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APPROVED

By Olivia Yu at 1:06 pm, Mar 30, 2018

**NMOCD grants closure
to 1RP-4569.**

February 27, 2018

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

Mark Naranjo
Roswell Field Office
New Mexico State Land Office
1001 South Atkinson Ave.
Roswell, NM 88203

**Re: Remediation Summary and Closure Report
Merlin State Com #002H
API No. 30-025-41938
GPS: 32.4419975, -103.49835
UL "D", Sec. 32, T21S, R34E
Lea Co, NM
NMOCD Ref. No. 1RP-4569**

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Closure Report* for the release site known as the Merlin State Com #002H Details of the release are summarized below:

RELEASE DETAILS			
Type of Release:	Crude Oil and Produced Water	Volume of Release: 70 bbls Oil, 55 bbls Produced Water	
		Volume Recovered: 68 bbls Oil, 53 bbls Produced Water	
Source of Release:	Free Water Knock Out	Date of Release: 01/11/17	Date of Discovery: 01/11/17
Was Immediate Notice Given?	Yes	If YES, to Whom? NMOCD District I/NMSLO	
Was a Watercourse Reached?	No	Volume Impacted the Watercourse: Not Applicable	
Cause of Problem and Remedial Action Taken:			
The release was attributed to the failure of a gasket on the free water knock out.			

A Site Location Map is provided as Attachment #1. A copy of the initial Release Notification and Corrective Action (NMOCD Form C-141) is provided as Attachment #6.

REGULATORY FRAMEWORK

Crude oil facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). Impact of soil due to a surface release is addressed in the NMOCD guidance document titled *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993.

The guidance document provides direction for initial response actions, site assessment, sampling procedures and provides a total ranking score based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

RANKING SCORE CRITERIA		
General Site Characteristics		Score
Depth to Groundwater	< 50 Feet	20
	50-99 Feet	10
	> 100 Feet	0
Well Head Protection Area, <1,000 Feet from water source, or <200 Feet from private domestic water source	Yes	20
	No	0
Distance to Surface Water Body	< 200 Feet	20
	200 - 1,000 Feet	10
	> 1,000 Feet	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 the Section and identify any registered water wells within 1,000 ft. 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. The results of the groundwater database search are provided as Attachment #3.

TOTAL RANKING SCORE FOR SITE		
Ranking Score Criteria		Score
Depth to Groundwater	75 Feet	10
Well Head Protection Area, <1,000 Feet from water source, or <200 Feet from private domestic water source	No	0
Distance to Surface Water Body	> 1,000 Feet	0
TOTAL RANKING SCORE FOR SITE		10

The NMOCD guidelines indicated the Site has an initial ranking score of 10 points. The NMOCD Recommended Remediation Action Levels (RRAL) for a Site with a ranking score of 10 points are as follows:

RECOMMENDED REMEDIATION ACTION LEVELS	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons (TPH)	1,000 mg/kg
Chloride	600 mg/kg

INITIAL INVESTIGATION

On January 23, and June 28, 2017, initial investigations were conducted at the Site by COG representatives. During the initial investigation, seventeen (17) representative soil samples were collected from within the affected area in an effort to determine the vertical extent of soil impacts. In addition, four (4) samples were collected from the edges of the release in an effort to determine the horizontal extent of soil impacts. The collected soil samples were submitted to an approved laboratory for analysis of benzene, BTEX, TPH and chloride concentrations. A table summarizing laboratory analytical results from soil samples collected during the initial assessment is provided below:

Sample ID	Depth	Soil Status	SW 846-8021b		SW-846 8015M					E300
			Benzene	Total BTEX	TPH GRO C ₆ -C ₁₀	TPH DRO C ₁₀ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₂₈	TOTAL TPH C ₆ -C ₃₅	CHLORIDE
T1	Surf.	Excavated	<0.050	0.937	32.1	354	-	386.1	-	128
T1	1'	Excavated	<0.100	16.96	229	1,620	-	1,849	-	128
T1	1.5'	Excavated	<0.100	7.238	129	1,000	-	1,129	-	112
T2	Surf.	Excavated	1.5	92.71	1,270	7,640	-	8,910	-	368
T2	1'	Excavated	<0.050	0.050	<10.0	111	-	111	-	32.0
T2	2.5'	Excavated	<0.050	1.157	49.2	1,070	-	1,119.2	-	64.0
T2	4'	Excavated	<0.050	<0.150	<10.0	35.9	-	35.9	-	144
T2	5.5'	In-Situ	<0.050	<0.150	<10.0	70.5	-	70.5	-	256
Trench-1	2'	Excavated	<0.00198	<0.00396	<15.0	41.9	<15.0	-	41.9	61.9
Trench-1	6'	In-Situ	<0.00200	<0.00399	<15.0	<15.0	<15.0	-	<15.0	234
Trench-1	12'	In-Situ	<0.00202	<0.00403	<15.0	<15.0	<15.0	-	<15.0	86.9
Trench-2	3'	Excavated	<0.00353	0.11950	352	2,380	220	-	2,952	141
Trench-2	4'	Excavated	<0.00199	0.01150	112	938	68.1	-	1,118.1	-
Trench-2	6'	In-Situ	<0.00202	0.02330	44.3	323	24.4	-	391.7	69.5
Trench-2	8'	In-Situ	<0.00199	<0.00398	<15.0	<15.0	<15.0	-	<15.0	-
Trench-2	11'	In-Situ	<0.00200	<0.00401	<15.0	<15.0	<15.0	-	<15.0	259
Trench-2	14'	In-Situ	<0.00200	<0.00399	<15.0	<15.0	<15.0	-	<15.0	174
West Trench-1	2'	In-Situ	<0.00201	<0.00402	<14.9	49.2	<14.9	-	49.2	71.5
North Trench-1	2'	In-Situ	<0.00200	<0.00401	<15.0	<15.0	<15.0	-	<15.0	29.9
East Trench-1	2'	In-Situ	<0.00199	<0.00398	<14.9	<14.9	<14.9	-	<14.9	89.5
South Trench-1	2'	In-Situ	<0.00200	<0.00399	<15.0	<15.0	<15.0	-	<15.0	74.9
NMOCD RRAL			10	50	-	-	-	-	1,000	600

Laboratory analytical reports are provided as Attachment #4. A "Site & Sample Location Map" is provided as Attachment #2.

PROPOSED REMEDIATION ACTIVITIES AND REMEDIATION WORKPLAN

Based on laboratory analytical results, site conditions and field observations made during the initial release assessment, COG proposed the following remediation activities designed to advance the Release Site toward an approved closure:

- Utilizing a backhoe, excavate the Release Site to a depth of approximately four and one half (4.5) feet bgs in the area represented by soil samples collected from trenches T2 and Trench-2 and to approximately one and one half (1.5) feet bgs in the area represented by soil samples collected from trenches T1 and Trench-1. The excavated soils will be stockpiled, mixed, and blended on a plastic liner adjacent to the excavation.
- Collect one (1) composite soil sample for every one hundred (100) cubic yards of excavated soil and submit for determination of concentrations of BTEX, TPH, and chloride concentrations.
- On receipt of favorable analytical results (below NMOCD regulatory guidelines), the excavation will be backfilled with the remediated soil.
- If laboratory analytical results indicate TPH, BTEX, or chloride concentrations of the excavated soil exceed NMOCD regulatory guidelines, the excavated soil will be transported under manifest to a NMOCD approved disposal facility and the excavated area will be backfilled with locally purchased non-impacted "like" soil.
- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and NMSLO.

The *Workplan* was subsequently approved with the condition that a statement of liner integrity be provided in the area of the release point, confirmation floor and sidewalls samples be collected in the areas represented by test trenches Trench 1 and Trench 2, a scaled map with confirmation sample locations and the excavated area be included, and confirmation stockpile characterization soil samples be collected for every fifty (50) cubic yards of material proposed to be used as backfill material

SUMMARY OF FIELD ACTIVITIES

Impacted soil within the release margins was excavated and temporarily stockpiled on-site, atop an impermeable liner, pending final disposition. The floor and sidewalls of the excavated area were advanced until the laboratory analytical results from confirmation soil samples indicated BTEX, TPH and/or chloride concentrations were below the NMOCD RRAL. Upon excavating impacted soil from within the release margins, eight (8) confirmation soil samples were collected from the floor and sidewalls of the excavated area along with six (6) stockpile characterization soil samples representing every 50 cubic yards of excavated material. The collected soil samples were submitted to the laboratory for analysis of benzene, BTEX, TPH and/or chloride. Stockpiled soil exhibiting TPH concentrations above the NMOCD RRAL (SP-3 and SP-5) was transported to an NMOCD-approved disposal facility. Stockpiled soil exhibiting TPH concentrations below the NMOCD RRAL (SP-1, SP-2, SP-4 and SP-6) was utilized as backfill material. A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Sample ID	Depth	Soil Status	SW 846-8021b		SW-846 8015M				E300
			Benzene	Total BTEX	TPH GRO C ₆ -C ₁₀	TPH DRO C ₁₀ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₃₅	CHLORIDE
T-1 Floor	1.5'	In-Situ	<0.00202	<0.00202	<15.0	644	120	764	160
T-1 SSW	6"	In-Situ	-	-	<15.0	214	37.0	251	-
T-1 ESW	6"	In-Situ	-	-	<15.0	<15.0	<15.0	<15.0	-
T-1 WSW	6"	In-Situ	-	-	<15.0	75.4	<15.0	75.4	-
T-2 Floor	4'	In-Situ	<0.00202	<0.00202	<15.0	395	82.2	477.2	94.3
T-2 NSW	2'	In-Situ	-	-	<14.9	252	49.8	301.8	-
T-2 ESW	2'	In-Situ	-	-	<14.9	200	46.0	246.0	-
T-2 WSW	2'	In-Situ	-	-	<15.0	208	36.0	244.0	-
T-2 SSW	2'	In-Situ	-	-	<15.0	<15.0	<15.0	<15.0	-
SP-1	NA	Backfill	<0.00327	<0.00327	<15.0	786	177	963	207
SP-2	NA	Backfill	<0.00200	<0.00200	<15.0	163	26.3	189.3	283
SP-3	NA	Disposed	<0.00200	<0.00200	<15.0	950	161	1,111	193
SP-4	NA	Backfill	<0.00199	0.00314	<15.0	513	108	621	288
SP-5	NA	Disposed	<0.00202	0.00284	<15.0	883	158	1,041	273
SP-6	NA	Backfill	<0.00201	<0.00201	<15.0	233	56.6	289.6	296
NMOCD RRAL			10	50	-	-	-	1,000	600

Upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with soil stockpiles represented by soil samples SP-1, SP-2, SP-4, SP-6 and imported, non-impacted "like" material. A Photographic Log is provided as Attachment #5.

EXCAVATION/REMEDATION DETAIL SUMMARY			
Type of Remediation:	Dig and Haul, Reuse of soil exhibiting BTEX, TPH and Chloride below NMOCD RRAL		
Date Remediation Activities Began:	January 16, 2018		
Excavation Dimensions:	Length: 90 Ft.	Width: 20 to 40 Ft.	Depth: 1.5 to 4 Ft.
Soil Transportation Start Date:	February 14, 2018	Backfill Date:	February 14, 2018
Total Yards Transported to Disposal:	100	Disposal Facility:	Lazy Ace Landfarm (NM-1-041)

LIMITATIONS

TRC has prepared this Remediation Summary and Soil Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

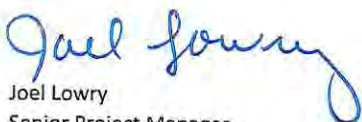
This report has been prepared for the benefit of COG Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or COG Operating, LLC.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD- and NMSLO-approved *Workplan*. Excavated impacted material was transported to an NMOCD-approved disposal facility and the site was backfilled with a combination of imported, non-impacted "like" material and stockpiled soil exhibiting BTEX, TPH and chloride concentrations below the NMOCD RRAL. TRC on behalf of COG Operating, LLC respectfully requests the NMOCD and NMSLO grant closure approval for the Merlin State Com #002H release which occurred on January 11, 2017.

