10 Desta Drive Suite 150E
Midland, TX 79705

432.520.7720 PHONE
432.520.7701 FAX

www.trcsolutions.com

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:

RELEASE DETAILS			
Type of Release:	Produced Water	**Volume of Release:**	100 bbls
		Volume Recovered:	250 bbls (Including Rain)
Source of Release:	Tank Battery	**Date of Discovery:**	9/3/2018
Was Immediate Notice Given?	Yes	**If, YES, to Whom?**	NMOCD District I
Was a Watercourse Reached?	No	**If YES, Volume Impacting the Watercourse:**	NA
Surface Owner:	R. Rice	**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;	Yes	**20**
Within 200 ft. of any lakebed, sinkhole, or playa lake;		
Within 300 ft. of an occupied permanent residence, school, hospital, or institution;		
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;	No	**0**
Within 300 ft. of a wetland;		
Within the area overlying a subsurface mine;		
Within an unstable area; or		
Within a 100-year floodplain.		
Minimum distance between any point within the horizontal boundary of the release and groundwater:	≤ 50 ft.	**20**
	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.

Concentrations of BTEX, TPH and/or Chloride in Soil											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				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
Closure Criteria				**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.

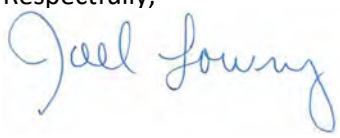
Vanguard maintains excavation and backfilling of the affected area within the tank battery could result in hazardous conditions and/or property damage. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Vanguard requests remediation, 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,

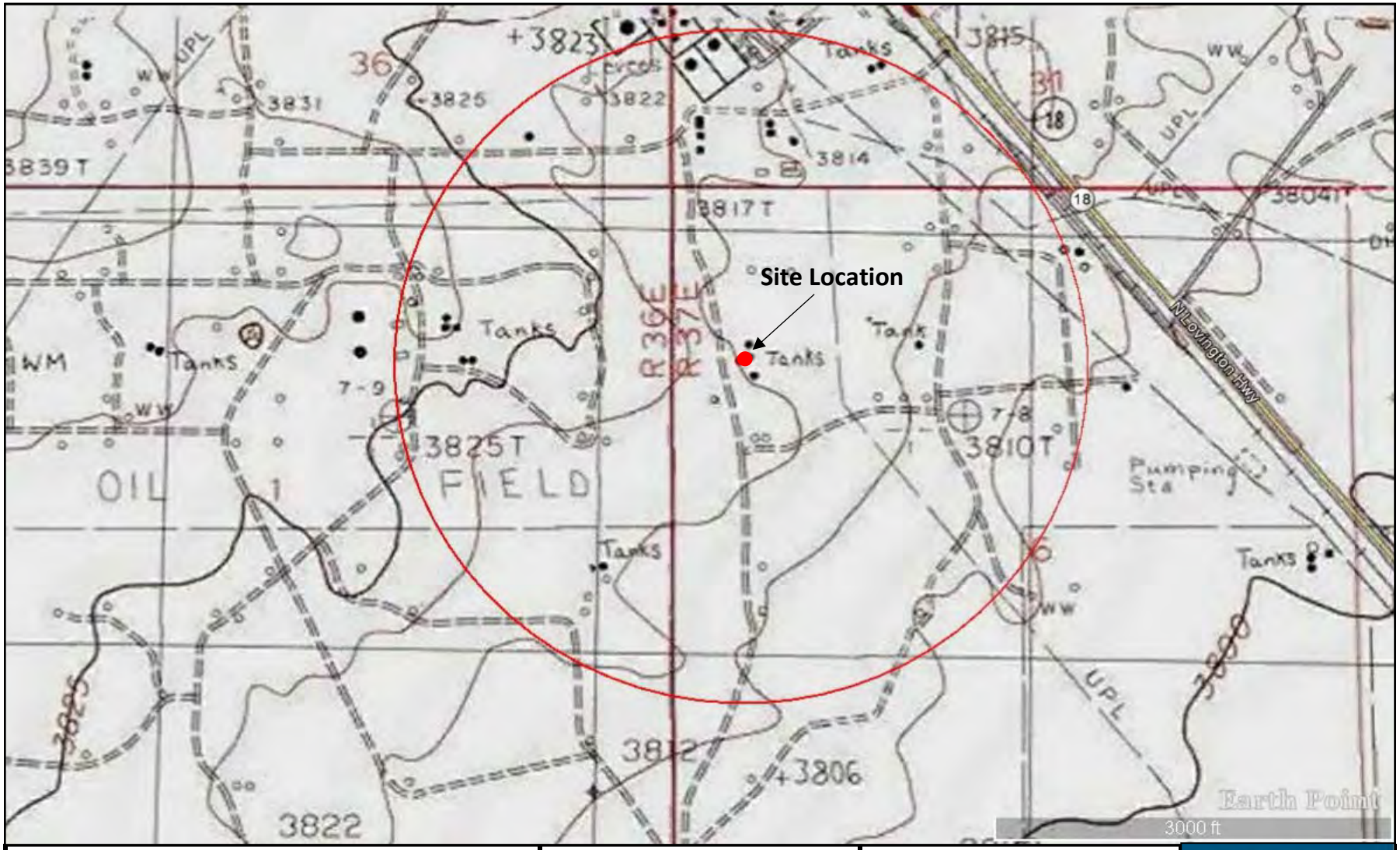


Joel Lowry
Senior Project Manager
TRC Environmental Corp.

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)



LEGEND:

- Site Location
- 1/2 Mile Radius

Figure 1

Topographical Map
Vanguard Operating, LLC
CS Caylor SR Estate #3
Lea County, NM

Drafted by: ZC | Checked by: JL	
Draft: March 7, 2018	
GPS:	32.867627 -103.2976
UL "D", Sec. 6, T17S, R37E	
TRC Proj. No:	314872

TRC
Results you can rely on

LEGEND:

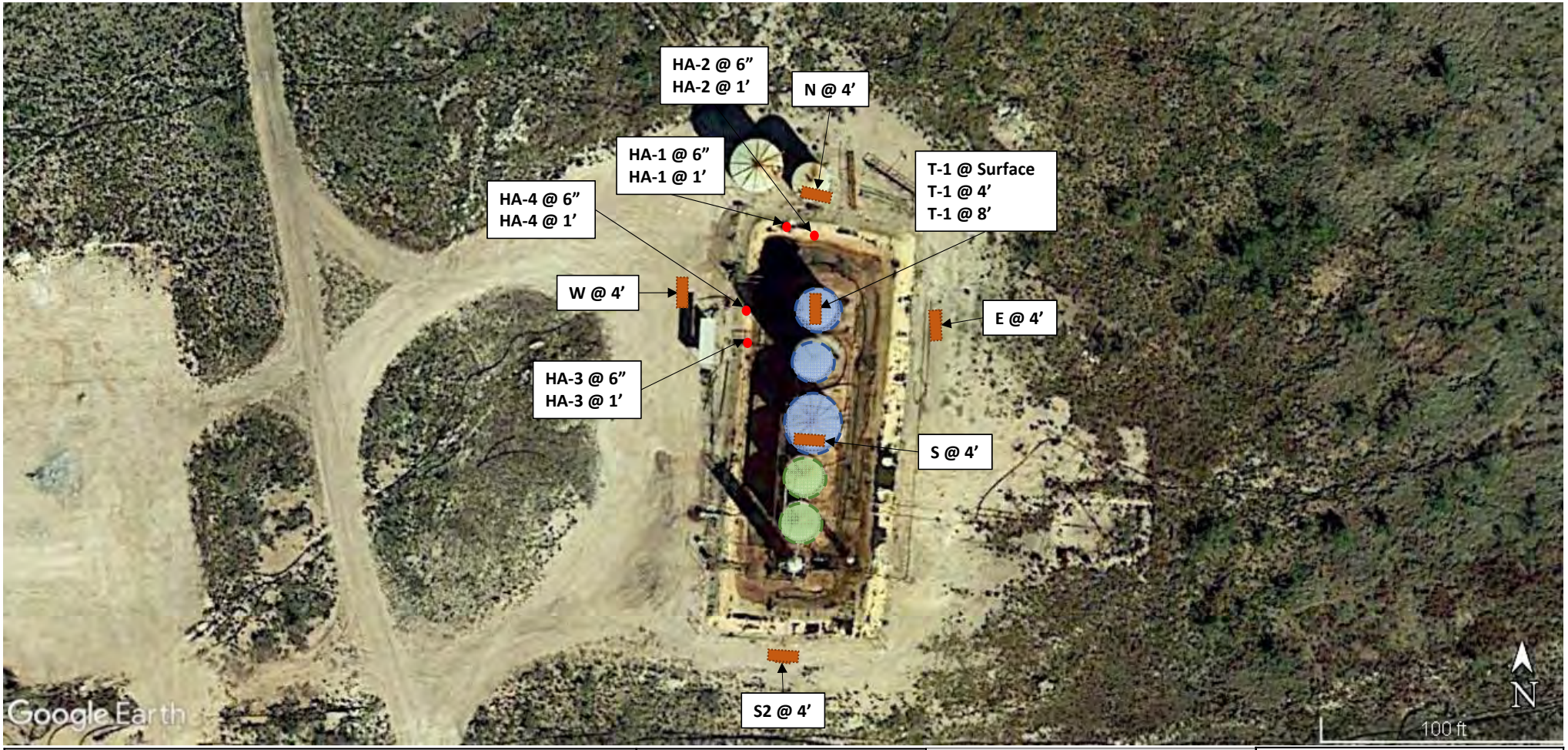
- Site Location
- Fresh Water Well
- 100-Year Floodplain
- High/Critical Karst
- Non-Industrial Building
- Subsurface Mine
- 1/2 Mile Radius

