 4	Allacer	TO U ULAN	A MAN		LOND VONA	lutions.com	lutions.com	ions.com					×	X	X	R	X	×	*	TPH 8015) ?o?	21	ß				Xenco Job #	107			
rd shall not assume any responsibility for any be invoiced at \$5 per sample. These terms will	r Temp. Thermo. Corr. Factor	12/17				ON DI LI A	suid. com															Field Comments	WW= Waste Water	0 = 01 adita = ta	OW =Ocean/Sea Water	SW = Surface water SL = Sludge	DW = Drinking Water P = Product	GW =Ground Water	W = Water S = Soil/Sed/Solid		Matrix Codes		いしゃ			

be enforced unless previously negotiated under a fully executed client contract.

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Final 1.000



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Temperature	e Range: 0 - 6 degC
Date/ Time Received: 09/07/2018 01:15:00 PM	• •	Acceptable Range: Ambient
Work Order #: 598367	Temperature Measuring	device used : R8
Samp	le Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ co	oler? N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6*Custody Seals Signed and dated?	N/A	
<pre>#7 *Chain of Custody present?</pre>	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ rec	eived? Yes	
#10 Chain of Custody agrees with sample labels/m	atrix? Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	TPH WAS IN BULK CONTAINER
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	N/A	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Date: 09/10/2018

 Checklist completed by:
 Brite Table

 Brianna Teel
 Brianna Teel

 Checklist reviewed by:
 Masses Masses

 Kelsey Brooks
 Kelsey Brooks

Date: 09/10/2018



Project Id:Contact:Joel LowryProject Location:Lea Co., NM

Certificate of Analysis Summary 601347

TRC Solutions, Inc, Midland, TX

Project Name: C S Caylor

Date Received in Lab:Wed Oct-03-18 04:50 pmReport Date:10-OCT-18Project Manager:Kelsey Brooks

									1	
	Lab Id:	601347-0	001	601347-0	02	601347-0	03			
Analysis Requested	Field Id:	HA-1 @	2'	HA-3 @	1'	HA-4 @	2'			
Analysis Requested	Depth:	2- ft		1- ft		2- ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Sep-28-18	12:00	Sep-28-18	2:05	Sep-28-18 1	2:10			
BTEX by EPA 8021B	Extracted:	Oct-04-18	13:30	Oct-04-18 1	3:30	Oct-04-18 1	3:30			
	Analyzed:	Oct-05-18	12:49	Oct-05-18 1	3:16	Oct-05-18 1	3:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		< 0.175	0.175	< 0.198	0.198	< 0.195	0.195			
Toluene		0.193	0.175	0.774	0.198	< 0.195	0.195			
Ethylbenzene		3.12	0.175	9.84	0.198	0.703	0.195			
m,p-Xylenes		8.91	0.351	16.1	0.397	1.64	0.391			
o-Xylene		1.61	0.175	1.45	0.198	0.371	0.195			
Xylenes, Total		10.52	0.175	17.55	0.198	2.011	0.195			
Total BTEX		13.833	0.175	28.164	0.198	2.714	0.195			
Chloride by EPA 300	Extracted:	Oct-09-18	12:00	Oct-09-18 1	2:00	Oct-09-18 1	2:00			
	Analyzed:	Oct-09-18	19:37	Oct-09-18 1	9:50	Oct-09-18 2	20:02			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		1480	250	442	125	570	125			
DRO-ORO By SW8015B	Extracted:	Oct-04-18	13:10	Oct-04-18 1	3:10	Oct-04-18 1	3:10			
	Analyzed:	Oct-05-18	16:43	Oct-05-18 1	7:19	Oct-05-18 1	7:56			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Diesel Range Organics (DRO)		645	50.2	272	50.1	78.5	49.6			
Oil Range Hydrocarbons (ORO)		199	50.2	171	50.1	55.1	49.6			
TPH GRO by EPA 8015 Mod.	Extracted:	Oct-04-18	13:30	Oct-04-18 1	3:30	Oct-04-18 1	3:30			
	Analyzed:	Oct-05-18	11:01	Oct-05-18 1	1:28	Oct-05-18 1	3:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
TPH-GRO	'	84.5	35.1	92.2	39.7	28.5	3.91			

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

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

Huns Boah

Kelsey Brooks Project Manager

Final 1.000

Analytical Report 601347

for TRC Solutions, Inc

Project Manager: Joel Lowry

CS Caylor

10-OCT-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)



10-OCT-18

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

Reference: XENCO Report No(s): 601347 C S Caylor 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) 601347. 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. 601347 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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

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



Sample Cross Reference 601347

TRC Solutions, Inc, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 @ 2'	S	09-28-18 12:00	2 ft	601347-001
HA-3 @ 1'	S	09-28-18 12:05	1 ft	601347-002
HA-4 @ 2'	S	09-28-18 12:10	2 ft	601347-003



Client Name: TRC Solutions, Inc Project Name: C S Caylor

Project ID: Work Order Number(s): 601347 Report Date: 10-OCT-18 Date Received: 10/03/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3065600 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Surrogate a,a,a-Trifluorotoluene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7663558-1-BLK,601347-001.

Batch: LBA-3065605 TPH GRO by EPA 8015 Mod. Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 601349-012 SD,601347-003.

Batch: LBA-3065710 DRO-ORO By SW8015B Surrogate Tricosane, Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 601347-001,601347-002,601347-003.

Batch: LBA-3065851 Chloride by EPA 300

Lab Sample ID 601349-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 601349-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



TRC Solutions, Inc, Midland, TX

Sample Id:	HA-1 @ 2'		Matrix:	Soil		Ľ	Date Received:10.	03.18 16.5	0		
Lab Sample Id:	601347-001		Date Col	lected: 09.28	.18 12.00	S	Sample Depth: 2 ft				
Analytical Meth	hod: Chloride by E	PA 300				Р	rep Method: E30	00P			
Tech:	RNL					%	6 Moisture:				
Analyst:	RNL		Date Prep	o: 10.09	.18 12.00	Е	Basis: We	t Weight			
Seq Number:	3065851]					U			
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Chloride		16887-00-6	1480	250		mg/kg	10.09.18 19.37		10		
Analytical Meth	nod: DRO-ORO B	v SW8015B				р	Prep Method: SW	78015P			
-	PGM	, 2 00 102					6 Moisture:	00101			
	PGM		Date Prep	n 10.04	.18 13.10			t Weight			
Seq Number:			Date Fle	9. 10.04	.10 15.10	L	<i>v</i> asis. <i>v</i> e	a weight			
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
esel Range Organics (DRO) C10C28DRO		C10C28DRO	645	50.2		mg/kg	10.05.18 16.43		2		
Dil Range Hydro	carbons (ORO)	PHCG2835	199	50.2		mg/kg 10.05.18 16.43			2		
Sumogata			Cas Number	%	Units	Limits	Analysis Data	Flog			
Surrogate Tricosane			638-67-5	Recovery 481	%	65-144	Analysis Date 10.05.18 16.43	Flag **			
n-Triacontan	ie.		638-68-6	401	%	46-152	10.05.18 16.43	**			
Analytical Meth	hod: BTEX by EPA	A 8021B				Р	rep Method: SW	75030B			
	MIT						6 Moisture:				
	MIT		Date Prep	o: 10.04	.18 13.30			t Weight			
Seq Number:			Dute I le			_		0			
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Benzene		71-43-2	<0.175	0.175		mg/kg	10.05.18 12.49	U	10		
Foluene		108-88-3	0.193	0.175		mg/kg	10.05.18 12.49		10		
Ethylbenzene		100-41-4	3.12	0.175		mg/kg	10.05.18 12.49		10		
n,p-Xylenes		179601-23-1	8.91	0.351		mg/kg	10.05.18 12.49		10		
o-Xylene		95-47-6	1.61	0.175		mg/kg	10.05.18 12.49		10		
Xylenes, Total		1330-20-7	10.52	0.175		mg/kg	10.05.18 12.49		10		
Fotal BTEX			13.833	0.175		mg/kg	10.05.18 12.49		10		
Surrogate			Cas Number	% Recovery	Units	Limits	Analysis Date	Flag			
				-							
4-Bromofluo	orobenzene		460-00-4 98-08-8	81 68	%	68-120 71-121	10.05.18 12.49	***			



TRC Solutions, Inc, Midland, TX

Sample Id: HA-1 @ 2' Lab Sample Id: 601347-001	Matrix: Soil Date Collected: 09.28.18 12.00	Date Received:10.03.18 16.50 Sample Depth: 2 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3065605	Date Prep: 10.04.18 13.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	84.5	35.1		mg/kg	10.05.18 11.01		10
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	2	460-00-4	106	%	76-123	10.05.18 11.01		
a,a,a-Trifluorotoluene	9	98-08-8	96	%	69-120	10.05.18 11.01		



TRC Solutions, Inc, Midland, TX

Sample Id:	HA-3 @ 1'		Matrix:	Soil		D	Date Received:10	.03.18 16.5	0
Lab Sample Id	: 601347-002		Date Coll	ected: 09.28	.18 12.05	S	ample Depth: 1 f	t	
Analytical Met	thod: Chloride by E	EPA 300				Р	rep Method: E3	00P	
Tech:	RNL						6 Moisture:		
Analyst:	RNL		Date Prep	. 10.09	.18 12.00			et Weight	
Seq Number:			Date Flep	. 10.07	.10 12.00	L	viii	a weight	
Seq Number.	5005051								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	442	125		mg/kg	10.09.18 19.50		5
Analytical Met	thod: DRO-ORO B	y SW8015B				Р	rep Method: SV	V8015P	
Tech:	PGM					%	6 Moisture:		
Analyst:	PGM		Date Prep	: 10.04	.18 13.10	В	asis: We	et Weight	
Seq Number:	3065710		2					U	
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Or	ganics (DRO)	C10C28DRO	272	50.1		mg/kg	10.05.18 17.19		2
Dil Range Hydro	ocarbons (ORO)	PHCG2835	171	50.1		mg/kg	10.05.18 17.19		2
Surrogate			Cas Number	%	Units	Limits	Analysis Date	Flag	
Tricosane			638-67-5	Recovery 220	%	65-144	10.05.18 17.19	**	
n-Triaconta	ine		638-68-6	290	%	46-152	10.05.18 17.19	**	
Analytical Met	thod: BTEX by EP	A 8021B				Р	rep Method: SV	V5030B	
Tech:	MIT					%	6 Moisture:		
Analyst:	MIT		Date Prep	: 10.04	.18 13.30	В	asis: We	et Weight	
Seq Number:	3065600								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene		71-43-2	<0.198	0.198		mg/kg	10.05.18 13.16	U	10
Foluene		108-88-3	0.774	0.198		mg/kg	10.05.18 13.16		10
Ethylbenzene		100-41-4	9.84	0.198		mg/kg	10.05.18 13.16		10
n,p-Xylenes		179601-23-1	16.1	0.397		mg/kg	10.05.18 13.16		10
o-Xylene		95-47-6	1.45	0.198		mg/kg	10.05.18 13.16		10
Kylenes, Total		1330-20-7	17.55	0.198		mg/kg	10.05.18 13.16		10
Fotal BTEX			28.164	0.198		mg/kg	10.05.18 13.16		10
Surrogate			Cas Number	% Recoverv	Units	Limits	Analysis Date	Flag	
	orobenzene		Cas Number 460-00-4	% Recovery 77	Units %	Limits 68-120	Analysis Date 10.05.18 13.16	Flag	



TRC Solutions, Inc, Midland, TX

Sample Id: HA-3 @ 1' Lab Sample Id: 601347-002	Matrix: Soil Date Collected: 09.28.18 12.05	Date Received:10.03.18 16.50 Sample Depth: 1 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3065605	Date Prep: 10.04.18 13.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	92.2	39.7		mg/kg	10.05.18 11.28		10
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	2	460-00-4	104	%	76-123	10.05.18 11.28		
a,a,a-Trifluorotoluene	9	98-08-8	101	%	69-120	10.05.18 11.28		



