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www.trcsolutions.com

September 6, 2017

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

Amber Groves Hobbs Field Office New Mexico State Land Office 2827 N. Dal Paso St., Suite 117 Hobbs, New Mexico 88240

APPROVED By Olivia Yu at 7:36 am, Oct 02, 2017

> NMOCD approves of the delineation completed for 1RP-4569 and proposed remediation with these conditions: 1. Statement of liner integrity for the around the release point. 2. Bottom and sidewall samples for excavation areas represented by Trench 1 and Trench 2. One sample location at the border between Trench 1 and Trench 2. 3. Scaled map with the confirmation sample locations demarcated and excavated area outlined. 4. Blended soil for backfilling must be tested every 50 yd3 for BTEX, TPH, and chlorides. Use EPA Methods 8260/8021 for BTEX. 8015 for TPH extended, 300 for Chlorides.

Soil Investigation Summary and Proposed Remediation Workplan Re: Merlin State Com #002H (1RP-4569) GPS: N 32.4419975° W 103.4983597° Unit Letter "D", Section 32, Township 21 South, Range 34 East Lea County, New Mexico

Dear Ms. Yu and Ms. Groves.

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG) has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the Merlin State Com #002H Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the Merlin State Com #002H Release Site toward a New Mexico Oil Conservation Division (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "D", Section 32, Township 21 South, Range 34 East, in Lea County, New Mexico. The GPS coordinates for the site are N 32.4419975° W 103.4983597°. The subject property is administered by the New Mexico State Land Office (NMSLO). A Site Location Map and Site Map are provided as Figure 1 and Figure 2, respectively.

On January 11, 2017, COG discovered a crude oil and produced water release from the gasket on a Free Water Knockout (FWKO). The release was confined to the caliche pad of the location and measured approximately 2,995 square feet in area. On January 12, 2017, a COG representative notified the NMOCD and a Release Notification and Corrective Action (Form C-141) was submitted to the NMOCD on January 13, 2017. During initial response activities, COG replaced the damaged gasket on the FWKO. Approximately one hundred twenty-five (125) barrels of fluid was released from the FWKO, with one hundred and twenty-one (121) barrels of fluid recovered. The Form C-141 is attached to this report.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 32, Township 21 South, Range 34 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office indicates groundwater should be encountered at approximately seventy-five (75) feet below ground surface (bgs). Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion.

No water wells were observed within one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

No surface water was observed within one-thousand (1,000) feet of the release. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site soil remediation levels are 10 milligrams per Kilogram (mg/Kg) for benzene, 50 mg/Kg for benzene, toluene, ethylbenzene and xylenes (BTEX), and one thousand (1,000) mg/Kg for total petroleum hydrocarbons (TPH). Per NMOCD request, chloride remediation levels for the Release Site will be 600 mg/Kg.

On January 23, 2017, a Concho Representative collected eight (8) delineation soil samples (T1-Surface, T1-1', T1-1.5', T2-Surface, T2-1', T2-2.5', T2-4', and T2-5.5') from the impacted area. The soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method SM 4500 Cl-B. The analytical results indicated benzene concentrations were less than the applicable laboratory Method Detection Limit (MDL) and NMOCD regulatory guidelines for the submitted soil samples, with the exception of soil sample T2-Surface, which exhibited a benzene concentration of 1.51 mg/Kg. The laboratory results indicated BTEX concentrations ranged from less than the applicable laboratory MDL for soil samples T2-1', T2-4', and T2-5.5' to 92.721 mg/Kg for soil sample T2-Surface. A review of laboratory analytical results indicated BTEX concentrations for the submitted samples were below NMOCD regulatory guidelines, with the exception of soil sample T2-Surface. The laboratory results indicated TPH concentrations ranged from 70.5 mg/Kg for soil sample T2-5.5' to 8,910 mg/Kg for soil sample T2-Surface. A review of laboratory analytical results indicated TPH concentrations were below NMOCD regulatory guidelines for the submitted soil samples, with the exception of soil samples T1-1' (1,849 mg/Kg), T1-1.5' (1,129 mg/Kg), T2-Surface (8,910), and T2-2.5' (1,119.2 mg/Kg). Chloride concentrations ranged from 32.0 mg/Kg for soil sample T2-1' to 368 mg/Kg and indicated chloride concentrations were below NMOCD regulatory guidelines. The laboratory analytical results are attached to this report.

On June 28, 2017, TRC mobilized a trackhoe to the Release Site to begin delineation activities. Nine (9) delineation soil samples (Trench-1 2', Trench-1 6', Trench-1 12', Trench-2 3', Trench-2 4', Trench-2 6', Trench-2 8', Trench-2 11', and Trench-2 14') were collected from the impacted area (see attached Figure 2 for sample locations and Table 1 for sample results) and submitted to Xenco Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and/or chloride using Method E 300.0/300.1. Laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory Method Detection Limit (MDL) for the collected soil samples, with the exception of soil samples Trench-2 3', Trench-2 4', and

Trench-2 6', which exhibited BTEX concentrations of 0.1195 mg/Kg, 0.0115 mg/Kg, and 0.0233 mg/Kg, respectively. A review of laboratory analytical results indicated BTEX concentrations for the submitted soil samples were below NMOCD regulatory guidelines. Laboratory analytical results indicated TPH concentrations were less than the applicable laboratory MDL for the submitted soil samples, with the exception of soil samples Trench-1 2' (41.9 mg/kg), Trench-2 3' (2,952 mg/Kg), Trench-2 4' (1,118.1 mg/Kg), and Trench-2 6' (391.7 mg/Kg). A review of laboratory analytical results indicate TPH concentrations for the submitted soil samples were below NMOCD regulatory guidelines, with the exception of soil samples Trench-2 3' and Trench-2 4'. Chloride concentrations ranged from 61.9 mg/Kg for soil sample Trench-1 2' to 259 mg/Kg for soil sample Trench-2 11'. A review of laboratory analytical results indicated chloride concentrations were below NMOCD regulatory guidelines for the submitted soil samples.