Figure 2

Aerial Map
Vanguard Operating, LLC
CS Caylor SR Estate #3
Lea County, NM

Drafted by: ZC | Checked by: JL	
Draft: March 7, 2018	
GPS:	32.867627 -103.2976
UL "D", Sec. 6, T17S, R37E	
TRC Proj. No:	314872

TRC
Results you can rely on



LEGEND:

- Test Trenches
- Sample Point Location (Hand Auger)
- Above Ground Storage Tank (Removed)
- Above Ground Storage Tank

Figure 3

Site & Sample Location Map
Vanguard Operatoring, LLC
CS Caylor SR Estate #003

Lea County, New Mexico

Drafted by: BC	Checked by: JL
Draft: October 16, 2018	
GPS: 32.867627, -103.297600	
TRC Proj. No.: 314872	

TRC
10 Desta Drive Suite 150E
Midland, TX 79705
432.520.7720 PHONE
432.520.7701 FAX
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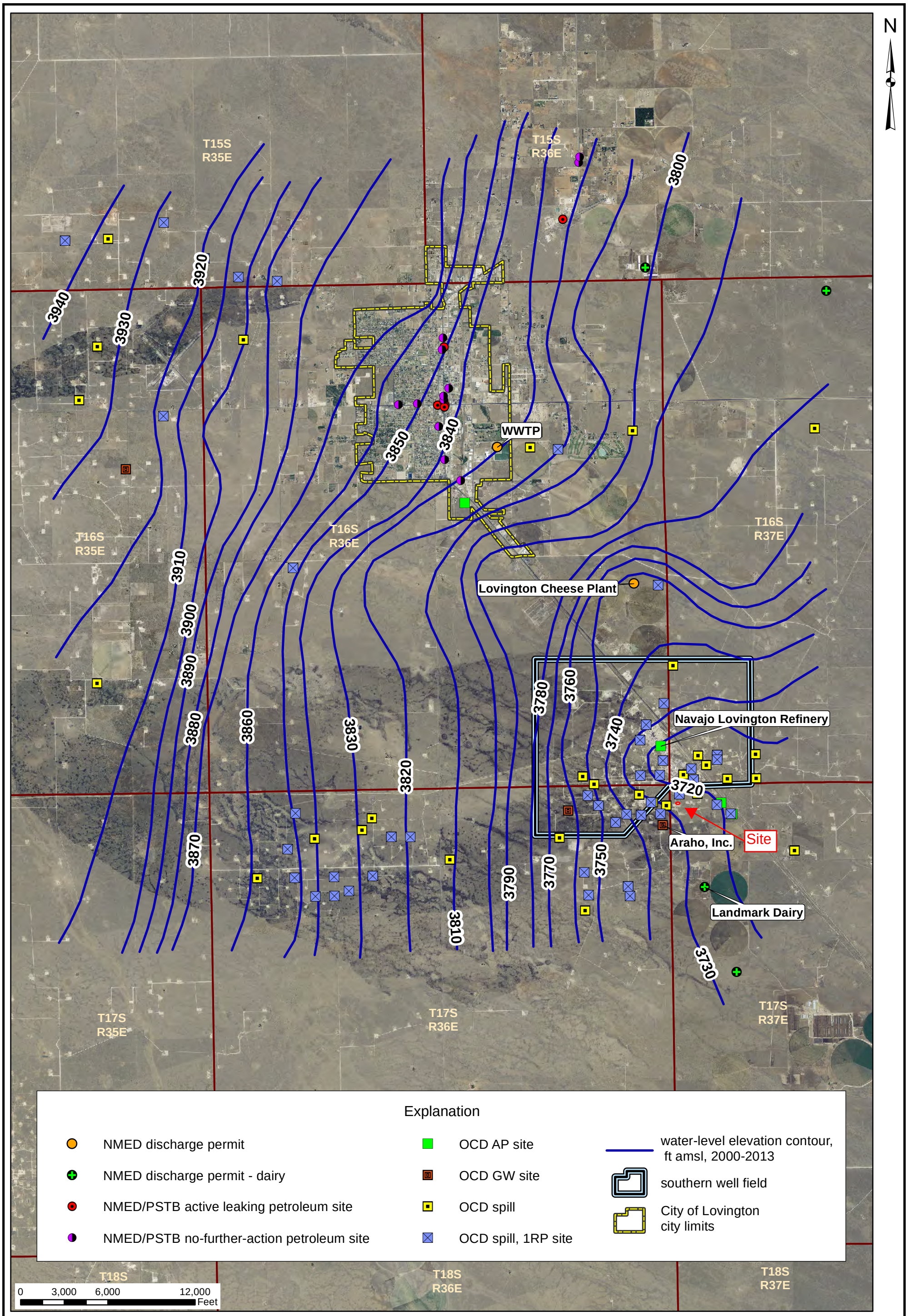


Figure 6. Aerial photograph showing City of Lovington southern well field, locations of sites identified by NMED and OCD that represent potential point sources of pollution in and around City well fields, and water-table elevation contours, Lea County, New Mexico.

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 12562 POD11		L	LE	2	4	2	01	17S	36E	658989	3637831	318	112	97	15
L 02508		L	LE	2	2	2	01	17S	36E	659013	3638194*	405	120	40	80
L 02561		L	LE	3	3	3	31	16S	37E	659210	3638403*	503	137	50	87
L 10633	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
L 02474		L	LE		1	3	06	17S	37E	659331	3637296*	611	100	40	60
L 14377 POD3		L	LE	2	3	3	31	16S	37E	659423	3638586	690	115		
L 14377 POD4		L	LE	2	3	3	31	16S	37E	659492	3638571	691	120		
L 14377 POD2		L	LE	2	3	3	31	16S	37E	659504	3638600	723	120		
L 14377 POD1		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
L 10633 S	R	L	LE			4	13	17S	36E	659026	3637189*	768	228	120	108
L 10652		L	LE		4	3	31	16S	37E	659808	3638511*	789	248	72	176

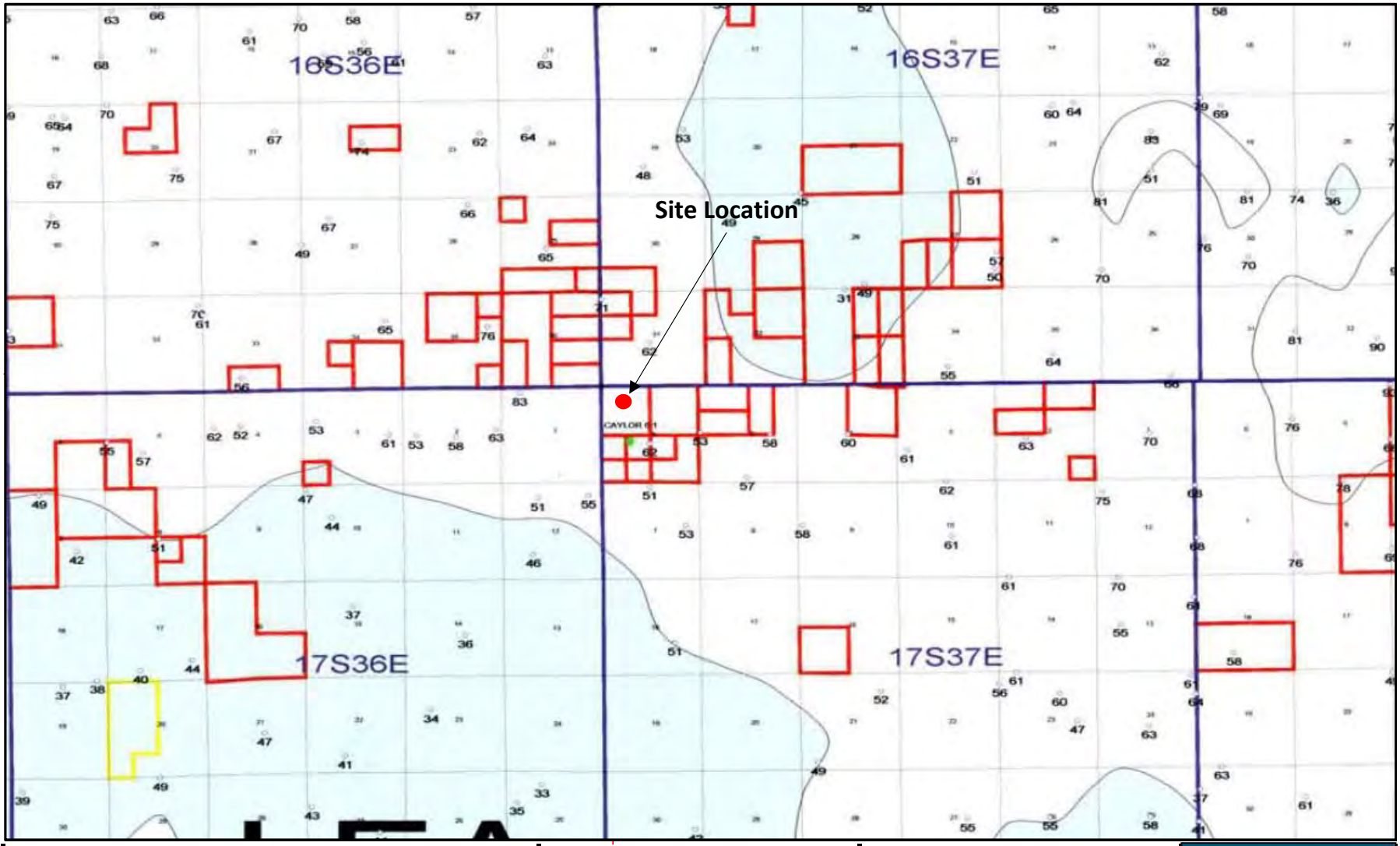
Average Depth to Water: **72 feet**
Minimum Depth: **40 feet**
Maximum Depth: **120 feet**