TRC Solutions, Inc, Midland, TX

Sample Id:	HA-4 @ 2'		Matrix:	Soil		Γ	Date Received:10.	03.18 16.5	0	
Lab Sample Id:	: 601347-003		Date Col	lected: 09.28	.18 12.10	Sample Depth: 2 ft				
Analytical Met	thod: Chloride by EP	PA 300				P	Prep Method: E30	00P		
Tech:	RNL					9	6 Moisture:			
Analyst:	RNL		Date Pre	o: 10.09	.18 12.00	E	Basis: We	t Weight		
Seq Number:	3065851		,					U		
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	570	125		mg/kg	10.09.18 20.02		5	
Analytical Met	thod: DRO-ORO By	SW8015B				р	Prep Method: SW	78015P		
-	PGM						6 Moisture:			
	PGM		Date Pre	n: 10.04	.18 13.10			t Weight		
Seq Number:			Date Fle	9. 10.04	.10 15.10	L	<i>Jusis.</i> We	a weight		
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Diesel Range Organics (DRO) C10		C10C28DRO	78.5	49.6		mg/kg	10.05.18 17.56		2	
Dil Range Hydro	ocarbons (ORO)	PHCG2835	55.1	49.6		mg/kg 10.05.18 17.56			2	
G				%	T 1	T • • • •		F		
Surrogate			Cas Number	Recovery	Units	Limits	Analysis Date	Flag **		
Tricosane n-Triaconta	ne		638-67-5 638-68-6	166 185	% %	65-144 46-152	10.05.18 17.56 10.05.18 17.56	**		
Analytical Met	thod: BTEX by EPA	8021B				P	Prep Method: SW	/5030B		
	MIT						6 Moisture:			
	MIT		Date Pre	n: 10.04	.18 13.30			t Weight		
Seq Number:	3065600							U		
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Benzene		71-43-2	< 0.195	0.195		mg/kg	10.05.18 13.43	U	10	
Foluene		108-88-3	< 0.195	0.195		mg/kg	10.05.18 13.43	U	10	
Ethylbenzene		100-41-4	0.703	0.195		mg/kg	10.05.18 13.43		10	
n,p-Xylenes		179601-23-1	1.64	0.391		mg/kg	10.05.18 13.43		10	
-Xylene		95-47-6	0.371	0.195		mg/kg	10.05.18 13.43		10	
		1330-20-7	2.011	0.195		mg/kg	10.05.18 13.43		10	
						/1				
			2.714	0.195		mg/kg	10.05.18 13.43		10	
			2.714 Cas Number	%	Units	mg/kg	10.05.18 13.43 Analysis Date	Flag	10	
Xylenes, Total Fotal BTEX Surrogate 4-Bromofluo	orobenzene				Units %			Flag	10	



TRC Solutions, Inc, Midland, TX

Sample Id: HA-4 @ 2' Lab Sample Id: 601347-003	Matrix: Soil Date Collected: 09.28.18 12.10	Date Received:10.03.18 16.50 Sample Depth: 2 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3065605	Date Prep: 10.04.18 13.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	28.5	3.91		mg/kg	10.05.18 13.43		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	2	460-00-4	81	%	76-123	10.05.18 13.43		
a,a,a-Trifluorotoluene	9	98-08-8	57	%	69-120	10.05.18 13.43	**	



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

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

+ NELAC certification not offered for this compound.

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



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Analytical Method:	Chloride by EPA 30	00						Pr	ep Metho	od: E30	OP	
Seq Number:	3065851			Matrix:	Solid				Date Pro	ep: 10.0	9.18	
MB Sample Id:	7663834-1-BLK		LCS Sar	nple Id:	7663834-	1-BKS		LCS	D Sample	e Id: 7663	3834-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	<25.0	250	245	98	245	98	90-110	0	20	mg/kg	10.09.18 15:17	

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	d: E30	0P	
Seq Number:	3065851 Matrix				Soil				Date Pre	ep: 10.0	9.18	
Parent Sample Id:	601349-001		MS Sar	nple Id:	601349-00	01 S		MSI	D Sample	Id: 601	349-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag

Analytical Method:	Chloride by EPA 3	00						P	ep Meth	od: E30	0P	
Seq Number:	3065851			Matrix:	Soil				Date Pr	ep: 10.0	9.18	
Parent Sample Id:	601349-009		MS Sar	nple Id:	601349-00)9 S		MS	D Sample	e Id: 601	349-009 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
	Rebuit	mount		/0100	Reput	/01100						

Analytical Method: Seq Number: MB Sample Id:	DRO-ORO 3065710 7663557-1-	•	3015B	LCS Sar	Matrix: nple Id:		1-BKS		LC	Prep Method Date Prep CSD Sample I	p: 10.0	8015P 4.18 3557-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP	D RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics	(DRO)	<7.48	100	117	117	112	112	63-139	4	20	mg/kg	10.05.18 15:29	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
Tricosane		92		1	03		83			65-144	%	10.05.18 15:29	
n-Triacontane		85		9	95		78			46-152	%	10.05.18 15:29	

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

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



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Analytical Method:	DRO-ORO By SW8015B
many near memour	

Analytical Method:	DRO-OR) By SW8	8015B						F	Prep Method	l: SW8	8015P	
Seq Number:	3065710				Matrix:	Soil				Date Prep	b: 10.0	4.18	
Parent Sample Id:	601349-00	1		MS Sar	nple Id:	601349-0	01 S		MS	SD Sample l	ld: 6013	349-001 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)	<7.50	100	114	114	103	103	63-139	10	20	mg/kg	10.05.18 19:43	
Surrogate					AS Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
Tricosane				1	08		98		6	5-144	%	10.05.18 19:43	
n-Triacontane				1	02		83		4	6-152	%	10.05.18 19:43	

Analytical Method:	BTEX by EPA 802	1B]	Prep Metho	d: SW:	5030B	
Seq Number:	3065600			Matrix:	Solid				Date Pre	ep: 10.0	4.18	
MB Sample Id:	7663558-1-BLK		LCS San	nple Id:	7663558-	1-BKS		LC	SD Sample	Id: 766	3558-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.0200	2.00	1.87	94	1.98	99	55-120	6	20	mg/kg	10.04.18 22:27	
Toluene	< 0.0200	2.00	1.73	87	1.84	92	77-120	6	20	mg/kg	10.04.18 22:27	
Ethylbenzene	< 0.0200	2.00	1.70	85	1.80	90	77-120	6	20	mg/kg	10.04.18 22:27	
m,p-Xylenes	< 0.0400	4.00	3.38	85	3.60	90	78-120	6	20	mg/kg	10.04.18 22:27	
o-Xylene	< 0.0200	2.00	1.66	83	1.77	89	78-120	6	20	mg/kg	10.04.18 22:27	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
4-Bromofluorobenzene	73		8	32		87		(58-120	%	10.04.18 22:27	
a,a,a-Trifluorotoluene	70	**	8	31		86			71-121	%	10.04.18 22:27	

Analytical Method:	BTEX by EPA 802	1B]	Prep Metho	d: SW3	5030B	
Seq Number:	3065600		Ν	Matrix:	Soil				Date Pre	p: 10.0	4.18	
Parent Sample Id:	601349-012		MS Sam	ple Id:	601349-0	12 S		M	SD Sample	Id: 6013	349-012 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPE	RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.0195	1.95	1.63	84	1.63	82	54-120	0	25	mg/kg	10.05.18 02:03	
Toluene	< 0.0195	1.95	1.55	79	1.48	75	57-120	5	25	mg/kg	10.05.18 02:03	
Ethylbenzene	< 0.0195	1.95	1.59	82	1.43	72	58-131	11	25	mg/kg	10.05.18 02:03	
m,p-Xylenes	< 0.00665	3.90	3.16	81	2.82	71	62-124	11	25	mg/kg	10.05.18 02:03	
o-Xylene	< 0.0195	1.95	1.57	81	1.50	76	62-124	5	25	mg/kg	10.05.18 02:03	
Surrogate			M %I		MS Flag	MSD %Re		_	Limits	Units	Analysis Date	
4-Bromofluorobenzene			8	3		92		e	58-120	%	10.05.18 02:03	
a,a,a-Trifluorotoluene			8	3		93		7	71-121	%	10.05.18 02:03	

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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



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Analytical Method:	TPH GRO by	y EPA 8	8015 Mod.						I	Prep Method	: SW:	5030B	
Seq Number:	3065605				Matrix:	Solid				Date Prep	: 10.0	4.18	
MB Sample Id:	7663561-1-BI	LK		LCS San	nple Id:	7663561-	1-BKS		LCS	SD Sample I	d: 766.	3561-1-BSD	
Parameter	I	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<	< 0.271	20.0	18.8	94	18.5	93	35-129	2	20	mg/kg	10.04.18 23:21	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSE %Rec		_	limits	Units	Analysis Date	
4-Bromofluorobenzene		91		1	13		106		7	6-123	%	10.04.18 23:21	
a,a,a-Trifluorotoluene		120		1	20		109		6	9-120	%	10.04.18 23:21	

Analytical Method:	TPH GRO	by EPA	8015 Mod.						Prep Meth	od: SW:	5030B	
Seq Number:	3065605				Matrix:	Soil			Date Pr	ep: 10.0	4.18	
Parent Sample Id:	601349-012	2		MS Sar	nple Id:	601349-0	12 S		MSD Sample	e Id: 6013	349-012 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Lim	it Units	Analysis Date	Flag
TPH-GRO		<3.94	19.7	14.5	74	14.5	75	35-129	0 20	mg/kg	10.05.18 02:57	
Surrogate				-	/IS Rec	MS Flag	MSI %Re			Units	Analysis Date	
4-Bromofluorobenzene				1	16		111		76-123	%	10.05.18 02:57	
a,a,a-Trifluorotoluene				,	70		68	**	69-120	%	10.05.18 02:57	

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

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



CHAIN OF CUSTODY

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

Phoenix, Arizona (480-355-0900)

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TRC Environmental Corporation		Project Name/Number: CS Cavlor	e/Number:										W = Water	
Company Address: 10 Desta Drive Suite 150E		Project Location: Lea Co, NM	tion:										S = Soil/Sed/Solid GW =Ground Wate	S = Soil/Sed/Solid GW =Ground Water
1, TX 79705											_		DW = Drinkii D = Droduot	DW = Drinking Water
In the second se	Phone No: 432-466-4450	Invoice To: Vangaurd C/O	O Chuck Johnston	hnston									SL = Sludge	r - rioduct SW = Surface water SL = Sludge
Project Contact: Joel Lowry		Invoice.						ţ					OW =Ocea WI = Wipe	OW =Ocean/Sea Water WI = Wipe
Samplers's Name Zach Conder												D	0 = 0	
		Collection	-		Numbe	Number of preserved bottles	botties						WW= Waste Water A = Air	te Water
No. Field ID / Point of Collection	Sample				K	HO 204 103	NE HO HOOH	08 Hc	abinold TEX 80					
1 HA-1 @ 2'	7#	9/28/2018	Time	Matrix bol s		PN 2H	ж		-		_		Field Comments	s
, HA-3 @ 1'	17	9/28/2018	12:00	U					+					
- HA-4 @ 2'	H		12:05	+				+	×	-				
	2ft	8102/82/8	12:10	s				×	×					
4														
5														
6								-						
7								+-						
8				+				+						
0				-				+						
10								+	-	+				
				Data	Data Deliverable Information									
Same Dav TAT	Dow TAT					I D		-		NOICES				
	J & Day TAT		Lev	Level II Std QC		Level IV (Fu	Level IV (Full Data Pkg /raw data)	aw data)		<u>ilowry@t</u> i	lowry@trcsolutions.com	c l	<u>bcooper@tr</u>	bcooper@trcsolutions.com
Next Day EMERGENCY	7 Day TAT		Levi	Level III Std QC+ Forms	Forms	TRRP Level IV	A IV			rhaskell@	rhaskell@concho.com			
2 Day EMERGENCY	X Contract TAT		Leve	Level 3 (CLP Forms)	(sm	UST/RG-411	11			zconder@	zconder@trcsolutions.com	mo		
3 Day EMERGENCY			TRR	TRRP Checklist						dneel2@	dneel2@concho.com			
TAT Starts Day received by Lab, if received by 5:00 pm	eived by 5:00 pm									FED.EY /	FED-EY / ILDS: Tracking #	*		
	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION. INCLUDING COURIER DEI VER	E DOCUMENTE	BELOW EAC	H TIME SAME	LES CHANGE POSS	ESSION. INCLUD	ING COURIER	DELIVER				ŧ		
Sampler:	Date Time:		Received By:	sy:		Relinquished By	1 By:		Date Time:		Received By:			
Relinquished by: 3	Date Time:	:0	Received E	By:		Relinquished By:	1 By:		Date Time:		z Received By:			
Relinquistigadoy:	Date Time	IX ALC	Received	By:	11/2.1	Custody Seal #	*	Pre	served whe	Preserved where applicable		On Ice Cooler Temp.	Thermo. Corr. Factor	r. Factor
More Affice. Signature of this document and relinquishment of samples constitutes availaburchase 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	of samples constitutes avalia	purchase order t	rom client comp	any to Xenco	its affiliates and subc	ontractors. It assig	jns standard terr	ns and co.	Iditions of se	vice. Xenco wi	I be liable only fo	r the cost of samples a	ind shall not assume any re-	Sponsibility for
terms will be enforced unless previously negotiated under a fully	/ executed client contract.		100. ^ 111111111	n chaige u ar	o will be applied to ea	ch project. Xenco:	s liability will be I	imited to t	ne cost of sai	nples. Any san	ples received by	Xenco but not analyze	d will be invoiced at \$5 per s	sample. These