In addition, TRC collected four (4) samples (West Trench-1 2', North Trench-1 2', East Trench-1 2', South Trench-1 2') to the west, north, east, and south of the visibly stained area to a depth of approximately two (2) feet bgs to determine the horizontal extent of the impacted area. The soil samples were submitted to Xenco Laboratories for BTEX, TPH, and chloride analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations for the submitted soil samples were below the applicable laboratory MDL, with the exception of soil samples West Trench-1 2', which exhibited a TPH concentration of 49.2 mg/Kg. Laboratory analytical results indicated chloride concentrations ranged from 29.9 mg/Kg for soil sample North Trench-1 2' to 89.5 mg/Kg for soil sample South Trench-1 2'. A review of laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were below NMOCD regulatory guidelines for the submitted soil samples.

In addition, one (1) background soil sample (BG-1 1') was collected approximately fifty (50) feet east of the caliche pad and submitted for BTEX, TPH, and chloride analysis. Laboratory analytical results indicated benzene and TPH concentrations were less than applicable laboratory MDL and NMOCD regulatory guidelines. Laboratory analytical results indicated BTEX concentrations were 0.0181 mg/Kg and below NMOCD regulatory guidelines. Laboratory analytical results indicated the chloride concentration was 12.1 mg/Kg and below NMOCD regulatory guidelines.

Based on the analytical results of the soil samples collected on June 28, 2017, COG proposes the following field activities designed to remediate the Merlin State Com #002H:

- 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.

COG is prepared to begin the activities outlined in this Proposed Remediation Workplan on NMOCD and NMSLO approval.

If you have any questions, or if additional information is required, please feel free to call me at 432-520-7720 (office) or 432-664-6699 (cell). Thank you,

-Nikk Guen

Nikki Green Project Manager TRC Environmental Corporation

Attachments:

Joffy Kindler

Jeffrey Kindley, PG Senior Project Manager TRC Environmental Corporation

Figure 1 - Site Location Map Figure 2 - Site Map Table 1 - Concentration of Chloride in Soil Laboratory Analytical Results Release Notification and Corrective Action (Form C-141)

cc: Rebecca Haskell COG Operating, LLC 600 W. Illinois Avenue Midland, Texas 79701

File



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TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

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

All concentrations are reported in mg/Kg

METHOD: SW 8015M METHODS: SW 846-8021b EPA 300.0 SM4500Cl-B SAMPLE SOIL SAMPLE LOCATION TPH GRO **TPH DRO TPH ORO** TOTAL TPH TOTAL TPH ETHYLm, p -0 -TOTAL STATUS BENZENE TOLUENE **CHLORIDE** DATE **CHLORIDE** BENZENE XYLENES XYLENE BTEX C₆-C₁₀ C₁₀-C₂₈ C₂₈-C₃₅ $C_{6}-C_{28}$ C₆-C₃₅ NMOCD Site Classification 50 10 1.000 1.000 600 Criteria *T1-SURFACE 01/23/17 Trench < 0.050 < 0.050 0.169 0.768 0.937 32.1 354 386.1 --3.73 229 *T1-1' 01/23/17 2.73 10.5 16.96 1.620 1.849 Trench < 0.100--*T1-1.5' 01/23/17 0.858 4.77 129 < 0.1001.61 7.238 1,000 1,129 Trench -. ***T2-SURFACE** 01/23/17 Trench 1.51 27.6 14.8 48.8 92.71 1,270 7,640 8,910 --*T2-1' 01/23/17 Trench < 0.050 0.050 < 0.050 < 0.150 0.050 <10.0 111 111 --*T2-2.5' 01/23/17 Trench < 0.050 0.098 0.241 0.818 1.157 49.2 1,070 1,119.2 -*T2-4' 01/23/17 Trench < 0.050 < 0.050 < 0.050 < 0.150 < 0.150 < 10.035.9 35.9 -*T2-5.5' 01/23/17 Trench < 0.050 < 0.050 < 0.050 < 0.150 < 0.150 <10.0 70.5 70.5 -_ < 0.00198 < 0.00396 Trench-1 2' 06/28/17 < 0.00198 < 0.00198 < 0.00198 < 0.00396 <15.0 41.9 <15.0 41.9 61.9 Trench -06/28/17 < 0.00200 < 0.00200 < 0.00200 < 0.00399 < 0.00200 < 0.00399 <15.0 <15.0 <15.0 <15.0 234 Trench-1 6' Trench -< 0.00202 < 0.00202 < 0.00202 <15.0 Trench-1 12' 06/28/17 Trench < 0.00202 < 0.00403 < 0.00403 <15.0 <15.0 <15.0 86.9 -< 0.00353 < 0.00353 0.0579 352 Trench-2 3' 06/28/17 < 0.00353 0.0616 0.1195 2,380 220 2,952 141 Trench -Trench-2 4' 06/28/17 Trench < 0.00199 < 0.00199 < 0.00199 0.0115 < 0.00199 0.0115 112 938 68.1 1,118.1 --06/28/17 < 0.00202 < 0.00202 < 0.00202 0.0233 < 0.00202 0.0233 44.3 323 24.4 391.7 69.5 Trench-2 6' Trench -< 0.00199 < 0.00199 < 0.00199 < 0.00398 < 0.00199 < 0.00398 <15.0 <15.0 <15.0 <15.0 Trench-2 8' 06/28/17 Trench --< 0.00200 < 0.00200 <15.0 <15.0 259 06/28/17 < 0.00200 < 0.00200 < 0.00401 < 0.00401 <15.0 <15.0 Trench-211' Trench -06/28/17 < 0.00200 < 0.00200 < 0.00200 < 0.00399 < 0.00200 < 0.00399 <15.0 <15.0 <15.0 <15.0 174 Trench-2 14' Trench -West Trench-1 2' 06/28/17 < 0.00201 < 0.00201 < 0.00201 < 0.00402 < 0.00201 < 0.00402 <14.9 49.2 <14.9 49.2 71.5 Trench -06/28/17 < 0.00200 < 0.00200 < 0.00200 < 0.00401 <15.0 <15.0 <15.0 29.9 North Trench-1 2' < 0.00200 < 0.00401 <15.0 Trench -< 0.00199 < 0.00199 < 0.00398 < 0.00199 < 0.00398 <14.9 <14.9 <14.9 <14.9 89.5 East Trench-1 2' 06/28/17 Trench < 0.00199 -