Record Count: 13

UTMNAD83 Radius Search (in meters):

Easting (X): 659299 **Northing (Y):** 3637907 **Radius:** 804

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



LEGEND:

● Site Location

Figure 4

Inferred Depth to Groundwater Map
Vanguard Operating, LCC
CS Caylor SR Estate #3
Lea County, NM

Drafted by: ZC | Checked by: JL	
Draft: March 7, 2018	
GPS:	32.867627 -103.2976
UL "D", Sec. 6, T17S, R37E	
TRC Proj. No:	314872

TRC
Results you can rely on

National Water Information System: Web Interface

Click to hideNews Bulletins

- Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 325133103171301

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

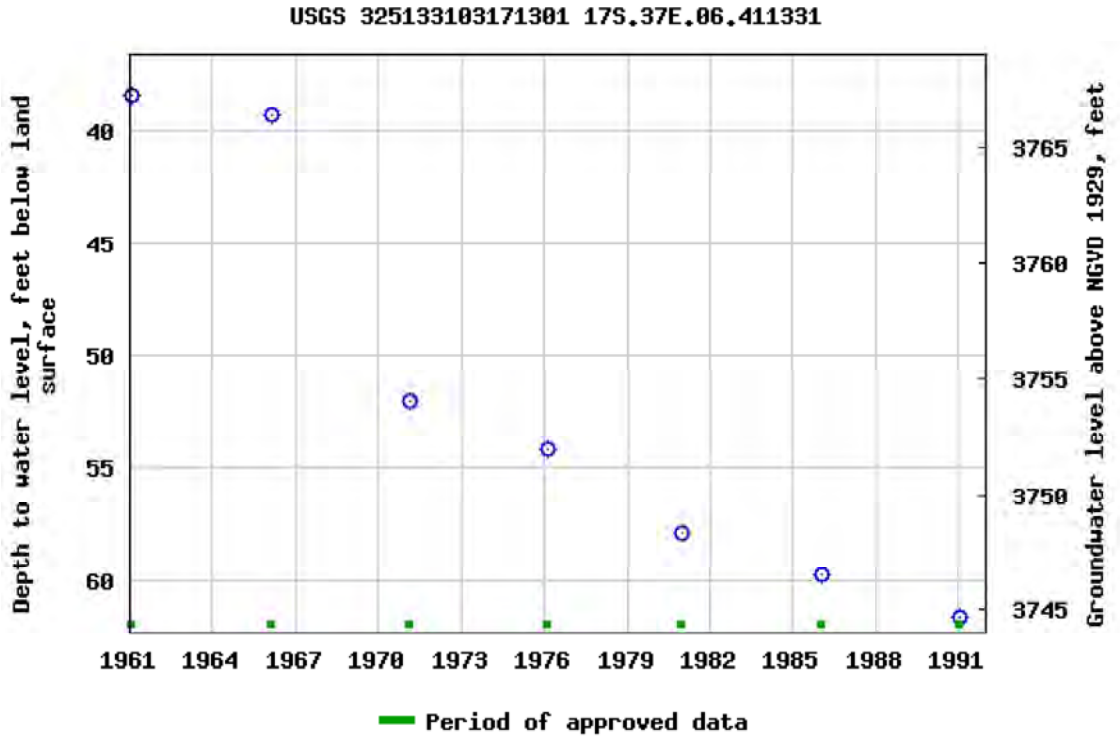
USGS 325133103171301 17S.37E.06.411331

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 12080003
Latitude 32°51'45", Longitude 103°17'25" NAD27
Land-surface elevation 3,806.00 feet above NGVD29
The depth of the well is 100 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

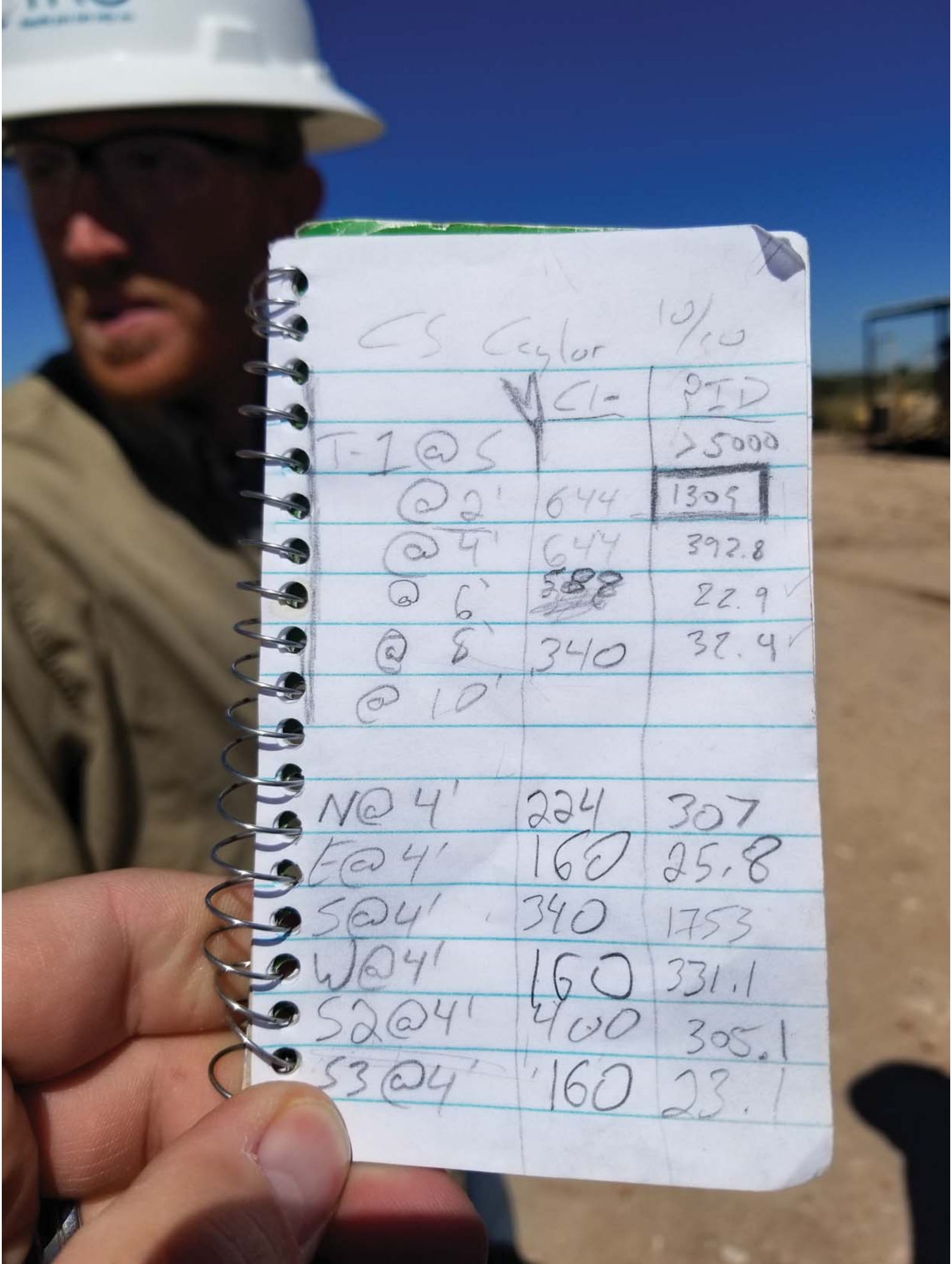
Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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