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 10/04/2018 04:50:00 PM Temperature Measuring device used : IR-3 Work Order #: 601347 Comments Sample Receipt Checklist 2.7 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seals intact on shipping container/ cooler? N/A #5 Custody Seals intact on sample bottles? N/A #6*Custody Seals Signed and dated? N/A #7 *Chain of Custody present? Yes #8 Any missing/extra samples? No #9 Chain of Custody signed when relinquished/ received? Yes #10 Chain of Custody agrees with sample labels/matrix? Yes #11 Container label(s) legible and intact? Yes #12 Samples in proper container/ bottle? Yes #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes #16 All samples received within hold time? Yes #17 Subcontract of sample(s)? N/A #18 Water VOC samples have zero headspace? N/A

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

Analyst:

PH Device/Lot#:

Date: 10/04/2018

Checklist completed by: Brenda Ward Brenda Ward Checklist reviewed by: Mms Moah Kelsev Brooks

Date: 10/05/2018



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

Certificate of Analysis Summary 602206

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Date Received in Lab:Thu Oct-11-18 04:15 pmReport Date:17-OCT-18Project Manager:Kelsey Brooks

	Lab Id:	602206-0	001	602206-0	002	602206-0	003	602206-0	004	602206-0	005	602206-0)06
An aluaia Do an ostad	Field Id:	T-1 @Sur	face	T-1 @4	4'	T-1 @8	3'	N@4'		E@4'		S@4'	
Analysis Requested	Depth:			4- ft		8- ft		4- ft		4- ft		4- ft	
	Matrix:	SOIL	,	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-10-18	11:00	Oct-10-18	11:15	Oct-10-18	11:30	Oct-10-18	11:45	Oct-10-18	12:00	Oct-10-18	12:15
BTEX by EPA 8021B	Extracted:	Oct-15-18	15:50	Oct-15-18	15:50	Oct-15-18	15:50	Oct-15-18	15:50	Oct-15-18	15:50	Oct-15-18	15:50
	Analyzed:	Oct-16-18	03:14	Oct-16-18 (02:51	Oct-15-182	22:27	Oct-16-18 (00:03	Oct-16-18 (00:27	Oct-16-18 (02:27
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.0949	0.0949	< 0.0182	0.0182	< 0.0199	0.0199	< 0.0200	0.0200	< 0.0199	0.0199	< 0.0184	0.0184
Toluene		< 0.0949	0.0949	< 0.0182	0.0182	< 0.0199	0.0199	< 0.0200	0.0200	< 0.0199	0.0199	< 0.0184	0.0184
Ethylbenzene		0.237	0.0949	0.0800	0.0182	< 0.0199	0.0199	< 0.0200	0.0200	< 0.0199	0.0199	< 0.0184	0.0184
m,p-Xylenes		0.674	0.190	0.236	0.0364	< 0.0398	0.0398	< 0.0400	0.0400	< 0.0398	0.0398	0.164	0.0368
o-Xylene		< 0.0949	0.0949	0.0764	0.0182	< 0.0199	0.0199	< 0.0200	0.0200	< 0.0199	0.0199	0.0847	0.0184
Xylenes, Total		0.674	0.0949	0.3124	0.0182	< 0.0199	0.0199	< 0.02	0.02	< 0.0199	0.0199	0.2487	0.0184
Total BTEX		0.911	0.0949	0.3924	0.0182	< 0.0199	0.0199	< 0.02	0.02	< 0.0199	0.0199	0.2487	0.0184
Chloride by EPA 300	Extracted:	Oct-12-18	13:00	Oct-12-18	13:00	Oct-12-18	13:00	Oct-12-18	13:00	Oct-12-18	13:00	Oct-12-18	13:00
	Analyzed:	Oct-12-18	17:01	Oct-12-18	17:26	Oct-12-18	17:51	Oct-12-18	18:15	Oct-12-18	8:28	Oct-12-18	18:40
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		177	25.0	453	25.0	410	25.0	48.0	25.0	43.2	25.0	418	25.0
DRO-ORO By SW8015B	Extracted:	Oct-12-18	12:10	Oct-12-18	12:10	Oct-12-18	12:10	Oct-12-18	12:10	Oct-12-18	12:10	Oct-12-18	12:10
	Analyzed:	Oct-12-18	18:34	Oct-15-18	10:40	Oct-12-18	21:10	Oct-12-18	23:07	Oct-12-18 2	23:44	Oct-13-18 (00:20
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		41400	12400	417	24.8	<24.8	24.8	<25.2	25.2	<24.9	24.9	2240	250
Oil Range Hydrocarbons (ORO)		13700	12400	90.7	24.8	<24.8	24.8	<25.2	25.2	<24.9	24.9	507	250
TPH GRO by EPA 8015 Mod.	Extracted:	Oct-16-18	14:00	Oct-16-18	14:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00	Oct-12-18	12:00
	Analyzed:	Oct-16-18	20:16	Oct-16-18 2	20:43	Oct-15-18	13:41	Oct-15-18	15:29	Oct-15-18	15:56	Oct-15-18 2	20:20
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<18.5	18.5	70.4	3.46	<3.78	3.78	<3.84	3.84	<4.00	4.00	13.0	7.74

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

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Kelsey Brooks Project Manager

Final 1.000



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

Certificate of Analysis Summary 602206

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Date Received in Lab:Thu Oct-11-18 04:15 pmReport Date:17-OCT-18Project Manager:Kelsey Brooks

	Lab Id:	602206-007			
	Field Id:	W@4'			
Analysis Requested	Depth:	4- ft			
	Matrix:	SOIL			
	Sampled:	Oct-10-18 12:30			
BTEX by EPA 8021B	Extracted:	Oct-15-18 15:50		1	
	Analyzed:	Oct-16-18 00:51			
	Units/RL:	mg/kg RL			
Benzene		<0.0198 0.0198			
Toluene		<0.0198 0.0198			
Ethylbenzene		<0.0198 0.0198			
m,p-Xylenes		<0.0397 0.0397			
o-Xylene		<0.0198 0.0198			
Xylenes, Total		<0.0198 0.0198			
Total BTEX		<0.0198 0.0198			
Chloride by EPA 300	Extracted:	Oct-12-18 13:00			
	Analyzed:	Oct-12-18 19:42			
	Units/RL:	mg/kg RL			
Chloride		214 25.0			
DRO-ORO By SW8015B	Extracted:	Oct-12-18 12:10			
	Analyzed:	Oct-13-18 00:58			
	Units/RL:	mg/kg RL			
Diesel Range Organics (DRO)		<25.2 25.2			
Oil Range Hydrocarbons (ORO)		<25.2 25.2			
TPH GRO by EPA 8015 Mod.	Extracted:	Oct-12-18 12:00			
	Analyzed:	Oct-15-18 17:38			
	Units/RL:	mg/kg RL			
TPH-GRO	1	<3.98 3.98			

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

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Kelsey Brooks Project Manager

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Analytical Report 602206

for TRC Solutions, Inc

Project Manager: Joel Lowry

CS Caylor

17-OCT-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)



17-OCT-18

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

Reference: XENCO Report No(s): 602206 CS Caylor 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) 602206. 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. 602206 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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

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Sample Cross Reference 602206

TRC Solutions, Inc, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 @Surface	S	10-10-18 11:00		602206-001
T-1 @4'	S	10-10-18 11:15	4 ft	602206-002
T-1 @8'	S	10-10-18 11:30	8 ft	602206-003
N@4'	S	10-10-18 11:45	4 ft	602206-004
E@4'	S	10-10-18 12:00	4 ft	602206-005
S@4'	S	10-10-18 12:15	4 ft	602206-006
W@4'	S	10-10-18 12:30	4 ft	602206-007



Client Name: TRC Solutions, Inc Project Name: CS Caylor

Project ID: Work Order Number(s): 602206 Report Date: *17-OCT-18* Date Received: *10/11/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066309 DRO-ORO By SW8015B

Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by reanalysis.

Samples affected are: 602206-002.

Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 602206-001,602206-002,602206-006.

Surrogate Tricosane recovered above QC limits. Matrix interferences is suspected; data confirmed by reanalysis.

Samples affected are: 602206-001,602206-006.

Batch: LBA-3066477 TPH GRO by EPA 8015 Mod.

Surrogate 4-Bromofluorobenzene, Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 602206-003 S,602206-003 SD.

Batch: LBA-3066483 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 602206-006,602206-001,602206-002.

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

Batch: LBA-3066578 TPH GRO by EPA 8015 Mod.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 602206-002.

Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7664257-1-BLK.



TRC Solutions, Inc, Midland, TX

Sample Id:T-1 @SurfaceLab Sample Id:602206-001		Matrix: Date Coll	Soil ected: 10.10	.18 11.00	E	ate Received:10.	11.18 16.1	5
Analytical Method: Chloride by E Tech: RNL	PA 300				%	rep Method: E30 5 Moisture:		
Analyst:RNLSeq Number:3066281		Date Prep	: 10.12	.18 13.00	В	asis: We	et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	25.0		mg/kg	10.12.18 17.01		1
Analytical Method: DRO-ORO B	y SW8015B				Р	rep Method: SW	/8015P	
Tech: PGM					%	Moisture:		
Analyst: PGM		Date Prep	: 10.12	.18 12.10	В	asis: We	et Weight	
Seq Number: 3066309								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	41400	12400		mg/kg	10.12.18 18.34		500
Oil Range Hydrocarbons (ORO)	PHCG2835	13700	12400		mg/kg	10.12.18 18.34		500
Surrogate		Cas Number	%	Units	Limits	Analysis Date	Flag	
		Cas Number	Recovery	Units	Linnts	Analysis Date	Tiag	
Tricosane		638-67-5	27879	%	65-144	10.12.18 18.34	**	
Tricosane n-Triacontane		638-67-5 638-68-6	27879 22121	% %	65-144 46-152	10.12.18 18.34 10.12.18 18.34	**	
n-Triacontane	A 8021B				46-152	10.12.18 18.34	**	
n-Triacontane Analytical Method: BTEX by EPA	A 8021B				46-152 P	10.12.18 18.34 rep Method: SW	**	
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT	A 8021B	638-68-6	22121		46-152 P	10.12.18 18.34 rep Method: SW 5 Moisture:	** 75030B	
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT	A 8021B		22121	%	46-152 P	10.12.18 18.34 rep Method: SW 5 Moisture:	**	
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483	A 8021B Cas Number	638-68-6	22121	%	46-152 P	10.12.18 18.34 rep Method: SW 5 Moisture:	** 75030B	Dil
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter		638-68-6 Date Prep	22121 : 10.15	%	46-152 P % B	10.12.18 18.34 rep Method: SW o Moisture: asis: We	** 75030B et Weight	Dil 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene	Cas Number	638-68-6 Date Prep Result	22121 : 10.15 RL	%	46-152 P % B Units	10.12.18 18.34 rep Method: SW Moisture: asis: We Analysis Date	** 75030B et Weight Flag	
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Senzene Soluene	Cas Number 71-43-2	638-68-6 Date Prep Result <0.0949	22121 : 10.15 RL 0.0949	%	46-152 P % B Units mg/kg	10.12.18 18.34 rep Method: SW Moisture: asis: We <u>Analysis Date</u> 10.16.18 03.14	** 75030B et Weight Flag U	5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene Coluene Cthylbenzene	Cas Number 71-43-2 108-88-3	638-68-6 Date Prep Result <0.0949 <0.0949	22121 : 10.15 RL 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg	10.12.18 18.34 rep Method: SW b Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14	** 75030B et Weight Flag U	5 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene Coluene Cthylbenzene n,p-Xylenes	Cas Number 71-43-2 108-88-3 100-41-4	638-68-6 Date Prep Result <0.0949 <0.0949 0.237	22121 : 10.15 RL 0.0949 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg mg/kg	10.12.18 18.34 rep Method: SW b Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14	** 75030B et Weight Flag U	5 5 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Coluene Coluene Chylbenzene n,p-XylenesXylene	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	638-68-6 Date Prep Result <0.0949 <0.0949 0.237 0.674 <0.0949 0.674	22121 : 10.15 RL 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 18.34 rep Method: SW b Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14	** /5030B et Weight Flag U U	5 5 5 5 5 5 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene Coluene Cthylbenzene n,p-Xylenes -Xylene Xylene, Total	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Prep Result <0.0949 <0.0949 0.237 0.674 <0.0949	22121 : 10.15 RL 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 18.34 rep Method: SW b Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14	** /5030B et Weight Flag U U	5 5 5 5 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene Foluene Ethylbenzene n,p-Xylenes Sylene Kylenes, Total	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Prep Result <0.0949 <0.0949 0.237 0.674 <0.0949 0.674 0.674 0.911	22121 : 10.15 RL 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 18.34 rep Method: SW b Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14	** /5030B et Weight Flag U U	5 5 5 5 5 5 5
n-Triacontane Analytical Method: BTEX by EPA Tech: MIT Analyst: MIT Seq Number: 3066483 Parameter Benzene Toluene Ethylbenzene m,p-Xylenes D-Xylene Xylenes, Total Total BTEX	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Prep Result <0.0949 <0.0949 0.237 0.674 <0.0949 0.674 0.674 0.911	22121 : 10.15 RL 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949 0.0949	%	46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 18.34 rep Method: SW Moisture: asis: We Analysis Date 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14 10.16.18 03.14	** 75030B et Weight Flag U U U	5 5 5 5 5 5 5