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

Respectfully,

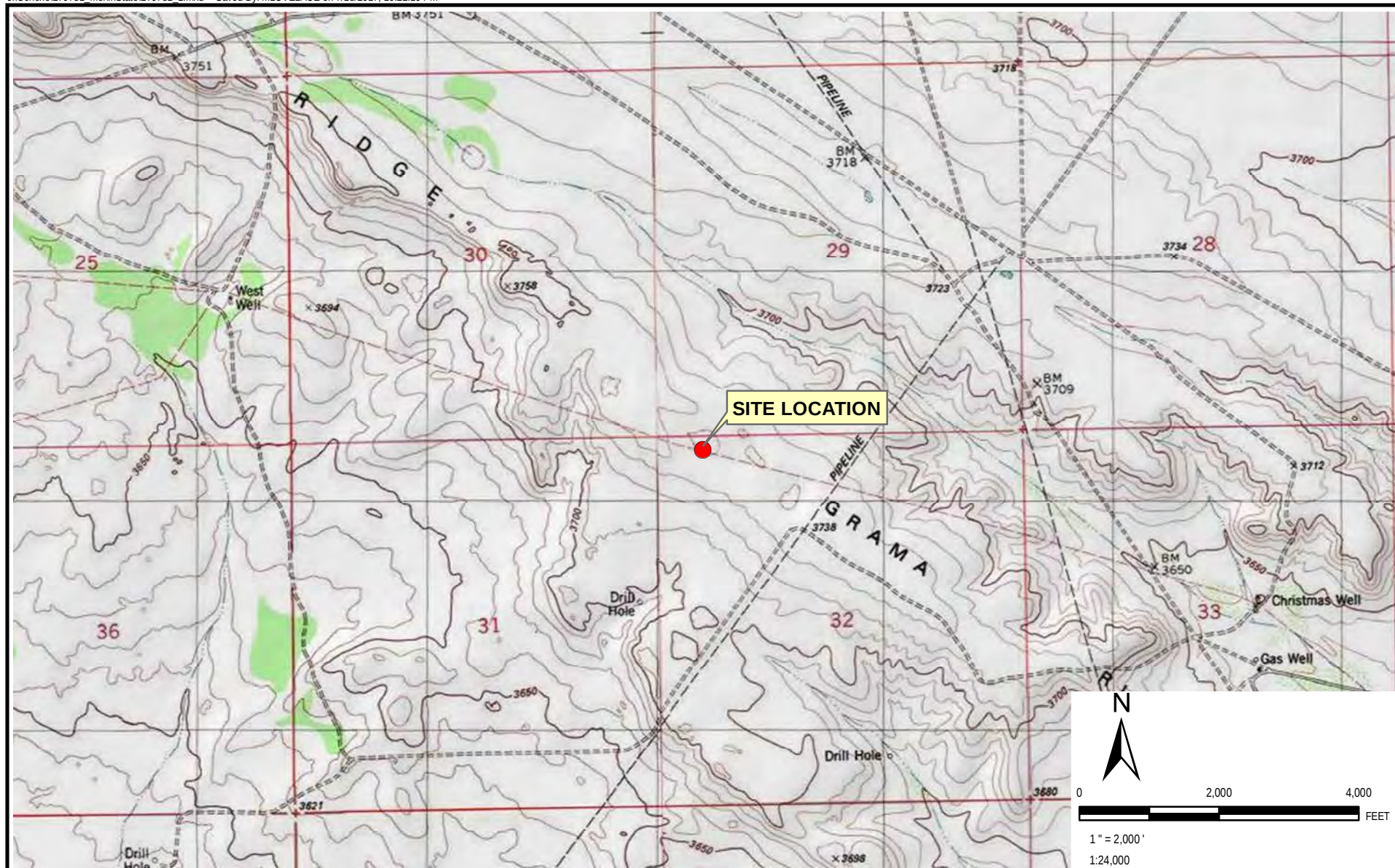


Joel Lowry
Senior Project Manager
TRC Environmental Corp.



Curt Stanley
Senior Project Manager
TRC Environmental Corp.

Attachments:	Attachment #1-	Figure 1 - Site Location Map
	Attachment #2-	Figure 2 - Site & Sample Location Map
	Attachment #3-	Groundwater Database Search
	Attachment #4-	Laboratory Analytical Reports
	Attachment #5-	Photographic Log
	Attachment #6-	Release Notification and Corrective Action (FORM C-141)



2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770

TRC - GIS

TITLE:

FIGURE 1 SITE LOCATION MAP

PROJECT:

**MERLIN STATE COM #002H
LEA COUNTY, NEW MEXICO
COG OPERATING, LLC**

DRAWN BY: MLOVELACE

CHECKED BY: NGREEN

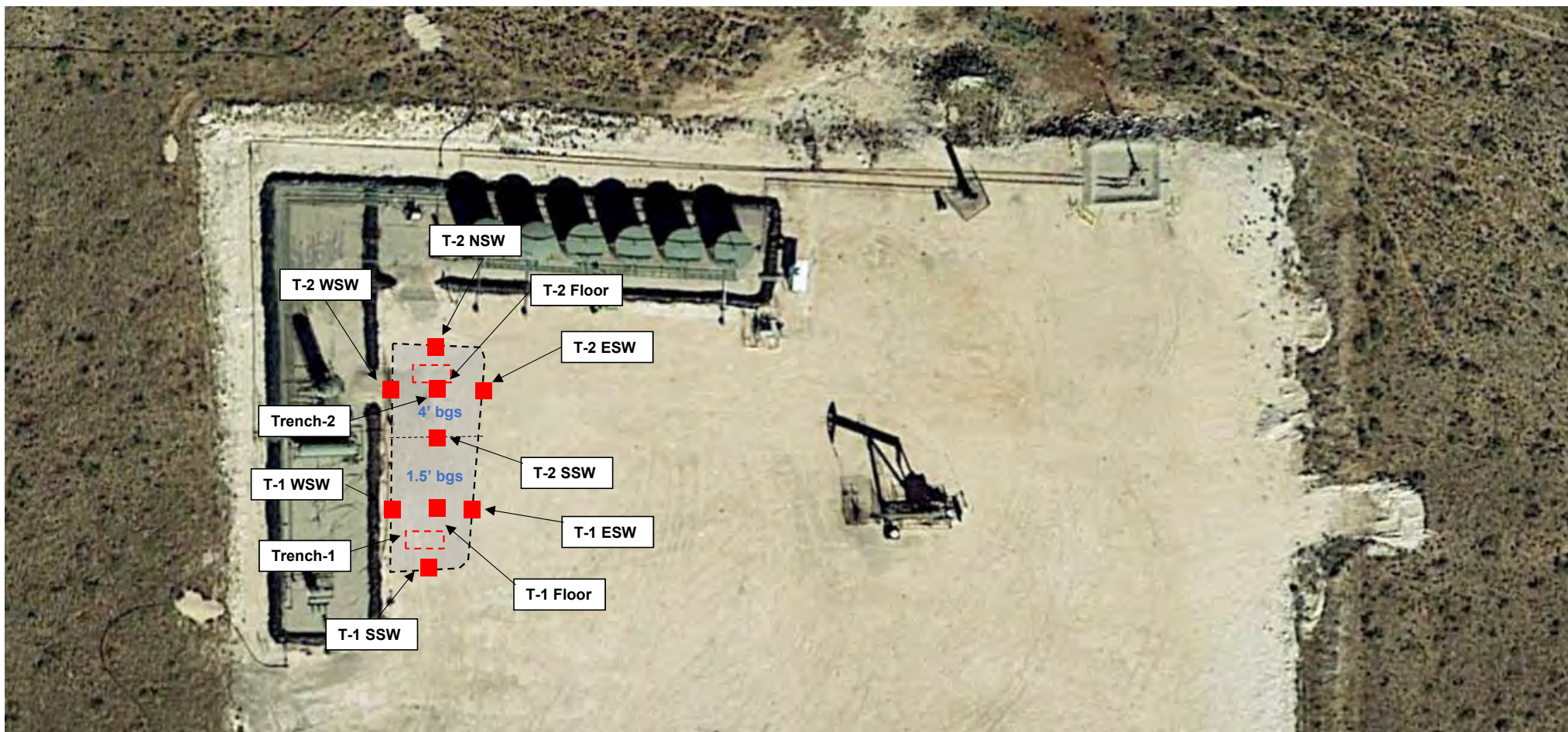
APPROVED BY: NGREEN

DATE: JULY 2017

PROJ. NO.: 279781

GPS: LAT. N 32.4419975, LONG. W 103.498597

NW1/4 NW1/4 SEC 32 T21S R34E



LEGEND:

- Confirmation Sample Location
- Excavated Area
- Test Trench

Figure 2
 Site & Sample Location Map
 COG Operating, LLC
 Merlin State Com #002H
 Lea County, New Mexico

Scale 1" = ~60'

Drafted by: ZC | Checked by: JL

Draft: February 20, 2018

Lat. N 32.44199 Long. W 103.49835

UL "D", Sec. 32, T21S, R34E

TRC Proj. No.: 279781



2057 Commerce Drive
 Midland, Texas 79703
 432.520.7720



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

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

No records found.

PLSS Search:

Section(s): 32

Township: 21S

Range: 34E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/21/18 2:04 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 31, 2017

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: MERLIN STATE #2H

Enclosed are the results of analyses for samples received by the laboratory on 01/25/17 12:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T1 - SURFACE (H700183-01)

BTX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	<0.050	0.050	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	0.169	0.050	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	0.768	0.150	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	0.937	0.300	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/28/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	32.1	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	354	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 102 % 35-147

Surrogate: 1-Chlorooctadecane 94.2 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T1 - 1' (H700183-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	2.73	0.100	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	3.73	0.100	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	10.5	0.300	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	16.9	0.600	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/28/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	229	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	1620	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 107 % 35-147

Surrogate: 1-Chlorooctadecane 100 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T1 - 1.5' (H700183-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	0.858	0.100	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	1.61	0.100	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	4.77	0.300	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	7.24	0.600	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	01/28/2017	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	129	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	1000	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 113 % 35-147

Surrogate: 1-Chlorooctadecane 110 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 DAKOTA NEEL
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 01/25/2017
 Reported: 01/31/2017
 Project Name: MERLIN STATE #2H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 01/23/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Angela Cabrera

Sample ID: T2 - SURFACE (H700183-04)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.51	1.00	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	27.6	1.00	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	14.8	1.00	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	48.8	3.00	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	92.7	6.00	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	01/28/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1270	50.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	7640	50.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 289 % 35-147

Surrogate: 1-Chlorooctadecane 194 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T2 - 1' (H700183-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	0.050	0.050	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	<0.050	0.050	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	<0.150	0.150	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	<0.300	0.300	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/28/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	111	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 96.7 % 35-147

Surrogate: 1-Chlorooctadecane 99.5 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T2 - 2.5' (H700183-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	0.098	0.050	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	0.241	0.050	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	0.818	0.150	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTX	1.16	0.300	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/28/2017	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	49.2	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	1070	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 104 % 35-147

Surrogate: 1-Chlorooctadecane 106 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T2 - 4' (H700183-07)

BTX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/30/2017	ND	1.91	95.6	2.00	0.678		
Toluene*	<0.050	0.050	01/30/2017	ND	1.92	95.9	2.00	0.381		
Ethylbenzene*	<0.050	0.050	01/30/2017	ND	1.96	98.2	2.00	0.486		
Total Xylenes*	<0.150	0.150	01/30/2017	ND	5.55	92.6	6.00	0.146		
Total BTX	<0.300	0.300	01/30/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/28/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	35.9	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 95.8 % 35-147

Surrogate: 1-Chlorooctadecane 92.0 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 01/25/2017
Reported: 01/31/2017
Project Name: MERLIN STATE #2H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/23/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: T2 - 5.5' (H700183-08)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/30/2017	ND	1.91	95.6	2.00	0.678	
Toluene*	<0.050	0.050	01/30/2017	ND	1.92	95.9	2.00	0.381	
Ethylbenzene*	<0.050	0.050	01/30/2017	ND	1.96	98.2	2.00	0.486	
Total Xylenes*	<0.150	0.150	01/30/2017	ND	5.55	92.6	6.00	0.146	
Total BTEx	<0.300	0.300	01/30/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	01/28/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/27/2017	ND	204	102	200	3.84	
DRO >C10-C28	70.5	10.0	01/27/2017	ND	215	108	200	7.32	

Surrogate: 1-Chlorooctane 96.7 % 35-147

Surrogate: 1-Chlorooctadecane 94.8 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

[illegible]

100



Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H (1/11/17)



Project Id:

Contact: Nikki Green

Project Location: Lea Co NM

Date Received in Lab: Mon Jul-03-17 11:55 am

Report Date: 11-JUL-17

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	556810-001	556810-002	556810-003	556810-004	556810-005	556810-006
	<i>Field Id:</i>	Trench-1 2'	Trench-1 6'	Trench-1 12'	Trench-2 3'	Trench-2 4'	Trench-2 6'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-28-17 12:25	Jun-28-17 13:20	Jun-28-17 14:45	Jun-28-17 14:50	Jun-28-17 15:30	Jun-28-17 15:45
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-06-17 15:00	Jul-06-17 15:00	Jul-06-17 15:00	Jul-10-17 18:00	Jul-06-17 15:00	Jul-07-17 08:30
	<i>Analyzed:</i>	Jul-07-17 03:29	Jul-07-17 03:45	Jul-07-17 04:01	Jul-11-17 09:36	Jul-07-17 04:17	Jul-07-17 14:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00353 0.00353	<0.00199 0.00199	<0.00202 0.00202
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00353 0.00353	<0.00199 0.00199	<0.00202 0.00202
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00353 0.00353	<0.00199 0.00199	<0.00202 0.00202
m,p-Xylenes		<0.00396 0.00396	<0.00399 0.00399	<0.00403 0.00403	0.0616 0.00707	0.0115 0.00398	0.0233 0.00403
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	0.0579 0.00353	<0.00199 0.00199	<0.00202 0.00202
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	0.120 0.00353	0.0115 0.00199	0.0233 0.00202
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	0.120 0.00353	0.0115 0.00199	0.0233 0.00202
Chloride by EPA 300	<i>Extracted:</i>	Jul-07-17 16:30	Jul-07-17 16:30	Jul-07-17 16:30	Jul-07-17 17:10		Jul-07-17 17:10
	<i>Analyzed:</i>	Jul-07-17 23:06	Jul-07-17 23:13	Jul-07-17 23:21	Jul-08-17 00:07		Jul-08-17 00:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
Chloride		61.9 4.96	234 4.94	86.9 4.97	141 4.91		69.5 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-04-17 10:00	Jul-04-17 10:00	Jul-04-17 10:00	Jul-04-17 10:00	Jul-04-17 10:00	Jul-06-17 11:00
	<i>Analyzed:</i>	Jul-05-17 01:36	Jul-05-17 01:57	Jul-05-17 02:18	Jul-05-17 03:23	Jul-05-17 03:44	Jul-06-17 14:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	352 15.0	112 15.0	44.3 15.0
Diesel Range Organics (DRO)		41.9 15.0	<15.0 15.0	<15.0 15.0	2380 15.0	938 15.0	323 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	220 15.0	68.1 15.0	24.4 15.0
Total TPH		41.9 15.0	<15.0 15.0	<15.0 15.0	2950 15.0	1120 15.0	392 15.0

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Version: 1.9%

Mike Kimmel
Client Services Manager



Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H (1/11/17)



Project Id:

Contact: Nikki Green

Project Location: Lea Co NM

Date Received in Lab: Mon Jul-03-17 11:55 am

Report Date: 11-JUL-17

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	556810-007	556810-008	556810-009	556810-010	556810-011	556810-012
	Field Id:	Trench-2 8'	Trench-2 11'	Trench-2 14'	West Trench-1 2'	North Trench-1 2'	East Trench-1 2'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-28-17 15:50	Jun-28-17 15:55	Jun-28-17 16:07	Jun-28-17 12:45	Jun-28-17 16:20	Jun-28-17 16:38
BTEX by EPA 8021B	Extracted:	Jul-07-17 08:30	Jul-07-17 08:30	Jul-07-17 08:30	Jul-06-17 15:00	Jul-07-17 08:30	Jul-07-17 08:30
	Analyzed:	Jul-07-17 13:29	Jul-07-17 14:17	Jul-07-17 14:34	Jul-07-17 04:33	Jul-07-17 11:52	Jul-07-17 10:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00399 0.00399	<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	Extracted:		Jul-07-17 17:10	Jul-07-17 17:10	Jul-07-17 17:10	Jul-07-17 17:10	Jul-07-17 17:10
	Analyzed:		Jul-08-17 00:38	Jul-08-17 00:45	Jul-08-17 00:53	Jul-08-17 01:16	Jul-08-17 01:24
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride			259 4.95	174 4.97	71.5 4.97	29.9 4.98	89.5 4.91
TPH by SW8015 Mod	Extracted:	Jul-06-17 11:00	Jul-06-17 11:00	Jul-06-17 11:00	Jul-04-17 10:00	Jul-04-17 10:00	Jul-04-17 10:00
	Analyzed:	Jul-06-17 15:31	Jul-06-17 15:52	Jul-06-17 16:12	Jul-05-17 04:05	Jul-05-17 04:27	Jul-05-17 04:49
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	49.2 14.9	<15.0 15.0	<14.9 14.9
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	49.2 14.9	<15.0 15.0	<14.9 14.9

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Version: 1.9%

Mike Kimmel
Client Services Manager



Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H (1/11/17)



Project Id:

Contact: Nikki Green

Project Location: Lea Co NM

Date Received in Lab: Mon Jul-03-17 11:55 am

Report Date: 11-JUL-17

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	556810-013					
	Field Id:	South Trench-1 2'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jun-28-17 16:45					
BTEX by EPA 8021B	Extracted:	Jul-07-17 08:30					
	Analyzed:	Jul-07-17 12:08					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00399 0.00399					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	Extracted:	Jul-07-17 17:10					
	Analyzed:	Jul-08-17 01:32					
	Units/RL:	mg/kg RL					
Chloride		74.9 4.99					
TPH by SW8015 Mod	Extracted:	Jul-04-17 10:00					
	Analyzed:	Jul-05-17 05:10					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Oil Range Hydrocarbons (ORO)		<15.0 15.0					
Total TPH		<15.0 15.0					

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

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

Version: 1.0%

Mike Kimmel
Client Services Manager

Analytical Report 556810

for
TRC Solutions, Inc

Project Manager: Nikki Green
Merlin State Com #002H (1/11/17)

11-JUL-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



11-JUL-17

Project Manager: **Nikki Green**

TRC Solutions, Inc

2057 Commerce

Midland, TX 79703

Reference: XENCO Report No(s): **556810**

Merlin State Com #002H (1/11/17)

Project Address: Lea Co NM

Nikki Green:

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) 556810. 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. 556810 will be filed for 60 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,

Mike Kimmel

Client Services Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Trench-1 2'	S	06-28-17 12:25		556810-001
Trench-1 6'	S	06-28-17 13:20		556810-002
Trench-1 12'	S	06-28-17 14:45		556810-003
Trench-2 3'	S	06-28-17 14:50		556810-004
Trench-2 4'	S	06-28-17 15:30		556810-005
Trench-2 6'	S	06-28-17 15:45		556810-006
Trench-2 8'	S	06-28-17 15:50		556810-007
Trench-2 11'	S	06-28-17 15:55		556810-008
Trench-2 14'	S	06-28-17 16:07		556810-009
West Trench-1 2'	S	06-28-17 12:45		556810-010
North Trench-1 2'	S	06-28-17 16:20		556810-011
East Trench-1 2'	S	06-28-17 16:38		556810-012
South Trench-1 2'	S	06-28-17 16:45		556810-013



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Merlin State Com #002H (1/11/17)

Project ID:

Work Order Number(s): 556810

Report Date: 11-JUL-17

Date Received: 07/03/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3021700 BTEX by EPA 8021B

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

Batch: LBA-3021705 BTEX by EPA 8021B

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

Batch: LBA-3021784 Inorganic Anions by EPA 300

Lab Sample ID 556810-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 556810-004, -006, -008, -009, -010, -011, -012, -013.

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

Batch: LBA-3021965 BTEX by EPA 8021B

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



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-001

Date Collected: 06.28.17 12.25

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 16.30

Basis: Wet Weight

Seq Number: 3021783

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.9	4.96	mg/kg	07.07.17 23.06		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	41.9	15.0	mg/kg	07.05.17 01.36		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.17 01.36	U	1
Total TPH	PHC635	41.9	15.0	mg/kg	07.05.17 01.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.05.17 01.36	
o-Terphenyl	84-15-1	107	%	70-135	07.05.17 01.36	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-001

Date Collected: 06.28.17 12.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.17 15.00

Basis: Wet Weight

Seq Number: 3021700

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.07.17 03.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.07.17 03.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	80-120	07.07.17 03.29		
1,4-Difluorobenzene	540-36-3	101	%	80-120	07.07.17 03.29		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 6'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-002

Date Collected: 06.28.17 13.20

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 16.30

Basis: Wet Weight

Seq Number: 3021783

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	234	4.94	mg/kg	07.07.17 23.13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 01.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.17 01.57	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.17 01.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.17 01.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.05.17 01.57	
o-Terphenyl	84-15-1	111	%	70-135	07.05.17 01.57	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 6'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-002

Date Collected: 06.28.17 13.20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.17 15.00

Basis: Wet Weight

Seq Number: 3021700

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.17 03.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.17 03.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	80-120	07.07.17 03.45		
1,4-Difluorobenzene	540-36-3	96	%	80-120	07.07.17 03.45		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 12'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-003

Date Collected: 06.28.17 14.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 16.30

Basis: Wet Weight

Seq Number: 3021783

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.9	4.97	mg/kg	07.07.17 23.21		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 02.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.17 02.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.17 02.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.17 02.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.05.17 02.18	
o-Terphenyl	84-15-1	93	%	70-135	07.05.17 02.18	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-1 12'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-003

Date Collected: 06.28.17 14.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.17 15.00

Basis: Wet Weight

Seq Number: 3021700

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.07.17 04.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.07.17 04.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	80-120	07.07.17 04.01		
4-Bromofluorobenzene	460-00-4	101	%	80-120	07.07.17 04.01		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 3'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-004

Date Collected: 06.28.17 14.50

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	4.91	mg/kg	07.08.17 00.07		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	352	15.0	mg/kg	07.05.17 03.23		1
Diesel Range Organics (DRO)	C10C28DRO	2380	15.0	mg/kg	07.05.17 03.23		1
Oil Range Hydrocarbons (ORO)	PHCG2835	220	15.0	mg/kg	07.05.17 03.23		1
Total TPH	PHC635	2950	15.0	mg/kg	07.05.17 03.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	07.05.17 03.23	
o-Terphenyl	84-15-1	90	%	70-135	07.05.17 03.23	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 3'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-004

Date Collected: 06.28.17 14.50

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.10.17 18.00

Basis: Wet Weight

Seq Number: 3021965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00353	0.00353	mg/kg	07.11.17 09.36	U	1
Toluene	108-88-3	<0.00353	0.00353	mg/kg	07.11.17 09.36	U	1
Ethylbenzene	100-41-4	<0.00353	0.00353	mg/kg	07.11.17 09.36	U	1
m,p-Xylenes	179601-23-1	0.0616	0.00707	mg/kg	07.11.17 09.36		1
o-Xylene	95-47-6	0.0579	0.00353	mg/kg	07.11.17 09.36		1
Total Xylenes	1330-20-7	0.120	0.00353	mg/kg	07.11.17 09.36		1
Total BTEX		0.120	0.00353	mg/kg	07.11.17 09.36		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109		%	80-120	07.11.17 09.36	
1,4-Difluorobenzene	540-36-3	83		%	80-120	07.11.17 09.36	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 4'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-005

Date Collected: 06.28.17 15.30

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	112	15.0	mg/kg	07.05.17 03.44		1
Diesel Range Organics (DRO)	C10C28DRO	938	15.0	mg/kg	07.05.17 03.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	68.1	15.0	mg/kg	07.05.17 03.44		1
Total TPH	PHC635	1120	15.0	mg/kg	07.05.17 03.44		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	07.05.17 03.44		
o-Terphenyl	84-15-1	101	%	70-135	07.05.17 03.44		

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.17 15.00

Basis: Wet Weight

Seq Number: 3021700

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.17 04.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.17 04.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.17 04.17	U	1
m,p-Xylenes	179601-23-1	0.0115	0.00398	mg/kg	07.07.17 04.17		1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.17 04.17	U	1
Total Xylenes	1330-20-7	0.0115	0.00199	mg/kg	07.07.17 04.17		1
Total BTEX		0.0115	0.00199	mg/kg	07.07.17 04.17		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	07.07.17 04.17		
4-Bromofluorobenzene	460-00-4	110	%	80-120	07.07.17 04.17		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 6'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-006

Date Collected: 06.28.17 15.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.5	4.96	mg/kg	07.08.17 00.30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.06.17 11.00