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

		W	S	W/6	Avg	Cl⁻
1:40	HA1@6"	30.5	10.6	2.87	.44	1267
	HA1@1'	30.4	10.0	3.04	.09	273
	HA2@6"	30.3	11.0	2.75	.07	192
	HA2@1'	30.1	10.9	2.76	.07	193
	HA3@6"	30.0	10.6	2.83	.30	849
	HA4@6"	30.3	10.0	3.03	.10	303
	HA4@1'	30.0	10.1	2.97	.10	297


HA1
HA2
HA4
HA3
32.867627, -103.297600


CS Ceylor 10/10
Cl-
PID
T-1 @ S
>5000
@ 2' 644
1309
@ 4' 644
392.8
@ 6' 588
22.9
@ 8' 340
32.4
@ 10'
N @ 4' 224 307
E @ 4' 160 25.8
S @ 4' 340 1753
W @ 4' 160 331.1
S2 @ 4' 400 305.1
S3 @ 4' 160 23.1

Certificate of Analysis Summary 598367

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Project Id:
Contact: Joel Lowry
Project Location: Lea

Date Received in Lab: Fri Sep-07-18 01:15 pm
Report Date: 18-SEP-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	598367-001		598367-002		598367-003		598367-004		598367-005		598367-006	
	Field Id:	HA 1@ 6"		HA 1 @ 1'		HA 2@ 6"		HA 2 @ 1'		HA 3 @ 6"		HA 4 @ 6"	
	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 12:00		Sep-13-18 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

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 598367

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Project Id:
Contact: Joel Lowry
Project Location: Lea

Date Received in Lab: Fri Sep-07-18 01:15 pm
Report Date: 18-SEP-18
Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	598367-007						
	Field Id:	HA 4@ 1'						
	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					

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,

Kelsey Brooks
Project Manager

Sample Cross Reference 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA 1@ 6"	S	09-06-18 13:40	6 In	598367-001
HA 1 @ 1'	S	09-06-18 13:40	1 ft	598367-002
HA 2@ 6"	S	09-06-18 13:40	6 In	598367-003
HA 2 @ 1'	S	09-06-18 13:40	1 ft	598367-004
HA 3 @ 6"	S	09-06-18 13:40	6 In	598367-005
HA 4 @ 6"	S	09-06-18 13:40	6 In	598367-006
HA 4@ 1'	S	09-06-18 13:40	1 ft	598367-007

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.

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 1@ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-001	Date Collected:	09.06.18 13.40	Sample Depth:	6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet 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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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
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	**

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 1@ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-001	Date Collected:	09.06.18 13.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.11.18 08.30	Basis:	Wet Weight
Seq Number:	3062939				

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 1 @ 1'**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-002	Date Collected:	09.06.18 13.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet 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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 2@ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-003	Date Collected:	09.06.18 13.40	Sample Depth:	6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet 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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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 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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 2@ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-003	Date Collected:	09.06.18 13.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.11.18 08.30	Basis:	Wet Weight
Seq Number:	3062939				

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 2 @ 1'**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-004	Date Collected:	09.06.18 13.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet Weight
Seq Number:	3063359				

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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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 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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	**

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 3 @ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-005	Date Collected:	09.06.18 13.40	Sample Depth:	6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet 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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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	% Recovery	Units	Limits	Analysis Date	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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 3 @ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-005	Date Collected:	09.06.18 13.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.11.18 08.30	Basis:	Wet Weight
Seq Number:	3062939				

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 4 @ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-006	Date Collected:	09.06.18 13.40	Sample Depth:	6 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet Weight
Seq Number:	3063359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**119**	4.95	mg/kg	09.14.18 01.26		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet 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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 4 @ 6"**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-006	Date Collected:	09.06.18 13.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	09.11.18 08.30	Basis:	Wet Weight
Seq Number:	3062939				

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**HA 4@ 1'**	Matrix:	Soil	Date Received:	09.07.18 13.15
Lab Sample Id:	598367-007	Date Collected:	09.06.18 13.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	09.13.18 12.00	Basis:	Wet Weight
Seq Number:	3063359				

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 SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	09.07.18 17.00	Basis:	Wet Weight
Seq Number:	3062569				

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	

Certificate of Analytical Results 598367

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 598367

TRC Solutions, Inc

CS Caylor

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3063359 Matrix: Solid Date Prep: 09.13.18
MB Sample Id: 7662256-1-BLK LCS Sample Id: 7662256-1-BKS LCSD Sample Id: 7662256-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	271	108	270	108	90-110	0	20	mg/kg	09.13.18 23:04	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3063359 Matrix: Soil Date Prep: 09.13.18
Parent Sample Id: 598367-005 MS Sample Id: 598367-005 S MSD Sample Id: 598367-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	785	251	1010	90	1010	90	90-110	0	20	mg/kg	09.14.18 01:11	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3063359 Matrix: Soil Date Prep: 09.13.18
Parent Sample Id: 598803-001 MS Sample Id: 598803-001 S MSD Sample Id: 598803-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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 SW8015 Mod** Prep Method: TX1005P
Seq Number: 3062569 Matrix: Solid Date Prep: 09.07.18
MB Sample Id: 7661909-1-BLK LCS Sample Id: 7661909-1-BKS LCSD Sample Id: 7661909-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		116		119		70-135	%	09.08.18 13:25
o-Terphenyl	106		103		109		70-135	%	09.08.18 13:25

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

QC Summary 598367

TRC Solutions, Inc

CS Caylor

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3062569 Matrix: Soil Date Prep: 09.07.18
Parent Sample Id: 598366-001 MS Sample Id: 598366-001 S MSD Sample Id: 598366-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		120		70-135	%	09.08.18 14:21
o-Terphenyl	121		119		70-135	%	09.08.18 14:21

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3062939 Matrix: Solid Date Prep: 09.11.18
MB Sample Id: 7662122-1-BLK LCS Sample Id: 7662122-1-BKS LCSD Sample Id: 7662122-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		99		96		70-130	%	09.11.18 11:23
4-Bromofluorobenzene	93		90		91		70-130	%	09.11.18 11:23

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3062939 Matrix: Soil Date Prep: 09.11.18
Parent Sample Id: 598443-010 MS Sample Id: 598443-010 S MSD Sample Id: 598443-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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	X
Toluene	<0.00198	0.0992	0.0722	73	0.0693	69	70-130	4	35	mg/kg	09.11.18 12:04	X
Ethylbenzene	<0.00198	0.0992	0.0706	71	0.0685	69	70-130	3	35	mg/kg	09.11.18 12:04	X
m,p-Xylenes	<0.00397	0.198	0.139	70	0.134	67	70-130	4	35	mg/kg	09.11.18 12:04	X
o-Xylene	<0.00198	0.0992	0.0667	67	0.0647	65	70-130	3	35	mg/kg	09.11.18 12:04	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		91		70-130	%	09.11.18 12:04
4-Bromofluorobenzene	91		90		70-130	%	09.11.18 12:04

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

CHAIN OF CUSTODY

XENCO LABORATORIES

Setting the Standard since 1990

Page 1 Of 1

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # | Xenco Job # 598367

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation

Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705

Email: jlowry@trcsolutions.com | Phone No: 432-466-4450

Project Contact: Joel Lowry

Samplers's Name: Kyle Schmidt

Project Information

Project Name/Number: ES Taylor

Project Location: Lea

Invoice To: Vangaurd & Chuck Johnston

Invoice:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)	BTEX 8021B	Field Comments
1	HA1@6"	6in	9-6-18	1:40	S	1									X	X							X	
2	HA1@1'	1Ft	9-6-18	1:50	S	1									X	X							X	
3	HA2@6"	6in	9-6-18	2:00	S	1									X	X							X	
4	HA2@1'	1Ft	9-6-18	2:10	S	1									X	X							X	
5	HA3@6"	6in	9-6-18	2:20	S	1									X	X							X	
6	HA4@6"	6in	9-6-18	2:30	S	1									X	X							X	
7	HA4@1'	1Ft	9-6-18	2:40	S	1									X	X							X	
8																								
9																								
10																								

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

jlowry@trcsolutions.com

zconder@trcsolutions.com

bcooper@trcsolutions.com

cjohnston@vangaurd.com

FED-EX / UPS: Tracking # 770859177480

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9-6-18	1	2	9/6/18 4:23	2 7/9/18
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4 1315
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. -0.4 / Thermo. Corr. Factor

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 09/07/2018 01:15:00 PM

Work Order #: 598367

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 09/10/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 09/10/2018

Kelsey Brooks

Certificate of Analysis Summary 601347

TRC Solutions, Inc, Midland, TX

Project Name: C S Caylor

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

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

Analysis Requested									
	Lab Id:	601347-001		601347-002		601347-003			
	Field Id:	HA-1 @ 2'		HA-3 @ 1'		HA-4 @ 2'			
	Depth:	2- ft		1- ft		2- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Sep-28-18 12:00		Sep-28-18 12:05		Sep-28-18 12:10			
BTEX by EPA 8021B	***Extracted:***	Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30			
	Analyzed:	Oct-05-18 12:49		Oct-05-18 13:16		Oct-05-18 13:43			
	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 12:00		Oct-09-18 12:00			
	Analyzed:	Oct-09-18 19:37		Oct-09-18 19:50		Oct-09-18 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 13:10		Oct-04-18 13:10			
	Analyzed:	Oct-05-18 16:43		Oct-05-18 17:19		Oct-05-18 17:56			
	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 13:30		Oct-04-18 13:30			
	Analyzed:	Oct-05-18 11:01		Oct-05-18 11:28		Oct-05-18 13:43			
	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		

Kelsey Brooks
Project Manager

Analytical Report 601347

for

TRC Solutions, Inc

Project Manager: Joel Lowry

C S 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

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

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.