TRC Solutions, Inc, Midland, TX

Sample Id: T-1 @Surface		Matrix:	Soil	Date Rece	ived:10.11.18 16.15	
Lab Sample Id: 602206-001		Date Collecte	d: 10.10.18 11.00			
Analytical Method: TPH GRO	by EPA 8015 Mod.			Prep Meth	od: SW5030B	
Tech: MIT				% Moistu	re:	
Analyst: MIT		Date Prep:	10.16.18 14.00	Basis:	Wet Weight	
Seq Number: 3066578						
Parameter	Cas Number	Result E	21	Unite Analys	is Data Flag	Dil

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
TPH-GRO	8006-61-9	<18.5	18.5		mg/kg	10.16.18 20.16	U	5	,
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene		460-00-4	110	%	76-123	10.16.18 20.16			
a,a,a-Trifluorotoluene		98-08-8	94	%	69-120	10.16.18 20.16			



TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample Id:	T-1 @4' 602206-002		Matrix: Soil Date Collected: 10.10.18 11.15		.18 11.15	Date Received:10.11.18 16. Sample Depth:4 ft			5
Analytical Meth	nod: Chloride by EPA	300				Р	rep Method: E3	00P	
-	RNL						6 Moisture:		
	RNL		Date Pre	n: 10.12	.18 13.00	В	asis: We	et Weight	
Seq Number: 3			Date The	p. 10.12	.10 12:00	2		ee ii eigiit	
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	453	25.0		mg/kg	10.12.18 17.26		1
Analytical Math	and DRO ORO By S	W9015D				n	wan Mathada SW	V9015D	
-	nod: DRO-ORO By S	W 8013B					rep Method: SV 6 Moisture:	v 8013F	
	PGM			10.10	10.12.10				
5	PGM		Date Pre	p: 10.12	.18 12.10	E	Basis: We	et Weight	
Seq Number:	3000309								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Org	anics (DRO)	C10C28DRO	417	24.8		mg/kg	10.15.18 10.40		1
Oil Range Hydroc	carbons (ORO)	PHCG2835	90.7	24.8		mg/kg	10.15.18 10.40		1
Surrogate			Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Tricosane			638-67-5	63	%	65-144	10.15.18 10.40	**	
n-Triacontano	e		638-68-6	261	%	46-152	10.15.18 10.40	**	
Analytical Meth	od. BTEX by EDA S	021B				a	ren Method: SV	V5030B	
	nod: BTEX by EPA 8	021B					rep Method: SV	V5030B	
Tech:	MIT	021B	Data Par		19 15 50	%	6 Moisture:		
Tech: M Analyst: M	MIT	021B	Date Pre	p: 10.15.	.18 15.50	%	6 Moisture:	V5030B et Weight	
Tech: M Analyst: M Seq Number: 3	MIT	021B Cas Number	Date Pre Result	p: 10.15. RL	.18 15.50	%	6 Moisture:		Dil
Tech: I Analyst: I Seq Number: 3 Parameter	MIT			F .	.18 15.50	% B	6 Moisture: Basis: Wo	et Weight	Dil 1
Tech: M Analyst: M Seq Number: 3 Parameter Benzene	MIT	Cas Number	Result	RL	.18 15.50	% E Units	6 Moisture: Basis: Wo Analysis Date	et Weight Flag	
Tech: I Analyst: I Seq Number: 3 Parameter Benzene Foluene	MIT	Cas Number 71-43-2	Result <0.0182	RL 0.0182	.18 15.50	% E Units mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51	et Weight Flag U	1
Tech: I Analyst: I Seq Number: 3 Parameter Benzene Foluene Ethylbenzene n,p-Xylenes	MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	Result <0.0182 <0.0182 0.0800 0.236	RL 0.0182 0.0182 0.0182 0.0364	.18 15.50	% E Units mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U	1
Tech: I Analyst: I Seq Number: 3 Parameter Benzene Foluene Ethylbenzene m,p-Xylenes o-Xylene	MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0182 <0.0182 0.0800 0.236 0.0764	RL 0.0182 0.0182 0.0182 0.0182 0.0364 0.0182	.18 15.50	% Units Mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U	1 1 1 1
Tech: N Analyst: N Seq Number: 3 Parameter Benzene Toluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total	MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	Result <0.0182 <0.0182 0.0800 0.236 0.0764 0.3124	RL 0.0182 0.0182 0.0182 0.0364 0.0182 0.0182	.18 15.50	% Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U	1 1 1 1 1 1
Tech: N Analyst: N Seq Number: 3 Parameter Benzene Toluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total	MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0182 <0.0182 0.0800 0.236 0.0764	RL 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182	.18 15.50	% Units Mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U	1 1 1 1
Tech: M Analyst: M	MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0182 <0.0182 0.0800 0.236 0.0764 0.3124	RL 0.0182 0.0182 0.0182 0.0364 0.0182 0.0182	.18 15.50 Units	% Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U	1 1 1 1 1 1
Tech: N Analyst: N Seq Number: 3 Parameter Benzene Toluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total Total BTEX	MIT MIT 3066483	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0182 <0.0182 0.0800 0.236 0.0764 0.3124 0.3924	RL 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 %		% E Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	6 Moisture: Basis: Wo Analysis Date 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51 10.16.18 02.51	et Weight Flag U U	1 1 1 1 1 1



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Sample Id: T-1 @4' Lab Sample Id: 602206-002	Matrix: Soil Date Collected: 10.10	0.18 11.15	Date Received Sample Depth:	:10.11.18 16.15 :4 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066578	Date Prep: 10.16	6.18 14.00	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	70.4	3.46		mg/kg	10.16.18 20.43		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	222	%	76-123	10.16.18 20.43	**	
a,a,a-Trifluorotoluene		98-08-8	72	%	69-120	10.16.18 20.43		



TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample Id:	T-1 @8' 602206-003		Matrix: Soil Date Collected: 10.10.18 11.30			Date Received:10.11.18 16.15 Sample Depth: 8 ft			5
Analytical Meth	nod: Chloride by EPA	A 300				Р	rep Method: E30	00P	
-	RNL	1000					6 Moisture:		
	RNL		Date Pre	n: 10.12	.18 13.00			t Weight	
Seq Number: 3			Date Fle	p. 10.12.	.10 15.00	Ľ	asis. we	a weight	
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	410	25.0		mg/kg	10.12.18 17.51		1
Analytical Meth	nod: DRO-ORO By S	SW8015B				р	rep Method: SW	/8015P	
	PGM						Moisture:		
	PGM		Date Pre	n: 10.12	.18 12.10			t Weight	
Seq Number: 3			Date Prej	p. 10.12	.10 12.10	D	visio. vve	a weight	
Seq Number.	1000307								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
viesel Range Organ	nics (DRO)	C10C28DRO	<24.8	24.8		mg/kg	10.12.18 21.10	U	1
il Range Hydroca	urbons (ORO)	PHCG2835	<24.8	24.8		mg/kg	10.12.18 21.10	U	1
Surrogate			Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Tricosane			638-67-5	Recovery 89	%	65-144	10.12.18 21.10	0	
n-Triacontane	е		638-68-6	97	%	46-152	10.12.18 21.10		
Analytical Meth	od BTEX by EPA S	2021B				D	ren Method: SW	/5030B	
	nod: BTEX by EPA 8	3021B					rep Method: SW	/5030B	
Tech: N	MIT	3021B		10.15	10 15 50	%	Moisture:		
Tech: M Analyst: M	MIT MIT	3021B	Date Prej	p: 10.15	.18 15.50	%	Moisture:	75030B et Weight	
Tech: M Analyst: M	MIT MIT	3021B	Date Prej	p: 10.15	.18 15.50	%	Moisture:		
Tech: N Analyst: N Seq Number: 3	MIT MIT	3021B Cas Number		RL	.18 15.50	%	Moisture:		Dil
Tech: N Analyst: N Seq Number: 3 Parameter	MIT MIT	Cas Number 71-43-2	Result <0.0199	RL 0.0199	.18 15.50	% B Units mg/kg	Moisture: asis: We Analysis Date	et Weight Flag U	Dil 1
Fech: M Analyst: M Seq Number: 3 arameter enzene oluene	MIT MIT	Cas Number 71-43-2 108-88-3	Result <0.0199 <0.0199	RL 0.0199 0.0199	.18 15.50	% B Units mg/kg mg/kg	Moisture: asis: We Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U	1
Tech: M Analyst: M Seq Number: 3 arameter enzene oluene thylbenzene	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4	Result <0.0199 <0.0199 <0.0199	RL 0.0199 0.0199 0.0199	.18 15.50	% Units mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U	1 1 1
Tech: M Analyst: M Seq Number: 3 arameter enzene oluene thylbenzene n,p-Xylenes	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	Result <0.0199 <0.0199 <0.0199 <0.0398	RL 0.0199 0.0199 0.0199 0.0398	.18 15.50	% Units mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	t Weight Flag U U U U U	1 1 1 1
Tech: M Analyst: M Seq Number: 3 arameter enzene oluene thylbenzene n,p-Xylenes -Xylene	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0199	RL 0.0199 0.0199 0.0199 0.0398 0.0398 0.0199	.18 15.50	% Units Mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U U U U	1 1 1 1
Tech: M Analyst: M Seq Number: 3 Parameter Benzene Toluene Cthylbenzene n,p-Xylenes -Xylene Kylenes, Total	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	Result <0.0199	RL 0.0199 0.0199 0.0199 0.0398 0.0199 0.0199	.18 15.50	% Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U U U U U	1 1 1 1 1 1
Tech: M Analyst: M Seq Number: 3 Parameter Benzene Toluene Chylbenzene n,p-Xylenes Xylene Kylenes, Total	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0199	RL 0.0199 0.0199 0.0199 0.0398 0.0199 0.0199 0.0199	.18 15.50	% Units Mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U U U U	1 1 1 1
Tech: M Analyst: M Seq Number: 3 Parameter Senzene Soluene Sthylbenzene 1,p-Xylenes -Xylene Kylenes, Total	MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0199	RL 0.0199 0.0199 0.0199 0.0398 0.0199 0.0199 0.0199 %	.18 15.50 Units	% Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U U U U U	1 1 1 1
Tech: N Analyst: N Seq Number: 3 Parameter Benzene Goluene Sthylbenzene n,p-Xylenes O-Xylene Cylenes, Total Total BTEX	MIT MIT 3066483	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	Result <0.0199	RL 0.0199 0.0199 0.0199 0.0398 0.0199 0.0199 0.0199		% Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Analysis Date 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27 10.15.18 22.27	et Weight Flag U U U U U U U U U U	1 1 1 1 1 1



TRC Solutions, Inc, Midland, TX

Sample Id: T-1 @8' Lab Sample Id: 602206-003	Matrix: Soil Date Collected: 10.10.18 11.30	Date Received:10.11.18 16.15 Sample Depth: 8 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066477	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.78	3.78		mg/kg	10.15.18 13.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	76-123	10.15.18 13.41		
a,a,a-Trifluorotoluene	9	98-08-8	78	%	69-120	10.15.18 13.41		