Basis: Wet Weight

Seq Number: 3021792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	44.3	15.0	mg/kg	07.06.17 14.30		1
Diesel Range Organics (DRO)	C10C28DRO	323	15.0	mg/kg	07.06.17 14.30		1
Oil Range Hydrocarbons (ORO)	PHCG2835	24.4	15.0	mg/kg	07.06.17 14.30		1
Total TPH	PHC635	392	15.0	mg/kg	07.06.17 14.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.06.17 14.30	
o-Terphenyl	84-15-1	109	%	70-135	07.06.17 14.30	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 6'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-006

Date Collected: 06.28.17 15.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.07.17 14.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.07.17 14.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.07.17 14.50	U	1
m,p-Xylenes	179601-23-1	0.0233	0.00403	mg/kg	07.07.17 14.50		1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.07.17 14.50	U	1
Total Xylenes	1330-20-7	0.0233	0.00202	mg/kg	07.07.17 14.50		1
Total BTEX		0.0233	0.00202	mg/kg	07.07.17 14.50		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	80-120	07.07.17 14.50		
4-Bromofluorobenzene	460-00-4	117	%	80-120	07.07.17 14.50		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 8'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-007

Date Collected: 06.28.17 15.50

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.06.17 11.00

Basis: Wet Weight

Seq Number: 3021792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.17 15.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.17 15.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.17 15.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.17 15.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.06.17 15.31	
o-Terphenyl	84-15-1	120	%	70-135	07.06.17 15.31	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.17 13.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.17 13.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	80-120	07.07.17 13.29	
1,4-Difluorobenzene	540-36-3	93	%	80-120	07.07.17 13.29	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 11'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-008

Date Collected: 06.28.17 15.55

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	259	4.95	mg/kg	07.08.17 00.38		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.06.17 11.00

Basis: Wet Weight

Seq Number: 3021792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.17 15.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.17 15.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.17 15.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.17 15.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	07.06.17 15.52	
o-Terphenyl	84-15-1	116	%	70-135	07.06.17 15.52	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 11'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-008

Date Collected: 06.28.17 15.55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.07.17 14.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.17 14.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	80-120	07.07.17 14.17		
1,4-Difluorobenzene	540-36-3	107	%	80-120	07.07.17 14.17		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 14'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-009

Date Collected: 06.28.17 16.07

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	174	4.97	mg/kg	07.08.17 00.45		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.06.17 11.00

Basis: Wet Weight

Seq Number: 3021792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.17 16.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.17 16.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.17 16.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.17 16.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.06.17 16.12	
o-Terphenyl	84-15-1	111	%	70-135	07.06.17 16.12	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **Trench-2 14'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-009

Date Collected: 06.28.17 16.07

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.17 14.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.17 14.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	80-120	07.07.17 14.34		
1,4-Difluorobenzene	540-36-3	101	%	80-120	07.07.17 14.34		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **West Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-010

Date Collected: 06.28.17 12.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	71.5	4.97	mg/kg	07.08.17 00.53		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.05.17 04.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	49.2	14.9	mg/kg	07.05.17 04.05		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.05.17 04.05	U	1
Total TPH	PHC635	49.2	14.9	mg/kg	07.05.17 04.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.05.17 04.05	
o-Terphenyl	84-15-1	107	%	70-135	07.05.17 04.05	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **West Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-010

Date Collected: 06.28.17 12.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.17 15.00

Basis: Wet Weight

Seq Number: 3021700

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.17 04.33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.17 04.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	80-120	07.07.17 04.33		
1,4-Difluorobenzene	540-36-3	98	%	80-120	07.07.17 04.33		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **North Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-011

Date Collected: 06.28.17 16.20

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.9	4.98	mg/kg	07.08.17 01.16		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 04.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.17 04.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.17 04.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.17 04.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	07.05.17 04.27		
o-Terphenyl	84-15-1	106	%	70-135	07.05.17 04.27		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **North Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-011

Date Collected: 06.28.17 16.20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.07.17 11.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.17 11.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	80-120	07.07.17 11.52		
1,4-Difluorobenzene	540-36-3	102	%	80-120	07.07.17 11.52		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **East Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-012

Date Collected: 06.28.17 16.38

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	89.5	4.91	mg/kg	07.08.17 01.24		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.05.17 04.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.05.17 04.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.05.17 04.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.05.17 04.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.05.17 04.49	
o-Terphenyl	84-15-1	104	%	70-135	07.05.17 04.49	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **East Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-012

Date Collected: 06.28.17 16.38

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.17 10.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.17 10.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	80-120	07.07.17 10.27		
4-Bromofluorobenzene	460-00-4	102	%	80-120	07.07.17 10.27		



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **South Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-013

Date Collected: 06.28.17 16.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 07.07.17 17.10

Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	74.9	4.99	mg/kg	07.08.17 01.32		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 07.04.17 10.00

Basis: Wet Weight

Seq Number: 3021777

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 05.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.17 05.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.17 05.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.17 05.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.05.17 05.10	
o-Terphenyl	84-15-1	107	%	70-135	07.05.17 05.10	



Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H (1/11/17)

Sample Id: **South Trench-1 2'**

Matrix: Soil

Date Received: 07.03.17 11.55

Lab Sample Id: 556810-013

Date Collected: 06.28.17 16.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.17 08.30

Basis: Wet Weight

Seq Number: 3021705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.17 12.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.17 12.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	80-120	07.07.17 12.08		
1,4-Difluorobenzene	540-36-3	99	%	80-120	07.07.17 12.08		

- 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 **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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QC Summary 556810

TRC Solutions, Inc
Merlin State Com #002H (1/11/17)

Analytical Method: Chloride by EPA 300

Seq Number: 3021783

MB Sample Id: 727344-1-BLK

Matrix: Solid

LCS Sample Id: 727344-1-BKS

Prep Method: E300P

Date Prep: 07.07.17

LCSD Sample Id: 727344-1-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	254	102	259	104	90-110	2	20	mg/kg	07.07.17 19:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3021784

MB Sample Id: 727342-1-BLK

Matrix: Solid

LCS Sample Id: 727342-1-BKS

Prep Method: E300P

Date Prep: 07.07.17

LCSD Sample Id: 727342-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	265	106	268	107	90-110	1	20	mg/kg	07.07.17 23:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3021783

Parent Sample Id: 556808-001

Matrix: Soil

MS Sample Id: 556808-001 S

Prep Method: E300P

Date Prep: 07.07.17

MSD Sample Id: 556808-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.8	246	251	96	262	101	90-110	4	20	mg/kg	07.07.17 20:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3021783

Parent Sample Id: 556808-017

Matrix: Soil

MS Sample Id: 556808-017 S

Prep Method: E300P

Date Prep: 07.07.17

MSD Sample Id: 556808-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	246	404	101	372	88	90-110	8	20	mg/kg	07.07.17 21:49	X

Analytical Method: Chloride by EPA 300

Seq Number: 3021784

Parent Sample Id: 556810-004

Matrix: Soil

MS Sample Id: 556810-004 S

Prep Method: E300P

Date Prep: 07.07.17

MSD Sample Id: 556810-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	246	411	110	451	126	90-110	9	20	mg/kg	07.08.17 00:15	X

Analytical Method: Chloride by EPA 300

Seq Number: 3021784

Parent Sample Id: 556930-002

Matrix: Soil

MS Sample Id: 556930-002 S

Prep Method: E300P

Date Prep: 07.07.17

MSD Sample Id: 556930-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	380	248	638	104	596	87	90-110	7	20	mg/kg	07.08.17 02:02	X



QC Summary 556810

TRC Solutions, Inc
Merlin State Com #002H (1/11/17)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3021777

MB Sample Id: 727236-1-BLK

Matrix: Solid

LCS Sample Id: 727236-1-BKS

Prep Method: TX1005P

Date Prep: 07.04.17

LCSD Sample Id: 727236-1-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)	<15.0	1000	983	98	993	99	70-135	1	35	mg/kg	07.04.17 21:40	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	963	96	70-135	5	35	mg/kg	07.04.17 21:40	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	110		100		102		70-135	%	07.04.17 21:40			
o-Terphenyl	117		98		102		70-135	%	07.04.17 21:40			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3021792

MB Sample Id: 727359-1-BLK

Matrix: Solid

LCS Sample Id: 727359-1-BKS

Prep Method: TX1005P

Date Prep: 07.06.17

LCSD Sample Id: 727359-1-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)	<15.0	1000	1030	103	1040	104	70-135	1	35	mg/kg	07.06.17 13:50	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1060	106	70-135	3	35	mg/kg	07.06.17 13:50	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	117		128		120		70-135	%	07.06.17 13:50			
o-Terphenyl	124		128		119		70-135	%	07.06.17 13:50			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3021777

Parent Sample Id: 556808-021

Matrix: Soil

MS Sample Id: 556808-021 S

Prep Method: TX1005P

Date Prep: 07.04.17

MSD Sample Id: 556808-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	317	998	1420	111	1360	104	70-135	4	35	mg/kg	07.04.17 22:45	
Diesel Range Organics (DRO)	1200	998	2350	115	2210	101	70-135	6	35	mg/kg	07.04.17 22:45	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			115		104		70-135	%	07.04.17 22:45			
o-Terphenyl			97		87		70-135	%	07.04.17 22:45			



QC Summary 556810

TRC Solutions, Inc Merlin State Com #002H (1/11/17)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3021792

Parent Sample Id: 556810-006

Matrix: Soil

MS Sample Id: 556810-006 S

Prep Method: TX1005P

Date Prep: 07.06.17

MSD Sample Id: 556810-006 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)	44.3	997	1080	104	1080	104	70-135	0	35	mg/kg	07.06.17 14:50	
Diesel Range Organics (DRO)	323	997	1380	106	1350	103	70-135	2	35	mg/kg	07.06.17 14:50	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		110		70-135	%	07.06.17 14:50
o-Terphenyl	100		106		70-135	%	07.06.17 14:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021700

MB Sample Id: 727313-1-BLK

Matrix: Solid

LCS Sample Id: 727313-1-BKS

Prep Method: SW5030B

Date Prep: 07.06.17

LCSD Sample Id: 727313-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.125	124	0.101	101	70-130	21	35	mg/kg	07.06.17 21:17	
Toluene	<0.00202	0.101	0.117	116	0.0917	92	70-130	24	35	mg/kg	07.06.17 21:17	
Ethylbenzene	<0.00202	0.101	0.115	114	0.0947	95	71-129	19	35	mg/kg	07.06.17 21:17	
m,p-Xylenes	<0.00403	0.202	0.207	102	0.170	85	70-135	20	35	mg/kg	07.06.17 21:17	
o-Xylene	<0.00202	0.101	0.111	110	0.0936	94	71-133	17	35	mg/kg	07.06.17 21:17	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		87		95		80-120	%	07.06.17 21:17
4-Bromofluorobenzene	111		86		91		80-120	%	07.06.17 21:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021705

MB Sample Id: 727314-1-BLK

Matrix: Solid

LCS Sample Id: 727314-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.17

LCSD Sample Id: 727314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.117	116	0.116	115	70-130	1	35	mg/kg	07.07.17 08:50	
Toluene	<0.00202	0.101	0.107	106	0.103	102	70-130	4	35	mg/kg	07.07.17 08:50	
Ethylbenzene	<0.00202	0.101	0.111	110	0.112	111	71-129	1	35	mg/kg	07.07.17 08:50	
m,p-Xylenes	<0.00404	0.202	0.196	97	0.199	99	70-135	2	35	mg/kg	07.07.17 08:50	
o-Xylene	<0.00202	0.101	0.104	103	0.108	107	71-133	4	35	mg/kg	07.07.17 08:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		88		94		80-120	%	07.07.17 08:50
4-Bromofluorobenzene	106		115		99		80-120	%	07.07.17 08:50



QC Summary 556810

TRC Solutions, Inc
Merlin State Com #002H (1/11/17)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021965

MB Sample Id: 727471-1-BLK

Matrix: Solid

LCS Sample Id: 727471-1-BKS

Prep Method: SW5030B

Date Prep: 07.10.17

LCSD Sample Id: 727471-1-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	0.0970	98	0.123	123	70-130	24	35	mg/kg	07.11.17 01:06	
Toluene	<0.00199	0.0994	0.0865	87	0.115	115	70-130	28	35	mg/kg	07.11.17 01:06	
Ethylbenzene	<0.00199	0.0994	0.0941	95	0.121	121	71-129	25	35	mg/kg	07.11.17 01:06	
m,p-Xylenes	<0.00398	0.199	0.166	83	0.210	105	70-135	23	35	mg/kg	07.11.17 01:06	
o-Xylene	<0.00199	0.0994	0.0979	98	0.111	111	71-133	13	35	mg/kg	07.11.17 01:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		84		106		80-120	%	07.11.17 01:06
4-Bromofluorobenzene	96		93		97		80-120	%	07.11.17 01:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021700