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

Sample Id:	**HA-1 @ 2'**	Matrix:	Soil	Date Received:	10.03.18 16.50
Lab Sample Id:	601347-001	Date Collected:	09.28.18 12.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.09.18 12.00	Basis:	Wet Weight
Seq Number:	3065851				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.04.18 13.10	Basis:	Wet Weight
Seq Number:	3065710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**645**	50.2	mg/kg	10.05.18 16.43		2
Oil Range Hydrocarbons (ORO)	PHCG2835	**199**	50.2	mg/kg	10.05.18 16.43		2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	481	%	65-144	10.05.18 16.43	**
n-Triacontane	638-68-6	402	%	46-152	10.05.18 16.43	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.04.18 13.30	Basis:	Wet Weight
Seq Number:	3065600				

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
Toluene	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
m,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
Total BTEX		**13.833**	0.175	mg/kg	10.05.18 12.49		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	68-120	10.05.18 12.49	
a,a,a-Trifluorotoluene	98-08-8	68	%	71-121	10.05.18 12.49	***

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

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

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	460-00-4	106	%	76-123	10.05.18 11.01	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	10.05.18 11.01	

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

Sample Id:	**HA-3 @ 1'**	Matrix:	Soil	Date Received:	10.03.18 16.50
Lab Sample Id:	601347-002	Date Collected:	09.28.18 12.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.09.18 12.00	Basis:	Wet Weight
Seq Number:	3065851				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.04.18 13.10	Basis:	Wet Weight
Seq Number:	3065710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**272**	50.1	mg/kg	10.05.18 17.19		2
Oil Range Hydrocarbons (ORO)	PHCG2835	**171**	50.1	mg/kg	10.05.18 17.19		2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	220	%	65-144	10.05.18 17.19	**
n-Triacontane	638-68-6	290	%	46-152	10.05.18 17.19	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.04.18 13.30	Basis:	Wet 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
Toluene	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
m,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
Xylenes, Total	1330-20-7	**17.55**	0.198	mg/kg	10.05.18 13.16		10
Total BTEX		**28.164**	0.198	mg/kg	10.05.18 13.16		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	77	%	68-120	10.05.18 13.16	
a,a,a-Trifluorotoluene	98-08-8	82	%	71-121	10.05.18 13.16	

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

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

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	460-00-4	104	%	76-123	10.05.18 11.28	
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	10.05.18 11.28	

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

Sample Id:	**HA-4 @ 2'**	Matrix:	Soil	Date Received:	10.03.18 16.50
Lab Sample Id:	601347-003	Date Collected:	09.28.18 12.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.09.18 12.00	Basis:	Wet Weight
Seq Number:	3065851				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.04.18 13.10	Basis:	Wet Weight
Seq Number:	3065710				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**78.5**	49.6	mg/kg	10.05.18 17.56		2
Oil Range Hydrocarbons (ORO)	PHCG2835	**55.1**	49.6	mg/kg	10.05.18 17.56		2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	166	%	65-144	10.05.18 17.56	**
n-Triacontane	638-68-6	185	%	46-152	10.05.18 17.56	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.04.18 13.30	Basis:	Wet Weight
Seq Number:	3065600				

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
Toluene	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
m,p-Xylenes	179601-23-1	**1.64**	0.391	mg/kg	10.05.18 13.43		10
o-Xylene	95-47-6	**0.371**	0.195	mg/kg	10.05.18 13.43		10
Xylenes, Total	1330-20-7	**2.011**	0.195	mg/kg	10.05.18 13.43		10
Total BTEX		**2.714**	0.195	mg/kg	10.05.18 13.43		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	68-120	10.05.18 13.43	
a,a,a-Trifluorotoluene	98-08-8	72	%	71-121	10.05.18 13.43	

Certificate of Analytical Results 601347

TRC Solutions, Inc, Midland, TX

C S Caylor

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

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	460-00-4	81	%	76-123	10.05.18 13.43	
a,a,a-Trifluorotoluene	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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 601347

TRC Solutions, Inc

C S Caylor

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3065851 Matrix: Solid Date Prep: 10.09.18
MB Sample Id: 7663834-1-BLK LCS Sample Id: 7663834-1-BKS LCSD Sample Id: 7663834-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	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 300** Prep Method: E300P
Seq Number: 3065851 Matrix: Soil Date Prep: 10.09.18
Parent Sample Id: 601349-001 MS Sample Id: 601349-001 S MSD Sample Id: 601349-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	654	250	944	116	933	112	80-120	1	20	mg/kg	10.09.18 15:54	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3065851 Matrix: Soil Date Prep: 10.09.18
Parent Sample Id: 601349-009 MS Sample Id: 601349-009 S MSD Sample Id: 601349-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	45.0	250	354	124	320	110	80-120	10	20	mg/kg	10.09.18 18:48	X

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3065710 Matrix: Solid Date Prep: 10.04.18
MB Sample Id: 7663557-1-BLK LCS Sample Id: 7663557-1-BKS LCSD Sample Id: 7663557-1-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	117	117	112	112	63-139	4	20	mg/kg	10.05.18 15:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	92		103		83		65-144	%	10.05.18 15:29
n-Triacontane	85		95		78		46-152	%	10.05.18 15:29

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

QC Summary 601347

TRC Solutions, Inc

C S Caylor

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3065710 Matrix: Soil Date Prep: 10.04.18
Parent Sample Id: 601349-001 MS Sample Id: 601349-001 S MSD Sample Id: 601349-001 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	108		98		65-144	%	10.05.18 19:43
n-Triacontane	102		83		46-152	%	10.05.18 19:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3065600 Matrix: Solid Date Prep: 10.04.18
MB Sample Id: 7663558-1-BLK LCS Sample Id: 7663558-1-BKS LCSD Sample Id: 7663558-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.87	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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	73		82		87		68-120	%	10.04.18 22:27
a,a,a-Trifluorotoluene	70	**	81		86		71-121	%	10.04.18 22:27

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3065600 Matrix: Soil Date Prep: 10.04.18
Parent Sample Id: 601349-012 MS Sample Id: 601349-012 S MSD Sample Id: 601349-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	83		92		68-120	%	10.05.18 02:03
a,a,a-Trifluorotoluene	83		93		71-121	%	10.05.18 02:03

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

QC Summary 601347

TRC Solutions, Inc

C S Caylor

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3065605 Matrix: Solid Date Prep: 10.04.18
MB Sample Id: 7663561-1-BLK LCS Sample Id: 7663561-1-BKS LCSD Sample Id: 7663561-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	91		113		106		76-123	%	10.04.18 23:21
a,a,a-Trifluorotoluene	120		120		109		69-120	%	10.04.18 23:21

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3065605 Matrix: Soil Date Prep: 10.04.18
Parent Sample Id: 601349-012 MS Sample Id: 601349-012 S MSD Sample Id: 601349-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<3.94	19.7	14.5	74	14.5	75	35-129	0	20	mg/kg	10.05.18 02:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	116		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 [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

CHAIN OF CUSTODY

Page 2 Of 2

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
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www.xenco.com

601347

Xenco Job # 601347

Client / Reporting Information	Project Information
Company Name / Branch: TRC Environmental Corporation	**Project Name/Number:** CS Caylor
Company Address: 10 Desta Drive Suite 150E, Midland, TX 79705	**Project Location:** Lea Co, NM
Email: jlowry@trcsolutions.com **Phone No:** 432-466-4450	**Invoice To:** Vangaurd C/O Chuck Johnston
Project Contact: Joel Lowry	**Invoice:**
Samplers's Name Zach Conder	

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Field Comments
1	HA-1 @ 2'	2ft	9/28/2018	12:00	s	1									x	x	x	
2	HA-3 @ 1'	1ft	9/28/2018	12:05	s	1									x	x	x	
3	HA-4 @ 2'	2ft	9/28/2018	12:10	s	1									x	x	x	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Data Deliverable Information

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☒ Contract TAT
- ☐ 3 Day EMERGENCY
- TAT Starts Day received by Lab, if received by 5:00 pm