TRC Solutions, Inc, Midland, TX

Sample Id: N@4' Lab Sample Id: 602206-004		Matrix: Date Col	Soil lected: 10.10	.18 11.45		ate Received:10 ample Depth:4 f		5
Analytical Method: Chloride by H	EPA 300				Р	rep Method: E3	00P	
Tech: RNL						Moisture:		
Analyst: RNL		Date Pre	p: 10.12	.18 13.00	В	asis: W	et Weight	
Seq Number: 3066281		Butorrej	p				6	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.0	25.0		mg/kg	10.12.18 18.15		1
Analytical Method: DRO-ORO E	Sy SW8015B				Р	rep Method: SV	V8015P	
Tech: PGM					%	Moisture:		
Analyst: PGM		Date Pre	p: 10.12	.18 12.10	В	asis: W	et Weight	
Seq Number: 3066309								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.2	25.2		mg/kg	10.12.18 23.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.2	25.2		mg/kg	10.12.18 23.07	U	1
a		<i>a</i>	%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
Tricosane n-Triacontane		638-67-5 638-68-6	107 90	% %	65-144 46-152	10.12.18 23.07 10.12.18 23.07		
Analytical Method: BTEX by EP	A 8021B				Р	rep Method: SV	V5030B	
Tech: MIT					%	Moisture:		
Analyst: MIT		Date Pre	p: 10.15	.18 15.50	В	asis: W	et Weight	
Seq Number: 3066483							-	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0200	0.0200		mg/kg	10.16.18 00.03	U	1
Toluene	108-88-3	< 0.0200	0.0200		mg/kg	10.16.18 00.03	U	1
Ethylbenzene	100-41-4	< 0.0200	0.0200		mg/kg	10.16.18 00.03	U	1
n,p-Xylenes	179601-23-1	< 0.0400	0.0400		mg/kg	10.16.18 00.03	U	1
o-Xylene	05 15 6	< 0.0200	0.0200		mg/kg	10.16.18 00.03	U	1
	95-47-6				4	10 16 10 00 02		
Xylenes, Total	95-47-6 1330-20-7	< 0.02	0.02		mg/kg	10.16.18 00.03	U	1
Xylenes, Total		<0.02 <0.02	0.02		mg/kg mg/kg	10.16.18 00.03	U U	1 1
Xylenes, Total			0.02 %	Units				
Xylenes, Total Total BTEX		< 0.02	0.02	Units %	mg/kg	10.16.18 00.03	U	



TRC Solutions, Inc, Midland, TX

Sample Id: N@4' Lab Sample Id: 602206-004	Matrix: Soil Date Collected: 10.10.18 11.45	Date Received:10.11.18 16.15 Sample Depth: 4 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066477	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.84	3.84		mg/kg	10.15.18 15.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	76-123	10.15.18 15.29		
a,a,a-Trifluorotoluene		98-08-8	78	%	69-120	10.15.18 15.29		


TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample Id	E@4' l: 602206-005		Matrix: Date Col	Soil lected: 10.10	.18 12.00	Date Received:10.11.18 16.15 Sample Depth: 4 ft				
Analytical Me	thod: Chloride by EPA	A 300				р	rep Method: E30)0P		
Tech:	RNL	1 500					6 Moisture:	JJJJJJJJJJJJJ		
Analyst:	RNL		Date Pre	n: 10.12	.18 13.00			t Weight		
Seq Number:			Date Fle	p. 10.12	.10 15.00	D		t weight		
Seq Number.	5000281									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	43.2	25.0		mg/kg	10.12.18 18.28		1	
Analytical Me	thod: DRO-ORO By S	SW8015B				Р	rep Method: SW	78015P		
Tech:	PGM						Moisture:			
Analyst:	PGM		Date Pre	n: 10.12	.18 12.10			t Weight		
Seq Number:			Date Fle	P. 10.12	.10 12.10	Ľ				
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Diesel Range Org	-	C10C28DRO	<24.9	24.9		mg/kg	10.12.18 23.44	U	1	
Dil Range Hydro	carbons (ORO)	PHCG2835	<24.9	24.9		mg/kg	10.12.18 23.44	U	1	
				%						
Surrogate			Cas Number	Recovery	Units	Limits	Analysis Date	Flag		
Tricosane			638-67-5	Recovery 94	%	65-144	10.12.18 23.44	Flag		
-	ane			•			•	Flag		
Tricosane n-Triaconta		8021B	638-67-5	94	%	65-144 46-152	10.12.18 23.44 10.12.18 23.44			
Tricosane n-Triaconta Analytical Me	thod: BTEX by EPA 8	8021B	638-67-5	94	%	65-144 46-152 P	10.12.18 23.44 10.12.18 23.44 rep Method: SW			
Tricosane n-Triaconta Analytical Me Tech:	thod: BTEX by EPA 5	8021B	638-67-5 638-68-6	94 92	% %	65-144 46-152 P	10.12.18 23.44 10.12.18 23.44 rep Method: SW	75030B		
Tricosane n-Triaconta	thod: BTEX by EPA 8 MIT MIT	8021B	638-67-5	94 92	%	65-144 46-152 P	10.12.18 23.44 10.12.18 23.44 rep Method: SW			
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 8 MIT MIT	8021B Cas Number	638-67-5 638-68-6	94 92	% %	65-144 46-152 P	10.12.18 23.44 10.12.18 23.44 rep Method: SW	75030B	Dil	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter	thod: BTEX by EPA 8 MIT MIT		638-67-5 638-68-6 Date Pre	94 92 p: 10.15	% %	65-144 46-152 P % B	10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: easis: We <u>Analysis Date</u> 10.16.18 00.27	75030B t Weight	Dil 1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199	94 92 92 RL 0.0199 0.0199	% %	65-144 46-152 P % B Units	10.12.18 23.44 10.12.18 23.44 rep Method: SW Moisture: Basis: We Analysis Date	75030B t Weight Flag		
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene 'oluene	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199	94 92 92 RL 0.0199 0.0199 0.0199	% %	65-144 46-152 P % B Units mg/kg	10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We <u>Analysis Date</u> 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U	1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene Coluene Cithylbenzene n,p-Xylenes	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	638-67-5 638-68-6 Date Pres Result <0.0199 <0.0199 <0.0199 <0.0398	94 92 92 RL 0.0199 0.0199 0.0199 0.0398	% %	65-144 46-152 P % B Units mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: casis: We Analysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U U	1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene Foluene Schuene Schuene Schuene Schuenes Schuenes Schuenes Schuenes	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199 <0.0398 <0.0199	p: 10.15 RL 0.0199 0.0199 0.0398 0.0199	% %	65-144 46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We Malysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U U U U U U U	1 1 1 1 1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene n,p-Xylenes S-Xylene Kylenes, Total	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199 <0.0199 <0.0199	94 92 92 RL 0.0199 0.0199 0.0199 0.0398 0.0199 0.0199	% %	65-144 46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We Analysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U U U U U U U U U	1 1 1 1 1 1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene n,p-Xylenes S-Xylene Kylenes, Total	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199 <0.0398 <0.0199	94 92 92 RL 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199	% %	65-144 46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We Malysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U U U U U U U	1 1 1 1 1	
Tricosane n-Triaconta Analytical Me Tech: Analyst:	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199 <0.0199 <0.0199	94 92 92 RL 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199 9,00199	% %	65-144 46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We Analysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Flag U U U U U U U U U	1 1 1 1 1 1 1	
Tricosane n-Triaconta Analytical Me Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene n,p-Xylenes o-Xylene Kylenes, Total Fotal BTEX Surrogate	thod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-67-5 638-68-6 Date Pre Result <0.0199 <0.0199 <0.0199 <0.0199 <0.0199 <0.0199 <0.0199	94 92 92 RL 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199 0.0199	%	65-144 46-152 P % B Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	10.12.18 23.44 10.12.18 23.44 10.12.18 23.44 rep Method: SW 6 Moisture: asis: We Analysis Date 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27 10.16.18 00.27	75030B t Weight Thag U U U U U U U U U U U U	1 1 1 1 1 1 1	



TRC Solutions, Inc, Midland, TX

Sample Id:E@4'Lab Sample Id:602206-005	Matrix: Soil Date Collected: 10.10.18 12.00	Date Received:10.11.18 16.15 Sample Depth: 4 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066477	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<4.00	4.00		mg/kg	10.15.18 15.56	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	103	%	76-123	10.15.18 15.56		
a,a,a-Trifluorotoluene	9	98-08-8	123	%	69-120	10.15.18 15.56	**	



TRC Solutions, Inc, Midland, TX

Sample Id: S@4' Lab Sample Id: 602206-006			Matrix: Date Col	Soil lected: 10.10	.18 12.15	Date Received:10.11.18 16.15 Sample Depth:4 ft				
Analytical Meth	hod: Chloride by EPA	300				р	rep Method: E3	800P		
-	RNL	500					6 Moisture:			
	RNL		Date Pre		.18 13.00			et Weight		
Seq Number:			Date Pre	p: 10.12	.18 13.00	Ľ	Jasis. W	et weight		
seq Number.	5000281									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	418	25.0		mg/kg	10.12.18 18.40		1	
Analytical Meth	hod: DRO-ORO By S	W8015B				Р	Prep Method: SV	W8015P		
-	PGM						6 Moisture:			
	PGM		Date Pre	n· 10.12	.18 12.10			et Weight		
Seq Number:			Date The	p. 10.12	.10 12.10	2		er i eight		
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Diesel Range Org	zanics (DRO)	C10C28DRO	2240	250		mg/kg	10.13.18 00.20		10	
Oil Range Hydro		PHCG2835	507	250		mg/kg	10.13.18 00.20		10	
				%						
Surrogate			Cas Number	Recovery	Units	Limits	Analysis Date	-		
Tricosane			638-67-5	869	%	65-144	10.13.18 00.20	**		
n-Triacontan	ne		638-68-6	829	%	46-152	10.13.18 00.20			
n-Triacontan	ie						10.13.18 00.20			
	ne hod: BTEX by EPA 8	021B				46-152	10.13.18 00.20 Prep Method: SV	**		
Analytical Meth		021B				46-152 P		**		
Analytical Meth	hod: BTEX by EPA 8	021B		829		46-152 P	Prep Method: SV 6 Moisture:	**		
Analytical Meth	hod: BTEX by EPA 8 MIT MIT	021B	638-68-6	829	%	46-152 P	Prep Method: SV 6 Moisture:	** W5030B		
Analytical Meth Tech: Analyst: Seq Number:	hod: BTEX by EPA 8 MIT MIT	021B Cas Number	638-68-6 Date Pre	829	%	46-152 P	Prep Method: SV 6 Moisture:	** W5030B	Dil	
Analytical Meth Tech: Analyst: Seq Number: Parameter	hod: BTEX by EPA 8 MIT MIT		638-68-6 Date Pre	829 p: 10.15	%	46-152 P % E	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27	** V5030B et Weight	Dil	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene	hod: BTEX by EPA 8 MIT MIT	Cas Number	638-68-6 Date Pre Result	829 p: 10.15 RL	%	46-152 P % E Units	Prep Method: SV 6 Moisture: Basis: W Analysis Date	** W5030B et Weight Flag		
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Foluene	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4	638-68-6 Date Pre Result <0.0184	829 p: 10.15 RL 0.0184 0.0184 0.0184	%	46-152 P % E Units mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U	1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene n,p-Xylenes	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	638-68-6 Date Pre Result <0.0184 <0.0184 0.164	829 p: 10.15 RL 0.0184 0.0184 0.0184 0.0368	%	46-152 P % E Units mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U U	1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene m,p-Xylenes D-Xylene	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Pre Result <0.0184 <0.0184 <0.0184 0.164 0.0847	829 p: 10.15 RL 0.0184 0.0184 0.0368 0.0184	%	46-152 P % E Units mg/kg mg/kg mg/kg mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U U	1 1 1 1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1	638-68-6 Date Pre Result <0.0184 <0.0184 0.0184 0.0184 0.0847 0.2487	829 p: 10.15 RL 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184	%	46-152 P % E Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U U	1 1 1 1 1 1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Foluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Pre Result <0.0184 <0.0184 <0.0184 0.164 0.0847	829 p: 10.15 RL 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184	%	46-152 P % E Units mg/kg mg/kg mg/kg mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U U	1 1 1 1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Toluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total	hod: BTEX by EPA 8 MIT MIT	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Pre Result <0.0184 <0.0184 0.0184 0.0184 0.0847 0.2487	829 p: 10.15 RL 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 9%	%	46-152 P % E Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** V5030B et Weight Flag U U U U	1 1 1 1 1 1	
Analytical Meth Tech: Analyst: Seq Number: Parameter Benzene Toluene Ethylbenzene m,p-Xylenes o-Xylene Xylenes, Total Total BTEX	hod: BTEX by EPA 8 MIT MIT 3066483	Cas Number 71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	638-68-6 Date Pre Result <0.0184 <0.0184 <0.0184 0.0847 0.2487 0.2487 0.2487	829 p: 10.15 RL 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184 0.0184	%	46-152 P % E Units mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Prep Method: SW 6 Moisture: Basis: W Analysis Date 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27 10.16.18 02.27	** W5030B et Weight Flag U U U Flag	1 1 1 1 1 1	