Parent Sample Id: 556808-007

Matrix: Soil

MS Sample Id: 556808-007 S

Prep Method: SW5030B

Date Prep: 07.06.17

MSD Sample Id: 556808-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.112	112	0.110	110	70-130	2	35	mg/kg	07.06.17 21:49	
Toluene	<0.00200	0.0998	0.0954	96	0.0886	89	70-130	7	35	mg/kg	07.06.17 21:49	
Ethylbenzene	<0.00200	0.0998	0.0902	90	0.0861	86	71-129	5	35	mg/kg	07.06.17 21:49	
m,p-Xylenes	<0.00399	0.200	0.156	78	0.152	76	70-135	3	35	mg/kg	07.06.17 21:49	
o-Xylene	<0.00200	0.0998	0.0907	91	0.0801	80	71-133	12	35	mg/kg	07.06.17 21:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		107		80-120	%	07.06.17 21:49
4-Bromofluorobenzene	118		101		80-120	%	07.06.17 21:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021705

Parent Sample Id: 556810-012

Matrix: Soil

MS Sample Id: 556810-012 S

Prep Method: SW5030B

Date Prep: 07.07.17

MSD Sample Id: 556810-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.101	101	0.121	121	70-130	18	35	mg/kg	07.07.17 09:23	
Toluene	<0.00200	0.0998	0.0966	97	0.114	114	70-130	17	35	mg/kg	07.07.17 09:23	
Ethylbenzene	<0.00200	0.0998	0.0958	96	0.110	110	71-129	14	35	mg/kg	07.07.17 09:23	
m,p-Xylenes	<0.00399	0.200	0.168	84	0.194	97	70-135	14	35	mg/kg	07.07.17 09:23	
o-Xylene	<0.00200	0.0998	0.0870	87	0.106	106	71-133	20	35	mg/kg	07.07.17 09:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		80-120	%	07.07.17 09:23
4-Bromofluorobenzene	98		98		80-120	%	07.07.17 09:23



QC Summary 556810

TRC Solutions, Inc
Merlin State Com #002H (1/11/17)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3021965

Parent Sample Id: 556811-001

Matrix: Soil

MS Sample Id: 556811-001 S

Prep Method: SW5030B

Date Prep: 07.10.17

MSD Sample Id: 556811-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.103	103	70-130	6	35	mg/kg	07.11.17 11:14	
Toluene	<0.00200	0.100	0.0984	98	0.0907	91	70-130	8	35	mg/kg	07.11.17 11:14	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0879	88	71-129	15	35	mg/kg	07.11.17 11:14	
m,p-Xylenes	0.0181	0.200	0.182	82	0.185	83	70-135	2	35	mg/kg	07.11.17 11:14	
o-Xylene	<0.00200	0.100	0.101	101	0.0933	93	71-133	8	35	mg/kg	07.11.17 11:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		98		80-120	%	07.11.17 11:14
4-Bromofluorobenzene	98		103		80-120	%	07.11.17 11:14

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Client / Reporting Information						Project Information							Analytical Information		Matrix Codes				
Company Name / Branch: TRC						Project Name/Number: Merlin State Com #002H (1/11/17) Lea County, NM Project Location:													
Company Address: 2057 Commerce Drive Midland, Texas 79703						Invoice To: Rebecca Haskell with COG Operating LLC rshaskel@concho.com 600 W Illinois Avenue Midland, TX 79701 Direct: 432-818-2372 Main: 432-683-7443													
Email: ndgreen@trcsolutions.com						Phone No: 432-664-6899													
Project Contact: Nikki Green						PO Number:													
Samplers Name: Nikki Green																			
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	TPH 8015M EXT 36	BTEX 8021B	Chloride E300.0		
1	Trench-1 2'		28-Jun	1225	S	1								X	X	X	X		
2	Trench-1 6'		28-Jun	1320	S	1								X	X	X	X		
3	Trench-1 12'		28-Jun	1445	S	1								X	X	X	X		
4	Trench-2 3'		28-Jun	1450	S	1								X	X	X	X		
5	Trench-2 4'		28-Jun	1530	S	1								X	X	X			
6	Trench-2 6'		28-Jun	1545	S	1								X	X	X	X		
7	Trench-2 8'		28-Jun	1550	S	1								X	X	X			
8	Trench-2 11'		28-Jun	1555	S	1								X	X	X	X		
9	Trench-2 14'		28-Jun	1607	S	1								X	X	X	X		
10																			
Turnaround Time (Business days)					Data Deliverable information												Notes:		
☐ Same Day TAT		☐ 5 Day TAT		☒ Level II Std QC		☐ Level IV (Full Data Pkg /raw data)													
☐ Next Day EMERGENCY		☐ 7 Day TAT		☐ Level III Std QC+ Forms		☐ TRRP Level IV													
☐ 2 Day EMERGENCY		☒ Contract TAT		☐ Level 3 (CLP Forms)		☐ UST / RG -411													
☐ 3 Day EMERGENCY				☐ TRRP Checklist															
TAT Starts Day received by Lab, if received by 5:00 pm																			
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																			
Relinquished by Sampler		Date Time: 7/3/17 11:55		Received By: [Signature]		Relinquished By: [Signature]		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:	
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:	
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Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:	
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Client / Reporting Information							Project Information						Analytical Information				Matrix Codes			
Company Name / Branch:							Project Name/Number:													
TRC							Merlin State Com #002H (1/11/17)													
Company Address: 2087 Commerce Drive Midland, Texas 79703							Lea County, NM													
Email: nrgreen@ircsolutions.com							Invoice To: Rebecca Haskell with COG Operating LLC rshaskell@cogco.com 600 W Illinois Avenue Midland, TX 79701 Direct: 432-818-2372 Main: 432-883,7443													
Project Contact: Nikki Green							Phone No: 432-864-6899													
Samplers's Name: Nikki Green							PO Number:													
No.	Field ID / Point of Collection						Collection		# of bottles	Number of preserved bottles										
	Sample Depth	Date	Time	Matrix	HCl	NaOH/Zn Acetate	HNO ₃	H ₂ SO ₄	NaOH	NaHSO ₄	MeOH	NONE								
1	West Trench-1 2'	28-Jun	1245	S	1							X	X	X						
2	North Trench-1 2'	28-Jun	1620	S	1							X	X	X						
3	East Trench-1 2'	28-Jun	1638	S	1							X	X	X						
4	South Trench-1 2'	28-Jun	1645	S	1							X	X	X						
5																				
6																				
7																				
8																				
9																				
10																				
Turnaround Time (Business days)				Data Deliverable information																
☐ Same Day TAT		☐ 5 Day TAT		☒ Level II Std QC		☐ Level IV (Full Data Pkg /raw data)														
☐ Next Day EMERGENCY		☐ 7 Day TAT		☐ Level III Std QC+ Forms		☐ TRRP Level IV														
☐ 2 Day EMERGENCY		☒ Contract TAT		☐ Level 3 (CLP Forms)		☐ UST / RG -411														
☐ 3 Day EMERGENCY				☐ TRRP Checklist																
TAT Starts Day received by Lab, if received by 5:00 pm																				
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																				
Relinquished By:		Date Time:		Received By:		Date Time:		Retained By:		Date Time:		Preserved Where applicable		On Ice		Cooler Temp.		Thermo, Corr. Factor		
1 Relinquished By: <i>Nikki Green</i>		7/31/17 11:55		1 Received By: <i>[Signature]</i>		2 Retained By:		2 Date Time:		2 Preserved Where applicable		2 On Ice		2 Cooler Temp.		2 Thermo, Corr. Factor		2		
3 Relinquished By:		Date Time:		3 Received By:		4 Retained By:		4 Date Time:		4 Preserved Where applicable		4 On Ice		4 Cooler Temp.		4 Thermo, Corr. Factor		4		
5 Relinquished By:		Date Time:		5 Received By:		6 Retained By:		6 Date Time:		6 Preserved Where applicable		6 On Ice		6 Cooler Temp.		6 Thermo, Corr. Factor		6		

Temp: 5.1 °C IR ID-R-8

CF:(0-6: -0.2°C) (6-23: +0.2°C)

Corrected Temp: 4.9

Notice: Signature of this document and invoice, sent of samples constitutes a valid purchase order from client company to Xenoco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75 will be applied to each project. Xenoco's liability will be limited to the cost of samples. Any samples received by Xenoco 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: 07/03/2017 11:55:00 AM

Work Order #: 556810

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)?	4.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 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: Jessica Kramer
Jessica Kramer

Date: 07/03/2017

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 07/03/2017



Certificate of Analysis Summary 574258

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co,NM

Date Received in Lab: Mon Jan-22-18 03:45 pm

Report Date: 29-JAN-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	574258-001					
	Field Id:	SP-1					
	Depth:	comp-					
	Matrix:	SOIL					
	Sampled:	Jan-18-18 09:00					
BTEX by EPA 8021B	Extracted:	Jan-24-18 16:45					
	Analyzed:	Jan-25-18 17:18					
	Units/RL:	mg/kg RL					
	Benzene	<0.00327 0.00327					
	Toluene	<0.00327 0.00327					
	Ethylbenzene	<0.00327 0.00327					
	Xylenes, Total	<0.00327 0.00327					
	Total BTEX	<0.00327 0.00327					
Chloride by EPA 300	Extracted:	Jan-25-18 15:00					
	Analyzed:	Jan-26-18 17:05					
	Units/RL:	mg/kg RL					
	Chloride	207 5.00					
TPH by SW8015 Mod	Extracted:	Jan-26-18 08:00					
	Analyzed:	Jan-26-18 21:10					
	Units/RL:	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0					
	Diesel Range Organics (DRO)	786 15.0					
	Oil Range Hydrocarbons (ORO)	177 15.0					
	Total TPH	963 15					

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

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

Kelsey Brooks
Project Manager

Analytical Report 574258

for
TRC Solutions, Inc

Project Manager: Joel Lowry

Merlin State Com #002H

29-JAN-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



29-JAN-18

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

Reference: XENCO Report No(s): **574258**
Merlin State Com #002H
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) 574258. 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. 574258 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

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Sample Cross Reference 574258



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	01-18-18 09:00	comp	574258-001



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Merlin State Com #002H

Project ID:

Work Order Number(s): 574258

Report Date: 29-JAN-18

Date Received: 01/22/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3039245 BTEX by EPA 8021B

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



Certificate of Analytical Results 574258



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: **SP-1**
Lab Sample Id: 574258-001

Matrix: Soil
Date Collected: 01.18.18 09.00

Date Received: 01.22.18 15.45
Sample Depth: comp

Analytical Method: Chloride by EPA 300
Tech: OJS
Analyst: OJS
Seq Number: 3039480

Prep Method: E300P
% Moisture:
Date Prep: 01.25.18 15.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	207	5.00	mg/kg	01.26.18 17.05		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3039409

Prep Method: TX1005P
% Moisture:
Date Prep: 01.26.18 08.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.18 21.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	786	15.0	mg/kg	01.26.18 21.10		1
Oil Range Hydrocarbons (ORO)	PHCG2835	177	15.0	mg/kg	01.26.18 21.10		1
Total TPH	PHC635	963	15	mg/kg	01.26.18 21.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.26.18 21.10	
o-Terphenyl	84-15-1	108	%	70-135	01.26.18 21.10	

Analytical Method: BTEX by EPA 8021B
Tech: ALJ
Analyst: ALJ
Seq Number: 3039245

Prep Method: SW5030B
% Moisture:
Date Prep: 01.24.18 16.45
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00327	0.00327	mg/kg	01.25.18 17.18	U	1
Toluene	108-88-3	<0.00327	0.00327	mg/kg	01.25.18 17.18	U	1
Ethylbenzene	100-41-4	<0.00327	0.00327	mg/kg	01.25.18 17.18	U	1
Xylenes, Total	1330-20-7	<0.00327	0.00327	mg/kg	01.25.18 17.18	U	1
Total BTEX		<0.00327	0.00327	mg/kg	01.25.18 17.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	80-120	01.25.18 17.18	
1,4-Difluorobenzene	540-36-3	87	%	80-120	01.25.18 17.18	

- 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 **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	