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

Notes:

jlowry@trcsolutions.com bcooper@trcsolutions.com
rhaskell@concho.com
zconder@trcsolutions.com
dneel2@concho.com
FED-EX / UPS: Tracking #

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1	2		2
Relinquished by: 3	**Date Time:**	**Received By:** 3	**Relinquished By:** 4	**Date Time:**	**Received By:** 4
Relinquished by: 5	**Date Time:** 10/3/18 4:50	**Received By:** 6 Brenda Ward	**Custody Seal #**	**Preserved where applicable**	**On Ice** ☑ **Cooler Temp.** 2.7 **Thermo. Corr. Factor** I.R.3

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/04/2018 04:50:00 PM

Work Order #: 601347

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

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 10/04/2018
Brenda Ward

Checklist reviewed by: Kelsey Brooks Date: 10/05/2018
Kelsey Brooks

Certificate of Analysis Summary 602206

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Thu Oct-11-18 04:15 pm

Report Date: 17-OCT-18

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	602206-001		602206-002		602206-003		602206-004		602206-005		602206-006	
	Field Id:	T-1 @Surface		T-1 @4'		T-1 @8'		N@4'		E@4'		S@4'	
	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-15-18 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 18:28		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 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 20:43		Oct-15-18 13:41		Oct-15-18 15:29		Oct-15-18 15:56		Oct-15-18 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

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 602206

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

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

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

Analysis Requested							
	Lab Id:	602206-007					
	Field Id:	W@4'					
	Depth:	4- ft					
	Matrix:	SOIL					
	Sampled:	Oct-10-18 12:30					
BTEX by EPA 8021B	***Extracted:***	Oct-15-18 15:50					
	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		<3.98	3.98				

Kelsey Brooks
Project Manager

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,

Kelsey Brooks
Project Manager

Sample Cross Reference 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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 re-analysis.
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 re-analysis.
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.

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**T-1 @Surface**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-001	Date Collected:	10.10.18 11.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet 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	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	27879	%	65-144	10.12.18 18.34	**
n-Triacontane	638-68-6	22121	%	46-152	10.12.18 18.34	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0949	0.0949	mg/kg	10.16.18 03.14	U	5
Toluene	108-88-3	<0.0949	0.0949	mg/kg	10.16.18 03.14	U	5
Ethylbenzene	100-41-4	**0.237**	0.0949	mg/kg	10.16.18 03.14		5
m,p-Xylenes	179601-23-1	**0.674**	0.190	mg/kg	10.16.18 03.14		5
o-Xylene	95-47-6	<0.0949	0.0949	mg/kg	10.16.18 03.14	U	5
Xylenes, Total	1330-20-7	**0.674**	0.0949	mg/kg	10.16.18 03.14		5
Total BTEX		**0.911**	0.0949	mg/kg	10.16.18 03.14		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	138	%	68-120	10.16.18 03.14	**
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	10.16.18 03.14	

Final 1.000

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**T-1 @Surface**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-001	Date Collected:	10.10.18 11.00		
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066578				

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	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**T-1 @4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-002	Date Collected:	10.10.18 11.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet Weight
Seq Number:	3066309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**417**	24.8	mg/kg	10.15.18 10.40		1
Oil Range Hydrocarbons (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-Triacontane	638-68-6	261	%	46-152	10.15.18 10.40	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0182	0.0182	mg/kg	10.16.18 02.51	U	1
Toluene	108-88-3	<0.0182	0.0182	mg/kg	10.16.18 02.51	U	1
Ethylbenzene	100-41-4	**0.0800**	0.0182	mg/kg	10.16.18 02.51		1
m,p-Xylenes	179601-23-1	**0.236**	0.0364	mg/kg	10.16.18 02.51		1
o-Xylene	95-47-6	**0.0764**	0.0182	mg/kg	10.16.18 02.51		1
Xylenes, Total	1330-20-7	**0.3124**	0.0182	mg/kg	10.16.18 02.51		1
Total BTEX		**0.3924**	0.0182	mg/kg	10.16.18 02.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	200	%	68-120	10.16.18 02.51	**
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	10.16.18 02.51	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**T-1 @4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-002	Date Collected:	10.10.18 11.15	Sample Depth:	4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066578				

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	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**T-1 @8'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-003	Date Collected:	10.10.18 11.30	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet Weight
Seq Number:	3066309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<24.8	24.8	mg/kg	10.12.18 21.10	U	1
Oil Range Hydrocarbons (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	89	%	65-144	10.12.18 21.10	
n-Triacontane	638-68-6	97	%	46-152	10.12.18 21.10	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1
Toluene	108-88-3	<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	10.15.18 22.27	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1
Xylenes, Total	1330-20-7	<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1
Total BTEX		<0.0199	0.0199	mg/kg	10.15.18 22.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	10.15.18 22.27	
a,a,a-Trifluorotoluene	98-08-8	103	%	71-121	10.15.18 22.27	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	98-08-8	78	%	69-120	10.15.18 13.41	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**N@4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-004	Date Collected:	10.10.18 11.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet 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

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	107	%	65-144	10.12.18 23.07	
n-Triacontane	638-68-6	90	%	46-152	10.12.18 23.07	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet 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
m,p-Xylenes	179601-23-1	<0.0400	0.0400	mg/kg	10.16.18 00.03	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	10.16.18 00.03	U	1
Xylenes, Total	1330-20-7	<0.02	0.02	mg/kg	10.16.18 00.03	U	1
Total BTEX		<0.02	0.02	mg/kg	10.16.18 00.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	68-120	10.16.18 00.03	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	10.16.18 00.03	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**E@4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-005	Date Collected:	10.10.18 12.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet Weight
Seq Number:	3066309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	10.12.18 23.44	U	1
Oil Range Hydrocarbons (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	94	%	65-144	10.12.18 23.44	
n-Triacontane	638-68-6	92	%	46-152	10.12.18 23.44	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1
Toluene	108-88-3	<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	10.16.18 00.27	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1
Xylenes, Total	1330-20-7	<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1
Total BTEX		<0.0199	0.0199	mg/kg	10.16.18 00.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	68-120	10.16.18 00.27	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	10.16.18 00.27	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	98-08-8	123	%	69-120	10.15.18 15.56	**

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**S@4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-006	Date Collected:	10.10.18 12.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet Weight
Seq Number:	3066309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**2240**	250	mg/kg	10.13.18 00.20		10
Oil Range Hydrocarbons (ORO)	PHCG2835	**507**	250	mg/kg	10.13.18 00.20		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	869	%	65-144	10.13.18 00.20	**
n-Triacontane	638-68-6	829	%	46-152	10.13.18 00.20	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0184	0.0184	mg/kg	10.16.18 02.27	U	1
Toluene	108-88-3	<0.0184	0.0184	mg/kg	10.16.18 02.27	U	1
Ethylbenzene	100-41-4	<0.0184	0.0184	mg/kg	10.16.18 02.27	U	1
m,p-Xylenes	179601-23-1	**0.164**	0.0368	mg/kg	10.16.18 02.27		1
o-Xylene	95-47-6	**0.0847**	0.0184	mg/kg	10.16.18 02.27		1
Xylenes, Total	1330-20-7	**0.2487**	0.0184	mg/kg	10.16.18 02.27		1
Total BTEX		**0.2487**	0.0184	mg/kg	10.16.18 02.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	68-120	10.16.18 02.27	**
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	10.16.18 02.27	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

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

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	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**W@4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-007	Date Collected:	10.10.18 12.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.12.18 13.00	Basis:	Wet Weight
Seq Number:	3066281				

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 By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.12.18 12.10	Basis:	Wet 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

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	107	%	65-144	10.13.18 00.58	
n-Triacontane	638-68-6	108	%	46-152	10.13.18 00.58	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.15.18 15.50	Basis:	Wet Weight
Seq Number:	3066483				

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	95-47-6	<0.0198	0.0198	mg/kg	10.16.18 00.51	U	1
Xylenes, Total	1330-20-7	<0.0198	0.0198	mg/kg	10.16.18 00.51	U	1
Total BTEX		<0.0198	0.0198	mg/kg	10.16.18 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	68-120	10.16.18 00.51	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	10.16.18 00.51	

Certificate of Analytical Results 602206

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**W@4'**	Matrix:	Soil	Date Received:	10.11.18 16.15
Lab Sample Id:	602206-007	Date Collected:	10.10.18 12.30	Sample Depth:	4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.12.18 12.00	Basis:	Wet Weight
Seq Number:	3066477				

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	460-00-4	110	%	76-123	10.15.18 17.38	
a,a,a-Trifluorotoluene	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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 602206