TRC Solutions, Inc, Midland, TX

Sample Id: S@4' Lab Sample Id: 602206-006	Matrix: Soil Date Collected: 10.10.18 12.15	Date Received:10.11.18 16.15 Sample Depth:4 ft
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066477	Date Prep: 10.12.18 12.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	13.0	7.74		mg/kg	10.15.18 20.20		2
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	138	%	76-123	10.15.18 20.20	**	
a,a,a-Trifluorotoluene		98-08-8	77	%	69-120	10.15.18 20.20		



TRC Solutions, Inc, Midland, TX

Sample Id: W@4' Lab Sample Id: 602206-007	Matrix: Date Col	Matrix: Soil Date Collected: 10.10.18 12.30			Date Received:10.11.18 16.15 Sample Depth: 4 ft			
Analytical Method: Chloride by H	EPA 300				Р	rep Method: E3	300P	
Tech: RNL						Moisture:		
Analyst: RNL		Date Pre	p: 10.12	2.18 13.00	В	asis: W	et Weight	
Seq Number: 3066281		Buterre	p				6	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	214	25.0		mg/kg	10.12.18 19.42		1
Analytical Method: DRO-ORO B	y SW8015B				Р	rep Method: SV	W8015P	
Tech: PGM					%	6 Moisture:		
Analyst: PGM		Date Pre	p: 10.12	2.18 12.10	В	asis: W	et Weight	
Seq Number: 3066309								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.2	25.2		mg/kg	10.13.18 00.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.2	25.2		mg/kg	10.13.18 00.58	U	1
		<i>a</i>	%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	-	
Tricosane n-Triacontane		638-67-5 638-68-6	107 108	% %	65-144 46-152	10.13.18 00.58 10.13.18 00.58		
Analytical Method: BTEX by EP	A 8021B				Р	rep Method: SV	V5030B	
Tech: MIT						6 Moisture:		
Analyst: MIT		Date Pre	p: 10.15	5.18 15.50			et Weight	
Seq Number: 3066483		,	r ·				C	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0198	0.0198		mg/kg	10.16.18 00.51	U	1
Toluene	108-88-3	< 0.0198	0.0198		mg/kg	10.16.18 00.51	U	1
Ethylbenzene	100-41-4	< 0.0198	0.0198		mg/kg	10.16.18 00.51	U	1
m,p-Xylenes	179601-23-1	< 0.0397	0.0397		mg/kg	10.16.18 00.51	U	1
o-Xylene	05 47 6	< 0.0198	0.0198		mg/kg	10.16.18 00.51	U	1
	95-47-6					10 16 10 00 51		
Xylenes, Total	95-47-6 1330-20-7	< 0.0198	0.0198		mg/kg	10.16.18 00.51	U	1
Xylenes, Total			0.0198		mg/kg mg/kg	10.16.18 00.51	U U	1 1
Xylenes, Total Total BTEX Surrogate		< 0.0198	0.0198 %	Units			U	
Xylenes, Total Total BTEX		<0.0198 <0.0198	0.0198	Units %	mg/kg	10.16.18 00.51	U	



TRC Solutions, Inc, Midland, TX

Sample Id: W@4' Lab Sample Id: 602206-007	Matrix:	Soil	Date Received:10.11.18 16.15			
	Date Collecte	d: 10.10.18 12.30	Sample Depth: 4 ft			
Analytical Method:TPH GRO by EPA 8015 Mod.Tech:MITAnalyst:MITSeq Number:3066477	Date Prep:	10.12.18 12.00	Prep Methoc % Moisture: Basis:	l: SW5030B Wet Weight		

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<3.98	3.98		mg/kg	10.15.18 17.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	2	460-00-4	110	%	76-123	10.15.18 17.38		
a,a,a-Trifluorotoluene	9	98-08-8	81	%	69-120	10.15.18 17.38		



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

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

+ NELAC certification not offered for this compound.

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



TRC Solutions, Inc

CS Caylor

Analytical Method:	Chloride by EPA 30	00						Pi	rep Meth	od: E300)P	
Seq Number:	3066281			Matrix:	Solid				Date Pr	ep: 10.1	2.18	
MB Sample Id:	7664115-1-BLK		LCS Sar	nple Id:	7664115-	1-BKS		LCS	D Sample	e Id: 7664	115-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	2.26	250	244	98	246	98	90-110	1	20	mg/kg	10.12.18 16:36	

Analytical Method:	Chloride by EPA 30	00						Pı	ep Metho	od: E30	0P	
Seq Number:	3066281			Matrix:	Soil				Date Pr	ep: 10.1	2.18	
Parent Sample Id:	602206-006		MS Sar	nple Id:	602206-00)6 S		MS	D Sample	e Id: 6022	206-006 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	418	250	648	92	653	94	80-120	1	20	mg/kg	10.12.18 19:05	

Analytical Method:	Chloride by EPA 30)0						Pi	ep Meth	od: E30	0P	
Seq Number:	3066281			Matrix:	Soil				Date Pr	ep: 10.1	2.18	
Parent Sample Id:	602206-007		MS Sar	nple Id:	602206-00	07 S		MS	D Sample	e Id: 602	206-007 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	214	250	468	102	466	101	80-120	0	20	mg/kg	10.12.18 20:07	

Analytical Method:	DRO-ORO By	V SW8	8015B						I	Prep Method	: SW	3015P	
Seq Number:	3066309				Matrix:	Solid				Date Prep	: 10.1	2.18	
MB Sample Id:	7664121-1-BL	K		LCS Sar	nple Id:	7664121-	1-BKS		LCS	SD Sample I	d: 766	4121-1-BSD	
Parameter		MB esult	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics	(DRO) <	7.48	100	91.8	92	94.7	95	63-139	3	20	mg/kg	10.12.18 17:18	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSE %Rec			Limits	Units	Analysis Date	
Tricosane		79		-	70		104		6	5-144	%	10.12.18 17:18	
n-Triacontane		70		-	70		62		4	6-152	%	10.12.18 17:18	

[D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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



TRC Solutions, Inc

CS Caylor

Analytical Method:	DRO-ORO By SW8015B
---------------------------	--------------------

Analytical Method:	DRO-ORO	By SW8	8015B						Prep Metho	d: SW8	3015P	
Seq Number:	3066309				Matrix:	Soil			Date Pre	p: 10.1	2.18	
Parent Sample Id:	602206-003			MS San	nple Id:	602206-00	03 S		MSD Sample	Id: 6022	206-003 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Limi	t Units	Analysis Date	Flag
Diesel Range Organics (I	DRO)	<7.47	99.9	116	116	106	107	63-139	9 20	mg/kg	10.12.18 21:47	
Surrogate					IS Rec	MS Flag	MSD %Re			Units	Analysis Date	
Tricosane				1	31		120		65-144	%	10.12.18 21:47	
n-Triacontane				8	34		84		46-152	%	10.12.18 21:47	

Analytical Method:	BTEX by EPA 802	lB]	Prep Metho	d: SW5	5030B	
Seq Number:	3066483		I	Matrix:	Solid				Date Pre	p: 10.1	5.18	
MB Sample Id:	7664183-1-BLK		LCS San	nple Id:	7664183-	1-BKS		LC	SD Sample	Id: 7664	4183-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.0200	2.00	1.94	97	1.93	97	55-120	1	20	mg/kg	10.15.18 20:25	
Toluene	< 0.0200	2.00	1.92	96	1.90	95	77-120	1	20	mg/kg	10.15.18 20:25	
Ethylbenzene	< 0.0200	2.00	1.95	98	1.95	98	77-120	0	20	mg/kg	10.15.18 20:25	
m,p-Xylenes	< 0.0400	4.00	3.89	97	3.90	98	78-120	0	20	mg/kg	10.15.18 20:25	
o-Xylene	< 0.0200	2.00	1.97	99	1.97	99	78-120	0	20	mg/kg	10.15.18 20:25	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
4-Bromofluorobenzene	86		9	1		100		(68-120	%	10.15.18 20:25	
a,a,a-Trifluorotoluene	84		9	2		100		,	71-121	%	10.15.18 20:25	

Analytical Method:	BTEX by EPA 802	1B							Prep Metho	1: SW5	5030B	
Seq Number:	3066483		I	Matrix:	Soil				Date Pre	p: 10.1	5.18	
Parent Sample Id:	602206-003		MS San	ple Id:	602206-00	03 S		М	SD Sample	Id: 6022	206-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	D RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.0199	1.99	1.85	93	1.75	92	54-120	6	25	mg/kg	10.15.18 22:51	
Toluene	< 0.0199	1.99	1.85	93	1.77	93	57-120	4	25	mg/kg	10.15.18 22:51	
Ethylbenzene	< 0.0199	1.99	1.87	94	1.79	94	58-131	4	25	mg/kg	10.15.18 22:51	
m,p-Xylenes	< 0.0398	3.98	3.75	94	3.58	94	62-124	5	25	mg/kg	10.15.18 22:51	
o-Xylene	< 0.0199	1.99	1.88	94	1.79	94	62-124	5	25	mg/kg	10.15.18 22:51	
Surrogate				IS Rec	MS Flag	MSD %Ree			Limits	Units	Analysis Date	
4-Bromofluorobenzene			8	57		113			68-120	%	10.15.18 22:51	
a,a,a-Trifluorotoluene			9	2		119			71-121	%	10.15.18 22:51	

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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



TRC Solutions, Inc

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Analytical Method:	TPH GRO	by EPA	8015 Mod.]	Prep Method	: SW3	5030B	
Seq Number:	3066477				Matrix:	Solid				Date Prep	: 10.1	2.18	
MB Sample Id:	7664084-1-	BLK		LCS Sar	nple Id:	7664084-	1-BKS		LC	SD Sample I	d: 7664	4084-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	ORPD Limit	Units	Analysis Date	Flag
TPH-GRO		<4.00	20.0	16.4	82	17.2	86	35-129	5	20	mg/kg	10.16.18 00:19	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSD %Rec		-	Limits	Units	Analysis Date	
4-Bromofluorobenzene		92		1	05		107		-	76-123	%	10.16.18 00:19	
a,a,a-Trifluorotoluene		119		1	11		113		(59-120	%	10.16.18 00:19	

Analytical Method:	TPH GRO by	EPA 8	8015 Mod.						P	rep Method	: SW	5030B	
Seq Number:	3066578				Matrix:	Solid				Date Prep	b: 10.1	6.18	
MB Sample Id:	7664257-1-BL	K		LCS San	nple Id:	7664257-	1-BKS		LCS	D Sample l	d: 766	4257-1-BSD	
Parameter	R	MB lesult	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<(0.271	20.0	18.9	95	20.1	101	35-129	6	20	mg/kg	10.16.18 14:26	
Surrogate	(MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Ree		_	imits	Units	Analysis Date	
4-Bromofluorobenzene		107		1	13		115		7	6-123	%	10.16.18 14:26	
a,a,a-Trifluorotoluene		137	**	1	05		107		6	9-120	%	10.16.18 14:26	

Analytical Method:	TPH GRO	by EPA	8015 Mod.						F	rep Method	: SW	5030B	
Seq Number:	3066477				Matrix:	Soil				Date Prep	: 10.1	2.18	
Parent Sample Id:	602206-00	3		MS San	nple Id:	602206-00)3 S		MS	D Sample I	d: 602	206-003 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO		<3.77	18.9	6.99	37	6.86	38	35-129	2	20	mg/kg	10.15.18 14:08	
Surrogate					IS Rec	MS Flag	MSD %Rec		_	imits	Units	Analysis Date	
4-Bromofluorobenzene				4	57	**	56	**	7	6-123	%	10.15.18 14:08	
a,a,a-Trifluorotoluene					2	**	2	**	6	9-120	%	10.15.18 14:08	

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

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



TRC Solutions, Inc

CS Caylor

Analytical Method: Seq Number: Parent Sample Id:	TPH GRO 3066578 602420-001	·	8015 Mod.	MS San	Matrix: nple Id:)1 S			Prep Method Date Prep SD Sample I	p: 10.1	5030B 6.18 420-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	ORPD Limit	Units	Analysis Date	Flag
TPH-GRO		<3.75	18.7	13.5	72	14.4	74	35-129	6	20	mg/kg	10.16.18 18:01	
Surrogate					AS Rec	MS Flag	MSD %Re			Limits	Units	Analysis Date	
4-Bromofluorobenzene				1	19		122			76-123	%	10.16.18 18:01	
a,a,a-Trifluorotoluene				-	78		76			59-120	%	10.16.18 18:01	