TRC Solutions, Inc
Merlin State Com #002H**Analytical Method: Chloride by EPA 300**

Seq Number: 3039480

MB Sample Id: 7638082-1-BLK

Matrix: Solid

LCS Sample Id: 7638082-1-BKS

Prep Method: E300P

Date Prep: 01.25.18

LCSD Sample Id: 7638082-1-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	249	100	247	99	90-110	1	20	mg/kg	01.26.18 15:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3039480

Parent Sample Id: 573940-001

Matrix: Soil

MS Sample Id: 573940-001 S

Prep Method: E300P

Date Prep: 01.25.18

MSD Sample Id: 573940-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	260	104	90-110	1	20	mg/kg	01.26.18 15:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3039480

Parent Sample Id: 574260-005

Matrix: Soil

MS Sample Id: 574260-005 S

Prep Method: E300P

Date Prep: 01.25.18

MSD Sample Id: 574260-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	94.3	255	350	100	349	100	90-110	0	20	mg/kg	01.26.18 17:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3039409

MB Sample Id: 7638140-1-BLK

Matrix: Solid

LCS Sample Id: 7638140-1-BKS

Prep Method: TX1005P

Date Prep: 01.26.18

LCSD Sample Id: 7638140-1-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)	<15.0	1000	920	92	850	85	70-135	8	35	mg/kg	01.26.18 12:39	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	946	95	70-135	9	35	mg/kg	01.26.18 12:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		103		110		70-135	%	01.26.18 12:39
o-Terphenyl	119		101		113		70-135	%	01.26.18 12:39

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

TRC Solutions, Inc
Merlin State Com #002H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3039409

Parent Sample Id: 574500-001

Matrix: Soil

MS Sample Id: 574500-001 S

Prep Method: TX1005P

Date Prep: 01.26.18

MSD Sample Id: 574500-001 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)	<14.9	996	971	97	935	94	70-135	4	35	mg/kg	01.26.18 13:39	
Diesel Range Organics (DRO)	137	996	1150	102	1130	100	70-135	2	35	mg/kg	01.26.18 13:39	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		107		70-135	%	01.26.18 13:39
o-Terphenyl	112		105		70-135	%	01.26.18 13:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3039245

MB Sample Id: 7638044-1-BLK

Matrix: Solid

LCS Sample Id: 7638044-1-BKS

Prep Method: SW5030B

Date Prep: 01.24.18

LCSD Sample Id: 7638044-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0966	96	0.0952	95	70-130	1	35	mg/kg	01.25.18 08:26	
Toluene	<0.00202	0.101	0.100	99	0.0987	99	70-130	1	35	mg/kg	01.25.18 08:26	
Ethylbenzene	<0.00202	0.101	0.107	106	0.105	105	71-129	2	35	mg/kg	01.25.18 08:26	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		93		95		80-120	%	01.25.18 08:26
4-Bromofluorobenzene	86		95		99		80-120	%	01.25.18 08:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3039245

Parent Sample Id: 574336-001

Matrix: Soil

MS Sample Id: 574336-001 S

Prep Method: SW5030B

Date Prep: 01.24.18

MSD Sample Id: 574336-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0929	92	0.0859	85	70-130	8	35	mg/kg	01.25.18 09:51	
Toluene	<0.00202	0.101	0.0938	93	0.0860	85	70-130	9	35	mg/kg	01.25.18 09:51	
Ethylbenzene	<0.00202	0.101	0.0973	96	0.0877	87	71-129	10	35	mg/kg	01.25.18 09:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		93		80-120	%	01.25.18 09:51
4-Bromofluorobenzene	103		97		80-120	%	01.25.18 09:51

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



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Page 1 of 1

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

Phoenix, Arizona (480-355-0900)

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Client / Reporting Information				Project Information				Analytical Information				Matrix Codes											
Company Name / Branch: TRC Environmental Corporation				Project Name/Number: Merlin State Com #002H																			
Company Address: 2057 Commerce Drive Midland, TX 79703				Project Location: Lea Co, NM																			
Email: jlowry@trcsolutions.com zconder@trcsolutions.com				Phone No: 432-466-4450				Invoice To: COG Operating CIO Becky Haskell															
Project Contact: Joel Lowry				Invoice:																			
Sampler's Name: Zach Conder																							
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Hold	Field Comments				
1	SP-1	Comp.	1/18/2018	9:00	S	1									X	X	X						
2																							
3																							
4																							
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12																							
Turnaround Time (Business days)				Data Deliverable Information				Notes:															
☐ Same Day TAT				☐ 6 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg /raw data)				jlowry@trcsolutions.com zconder@trcsolutions.com							
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC+ Forms				☐ TRRP Level IV				thaskell@concho.com							
☐ 2 Day EMERGENCY				☒ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG-411				kblackburn@trcsolutions.com							
☐ 3 Day EMERGENCY								☐ TRRP Checklist								dneel2@concho.com							
TAT Starts Day received by Lab, if received by 5:00 pm																FED-EX / UPS: Tracking #							
Relinquished by Sampler:				Date Time:				Received By:				Relinquished By:				Date Time:				Received By:			
1				1/22 3:45				2				1/22 3:45				2				1/22 3:45			
Relinquished by:				Date Time:				Received By:				Relinquished By:				Date Time:				Received By:			
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Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas, Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 OF 1

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

www.xenoco.com

Phoenix, Arizona (480-355-0900)

Xenoco Job #

594258

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes											
Company Name / Branch: TRC Environmental Corporation				Project Name/Number: Martin State Com #002H																			
Company Address: 2057 Commerce Drive Midland, TX 79703				Project Location: Lea Co, NM																			
Email: jlowry@trcsolutions.com zconder@trcsolutions.com				Phone No: 432-456-4450				Invoice To: COG Operating C/O Becky Haskell															
Project Contact: Joel Lowry				Invoice:																			
Sampler's Name: Zach Conder																							
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Hold	Field Comments				
1	SP-1	Comp.	1/18/2018	9:00	S	1									X	X	X						
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12																							
Turnaround Time (Business days)				Data Deliverable Information				Notes:															
☐ Same Day TAT				☐ 6 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg /raw data)				jlowry@trcsolutions.com				zconder@trcsolutions.com			
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC+ Forms				☐ TRRP Level IV				rhaskell@concho.com							
☐ 2 Day EMERGENCY				☒ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG -411				kblackburn@trcsolutions.com							
☐ 3 Day EMERGENCY								☐ TRRP Checklist								dineel2@concho.com							
TAT Starts Day received by Lab, if received by 5:00 pm																FED-EX / UPS: Tracking #							
Relinquished by Sampler:				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																			
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Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75 will be applied to each project. Xenoco's liability will be limited to the cost of samples. Any samples received by Xenoco 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: 01/22/2018 03:45:00 PM

Work Order #: 574258

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)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Shawnee Smith

Date: 01/23/2018

Checklist reviewed by:

Kelsey Brooks

Date: 01/23/2018



Certificate of Analysis Summary 574260

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Mon Jan-22-18 03:45 pm

Report Date: 29-JAN-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	574260-001	574260-002	574260-003	574260-004	574260-005	574260-006
	Field Id:	T-1 Floor @ 1.5'	T-1 SSW	T-1 ESW	T-1 WSW	T-2 Floor @ 4'	T-2 NSW
	Depth:	1.5'-	6"-	6"-	6"-	4'-	2'-
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-18-18 08:00	Jan-18-18 08:05	Jan-18-18 08:10	Jan-18-18 08:15	Jan-18-18 08:20	Jan-18-18 08:25
BTEX by EPA 8021B	Extracted:	Jan-24-18 16:45				Jan-24-18 16:45	
	Analyzed:	Jan-25-18 11:48				Jan-25-18 12:07	
	Units/RL:	mg/kg RL				mg/kg RL	
	Benzene	<0.00202 0.00202				<0.00202 0.00202	
	Toluene	<0.00202 0.00202				<0.00202 0.00202	
Ethylbenzene		<0.00202 0.00202				<0.00202 0.00202	
Xylenes, Total		0.00218 0.00202				<0.00202 0.00202	
Total BTEX		0.00218 0.00202				<0.00202 0.00202	
Chloride by EPA 300	Extracted:	Jan-25-18 15:00				Jan-25-18 15:00	
	Analyzed:	Jan-26-18 17:12				Jan-26-18 17:19	
	Units/RL:	mg/kg RL				mg/kg RL	
	Chloride	160 4.90				94.3 5.10	
TPH by SW8015 Mod	Extracted:	Jan-26-18 16:00	Jan-26-18 16:00	Jan-26-18 16:00	Jan-26-18 16:00	Jan-26-18 16:00	Jan-26-18 16:00
	Analyzed:	Jan-26-18 22:55	Jan-26-18 23:15	Jan-26-18 23:34	Jan-26-18 23:55	Jan-27-18 00:17	Jan-27-18 00:37
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
	Diesel Range Organics (DRO)	644 15.0	214 15.0	<15.0 15.0	75.4 15.0	395 15.0	252 14.9
Oil Range Hydrocarbons (ORO)		120 15.0	37.0 15.0	<15.0 15.0	<15.0 15.0	82.2 15.0	49.8 14.9
Total TPH		764 15	251 15	<15 15	75.4 15	477.2 15	301.8 14.9

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

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

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 574260

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #002H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co, NM

Date Received in Lab: Mon Jan-22-18 03:45 pm

Report Date: 29-JAN-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	574260-007	574260-008	574260-009			
	Field Id:	T-2 ESW	T-2 WSW	T-2 SSW			
	Depth:	2'-	2'-	2'-			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Jan-18-18 08:30	Jan-18-18 08:35	Jan-18-18 08:40			
TPH by SW8015 Mod	Extracted:	Jan-26-18 16:00	Jan-26-18 16:00	Jan-26-18 16:00			
	Analyzed:	Jan-27-18 00:57	Jan-27-18 01:18	Jan-27-18 01:39			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		200 14.9	208 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)		46.0 14.9	36.0 15.0	<15.0 15.0			
Total TPH		246 14.9	244 15	<15 15			

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

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

Kelsey Brooks
Project Manager

Analytical Report 574260

for
TRC Solutions, Inc

Project Manager: Joel Lowry

Merlin State Com #002H

29-JAN-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



29-JAN-18

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

Reference: XENCO Report No(s): **574260**
Merlin State Com #002H
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) 574260. 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. 574260 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 Floor @ 1.5'	S	01-18-18 08:00	1.5'	574260-001
T-1 SSW	S	01-18-18 08:05	6"	574260-002
T-1 ESW	S	01-18-18 08:10	6"	574260-003
T-1 WSW	S	01-18-18 08:15	6"	574260-004
T-2 Floor @ 4'	S	01-18-18 08:20	4'	574260-005
T-2 NSW	S	01-18-18 08:25	2'2'	574260-006
T-2 ESW	S	01-18-18 08:30	2'	574260-007
T-2 WSW	S	01-18-18 08:35	2'	574260-008
T-2 SSW	S	01-18-18 08:40	2'	574260-009



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Merlin State Com #002H

Project ID:

Work Order Number(s): 574260

Report Date: 29-JAN-18

Date Received: 01/22/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3039245 BTEX by EPA 8021B

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



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-1 Floor @ 1.5'

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-001

Date Collected: 01.18.18 08.00

Sample Depth: 1.5'

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: OJS

% Moisture:

Analyst: OJS

Date Prep: 01.25.18 15.00

Basis: Wet Weight

Seq Number: 3039480

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	160	4.90	mg/kg	01.26.18 17.12		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.18 22.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	644	15.0	mg/kg	01.26.18 22.55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	120	15.0	mg/kg	01.26.18 22.55		1
Total TPH	PHC635	764	15	mg/kg	01.26.18 22.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.26.18 22.55	
o-Terphenyl	84-15-1	93	%	70-135	01.26.18 22.55	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 01.24.18 16.45

Basis: Wet Weight

Seq Number: 3039245

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.25.18 11.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.25.18 11.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.25.18 11.48	U	1
Xylenes, Total	1330-20-7	0.00218	0.00202	mg/kg	01.25.18 11.48		1
Total BTEX		0.00218	0.00202	mg/kg	01.25.18 11.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	80-120	01.25.18 11.48	
1,4-Difluorobenzene	540-36-3	87	%	80-120	01.25.18 11.48	



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-1 SSW
Lab Sample Id: 574260-002

Matrix: Soil
Date Collected: 01.18.18 08.05

Date Received: 01.22.18 15.45
Sample Depth: 6"