TRC Solutions, Inc

CS Caylor

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3066281 Matrix: Solid Date Prep: 10.12.18
MB Sample Id: 7664115-1-BLK LCS Sample Id: 7664115-1-BKS LCSD Sample Id: 7664115-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	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 300** Prep Method: E300P
Seq Number: 3066281 Matrix: Soil Date Prep: 10.12.18
Parent Sample Id: 602206-006 MS Sample Id: 602206-006 S MSD Sample Id: 602206-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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 300** Prep Method: E300P
Seq Number: 3066281 Matrix: Soil Date Prep: 10.12.18
Parent Sample Id: 602206-007 MS Sample Id: 602206-007 S MSD Sample Id: 602206-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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 SW8015B** Prep Method: SW8015P
Seq Number: 3066309 Matrix: Solid Date Prep: 10.12.18
MB Sample Id: 7664121-1-BLK LCS Sample Id: 7664121-1-BKS LCSD Sample Id: 7664121-1-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	91.8	92	94.7	95	63-139	3	20	mg/kg	10.12.18 17:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	79		70		104		65-144	%	10.12.18 17:18
n-Triacontane	70		70		62		46-152	%	10.12.18 17:18

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

QC Summary 602206

TRC Solutions, Inc

CS Caylor

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3066309 Matrix: Soil Date Prep: 10.12.18
Parent Sample Id: 602206-003 MS Sample Id: 602206-003 S MSD Sample Id: 602206-003 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)	<7.47	99.9	116	116	106	107	63-139	9	20	mg/kg	10.12.18 21:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	131		120		65-144	%	10.12.18 21:47
n-Triacontane	84		84		46-152	%	10.12.18 21:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3066483 Matrix: Solid Date Prep: 10.15.18
MB Sample Id: 7664183-1-BLK LCS Sample Id: 7664183-1-BKS LCSD Sample Id: 7664183-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.94	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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		91		100		68-120	%	10.15.18 20:25
a,a,a-Trifluorotoluene	84		92		100		71-121	%	10.15.18 20:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3066483 Matrix: Soil Date Prep: 10.15.18
Parent Sample Id: 602206-003 MS Sample Id: 602206-003 S MSD Sample Id: 602206-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0199	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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	87		113		68-120	%	10.15.18 22:51
a,a,a-Trifluorotoluene	92		119		71-121	%	10.15.18 22:51

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

QC Summary 602206

TRC Solutions, Inc

CS Caylor

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3066477 Matrix: Solid Date Prep: 10.12.18
MB Sample Id: 7664084-1-BLK LCS Sample Id: 7664084-1-BKS LCSD Sample Id: 7664084-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<4.00	20.0	16.4	82	17.2	86	35-129	5	20	mg/kg	10.16.18 00:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		105		107		76-123	%	10.16.18 00:19
a,a,a-Trifluorotoluene	119		111		113		69-120	%	10.16.18 00:19

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3066578 Matrix: Solid Date Prep: 10.16.18
MB Sample Id: 7664257-1-BLK LCS Sample Id: 7664257-1-BKS LCSD Sample Id: 7664257-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		113		115		76-123	%	10.16.18 14:26
a,a,a-Trifluorotoluene	137	**	105		107		69-120	%	10.16.18 14:26

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3066477 Matrix: Soil Date Prep: 10.12.18
Parent Sample Id: 602206-003 MS Sample Id: 602206-003 S MSD Sample Id: 602206-003 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	57	**	56	**	76-123	%	10.15.18 14:08
a,a,a-Trifluorotoluene	2	**	2	**	69-120	%	10.15.18 14:08

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

QC Summary 602206

TRC Solutions, Inc

CS Caylor

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3066578 Matrix: Soil Date Prep: 10.16.18

Parent Sample Id: 602420-001 MS Sample Id: 602420-001 S MSD Sample Id: 602420-001 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	119		122		76-123	%	10.16.18 18:01
a,a,a-Trifluorotoluene	78		76		69-120	%	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

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

Final 1.000

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Xenco Quote #

Xenco Job # 602206

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705
Email: jlowry@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name:

Project Information

Project Name/Number: CS Eaglor
Project Location: Lea Co, NM
Invoice To: Vanguard c/o Chuck Johnston
Invoice:

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)	BTEX		Field Comments
1	T-1 @ Surface	Surf.	10/10	11:00	S	1															X	X			
2	T-1 @ 4'	4Ft	"	11:15	"	"															X	X			
3	T-1 @ 8'	8Ft	"	11:30	"	"															X	X	X		
4	NO 4'	4'	"	11:45	"	"															X	X	X		
5	EO 4'	4'	"	12:00	"	"															X	X	X		
6	SO 4'	4'	"	12:15	"	"															X	X	X		
7	WO 4'	4'	"	12:30	"	"															X	X	X		
8																									
9																									
10																									

Matrix Codes

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

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] Next Day EMERGENCY (10/12/18)
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [ ] 5 Day TAT
- [ ] 7 Day TAT
- [x] Contract TAT

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

Data Deliverable Information

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

Notes:

jlowry@trcsolutions.com would like by Monday by 11am
zconder@trcsolutions.com
bcooper@trcsolutions.com
called and changed to 24hr Rush per
FED-EX / UPS: Tracking #

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1	2		2
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time: 10/12/18 16:15	Received By: Brenda Ward	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 4.4 Thermo. Corr. Factor IR 3
5		5			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/11/2018 04:15:00 PM

Work Order #: 602206

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

Temperature Measuring device used : IR3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Ashley Derstine Date: 10/12/2018

Checklist reviewed by: Kelsey Brooks Date: 10/12/2018

Certificate of Analysis Summary 602420

TRC Solutions, Inc, Midland, TX

Project Name: CS Caylor

Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Mon Oct-15-18 04:55 pm

Report Date: 17-OCT-18

Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	602420-001						
	Field Id:	S2 @4						
	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					

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,

Kelsey Brooks
Project Manager

Sample Cross Reference 602420

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S2 @4	S	10-10-18 13:00		602420-001

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 re-analysis.
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.

Certificate of Analytical Results 602420

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**S2 @4**	Matrix:	Soil	Date Received:	10.15.18 16.55
Lab Sample Id:	602420-001	Date Collected:	10.10.18 13.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.16.18 08.30	Basis:	Wet Weight
Seq Number:	3066480				

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 By SW8015B			Prep Method:	SW8015P
Tech:	PGM			% Moisture:	
Analyst:	PGM	Date Prep:	10.16.18 11.00	Basis:	Wet 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

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	100	%	65-144	10.16.18 13.38	
n-Triacontane	638-68-6	59	%	46-152	10.16.18 13.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066577				

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	

Certificate of Analytical Results 602420

TRC Solutions, Inc, Midland, TX

CS Caylor

Sample Id:	**S2 @4**	Matrix:	Soil	Date Received:	10.15.18 16.55
Lab Sample Id:	602420-001	Date Collected:	10.10.18 13.00		
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066578				

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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 602420

TRC Solutions, Inc

CS Caylor

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3066480 Matrix: Solid Date Prep: 10.16.18
MB Sample Id: 7664233-1-BLK LCS Sample Id: 7664233-1-BKS LCSD Sample Id: 7664233-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	253	101	250	100	90-110	1	20	mg/kg	10.16.18 09:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3066480 Matrix: Soil Date Prep: 10.16.18
Parent Sample Id: 602420-001 MS Sample Id: 602420-001 S MSD Sample Id: 602420-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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 SW8015B** Prep Method: SW8015P
Seq Number: 3066562 Matrix: Solid Date Prep: 10.16.18
MB Sample Id: 7664245-1-BLK LCS Sample Id: 7664245-1-BKS LCSD Sample Id: 7664245-1-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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	98		87		110		65-144	%	10.16.18 12:09
n-Triacontane	59		61		73		46-152	%	10.16.18 12:09

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3066562 Matrix: Soil Date Prep: 10.16.18
Parent Sample Id: 602420-001 MS Sample Id: 602420-001 S MSD Sample Id: 602420-001 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	137		146	**	65-144	%	10.16.18 14:22
n-Triacontane	64		86		46-152	%	10.16.18 14:22

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

QC Summary 602420

TRC Solutions, Inc

CS Caylor

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

Seq Number: 3066577 Matrix: Solid Date Prep: 10.16.18

MB Sample Id: 7664255-1-BLK LCS Sample Id: 7664255-1-BKS LCSD Sample Id: 7664255-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.76	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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	83		78		83		68-120	%	10.16.18 13:33
a,a,a-Trifluorotoluene	78		76		74		71-121	%	10.16.18 13:33

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

Seq Number: 3066577 Matrix: Soil Date Prep: 10.16.18

Parent Sample Id: 602420-001 MS Sample Id: 602420-001 S MSD Sample Id: 602420-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0186	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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		91		68-120	%	10.16.18 17:07
a,a,a-Trifluorotoluene	84		94		71-121	%	10.16.18 17:07

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3066578 Matrix: Solid Date Prep: 10.16.18

MB Sample Id: 7664257-1-BLK LCS Sample Id: 7664257-1-BKS LCSD Sample Id: 7664257-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		113		115		76-123	%	10.16.18 14:26
a,a,a-Trifluorotoluene	137	**	105		107		69-120	%	10.16.18 14:26

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 602420

TRC Solutions, Inc

CS Caylor

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3066578 Matrix: Soil Date Prep: 10.16.18