< 0.00200

< 0.00399

<15.0

<15.0

<15.0

<15.0

-

74.9

< 0.00200

< 0.00200

South Trench-1 2'

06/28/17

Trench

< 0.00200

< 0.00399

600

128

128

112

368

32.0

64.0

144

256

-

-

-

-

-

-

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-

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TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

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

All concentrations are reported in mg/Kg

		SOU		METHODS: SW 846-8021b METHOD: SW 8015M					EPA 300.0	SM4500Cl-B					
SAMPLE LOCATION	SAMPLE SOIL DATE STATUS BE	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C ₆ -C ₁₀	TPH DRO C ₁₀ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	ТОТАL ТРН С ₆ -С ₂₈	ТОТА L ТРН С ₆ -С ₃₅	CHLORIDE	CHLORIDE	
NMOCD Site Classification Criteria			10					50				1,000	1,000	600	600
BG-1 1'	06/28/17	Trench	< 0.00345	< 0.00345	< 0.00345	0.0181	< 0.00345	0.0181	<15.0	<15.0	<15.0	-	<15.0	12.1	-

* - Soil sample was collected by a COG Representative and submitted to Cardinal Laboratories.



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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

Sample ID: T1 - SURFACE (H700183-01)

BTEX 8021B	mg/	kg	Analyze	d 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 BTEX	0.937	0.300	01/30/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	73.6-14	0						
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	Analyze	d 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 9	35-147	,						
Surrogate: 1-Chlorooctadecane	94.2	% 28-171							

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	kg	Analyze	d 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 BTEX	16.9	0.600	01/30/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	128 9	% 73.6-14	0						
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	Analyze	d 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 9	% 35-147	7						
Surrogate: 1-Chlorooctadecane	100 9	% 28-171	1						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	kg	Analyze	d 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 BTEX	7.24	0.600	01/30/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 9	73.6-14	0						
Chloride, SM4500Cl-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	Analyze	d 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 9	35-147	7						
Surrogate: 1-Chlorooctadecane	110 9	6 28-171							

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

Sample ID: T2 - SURFACE (H700183-04)

BTEX 8021B	mg	/kg	Analyze	d 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 BTEX	92.7	6.00	01/30/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 73.6-14	0						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d 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	Analyze	d 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	7						
Surrogate: 1-Chlorooctadecane	194	% 28-171	1						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	kg	Analyze	d 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 9	% 73.6-14	0						
Chloride, SM4500Cl-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	Analyze	d 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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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	kg	Analyze	d 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 BTEX	1.16	0.300	01/30/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d 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	Analyze	d 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 9	% 35-147	,						
Surrogate: 1-Chlorooctadecane	106 9	% 28-171							

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	′kg	Analyze	d 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	103 9	% 73.6-14	0						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d 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	Analyze	d 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	7						
Surrogate: 1-Chlorooctadecane	92.0	% 28-171							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	01/25/2017	Sampling Date:	01/23/2017
Reported:	01/31/2017	Sampling Type:	Soil
Project Name:	MERLIN STATE #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Angela Cabrera
Project Location:	NOT GIVEN		

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

BTEX 8021B	mg/	kg	Analyze	d 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 9	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d 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	Analyze	d 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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Celez D. Keine