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3039410

Date Prep: 01.26.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.18 23.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	214	15.0	mg/kg	01.26.18 23.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	37.0	15.0	mg/kg	01.26.18 23.15		1
Total TPH	PHC635	251	15	mg/kg	01.26.18 23.15		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	101	%	70-135	01.26.18 23.15		
o-Terphenyl	84-15-1	104	%	70-135	01.26.18 23.15		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-1 ESW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-003

Date Collected: 01.18.18 08.10

Sample Depth: 6"

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.18 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.26.18 23.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.26.18 23.34	U	1
Total TPH	PHC635	<15	15	mg/kg	01.26.18 23.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-135	01.26.18 23.34		
o-Terphenyl	84-15-1	112	%	70-135	01.26.18 23.34		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-1 WSW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-004

Date Collected: 01.18.18 08.15

Sample Depth: 6"

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.26.18 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	75.4	15.0	mg/kg	01.26.18 23.55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.26.18 23.55	U	1
Total TPH	PHC635	75.4	15	mg/kg	01.26.18 23.55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	01.26.18 23.55		
o-Terphenyl	84-15-1	102	%	70-135	01.26.18 23.55		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-2 Floor @ 4'

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-005

Date Collected: 01.18.18 08.20

Sample Depth: 4'

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: OJS

% Moisture:

Analyst: OJS

Date Prep: 01.25.18 15.00

Basis: Wet Weight

Seq Number: 3039480

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	94.3	5.10	mg/kg	01.26.18 17.19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.18 00.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	395	15.0	mg/kg	01.27.18 00.17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	82.2	15.0	mg/kg	01.27.18 00.17		1
Total TPH	PHC635	477.2	15	mg/kg	01.27.18 00.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.27.18 00.17	
o-Terphenyl	84-15-1	92	%	70-135	01.27.18 00.17	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 01.24.18 16.45

Basis: Wet Weight

Seq Number: 3039245

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.25.18 12.07	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.25.18 12.07	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.25.18 12.07	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.25.18 12.07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.25.18 12.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	80-120	01.25.18 12.07	
4-Bromofluorobenzene	460-00-4	93	%	80-120	01.25.18 12.07	



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-2 NSW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-006

Date Collected: 01.18.18 08.25

Sample Depth: 2'2'

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.27.18 00.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	252	14.9	mg/kg	01.27.18 00.37		1
Oil Range Hydrocarbons (ORO)	PHCG2835	49.8	14.9	mg/kg	01.27.18 00.37		1
Total TPH	PHC635	301.8	14.9	mg/kg	01.27.18 00.37		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	116	%	70-135	01.27.18 00.37		
o-Terphenyl	84-15-1	116	%	70-135	01.27.18 00.37		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-2 ESW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-007

Date Collected: 01.18.18 08.30

Sample Depth: 2'

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	01.27.18 00.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	200	14.9	mg/kg	01.27.18 00.57		1
Oil Range Hydrocarbons (ORO)	PHCG2835	46.0	14.9	mg/kg	01.27.18 00.57		1
Total TPH	PHC635	246	14.9	mg/kg	01.27.18 00.57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	01.27.18 00.57		
o-Terphenyl	84-15-1	103	%	70-135	01.27.18 00.57		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-2 WSW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-008

Date Collected: 01.18.18 08.35

Sample Depth: 2'

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.18 01.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	208	15.0	mg/kg	01.27.18 01.18		1
Oil Range Hydrocarbons (ORO)	PHCG2835	36.0	15.0	mg/kg	01.27.18 01.18		1
Total TPH	PHC635	244	15	mg/kg	01.27.18 01.18		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-135	01.27.18 01.18		
o-Terphenyl	84-15-1	114	%	70-135	01.27.18 01.18		



Certificate of Analytical Results 574260



TRC Solutions, Inc, Midland, TX

Merlin State Com #002H

Sample Id: T-2 SSW

Matrix: Soil

Date Received: 01.22.18 15.45

Lab Sample Id: 574260-009

Date Collected: 01.18.18 08.40

Sample Depth: 2'

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 01.26.18 16.00

Basis: Wet Weight

Seq Number: 3039410

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.27.18 01.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.27.18 01.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.27.18 01.39	U	1
Total TPH	PHC635	<15	15	mg/kg	01.27.18 01.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	01.27.18 01.39		
o-Terphenyl	84-15-1	99	%	70-135	01.27.18 01.39		

- 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

+ NELAC certification not offered for this compound.

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

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	

TRC Solutions, Inc
Merlin State Com #002H

Analytical Method: Chloride by EPA 300

Seq Number: 3039480

MB Sample Id: 7638082-1-BLK

Matrix: Solid

LCS Sample Id: 7638082-1-BKS

Prep Method: E300P

Date Prep: 01.25.18

LCSD Sample Id: 7638082-1-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	249	100	247	99	90-110	1	20	mg/kg	01.26.18 15:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3039480

Parent Sample Id: 573940-001

Matrix: Soil

MS Sample Id: 573940-001 S

Prep Method: E300P

Date Prep: 01.25.18

MSD Sample Id: 573940-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	260	104	90-110	1	20	mg/kg	01.26.18 15:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3039480

Parent Sample Id: 574260-005

Matrix: Soil

MS Sample Id: 574260-005 S

Prep Method: E300P

Date Prep: 01.25.18

MSD Sample Id: 574260-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	94.3	255	350	100	349	100	90-110	0	20	mg/kg	01.26.18 17:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3039410

MB Sample Id: 7638141-1-BLK

Matrix: Solid

LCS Sample Id: 7638141-1-BKS

Prep Method: TX1005P

Date Prep: 01.26.18

LCSD Sample Id: 7638141-1-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)	<15.0	1000	984	98	937	94	70-135	5	35	mg/kg	01.26.18 22:12	
Diesel Range Organics (DRO)	<15.0	1000	1090	109	1020	102	70-135	7	35	mg/kg	01.26.18 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		120		119		70-135	%	01.26.18 22:12
o-Terphenyl	110		116		118		70-135	%	01.26.18 22:12

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



QC Summary 574260

TRC Solutions, Inc Merlin State Com #002H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3039410

Parent Sample Id: 574260-009

Matrix: Soil

MS Sample Id: 574260-009 S

Prep Method: TX1005P

Date Prep: 01.26.18

MSD Sample Id: 574260-009 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)	<15.0	998	978	98	915	92	70-135	7	35	mg/kg	01.27.18 01:59	
Diesel Range Organics (DRO)	<15.0	998	1080	108	995	100	70-135	8	35	mg/kg	01.27.18 01:59	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		118		70-135	%	01.27.18 01:59
o-Terphenyl	122		123		70-135	%	01.27.18 01:59

Analytical Method: BTEX by EPA 8021B

Seq Number: 3039245

MB Sample Id: 7638044-1-BLK

Matrix: Solid

LCS Sample Id: 7638044-1-BKS

Prep Method: SW5030B

Date Prep: 01.24.18

LCSD Sample Id: 7638044-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0966	96	0.0952	95	70-130	1	35	mg/kg	01.25.18 08:26	
Toluene	<0.00202	0.101	0.100	99	0.0987	99	70-130	1	35	mg/kg	01.25.18 08:26	
Ethylbenzene	<0.00202	0.101	0.107	106	0.105	105	71-129	2	35	mg/kg	01.25.18 08:26	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		93		95		80-120	%	01.25.18 08:26
4-Bromofluorobenzene	86		95		99		80-120	%	01.25.18 08:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3039245

Parent Sample Id: 574336-001

Matrix: Soil

MS Sample Id: 574336-001 S

Prep Method: SW5030B

Date Prep: 01.24.18

MSD Sample Id: 574336-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0929	92	0.0859	85	70-130	8	35	mg/kg	01.25.18 09:51	
Toluene	<0.00202	0.101	0.0938	93	0.0860	85	70-130	9	35	mg/kg	01.25.18 09:51	
Ethylbenzene	<0.00202	0.101	0.0973	96	0.0877	87	71-129	10	35	mg/kg	01.25.18 09:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		93		80-120	%	01.25.18 09:51
4-Bromofluorobenzene	103		97		80-120	%	01.25.18 09:51

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

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

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

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



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[illegible]



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 01/22/2018 03:45:00 PM

Work Order #: 574260

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#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:

Connie Hernandez

Date: 01/23/2018

Checklist reviewed by:

Kelsey Brooks

Date: 01/23/2018



Certificate of Analysis Summary 575283

TRC Solutions, Inc, Midland, TX

Project Name: Merlin State Com #2H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co,NM

Date Received in Lab: Thu Feb-01-18 04:37 pm

Report Date: 08-FEB-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	575283-001	575283-002	575283-003	575283-004	575283-005	
	Field Id:	SP-2	SP-3	SP-4	SP-5	SP-6	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Feb-01-18 13:00	Feb-01-18 13:05	Feb-01-18 13:10	Feb-01-18 13:15	Feb-01-18 13:20	
BTEX by EPA 8021B	Extracted:	Feb-02-18 16:00	Feb-02-18 16:00	Feb-02-18 16:00	Feb-02-18 16:00	Feb-02-18 16:00	
	Analyzed:	Feb-05-18 14:22	Feb-05-18 14:22	Feb-05-18 14:22	Feb-05-18 14:22	Feb-05-18 14:22	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00201 0.00201	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00201 0.00201	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00201 0.00201	
Xylenes, Total		<0.002 0.002	0.0038 0.002	0.00314 0.00199	0.00284 0.00202	<0.00201 0.00201	
Total BTEX		<0.002 0.002	0.0038 0.002	0.00314 0.00199	0.00284 0.00202	<0.00201 0.00201	
Chloride by EPA 300	Extracted:	Feb-06-18 14:00	Feb-06-18 14:00	Feb-06-18 14:00	Feb-06-18 14:00	Feb-06-18 14:00	
	Analyzed:	Feb-06-18 18:19	Feb-06-18 18:40	Feb-06-18 18:47	Feb-06-18 18:54	Feb-06-18 19:01	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		283 4.97	193 4.96	288 4.94	273 4.98	296 4.94	
TPH by SW8015 Mod	Extracted:	Feb-02-18 12:00	Feb-02-18 12:00	Feb-02-18 12:00	Feb-02-18 12:00	Feb-02-18 12:00	
	Analyzed:	Feb-03-18 06:59	Feb-03-18 07:21	Feb-03-18 07:43	Feb-03-18 08:04	Feb-03-18 08:25	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		163 15.0	950 15.0	513 15.0	883 15.0	233 15.0	
Oil Range Hydrocarbons (ORO)		26.3 15.0	161 15.0	108 15.0	158 15.0	56.6 15.0	
Total TPH		189.3 15	1111 15	621 15	1041 15	289.6 15	

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

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Kelsey Brooks
Project Manager

Analytical Report 575283

for
TRC Solutions, Inc

Project Manager: Joel Lowry

Merlin State Com #2H

08-FEB-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



08-FEB-18

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

Reference: XENCO Report No(s): **575283**
Merlin State Com #2H
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) 575283. 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. 575283 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

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Sample Cross Reference 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-2	S	02-01-18 13:00		575283-001
SP-3	S	02-01-18 13:05		575283-002
SP-4	S	02-01-18 13:10		575283-003
SP-5	S	02-01-18 13:15		575283-004
SP-6	S	02-01-18 13:20		575283-005



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Merlin State Com #2H

Project ID:

Work Order Number(s): 575283

Report Date: 08-FEB-18

Date Received: 02/01/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3040163 BTEX by EPA 8021B

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



Certificate of Analytical Results 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id: **SP-2**
Lab Sample Id: 575283-001

Matrix: Soil
Date Collected: 02.01.18 13.00

Date Received: 02.01.18 16.37

Analytical Method: Chloride by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3040386

Date Prep: 02.06.18 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	283	4.97	mg/kg	02.06.18 18.19		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3040140

Date Prep: 02.02.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.03.18 06.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	163	15.0	mg/kg	02.03.18 06.59		1
Oil Range Hydrocarbons (ORO)	PHCG2835	26.3	15.0	mg/kg	02.03.18 06.59		1
Total TPH	PHC635	189.3	15	mg/kg	02.03.18 06.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	02.03.18 06.59	
o-Terphenyl	84-15-1	78	%	70-135	02.03.18 06.59	

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3040163

Date Prep: 02.02.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Xylenes, Total	1330-20-7	<0.002	0.002	mg/kg	02.05.18 14.22	U	1
Total BTEX		<0.002	0.002	mg/kg	02.05.18 14.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	02.05.18 14.22	
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.05.18 14.22	