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

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

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Stafford, Texas (281-240-4200)

Dallas Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 Of 1

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

Phoenix, Arizona (480-355-0900)

42A Kuish OW =Ocean/Sea Water Mond 101111 5 Mov A Constructed to the foreign is added to the construction of the control of Second the control of Second time and subject to the cost of samples and shall not assume any responsibility for any previously negotiated under a fully second of fear to contract or Second to the cost of samples and shall not assume any responsibility for any previously negotiated under a fully second of fear to contract of Second to the cost of samples and shall not assume any responsibility for any previously negotiated under a fully second of fear to the cost of samples and sample. Any samples are any responsibility for any previously negotiated under a fully second of fear contract of Second as S5 per sample. These are many to the cost of samples and samples and sample. These are not second as S5 per sample. These terms will be invoiced as S5 per sample. These terms will be invoiced as S5 per sample. These terms will be invoiced as S5 per sample. DW = Drinking Water GW =Ground Water SW = Surface water S = Soil/Sed/Solid 0 = 0il WW= Waste Water Thermo. Corr. Factor Matrix Codes SAN SL = Sludge P = Product Field Comments W = Water WI = Wipe A = AirDIVILIAN NC F nun Cooler Temp COUNAR Mould On Ice X-115 XX く イメ × × zconder @ trcsolutions.com bcooper@trcsolutions.com lowry@trcsolutions.com and FED-EX / UPS: Tracking Xenco Job # Received By: Received By: (MN) 1×3 M 8108 H91 Chloride X と Analytical Information Coulled TCLP RCRA 8 Metals Notes: Preserved where applicable TCLP Benzene RCI Date Time: Date Time: NORM Xenco Quote # Chloride E 300 Level IV (Full Data Pkg /raw data) SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Date Time: Received By: TPH TX1005 IONE do chuck tolasso нози Number of preserved bottles 2 Relinquished By: TRRP Level IV UST / RG -411 Custody Seal # POSH6 NOB 42SO4 SON Data Defiverable Information 5 etste? Laslor UZ/HOP Darie Юŀ Level ill Std QC+ Forms Level 3 (CLP Forms) # of bottles Project information TRRP Checklist Level II Std QC Menda Matrix Project Name/Number: しょしている S Repeived By: Received By: 0 3 2:20 OU.CI 1:10 Time 11/5 Project Location 60 12:11 Collection 0/0 voice To: Date 10/11/11/01 Date Time: Sample 367 Date Time: Depth S い 、 ン 1 TAT Starts Day received by Lab, if received by 5:00 pm 1 5 X Contract TAT Tosses or expertises incurred by the Client if such loses are due to circumstance be enforced unless previously negotiated under a fully executed client contract. 432-466-4450 5 Day TAT Phone No: TAT Day TAT Field ID / Point of Collection Surface Turnaround Time (Business days) Client / Reporting Information TRC Environmental Corporation ilowry @ tresolutions.com Some Day TAT Some Day Internet 00 1 Relinquished by Sampler. 2 Day EMERGENCY 3 Day EMERGENCY 3 Company Name / Branch: 3 10H 504 10 Desta Dr. Suite 150E 502 Project Contact: Joel Lowry Samplers's Name: Relinquished by: Relinquished by: Company Address: 00 Widland, TX 79705 l ١ t Email: ġ. 5 LC, ŝ ~ ω σ 0

Final 1.000



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Temperature Range: 0 - 6 degC						
Date/ Time Received: 10/11/2018 04:15:00 PM	Air and Metal samples Acceptable Range: Ambient						
Work Order #: 602206	Temperature Measuring device used : IR3						
Sample Recei	pt 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						
#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)?	Νο						

#18 Water VOC samples have zero headspace?

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

Analyst:

PH Device/Lot#:

Date: 10/12/2018

N/A

Checklist completed by: Ashley Derstine
Checklist reviewed by: Mark Moak
Kelsey Brooks

Date: 10/12/2018



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

Certificate of Analysis Summary 602420

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Date Received in Lab:Mon Oct-15-18 04:55 pmReport Date:17-OCT-18Project Manager:Kelsey Brooks

	Lab Id:	602420-001			
Analusia Dogugatod	Field Id:	S2 @4			
Analysis Requested	Depth:				
	Matrix:	SOIL			
	Sampled:	Oct-10-18 13:00			
Chloride by EPA 300	Extracted:	Oct-16-18 08:30			
	Analyzed:	Oct-16-18 09:57			
	Units/RL:	mg/kg RL			
Chloride		<25.0 25.0			
BTEX by EPA 8021B	Extracted:	Oct-16-18 14:00			
	Analyzed:	Oct-16-18 16:40			
	Units/RL:	mg/kg RL			
Benzene		<0.0197 0.0197			
Toluene		<0.0197 0.0197			
Ethylbenzene		<0.0197 0.0197			
m,p-Xylenes		<0.0394 0.0394			
o-Xylene		<0.0197 0.0197			
Xylenes, Total		<0.0197 0.0197			
Total BTEX		<0.0197 0.0197			
DRO-ORO By SW8015B	Extracted:	Oct-16-18 11:00			
	Analyzed:	Oct-16-18 13:38			
	Units/RL:	mg/kg RL			
Diesel Range Organics (DRO)		<25.0 25.0			
Oil Range Hydrocarbons (ORO)		<25.0 25.0			
TPH GRO by EPA 8015 Mod.	Extracted:	Oct-16-18 14:00			
	Analyzed:	Oct-16-18 16:40			
	Units/RL:	mg/kg RL			
TPH-GRO	·	<3.94 3.94			

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

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

Version: 1.%

Huns Boah

Kelsey Brooks Project Manager

Analytical Report 602420

for TRC Solutions, Inc

Project Manager: Joel Lowry

CS Caylor

17-OCT-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)



17-OCT-18

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

Reference: XENCO Report No(s): 602420 CS Caylor 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) 602420. 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. 602420 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Sample Cross Reference 602420

TRC Solutions, Inc, Midland, TX

CS Caylor

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	10-10-18 13:00		602420-001

Sample Id

S2 @4



Client Name: TRC Solutions, Inc Project Name: CS Caylor

Project ID: Work Order Number(s): 602420 Report Date: 17-OCT-18 Date Received: 10/15/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3066562 DRO-ORO By SW8015B Surrogate Tricosane recovered above QC limits. Matrix interferences is suspected; data confirmed by reanalysis. Samples affected are: 602420-001 SD.

Batch: LBA-3066577 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3066578 TPH GRO by EPA 8015 Mod. Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7664257-1-BLK.



TRC Solutions, Inc, Midland, TX

Sample Id: S2 @4 Lab Sample Id: 602420-001		Matrix: Date Col	Soil lected: 10.10	.18 13.00	Ľ	Date Received:10.	15.18 16.5	5
Analytical Method: Chloride by E Tech: RNL Analyst: RNL	EPA 300		10.10	19.09.20	%	rep Method: E30 6 Moisture:		
Analyst: RNL Seq Number: 3066480		Date Prep	p: 10.16	.18 08.30	E	Basis: We	t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0		mg/kg	10.16.18 09.57	U	1
Analytical Method: DRO-ORO B	y SW8015B				Р	rep Method: SW	/8015P	
Tech: PGM					%	6 Moisture:		
Analyst: PGM		Date Pre	p: 10.16	.18 11.00	В	asis: We	t Weight	
Seq Number: 3066562								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0		mg/kg	10.16.18 13.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<25.0	25.0		mg/kg	10.16.18 13.38	U	1
S		Coo Normhan	%	T	T :!4-	An alaria Data	El	
Surrogate Tricosane		Cas Number 638-67-5	Recovery 100	Units %	Limits 65-144	Analysis Date 10.16.18 13.38	Flag	
n-Triacontane		638-68-6	59	%	46-152	10.16.18 13.38		
Analytical Method: BTEX by EP.	A 8021B				р	rep Method: SW	75030B	
Tech: MIT	100210					6 Moisture:	5050 D	
Analyst: MIT		Date Pre	. 10.16	.18 14.00			t Weight	
Seq Number: 3066577		Date Fle	p. 10.10	.10 14.00	L		t weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
Toluene	108-88-3	< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
Ethylbenzene	100-41-4	< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
m,p-Xylenes	179601-23-1	< 0.0394	0.0394		mg/kg	10.16.18 16.40	U	1
o-Xylene	95-47-6	< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
Xylenes, Total	1330-20-7	< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
Total BTEX		< 0.0197	0.0197		mg/kg	10.16.18 16.40	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	92	%	68-120	10.16.18 16.40		
a,a,a-Trifluorotoluene		98-08-8	82	%	71-121	10.16.18 16.40		



TRC Solutions, Inc, Midland, TX

Sample Id: S2 @4		Matrix:	Soil	Date Recei	ved:10.15.18 16.55	
Lab Sample Id: 602420-001		Date Collecte	d: 10.10.18 13.00			
Analytical Method: TPH GRC) by EPA 8015 Mod.			Prep Metho	od: SW5030B	
Tech: MIT				% Moistur	e:	
Analyst: MIT		Date Prep:	10.16.18 14.00	Basis:	Wet Weight	
Seq Number: 3066578						
Parameter	Cas Number	Result R	21	Unite Analysi	s Doto Flog	Dil

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
TPH-GRO	8006-61-9	<3.94	3.94		mg/kg	10.16.18 16.40	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene		460-00-4	118	%	76-123	10.16.18 16.40			
a,a,a-Trifluorotoluene		98-08-8	87	%	69-120	10.16.18 16.40			



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

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

+ NELAC certification not offered for this compound.

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



TRC Solutions, Inc

CS Caylor

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	d: E30	OP	
Seq Number:	3066480			Matrix:	Solid				Date Pre	p: 10.1	16.18	
MB Sample Id:	7664233-1-BLK		LCS Sar	nple Id:	7664233-	1-BKS		LCSI	O Sample	Id: 766	4233-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride				101	250	100	90-110		20	mg/kg	10.16.18 09:32	

Analytical Method:	Chloride by EPA 30	00						P	rep Meth	od: E30	0P	
Seq Number:	3066480			Matrix:	Soil				Date Pr	ep: 10.1	6.18	
Parent Sample Id:	602420-001		MS Sar	nple Id:	602420-00	01 S		MS	D Sample	e Id: 6024	420-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	18.8	250	282	105	272	101	80-120	4	20	mg/kg	10.16.18 10:09	

Analytical Method:	DRO-ORO	By SW8	015B						F	Prep Method	: SW	8015P	
Seq Number:	3066562				Matrix:	Solid				Date Prep	: 10.1	6.18	
MB Sample Id:	7664245-1-I	BLK		LCS Sar	nple Id:	7664245-	1-BKS		LCS	SD Sample I	d: 766	4245-1-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)	<7.48	100	93.2	93	110	110	63-139	17	20	mg/kg	10.16.18 12:09	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSE %Rec			limits	Units	Analysis Date	
Tricosane		98		8	37		110		6	5-144	%	10.16.18 12:09	
n-Triacontane		59		(51		73		4	6-152	%	10.16.18 12:09	

Analytical Method:	Matrix:	Sail			F	Prep Method Date Prer		8015P					
Seq Number:	3066562									1		6.18	
Parent Sample Id:	602420-00	1		MS Sar	nple Id:	602420-00	01 S		MS	SD Sample I	d: 602	420-001 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)	<7.49	100	115	115	120	120	63-139	4	20	mg/kg	10.16.18 14:22	
Surrogate					IS Rec	MS Flag	MSD %Rec		_	limits	Units	Analysis Date	
Tricosane				1	37		146	**	6	5-144	%	10.16.18 14:22	
n-Triacontane				(54		86		4	6-152	%	10.16.18 14:22	

$$\label{eq:c-A} \begin{split} & [D] = 100*(C-A) \ / \ B \\ & RPD = 200* \ | \ (C-E) \ / \ (C+E) \ | \\ & [D] = 100*(C) \ / \ [B] \\ & Log \ Diff. = Log(Sample \ Duplicate) \ - \ Log(Original \ Sample) \end{split}$$