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

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

Page 10 of 11

Project Manager: Dakota Neel															AN	AL	ANALYSIS		REQUES				
							P.O.	#	a de la de l					_	-						_		-
Address: 2208 West Main							Cor	Company:	NA.	COG Operating LLC	ating LLC				_				_				
City: Artesia	State: NM		Zip	88	88210		Attn:	Ħ.		Robert McNeill	Neill			-		_	_		1				
Phone #: 432-215-2783	Fax #:						Add	Address:	S	600 W Illinois	linois				_	_			_				-
Project #:	Project Owner:						City:			Midland						_							-
Project Name: Merlin State #2H							Stat	State: TX	×	Zip: 79701	T												-
Project Location:							Pho	ne #	#: (4	Phone #: (432) 221-0388													
Sampler Name:						_	Fax #:	#						_		-							-
FOR LAB USE ONLY			\neg	2	MATRIX	×		PRE	PRESERV	V. SAMPLING	NG												-
Lab I.D. Sample I.D.	e I.D.	(G)RAB OR (C)OMP.	# CONTAINERS GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL OTHER :	DATE	TIME	BTEX	трн	Chloride			-			-			
	T1- Surface	1		_	-			_	-	1/23/17	11:00 AM	×	×	×		-							
	T1- 1'				-				-	1/23/17	11:00 AM	×	×	×		-							
	T1- 1.5'				-				-	1/23/17	11:00 AM	×	×	×		-				-	_		-
	T2-Surface						-			1/23/17	11:00 AM	×	×	×		-				-			
	T2- 1'								-	1/23/17	11:00 AM	×	×	×		-							
	T2- 2.5'				-				-	1/23/17	11:00 AM	×	×	×	-	-				-			
	T2- 4'		-		-				-	1/23/17	11:00 AM	×	×	×		-				-			
U	T2- 5.5'								+	1/23/17	11:00 AM	×	×	×									
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Relinguished By:		Rec	Received By:	By:	-	1)		5	Received By:	Phone Result: Fax Result: REMARKS:	Litt	□ Yes	I No No		Add'l Phone #: Add'l Fax #:	one *	*					
Relinquished By:	Date: Time:	Rec	Received By:	BY	6	1	1	8	p	8				10	dneel2@concho.com	DCO	ncho).cor	CI				
Delivered By: (Circle One)		0	-	Samp	le Co	Inditi	9	0	HEC	CHECKED BY:													
Sampler - UPS - Bus - Other:	4.60	Co		Yes Yes	esint	Yes	0	5	2	Winitials #75	j												

s. Please fax written changes to 575-393-2476

Page 11 of 11



Project Id:Contact:Nikki GreenProject Location:Lea Co NM

Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

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



Date Received in Lab:Mon Jul-03-17 11:55 amReport Date:11-JUL-17Project Manager:Kelsey Brooks

	Lab Id:	556810-	001	556810-0	002	556810-0	003	556810-	004	556810-	005	556810-0	006
An alugia Requested	Field Id:	Trench-	1 2'	Trench-	1 6'	Trench-1	12'	Trench-	2 3'	Trench-2	2 4'	Trench-2	2 6'
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		SOIL		SOIL	
	Sampled:	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	Extracted:	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
	Analyzed:	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
	Units/RL:	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	Extracted:	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
	Analyzed:	Jul-07-17	23:06	Jul-07-17	23:13	Jul-07-17 2	23:21	Jul-08-17	00:07			Jul-08-17 (00:30
	Units/RL:	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	Extracted:	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
	Analyzed:	Jul-05-17	Jul-05-17 01:36		01:57	Jul-05-17 (02:18	Jul-05-17	03:23	Jul-05-17 (03:44	Jul-06-17	14:30
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<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.%

Mike Kimmel Client Services Manager



Project Id:Contact:Nikki GreenProject Location:Lea Co NM

Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

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



Date Received in Lab:Mon Jul-03-17 11:55 amReport Date:11-JUL-17Project Manager:Kelsey Brooks

	Lab Id:	556810-0	007	556810-0	008	556810-0)09	556810-	010	556810-0	011	556810-0	012
	Field Id:	Trench-2	2 8'	Trench-2	11'	Trench-2	14'	West Trenc	h-1 2'	North Trend	ch-1 2'	East Trencl	h-1 2'
Analysis Requested	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 0)8:30	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 1	13:29	Jul-07-17	14:17	Jul-07-17	4:34	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	7:10	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 1	1:00	Jul-06-17	11:00	Jul-06-17	1:00	Jul-04-17	10:00	Jul-04-17	10:00	Jul-04-17	10:00
	Analyzed:	Jul-06-17 1	15:31	Jul-06-17	15:52	Jul-06-17	6:12	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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Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Mike Kimmel Client Services Manager



Project Id:Contact:Nikki GreenProject Location:Lea Co NM

Certificate of Analysis Summary 556810

TRC Solutions, Inc, Midland, TX

Str Accelones

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

Date Received in Lab:Mon Jul-03-17 11:55 amReport Date:11-JUL-17Project Manager:Kelsey Brooks

	Lab Id:	556810-013			
Anglusia Boguestad	Field Id:	South Trench-1 2'			
Analysis Requested	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.%

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)







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,

le p

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 Id

Trench-1 2'
Trench-1 6'
Trench-1 12'
Trench-2 3'
Trench-2 4'
Trench-2 6'
Trench-2 8'
Trench-2 11'
Trench-2 14'
West Trench-1 2'
North Trench-1 2'
East Trench-1 2'
South Trench-1 2'

Sample Cross Reference 556810



Matrix	Date Collected	Sample Depth	Lab Sample Id
S	06-28-17 12:25		556810-001
S	06-28-17 13:20		556810-002
S	06-28-17 14:45		556810-003
S	06-28-17 14:50		556810-004
S	06-28-17 15:30		556810-005
S	06-28-17 15:45		556810-006
S	06-28-17 15:50		556810-007
S	06-28-17 15:55		556810-008
S	06-28-17 16:07		556810-009
S	06-28-17 12:45		556810-010
S	06-28-17 16:20		556810-011
S	06-28-17 16:38		556810-012
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.