Parent Sample Id: 602420-001 MS Sample Id: 602420-001 S MSD Sample Id: 602420-001 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	119		122		76-123	%	10.16.18 18:01
a,a,a-Trifluorotoluene	78		76		69-120	%	10.16.18 18:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

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Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 100420

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705
Email: jlowry@trcsolutions.com | Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name:

Project Information

Project Name/Number: CS Caylor
Project Location: Lea Co, NM
Invoice To: Vanguard c/o Chuck Johnston
Invoice:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)	BTEX 8021 B		Field Comments
1	S2 @ 4'	4ft	6/10	11:00	S	1															X	X	X		
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

jlowry@trcsolutions.com
zconder@trcsolutions.com
bcooper@trcsolutions.com

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1			1	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time: 10/15/18 11:00	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: Cooler Temp: 1.1 Thermo. Corr. Factor: 5.2/5.2

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/15/2018 04:55:00 PM

Work Order #: 602420

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

Temperature Measuring device used : IR3

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Ashley Derstine Date: 10/16/2018

Checklist reviewed by: Kelsey Brooks Date: 10/16/2018

Site Name: Vanguard: CS Taylor SR Estate 4003

Date: 10/10/18

Soil Profile

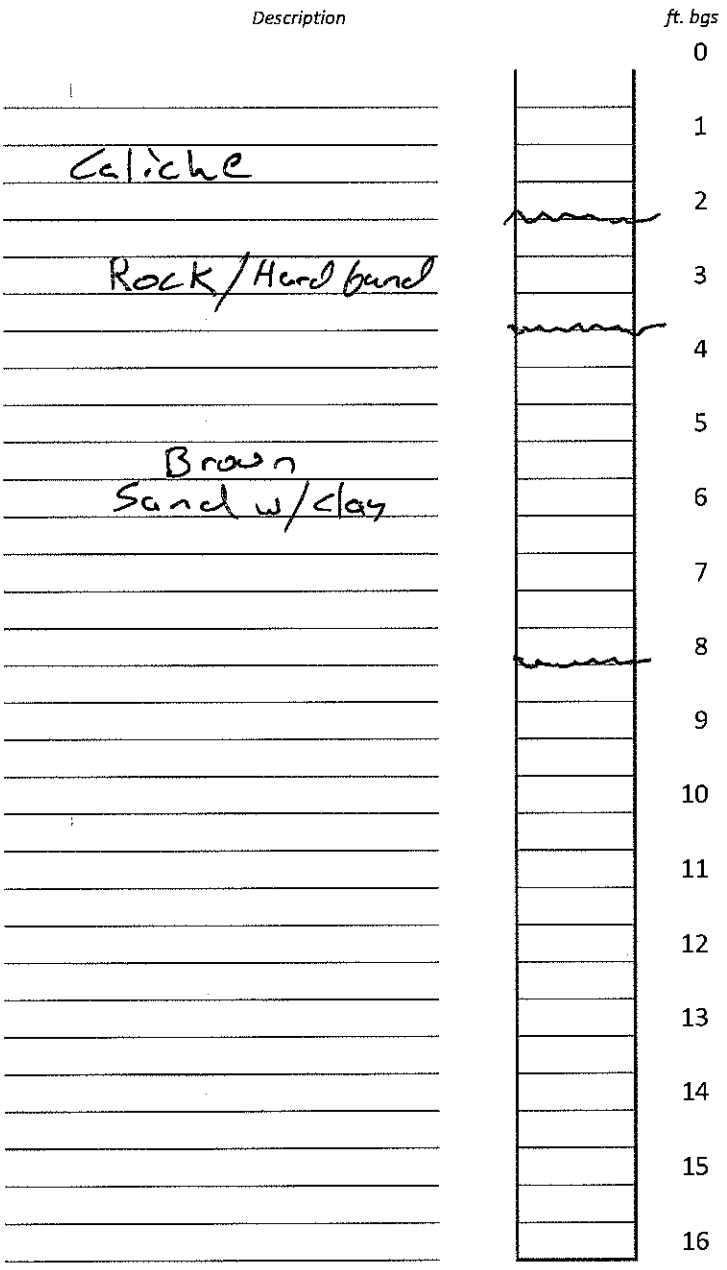

Figure 1 - View of portion of the affected liner, facing southeast.

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

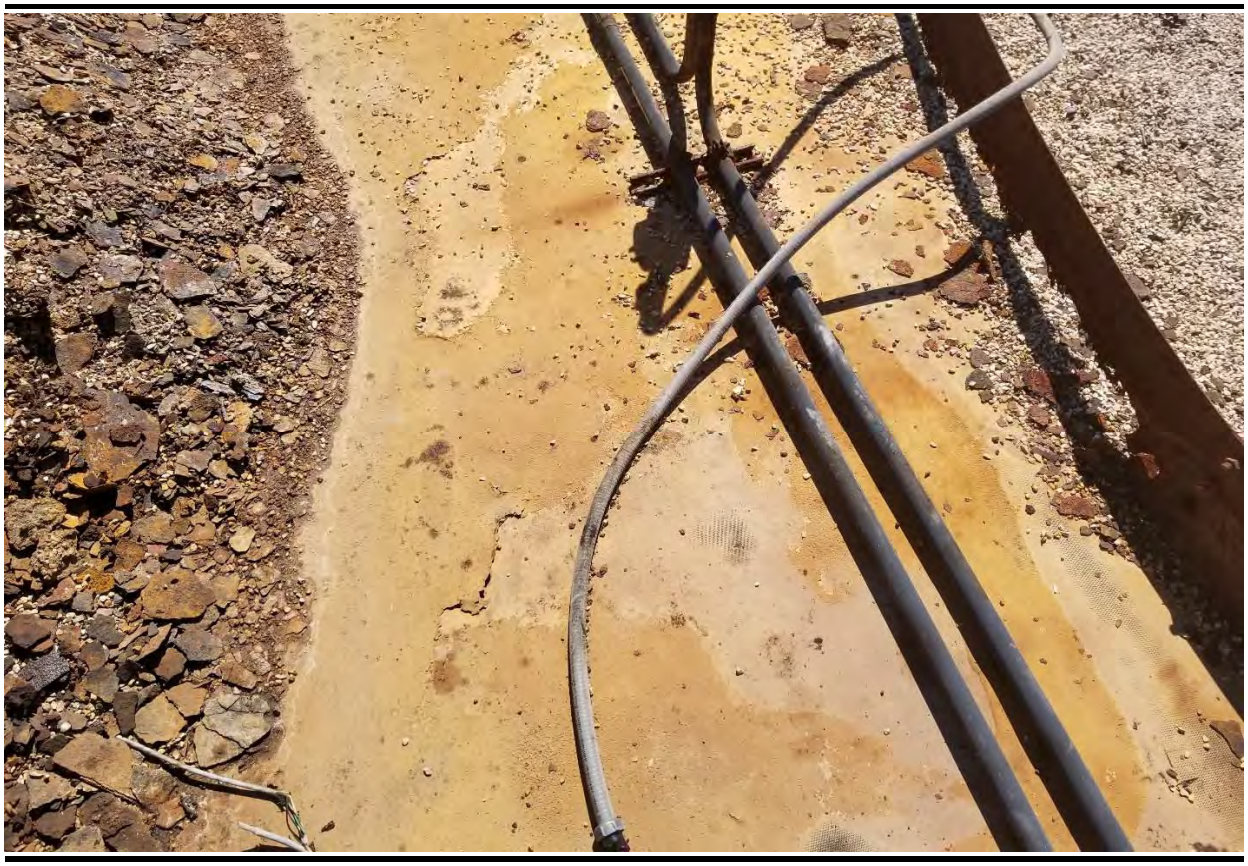

Figure 3 - View of liner within the facility.

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.

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	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, TX 79762	

Location of Release Source

Latitude 32.867627 Longitude -103.297600

(NAD 83 in decimal degrees to 5 decimal places)

Site Name C.S. Caylor SR Estate #3	Site Type Tank Battery
Date Release Discovered 9-3-2018	API# (i) NCH1826343790 C.S. CAYLOR SR ESTATE #3 @ 30-025-05430

Unit Letter	Section	Township	Range	County
D	6	17S	37E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
X Produced Water	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
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Lightning struck the tank partially burning and releasing 100 bbls of produced water inside of a lined containment.

State of New Mexico
Oil Conservation Division

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.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes by Chuck Johnston 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

- ☒ 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 by: RECEIVED By CHernandez at 11:23 am, Sep 20, 2018 Date:

State of New Mexico
Oil Conservation Division

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

Site Assessment/Characterization

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.

State of New Mexico
Oil Conservation Division

Incident ID	nCH1826343790
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 Title: EHS Operations Specialist

Signature: Date:

email: cjohnston@vnrenergy.com Telephone: (432) 202-4771

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

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

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☑ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☑ Extents of contamination must be fully delineated.
- ☑ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: _____

email: cjohnston@vnrenergy.com Telephone: (432) 202-4771

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.

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must 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 responsiblity 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: _____