Certificate of Analytical Results 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id: **SP-3**
Lab Sample Id: 575283-002

Matrix: Soil
Date Collected: 02.01.18 13.05

Date Received: 02.01.18 16.37

Analytical Method: Chloride by EPA 300
Tech: OJS
Analyst: OJS
Seq Number: 3040386

Prep Method: E300P
% Moisture:
Date Prep: 02.06.18 14.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	193	4.96	mg/kg	02.06.18 18.40		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3040140

Prep Method: TX1005P
% Moisture:
Date Prep: 02.02.18 12.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.03.18 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	950	15.0	mg/kg	02.03.18 07.21		1
Oil Range Hydrocarbons (ORO)	PHCG2835	161	15.0	mg/kg	02.03.18 07.21		1
Total TPH	PHC635	1111	15	mg/kg	02.03.18 07.21		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	98	%	70-135	02.03.18 07.21		
o-Terphenyl	84-15-1	89	%	70-135	02.03.18 07.21		

Analytical Method: BTEX by EPA 8021B
Tech: ALJ
Analyst: ALJ
Seq Number: 3040163

Prep Method: SW5030B
% Moisture:
Date Prep: 02.02.18 16.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.05.18 14.22	U	1
Xylenes, Total	1330-20-7	0.0038	0.002	mg/kg	02.05.18 14.22		1
Total BTEX		0.0038	0.002	mg/kg	02.05.18 14.22		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	83	%	80-120	02.05.18 14.22		
4-Bromofluorobenzene	460-00-4	116	%	80-120	02.05.18 14.22		



Certificate of Analytical Results 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id: **SP-4**
Lab Sample Id: 575283-003

Matrix: Soil
Date Collected: 02.01.18 13.10

Date Received: 02.01.18 16.37

Analytical Method: Chloride by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3040386

Date Prep: 02.06.18 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	288	4.94	mg/kg	02.06.18 18.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3040140

Date Prep: 02.02.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.03.18 07.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	513	15.0	mg/kg	02.03.18 07.43		1
Oil Range Hydrocarbons (ORO)	PHCG2835	108	15.0	mg/kg	02.03.18 07.43		1
Total TPH	PHC635	621	15	mg/kg	02.03.18 07.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.03.18 07.43	
o-Terphenyl	84-15-1	96	%	70-135	02.03.18 07.43	

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3040163

Date Prep: 02.02.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.05.18 14.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.05.18 14.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.05.18 14.22	U	1
Xylenes, Total	1330-20-7	0.00314	0.00199	mg/kg	02.05.18 14.22		1
Total BTEX		0.00314	0.00199	mg/kg	02.05.18 14.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	02.05.18 14.22	
4-Bromofluorobenzene	460-00-4	103	%	80-120	02.05.18 14.22	



Certificate of Analytical Results 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id: SP-5
Lab Sample Id: 575283-004

Matrix: Soil
Date Collected: 02.01.18 13.15

Date Received: 02.01.18 16.37

Analytical Method: Chloride by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3040386

Prep Method: E300P

% Moisture:

Date Prep: 02.06.18 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	273	4.98	mg/kg	02.06.18 18.54		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3040140

Prep Method: TX1005P

% Moisture:

Date Prep: 02.02.18 12.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.03.18 08.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	883	15.0	mg/kg	02.03.18 08.04		1
Oil Range Hydrocarbons (ORO)	PHCG2835	158	15.0	mg/kg	02.03.18 08.04		1
Total TPH	PHC635	1041	15	mg/kg	02.03.18 08.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.03.18 08.04	
o-Terphenyl	84-15-1	95	%	70-135	02.03.18 08.04	

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3040163

Prep Method: SW5030B

% Moisture:

Date Prep: 02.02.18 16.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.05.18 14.22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.05.18 14.22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.05.18 14.22	U	1
Xylenes, Total	1330-20-7	0.00284	0.00202	mg/kg	02.05.18 14.22		1
Total BTEX		0.00284	0.00202	mg/kg	02.05.18 14.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	02.05.18 14.22	
1,4-Difluorobenzene	540-36-3	96	%	80-120	02.05.18 14.22	



Certificate of Analytical Results 575283



TRC Solutions, Inc, Midland, TX

Merlin State Com #2H

Sample Id: **SP-6**
Lab Sample Id: 575283-005

Matrix: Soil
Date Collected: 02.01.18 13.20

Date Received: 02.01.18 16.37

Analytical Method: Chloride by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3040386

Prep Method: E300P

% Moisture:

Date Prep: 02.06.18 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	296	4.94	mg/kg	02.06.18 19.01		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3040140

Prep Method: TX1005P

% Moisture:

Date Prep: 02.02.18 12.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.03.18 08.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	233	15.0	mg/kg	02.03.18 08.25		1
Oil Range Hydrocarbons (ORO)	PHCG2835	56.6	15.0	mg/kg	02.03.18 08.25		1
Total TPH	PHC635	289.6	15	mg/kg	02.03.18 08.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.03.18 08.25	
o-Terphenyl	84-15-1	94	%	70-135	02.03.18 08.25	

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3040163

Prep Method: SW5030B

% Moisture:

Date Prep: 02.02.18 16.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.05.18 14.22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.05.18 14.22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.05.18 14.22	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	02.05.18 14.22	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.05.18 14.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	80-120	02.05.18 14.22	
1,4-Difluorobenzene	540-36-3	92	%	80-120	02.05.18 14.22	

- 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

+ NELAC certification not offered for this compound.

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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



QC Summary 575283

TRC Solutions, Inc
Merlin State Com #2H

Analytical Method: Chloride by EPA 300

Seq Number: 3040386

MB Sample Id: 7638685-1-BLK

Matrix: Solid

LCS Sample Id: 7638685-1-BKS

Prep Method: E300P

Date Prep: 02.06.18

LCSD Sample Id: 7638685-1-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	261	104	264	106	90-110	1	20	mg/kg	02.06.18 18:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3040386

Parent Sample Id: 575283-001

Matrix: Soil

MS Sample Id: 575283-001 S

Prep Method: E300P

Date Prep: 02.06.18

MSD Sample Id: 575283-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	283	249	517	94	532	100	90-110	3	20	mg/kg	02.06.18 18:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3040386

Parent Sample Id: 575340-003

Matrix: Soil

MS Sample Id: 575340-003 S

Prep Method: E300P

Date Prep: 02.06.18

MSD Sample Id: 575340-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	207	250	438	92	453	98	90-110	3	20	mg/kg	02.06.18 20:04	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3040140

MB Sample Id: 7638545-1-BLK

Matrix: Solid

LCS Sample Id: 7638545-1-BKS

Prep Method: TX1005P

Date Prep: 02.02.18

LCSD Sample Id: 7638545-1-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)	<15.0	1000	961	96	905	91	70-135	6	35	mg/kg	02.03.18 01:34	
Diesel Range Organics (DRO)	<15.0	1000	1060	106	976	98	70-135	8	35	mg/kg	02.03.18 01:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		122		114		70-135	%	02.03.18 01:34
o-Terphenyl	106		118		122		70-135	%	02.03.18 01:34

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

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

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

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



QC Summary 575283

TRC Solutions, Inc Merlin State Com #2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3040140

Parent Sample Id: 575033-005

Matrix: Soil

MS Sample Id: 575033-005 S

Prep Method: TX1005P

Date Prep: 02.02.18

MSD Sample Id: 575033-005 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)	<15.0	997	823	83	846	85	70-135	3	35	mg/kg	02.03.18 02:40	
Diesel Range Organics (DRO)	120	997	1010	89	1030	91	70-135	2	35	mg/kg	02.03.18 02:40	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		98		70-135	%	02.03.18 02:40
o-Terphenyl	98		80		70-135	%	02.03.18 02:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040163

MB Sample Id: 7638538-1-BLK

Matrix: Solid

LCS Sample Id: 7638538-1-BKS

Prep Method: SW5030B

Date Prep: 02.02.18

LCSD Sample Id: 7638538-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0864	86	0.0937	94	70-130	8	35	mg/kg	02.05.18 14:22	
Toluene	<0.00201	0.101	0.0895	89	0.0917	92	70-130	2	35	mg/kg	02.05.18 14:22	
Ethylbenzene	<0.00201	0.101	0.0934	92	0.0955	96	71-129	2	35	mg/kg	02.05.18 14:22	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		92		89		80-120	%	02.05.18 14:22
4-Bromofluorobenzene	101		97		98		80-120	%	02.05.18 14:22

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040163

Parent Sample Id: 575316-001

Matrix: Soil

MS Sample Id: 575316-001 S

Prep Method: SW5030B

Date Prep: 02.02.18

MSD Sample Id: 575316-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0817	82	0.0895	90	70-130	9	35	mg/kg	02.05.18 14:22	
Toluene	<0.00200	0.100	0.0779	78	0.0758	76	70-130	3	35	mg/kg	02.05.18 14:22	
Ethylbenzene	<0.00200	0.100	0.0777	78	0.0742	74	71-129	5	35	mg/kg	02.05.18 14:22	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		80-120	%	02.05.18 14:22
4-Bromofluorobenzene	99		114		80-120	%	02.05.18 14:22

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

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

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

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

CHAIN OF CUSTODY

Page 1 of 1

Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

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

Phoenix, Arizona (480-355-0900)

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[illegible]



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 02/01/2018 04:37:00 PM

Work Order #: 575283

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)?	2.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	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:

Shawnee Smith

Date: 02/02/2018

Checklist reviewed by:

Kelsey Brooks

Date: 02/05/2018

Photographic Log

Client: COG Operating, LLC
Project Name: Merlin State Com #002H

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 1

Description:
View of surface
staining from initial
release.

Direction:
South



Photograph No. 2

Description:
View of surface
staining from initial
release.

Direction:
Southwest



Photographic Log

Client: COG Operating, LLC
Project Name: Merlin State Com #002H

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 3

Description:
View of the
excavated area.

Direction:
Southwest



Photograph No. 4

Description:
View of the
excavated area.

Direction:
North



Photographic Log

Client: COG Operating, LLC
Project Name: Merlin State Com #002H

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 5

Description:
View of affected
area after
remediation
activities.

Direction:
Northwest



Photograph No. 6

Description:
View of affected
area after
remediation
activities.

Direction:
West



Photographic Log

Client: COG Operating, LLC
Project Name: Merlin State Com #002H

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 7

Description:
View of liner within
the affected area.

Direction:
Northwest



Photograph No. 8

Description:
View of liner within
the affected area.

Direction:
South



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

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company:	COG Operating LLC	Contact:	Robert McNeill
Address:	600 West Illinois Avenue, Midland TX 79701	Telephone No.	432-683-7443
Facility Name:	MERLIN STATE COM #002H	Facility Type:	Tank Battery
Surface Owner:	State	Mineral Owner:	API No. 30-025-41938

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	32	21S	34E	440'	North	660'	West	Lea

Latitude 32.4419975 Longitude 103.4983597

NATURE OF RELEASE

Type of Release:	Oil & Produced Water	Volume of Release:	70bbls Oil & 55bbls of Produced Water	Volume Recovered:	68bbls of Oil & 53bbls of Produced Water
Source of Release:	FWKO	Date and Hour of Occurrence:	1-11-2017 09:00 am	Date and Hour of Discovery:	1-11-2017 09:00 am
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Ms. Lynch - NMOCD / Ms. Groves - SLO		
By Whom?	Robert Grubbs Jr.	Date and Hour:	Thu 1/12/2017 2:11 PM		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

RECEIVED

By Olivia Yu at 1:09 pm, Jan 18, 2017

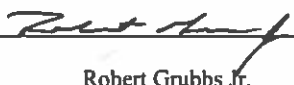
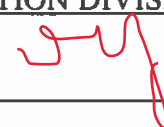
Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a gasket that failed on a FWKO. Replaced the gasket with a new one.

Describe Area Affected and Cleanup Action Taken.*

This release was mostly contained within the lined facility a small area of 30 X 50 on the pad.. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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

Signature:		OIL CONSERVATION DIVISION	
Printed Name:	Robert Grubbs Jr.	Approved by Environmental Specialist:	
Title:	Senior HSE Coordinator	Approval Date:	01/18/2017
E-mail Address:	rgrubbs@concho.com	Expiration Date:	
Date:	January 13, 2017	Conditions of Approval:	see attached directive
Phone:	432-683-7443	Attached	☒

* Attach Additional Sheets If Necessary

RP4569

nOY1701847566

pOY1701847740