o-Terphenyl

Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

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

Sample Id: Trench-1 2' Lab Sample Id: 556810-001		Matrix: Date Colle	Soil cted: 06.28.	17 12.25	Ľ	Date Received:07	7.03.17 11.5	5
Analytical Method: Chloride by EP	A 300					rep Method: E	300P	
Tech: MGO					%	6 Moisture:		
Analyst: MGO		Date Prep:	07.07.	17 16.30	В	asis: W	et 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 SW801 Tech: ARM Analyst: ARM Seq Number: 3021777	15 Mod	Date Prep:	07.04.	17 10.00	%	rep Method: T 6 Moisture: 8asis: W	X1005P Vet Weight	
Tech: ARM Analyst: ARM	15 Mod Cas Number	Date Prep: Result	07.04. RL	17 10.00	%	5 Moisture:		Dil
Tech: ARM Analyst: ARM Seq Number: 3021777		-		17 10.00	% B	6 Moisture: Basis: W	vet Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter	Cas Number	Result	RL	17 10.00	% B Units	6 Moisture: asis: W Analysis Date	Vet Weight Flag	
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result <15.0	RL 15.0	17 10.00	% B Units mg/kg	Moisture: Basis: W Analysis Date 07.05.17 01.36	Vet Weight Flag	1
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result <15.0 41.9	RL 15.0 15.0	17 10.00	% B Units mg/kg mg/kg	6 Moisture: asis: W Analysis Date 07.05.17 01.36 07.05.17 01.36	Vet Weight Flag U	1 1
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Oil Range Hydrocarbons (ORO)	Cas Number PHC610 C10C28DRO PHCG2835	Result <15.0 <15.0 <15.0 <15.0 <19	RL 15.0 15.0 15.0	17 10.00 Units	% E Units mg/kg mg/kg mg/kg	6 Moisture: asis: W Analysis Date 07.05.17 01.36 07.05.17 01.36	Vet Weight Flag U U	1 1 1

107

%

70-135

07.05.17 01.36

84-15-1





TRC Solutions, Inc, Midland, TX

Sample Id: Trend	h-1 2'	Matrix:	Soil	Date	Received:07.0	3.17 11.55	
Lab Sample Id: 55681	0-001	Date Collect	ted: 06.28.17 12.25				
Analytical Method: E Tech: ALJ	TEX by EPA 8021B			1	Method: SW:	5030B	
Analyst: ALJ		Date Prep:	07.06.17 15.00	% M Basi		Weight	
Seq Number: 302170	00						
Parameter	Cas Number	Result	RL U	U nits A	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198 0	.00198 n	ng/kg 07	7.07.17 03.29	U	1
Toluene	108-88-3	<0.00198 0	.00198 n	ng/kg 07	7.07.17 03.29	U	1
Ethylbenzene	100-41-4	<0.00198 0	.00198 n	ng/kg 07	7.07.17 03.29	U	1

Enjioenzene	100 11 1	(01001)0	0.00190			0/10/11/ 0012/	e	-
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Trench-1 6' Lab Sample Id: 556810-002		Matrix: Date Collec	Soil cted: 06.28.17 13.20		Date Received:07.03.17 1	1.55
Analytical Method:Chloride by EP.Tech:MGOAnalyst:MGOSeq Number:3021783	A 300	Date Prep:	07.07.17 16.30		Prep Method: E300P % Moisture: Basis: Wet Weigh	nt
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 SW801 Tech: ARM Analyst: ARM Seq Number: 3021777	5 Mod	Date Prep:	07.04.17 10.00		Prep Method: TX1005P % Moisture: Basis: Wet Weigh	nt
Parameter	Cas Number	Result	RL	Units	Analysis Date Flag	Dil

	ous i tunis ei		nii.		Cinto	Thay sis Date	Thes	DI
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample Id	Trench-1 6' d: 556810-002		Matrix: Date Collecte	Soil d: 06.28.17 13.20		Date Received	1:07.03.17 11.55	
Analytical Me	ethod: BTEX by EPA 802	21B				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 R	L	Units	Analysis D	ate Flag	Dil

r al ameter	Cas Nulliber	Kesuit	KL		Units	Analysis Date	riag	DII
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
		<i>a</i> v v	%	.	.			
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Trench-1 12' Lab Sample Id: 556810-003		Matrix: Date Collec	Soil cted: 06.28.17 14.45]	Date Received:07.0)3.17 11.5	5
Analytical Method: Chloride by EI	PA 300]	Prep Method: E30	0P	
Tech: MGO					% Moisture:		
Analyst: MGO		Date Prep:	07.07.17 16.30]	Basis: We	t Weight	
Seq Number: 3021783		1				-	
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 SW80 Tech: ARM Analyst: ARM	15 Mod	Date Prep:	07.04.17 10.00	Q	Prep Method: TX % Moisture: Basis: We	1005P t 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
(ODO)							
Dil 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
G			%	T T	T		T	
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		



o-Xylene

Total Xylenes

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

Total BTEX

Certificate of Analytical Results 556810



07.07.17 04.01

07.07.17 04.01

07.07.17 04.01

Analysis Date

07.07.17 04.01

07.07.17 04.01

mg/kg

mg/kg

mg/kg

Limits

80-120

80-120

U

U

U

Flag

1

1

1

TRC Solutions, Inc, Midland, TX

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

Sample Id: Lab Sample Id	Trench-1 12' l: 556810-003		Matrix: Date Coll	Soil lected: 06.28.17 14.45]	Date Received:07.0	03.17 11.55	5
Analytical Me Tech: Analyst: Seq Number:	thod: BTEX by EPA 80 ALJ ALJ 3021700)21B	Date Prep	o: 07.06.17 15.00		Prep Method: SW % Moisture: Basis: Wet	5030B t Weight	
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