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



TRC Solutions, Inc

CS Caylor

Analytical Method:	BTEX by EPA 8021B

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3066577 7664255-1-BLK	1B		Matrix: nple Id:	Solid 7664255-	1-BKS			Prep Metho Date Pre SD Sample	p: 10.1	5030B 6.18 4255-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.0200	2.00	1.76	88	1.90	95	55-120	8	20	mg/kg	10.16.18 13:33	
Toluene	< 0.0200	2.00	1.62	81	1.71	86	77-120	5	20	mg/kg	10.16.18 13:33	
Ethylbenzene	< 0.0200	2.00	1.59	80	1.64	82	77-120	3	20	mg/kg	10.16.18 13:33	
m,p-Xylenes	< 0.00682	4.00	3.17	79	3.28	82	78-120	3	20	mg/kg	10.16.18 13:33	
o-Xylene	< 0.0200	2.00	1.58	79	1.56	78	78-120	1	20	mg/kg	10.16.18 13:33	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSE %Rec			Limits	Units	Analysis Date	
4-Bromofluorobenzene	83		7	78		83			68-120	%	10.16.18 13:33	
a,a,a-Trifluorotoluene	78		7	76		74			71-121	%	10.16.18 13:33	

Analytical Method:	BTEX by EPA 802	1B]	Prep Method	i: SW5	5030B	
Seq Number:	3066577		Ν	Matrix:	Soil				Date Prep	p: 10.1	6.18	
Parent Sample Id:	602420-001		MS Sam	ple Id:	602420-00	01 S		М	SD Sample	[d: 6024	420-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.0186	1.86	1.58	85	1.66	89	54-120	5	25	mg/kg	10.16.18 17:07	
Toluene	< 0.0186	1.86	1.55	83	1.58	85	57-120	2	25	mg/kg	10.16.18 17:07	
Ethylbenzene	< 0.0186	1.86	1.60	86	1.61	87	58-131	1	25	mg/kg	10.16.18 17:07	
m,p-Xylenes	< 0.00635	3.72	3.13	84	3.20	86	62-124	2	25	mg/kg	10.16.18 17:07	
o-Xylene	< 0.0186	1.86	1.51	81	1.56	84	62-124	3	25	mg/kg	10.16.18 17:07	
Surrogate			M %I		MS Flag	MSD %Ree			Limits	Units	Analysis Date	
4-Bromofluorobenzene			8	6		91		(58-120	%	10.16.18 17:07	
a,a,a-Trifluorotoluene			8	4		94		,	71-121	%	10.16.18 17:07	

3066578	•	8015 Mod.				1-BKS			Date Prep): 10.1	6.18	
	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
	< 0.271	20.0	18.9	95	20.1	101	35-129	6	20	mg/kg	10.16.18 14:26	
	MB %Rec	MB Flag			LCS Flag			-	Limits	Units	Analysis Date	
	107 137	**				115 107				% %	10.16.18 14:26 10.16.18 14:26	
	3066578	3066578 7664257-1-BLK MB Result <0.271 MB %Rec	3066578 7664257-1-BLK MB Spike Result Amount <0.271 20.0 MB MB Flag 107	7664257-1-BLKLCS SarMB ResultSpike AmountLCS Result<0.271	3066578 Matrix: 7664257-1-BLK LCS Sample Id: MB Spike LCS Result Amount %Rec <0.271	3066578 Matrix: Solid 7664257-1-BLK LCS Sample Id: 7664257- MB Spike Result LCS LCS <0.271	3066578 Matrix: Solid 7664257-1-BLK LCS Sample Id: 7664257-1-BKS MB Spike LCS LCS LCSD LCSD <0.271	3066578 Matrix: Solid 7664257-1-BLK LCS Sample Id: 7664257-1-BKS MB Result Spike Amount LCS Result LCS %Rec LCSD %Rec LCSD LCSD %Rec	3066578 Matrix: Solid 7664257-1-BLK LCS Sample Id: 7664257-1-BKS LCS MB Spike LCS LCS LCSD LCSD </td <td>3066578Matrix:SolidDate Prep7664257-1-BLKLCS Sample Id:7664257-1-BKSLCSD Sample Id:MB ResultSpike AmountLCS ResultLCS %RecLCSD ResultLCSD %RecLCSD</td> <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>3066578Matrix:SolidDate Prep:10.16.187664257-1-BLKLCS Sample Id:7664257-1-BKSLCSD Sample Id:7664257-1-BSDMB < 0.271Spike 20.0LCS 18.9LCS 95LCSD 20.1LCSD 101LCSD $35-129$MPD RPD Limit 6Units 20Analysis DateMB $%Rec$MB $%Rec$LCS $%Rec$LCSD $Result$LCSD $%Rec$LCSD $%Rec$LCSD $%Rec$Limits $%Rec$MPD RPD Limit $MRec$Units <math>ResultAnalysisDateMB$%Rec$MB $Flag$LCS $%Rec$LCSD $Flag$LCSD $%Rec$LCSD $Flag$LCSD <math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSD<math>ResultLCSDRe</math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></math></td>	3066578Matrix:SolidDate Prep7664257-1-BLKLCS Sample Id:7664257-1-BKSLCSD Sample Id:MB ResultSpike AmountLCS ResultLCS %RecLCSD ResultLCSD %RecLCSD	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3066578Matrix:SolidDate Prep:10.16.187664257-1-BLKLCS Sample Id:7664257-1-BKSLCSD Sample Id:7664257-1-BSDMB < 0.271 Spike 20.0 LCS 18.9 LCS 95 LCSD 20.1 LCSD 101 LCSD $35-129$ MPD RPD Limit 6 Units 20 Analysis DateMB $%Rec$ MB $%Rec$ LCS $%Rec$ LCSD $Result$ LCSD $%Rec$ LCSD $%Rec$ LCSD $%Rec$ Limits $%Rec$ MPD RPD Limit $MRec$ Units $ResultAnalysisDateMB%RecMBFlagLCS%RecLCSDFlagLCSD%RecLCSDFlagLCSDResultLCSDRe$

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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



TRC Solutions, Inc

CS Caylor

Analytical Method: Seq Number: Parent Sample Id:	TPH GRO 3066578 602420-002	-	8015 Mod.	MS Sar	Matrix: nple Id:	~ ~ ~ ~)1 S			Prep Method Date Prep SD Sample 1	o: 10.1	5030B 6.18 120-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO		<3.75	18.7	13.5	72	14.4	74	35-129	6	20	mg/kg	10.16.18 18:01	
Surrogate					AS Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
4-Bromofluorobenzene				1	19		122		7	6-123	%	10.16.18 18:01	
a,a,a-Trifluorotoluene					78		76		6	9-120	%	10.16.18 18:01	

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

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

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Final 1.000



XENCO Laboratories NCO ATORIES Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 10/15/2018 04:55:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 602420	Temperature Measuring device used : IR3
Sample Rece	ipt 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?	Νο
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Νο
#18 Water VOC samples have zero headspace?	Yes

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

Analyst:

PH Device/Lot#:

Date: 10/16/2018

Checklist completed by: Ashley Derstine Checklist reviewed by: Kelsey Brooks

Date: 10/16/2018

Date: 10/10/18

Site Name: Venguend: CS Ceylor SR Estate 4003

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Soil Profile





Figure 1 - View of portion of the affected liner, facing southeast.



Figure 2 - View of portion of the affected liner, facing south.



Figure 3 - View of liner within the facility.



Figure 4 - View of liner within the facility.



Figure 5 - View of test trench "T-1", facing North.



Figure 6 - View of test trench "E", facing West.

State of New Mexico Energy Minerals and Natural Resources Department

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

Incident ID	nCH1826343790
District RP	1RP-5195
Facility ID	
Application ID	pCH1826344217

Release Notification

Responsible Party

Responsible Party Vanguard Operating, LLC	OGRID 258350	
Contact Name Brent White	Contact Telephone 505-918-0669	
Contact email bwhite@vnrenergy.com	Incident # (assigned by OCD)	
Contact mailing address 4001 Penbrooke Suite 201 Odessa, T. 79762	X	

Location of Release Source

Latitude 32	.867627		()//D (2) ;	n destinal de	Longitude -103.297600	·····
			(NAD 05 I	n aecimai ae	grees to 5 decimal places)	
Site Name (C.S. Caylor S	SR Estate #3			Site Type Tank Battery	
Date Releas	e Discovere	d 9-3-2018				3790 C.S. CAYLOR SR @ 30-025-05430
Unit Letter	Section	Township	Range		County	
D	6	17S	37E	Lea		
Surface Owr	ier: 🗌 State	e 🗙 Federal 🗌	Tribal 🗌 Privat	te (<i>Name:</i>)

Nature and Volume of Release

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

Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (bbls) 100	Volume Recovered (bbls) 250 Including rain water
Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	X Yes 🗌 No
Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (Mcf)	Volume Recovered (Mcf)
Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
ning struck the tank partially burning and releasing 10	0 bbls of produced water inside of a lined containment.
	Volume Released (bbls) 100 Is the concentration of dissolved chloride in the produced water >10,000 mg/l? Volume Released (bbls) Volume Released (bbls) Volume Released (Mcf) Volume/Weight Released (provide units)

Incident ID	nCH1826343790	
District RP	1RP-5195	
Facility ID		
Application ID	pCH1826344217	

Was this a major release as defined by 19.15.29.7(A) NMAC? X Yes 🗌 No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls.	
· ·	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? to Olivia Yu and Christina Hernandez 9-4-2018 3:50 pm email.	

Initial Response

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

 \boxtimes The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name:Chuck Johnston	Title:EHS Operations Specialist	
Signature:	Date:9-10-2018	
email: cjohnston@vnrenergy.com Telephone: 432-202-4771		
OCD Only RECEIVED		
Received by: By CHernandez at 11:23 am, Sep 20, 201	8 Date:	

Site Assessment/Characterization

Page 3

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

What is the shallowest depth to groundwater beneath the area affected by the release?	62	(ft bgs)
Did this release impact groundater or surface water?	Yes	✓ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes	✓ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinarly high-water mark)?	Yes	✓ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	Yes	✓ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	Yes	✓ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	Yes	✓ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	Yes	✓ No
Are the lateral extents of the release within 300 feet of a wetland?	Yes	✓ No
Are the lateral extents of the release overlying a subsurface mine?	Yes	✓ No
Are the laterial extents of the release overlying an unstable area such as karst geology?	☐ Yes	✓ No
Are the lateral extents of the release within a 100-year floodplain?	Yes	✓ No
Did the release impact areas not on an exploration, development, production or storage site?	🗌 Yes	✓ No

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

Characterization Report Checklist: Each of the following items must be included in the report			
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.			
✓ Field data			
✓ Data table of soil contaminant concentration data			
Determination of water sources and significant watercourses within 1/2-mile of the laterial extents of the release			
✓ Boring or excavation logs			
✓ Photographs including date and GIS information			
✓ Topographic/Aerial maps			
✓ Laboratory data including chain of custody			

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

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Page 4	Oil Conservation Division	L	District RP	1RP-5195
			Facility ID	
			Application ID	pCH1826344217
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state or local laws and/or regulations.				
Printed Name:	Chuck Johnston T	itle: E	EHS Operations Special	ist
Signature:	D	Date:		
email:	cjohnston@vnrenergy.com T	elephone:	(432) 202-4771	
OCD Only				
Received by:		Date:		

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Remediation Plan

Remediation Plan Checklist: Each of the following items must be included in the plan.				
Detailed description of proposed remediation technique				
	ap with GPS coordinates showing deline	ation points		
	blume of material to be remediated	10.15.00.10(0)(4) 33.6		
	ria is to Table 1 specifications subject to			
	nedule for remediation (note if remediation	on plan timeline is more	e than 90 days OCD a	pproval is required)
			<u> </u>	
Deferral Reques	t <mark>s Only:</mark> Each of the following items mus	t be confirmed as part of	of any request for def	erral of remediation.
Contamination facility decor	on must be in areas immediately under or nstruction.	around production equ	ipment where remed	iation could cause a major
✓ Extents of co	ontamination must be fully delineated.			
Contamination	on does not cause an imminent risk to hu	man health, the environ	ment, or groundwate	r.
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state or local laws and/or regulations.				
Printed Name:	Chuck Johnston	Title:	EHS Operations	Specialist
Signature:		Date:		
email:	cjohnston@vnrenergy.com	Telephone:	(432) 20	2-4771
OCD Only				
Received by:		Date:		_
Approved Approved with Attached Conditions of Approval Denied Deferral Approved				
Signature:		Date:		

State of New Mexico Oil Conservation Division

Incident ID	nCH1826343790
District RP	1RP-5195
Facility ID	
Application ID	pCH1826344217

Closure

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

<u>Closure Report Attachment Checklist:</u> Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

Laboratory analyses of final sampling (Note: appropriate OCD Distric office must be notified 2 days prior to final sampling)

Description of remediation activities

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

Printed Name:	Title:		
Signature:	Date:		
email:	Telephone:		
OCD Only			
Received by:	Date:		
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment not does not relieve the responsible party of compliance with any other federal, state or local laws and/or regulations.			
Signature:	Date:		