0.00202

0.00202

0.00202

%

Recovery

104

101

Units

%

%

< 0.00202

< 0.00202

< 0.00202

Cas Number

540-36-3

460-00-4

95-47-6

1330-20-7

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o-Terphenyl

Certificate of Analytical Results 556810



TRC Solutions, Inc, Midland, TX

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

Sample Id: Trench-2 3' Lab Sample Id: 556810-004		Matrix: Date Colle	Soil cted: 06.28.17	14.50	D	ate Received	:07.03.	.17 11.55	i
Analytical Method: Chloride by EPA	300				P	rep Method:	E300F	Р	
Tech: MGO					%	Moisture:			
Analyst: MGO		Date Prep:	07.07.17	17.10	В	asis:	Wet W	Veight	
Seq Number: 3021784		1						C	
Parameter	Cas Number	Result	RL		Units	Analysis Da	ite	Flag	Dil
Chloride	16887-00-6	141	4.91		mg/kg	07.08.17 00.0	07		1
Analytical Method: TPH by SW8015 Tech: ARM Analyst: ARM Seq Number: 3021777	5 Mod	Date Prep:	07.04.17	10.00	%	rep Method: 6 Moisture: asis:		05P Veight	
Tech: ARM Analyst: ARM	5 Mod Cas Number	Date Prep: Result	07.04.17 RL	10.00	%	Moisture:	Wet W		Dil
Tech: ARM Analyst: ARM Seq Number: 3021777				10.00	% B	Moisture: asis:	Wet W nte	Veight	Dil
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter	Cas Number	Result	RL	10.00	% B Units	Moisture: asis: Analysis Da	Wet W nte 23	Veight	
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result 352	RL 15.0	10.00	% B Units mg/kg	 Moisture: asis: Analysis Da 07.05.17 03.2 	Wet W nte 23 23	Veight	1
Tech: ARM Analyst: ARM Seq Number: 3021777 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 352 2380	RL 15.0 15.0	10.00	% B Units mg/kg mg/kg	Moisture: asis: Analysis Da 07.05.17 03.2	Wet W ite 23 23 23	Veight	1 1

90

%

70-135

07.05.17 03.23

84-15-1



o-Xylene

Total Xylenes

Surrogate

4-Bromofluorobenzene

1,4-Difluorobenzene

Total BTEX

Certificate of Analytical Results 556810



1

1

1

Flag

07.11.17 09.36

07.11.17 09.36

07.11.17 09.36

Analysis Date

07.11.17 09.36

07.11.17 09.36

mg/kg

mg/kg

mg/kg

Limits

80-120

80-120

TRC Solutions, Inc, Midland, TX

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

Sample Id:	Trench-2 3'		Matrix:	Soil	I	Date Received:07.0	03.17 11.55	
Lab Sample Id:	556810-004		Date Coll	ected: 06.28.17 14.50				
Analytical Meth	hod: BTEX by EPA 80	21B			I	Prep Method: SW	5030B	
Tech:	ALJ				ç	% Moisture:		
Analyst:	ALJ		Date Prep	o: 07.10.17 18.00	1	Basis: We	t 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

0.00353

0.00353

0.00353

%

Recovery

109

83

Units

%

%

0.0579

0.120

0.120

Cas Number

460-00-4

540-36-3

95-47-6

1330-20-7

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TRC Solutions, Inc, Midland, TX

Sample Id: Trench-2 4' Lab Sample Id: 556810-005		Matrix: Date Collec	Soil eted: 06.28.17 15.30		Date Received:07.0)3.17 11.55	5
Analytical Method: TPH by SW8015 Tech: ARM Analyst: ARM Seq Number: 3021777	9 Mod	Date Prep:	07.04.17 10.00		Prep Method: TX % Moisture: Basis: Wet	1005P t Weight	
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
			0/				

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 M	ethod: 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		





TRC Solutions, Inc, Midland, TX

Sample Id: Trench-2 6' Lab Sample Id: 556810-006		Matrix: Date Collec	Soil cted: 06.28	.17 15.45	D	Date Received:07.0	03.17 11.5	5
Analytical Method: Chloride by EPA Tech: MGO Analyst: MGO Seq Number: 3021784	. 300	Date Prep:	07.07	.17 17.10	%	rep Method: E30 5 Moisture: 8asis: We	00P t Weight	
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 Tech: ARM Analyst: ARM Seq Number: 3021792	5 Mod	Date Prep:	07.06	.17 11.00	%	rep Method: TX 5 Moisture: Basis: We	1005P t Weight	
Tech: ARM Analyst: ARM	5 Mod Cas Number	Date Prep: Result	07.06. RL	.17 11.00	%	5 Moisture:		Dil
Tech:ARMAnalyst:ARMSeq Number:3021792		·		.17 11.00	% B	5 Moisture: Basis: We	t Weight	Dil
Tech: ARM Analyst: ARM Seq Number: 3021792 Parameter	Cas Number	Result	RL	.17 11.00	% B Units	6 Moisture: asis: We Analysis Date	t Weight	
Tech: ARM Analyst: ARM Seq Number: 3021792 Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	Result	RL 15.0	.17 11.00	% B Units mg/kg	Moisture: Basis: We Analysis Date 07.06.17 14.30	t Weight	1
Tech: ARM Analyst: ARM Seq Number: 3021792 Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Cas Number PHC610 C10C28DRO	Result 44.3 323	RL 15.0 15.0	.17 11.00	% B Units mg/kg mg/kg	6 Moisture: asis: We Analysis Date 07.06.17 14.30 07.06.17 14.30	t Weight	1 1




TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample Id	Trench-2 6' : 556810-006		Matrix: Date Colle	Soil ected: 06.28.17 15.45		Date Received:07.	03.17 11.5	5
Analytical Met Tech: Analyst: Seq Number:	thod: BTEX by EPA 80 ALJ ALJ 3021705)21B	Date Prep:	07.07.17 08.30		Prep Method: SW % Moisture: Basis: We	75030B et Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Benzene		Cas Number 71-43-2		RL 0.00202	Units mg/kg	Analysis Date 07.07.17 14.50	Flag U	Dil
			<0.00202			•		Dil 1 1
Benzene		71-43-2	<0.00202 <0.00202	0.00202	mg/kg	07.07.17 14.50	U	Dil 1 1 1
Benzene Toluene		71-43-2 108-88-3	<0.00202 <0.00202 <0.00202	0.00202 0.00202	mg/kg mg/kg	07.07.17 14.50 07.07.17 14.50	U U U	Dil 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Benzene Toluene Ethylbenzene		71-43-2 108-88-3 100-41-4	<0.00202 <0.00202 <0.00202 0.0233	0.00202 0.00202 0.00202	mg/kg mg/kg mg/kg	07.07.17 14.50 07.07.17 14.50 07.07.17 14.50	U U U	Dil 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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		





TRC Solutions, Inc, Midland, TX

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 Me	ethod: 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		





TRC Solutions, Inc, Midland, TX

Sample Id: Trench-2 11' Lab Sample Id: 556810-008		Matrix: Date Collec	Soil cted: 06.28.17 15.55		Date Received:07.	03.17 11.5	5
Analytical Method: Chloride by EF Tech: MGO	PA 300				Prep Method: E30 % Moisture:)0P	
Analyst:MGOSeq Number:3021784		Date Prep:	07.07.17 17.10		Basis: We	t Weight	
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 SW80 Tech: ARM Analyst: ARM Seq Number: 3021792	15 Mod	Date Prep:	07.06.17 11.00		Prep Method: TX % Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	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

nai 11 11	1110055	<15.0	15.0		mg/kg	07.00.17 15.52	U	
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Trench-211' Lab Sample Id: 556810-008		Matrix: Date Coll	Soil ected: 06.28.17 15.55]	Date Received:07.0	03.17 11.5	5
Analytical Method:BTEX by EPATech:ALJAnalyst:ALJSeq Number:3021705	8021B	Date Prep	o: 07.07.17 08.30	(Prep Method: SW % Moisture: Basis: We	5030B t Weight	
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Tre Lab Sample Id: 556	ench-2 14' 5810-009		Matrix: Date Collec	Soil eted: 06.28.17 16.07		Date Received	:07.03.17 11.5:	5
Analytical Method: Tech: MGe Analyst: MGe Seq Number: 302	0)	Date Prep:	07.07.17 17.10		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride	10	5887-00-6	174	4.97	mg/kg	07.08.17 00.4	45	1
Analytical Method: Tech: ARM Analyst: ARM		od	Date Prep:	07.06.17 11.00		Prep Method: % Moisture: Basis:	TX1005P Wet Weight	
1	1792	Car Namelan	-	DY.	T T •/			5.1
Parameter		Cas Number	Result	RL	Units	Analysis Da	nte Flag	Di

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		



o-Xylene

Total Xylenes

Total BTEX

Surrogate

4-Bromofluorobenzene

1,4-Difluorobenzene

Certificate of Analytical Results 556810



U

U

U

Flag

1

1

1

07.07.17 14.34

07.07.17 14.34

07.07.17 14.34

Analysis Date

07.07.17 14.34

07.07.17 14.34

TRC Solutions, Inc, Midland, TX

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

Sample Id:	Trench-2 14'		Matrix:	Soil	I	Date Received:07.0	03.17 11.5	5
Lab Sample Id	l: 556810-009		Date Col	lected: 06.28.17 16.07				
Analytical Me	thod: BTEX by EPA 8	021B			I	Prep Method: SW	5030B	
Tech:	ALJ				ç	% Moisture:		
Analyst:	ALJ		Date Prep	p: 07.07.17 08.30	1	Basis: We	t 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

0.00200

0.00200

0.00200

%

Recovery

101

101

Units

%

%

mg/kg

mg/kg

mg/kg

Limits

80-120

80-120

< 0.00200

< 0.00200

< 0.00200

Cas Number

460-00-4

540-36-3

95-47-6

1330-20-7

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TRC Solutions, Inc, Midland, TX

Analytical Method: Chloride by EPA 300 Tech: MGO Analyst: MGO Date Pre Seq Number: 3021784 Parameter Cas Number Result Chloride 16887-00-6 71.5 Analytical Method: TPH by SW8015 Mod	p: 07.07.17 17.10 RL 4.97	Prep Method: E300P % Moisture: 0 Basis: Wet Weight Units Analysis Date Flag Dil mg/kg 07.08.17 00.53 1
Chloride 16887-00-6 71.5		
	4.97	mg/kg 07.08.17 00.53 1
Analytical Method: TPH by SW8015 Mod		
Tech: ARM		Prep Method: TX1005P % Moisture:
Analyst:ARMDate PreSeq Number:3021777	p: 07.04.17 10.00	00 Basis: Wet Weight

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		





TRC Solutions, Inc, Midland, TX

Sample Id: West Trench-I Lab Sample Id: 556810-010	1 2'	Matrix: Date Coll	Soil lected: 06.28.17 12.45]	Date Received:07.	03.17 11.5	5
Analytical Method:BTEX byTech:ALJAnalyst:ALJSeq Number:3021700	EPA 8021B	Date Prep	o: 07.06.17 15.00	(Prep Method: SW % Moisture: Basis: We	75030B et Weight	
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
Tolyana	100 00 2	<0.00201	0.00201	ma/lra	07 07 17 04 22	T	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		





TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample I	North Trench-1 2' d: 556810-011		Matrix: Date Collec	Soil cted: 06.28.17 16.20		Date Received:07	.03.17 11.5	5
Analytical M	ethod: Chloride by EPA	300				Prep Method: E3	800P	
Tech:	MGO					% Moisture:		
Analyst:	MGO		Date Prep:	07.07.17 17.10		Basis: W	et 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

5	5 Mod					1	(1005P	
ARM		Date Pre	p: 07.04	.17 10.00			et Weight	
3021777								
	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.05.17 04.27	U	1
ganics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.05.17 04.27	U	1
carbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.05.17 04.27	U	1
	PHC635	<15.0	15.0		mg/kg	07.05.17 04.27	U	1
		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
tane		111-85-3	103	%	70-135	07.05.17 04.27		
1		84-15-1	106	%	70 135	07.05.17 04.27		
1	ARM ARM 3021777 Hydrocarbons (GRO) ganics (DRO) carbons (ORO)	ARM ARM 3021777 Hydrocarbons (GRO) PHC610 ganics (DRO) C10C28DRO carbons (ORO) PHCG2835 PHC635 tane	ARM Date Pre- 3021777 Cas Number Result Hydrocarbons (GRO) PHC610 <15.0	ARM Date Prep: 07.04 3021777 Cas Number Result RL Hydrocarbons (GRO) PHC610 <15.0	ARM Date Prep: 07.04.17 10.00 3021777 Cas Number Result RL Hydrocarbons (GRO) PHC610 <15.0	ARM 9 ARM Date Prep: 07.04.17 10.00 E 3021777 Cas Number Result RL Units Hydrocarbons (GRO) PHC610 <15.0	ARM % Moisture: ARM Date Prep: 07.04.17 10.00 Basis: Woisture: ARM Date Prep: 07.04.17 10.00 Basis: Woisture: 3021777 Cas Number Result RL Units Analysis Date Hydrocarbons (GRO) PHC610 <15.0 15.0 mg/kg 07.05.17 04.27 ganics (DRO) C10C28DRO <15.0	ARM % Moisture: ARM Date Prep: 07.04.17 10.00 Basis: Wet Weight 3021777 Cas Number Result RL Units Analysis Date Flag Hydrocarbons (GRO) PHC610 <15.0





TRC Solutions, Inc, Midland, TX

Sample Id:North Trench-1 2'Lab Sample Id:556810-011	Matrix: Soil Date Collected: 06.28.17 16.20	Date Received:07.03.17 11.55
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3021705	Date Prep: 07.07.17 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	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		





TRC Solutions, Inc, Midland, TX

Sample Id:East Trench-1 2Lab Sample Id:556810-012	2'	Matrix: Date Collect	Soil ed: 06.28.17 16.38		Date Received:07.0)3.17 11.55	
Analytical Method: Chloride by Tech: MGO Analyst: MGO Seq Number: 3021784	7 EPA 300	Date Prep:	07.07.17 17.10		Prep Method: E30 % Moisture: Basis: Wet	0P Weight	
Parameter Chloride	Cas Number 16887-00-6	Result 39.5	RL 4.91	Units mg/kg	Analysis Date 07.08.17 01.24	Flag	Dil
					•	Flag	Dil

Analyst: ARM Seq Number: 3021777		Date Prej	p: 07.04	.17 10.00	В	Basis: We	t Weight	
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		





TRC Solutions, Inc, Midland, TX

Sample Id:East Trench-1 2'Lab Sample Id:556810-012		Matrix: Date Collect	Soil eed: 06.28.17 16.38]	Date Received:	07.03.17 11.5	5
Analytical Method: BTEX by EP Tech: ALJ	A 8021B				Prep Method: S % Moisture:	SW5030B	
Analyst: ALJ		Date Prep:	07.07.17 08.30			Wet Weight	
Seq Number: 3021705 Parameter	Cas Number	Result	RL	Units	Analysis Dat	e Flag	Dil
Benzene	71-43-2	<0.00199 0	.00199	mg/kg	07.07.17 10.2	7 U	1

Demonstra	71 42 0	-0.00100	0.00100			07.07.17.10.07	TT	1
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		





TRC Solutions, Inc, Midland, TX

Sample Id: Lab Sample	South Trench-1 2' Id: 556810-013		Matrix: Date Collec	Matrix:SoilDate Received:07.03.17Date Collected:06.28.1716.45						
Analytical M Tech: Analyst: Seq Number:	lethod: Chloride by EP. MGO MGO : 3021784	A 300	Date Prep:	07.07.17 17.10		Prep Method: E3 % Moisture: Basis: W	00P et Weight			
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		

Tech: ARM					9	Moisture:		
Analyst: ARM		Date Pre	p: 07.04	.17 10.00	E	asis: We	t 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		





TRC Solutions, Inc, Midland, TX

Sample Id:South Trench-1 2'Lab Sample Id:556810-013	Matrix: Soil Date Collected: 06.28.17 16.45	Date Received:07.03.17 11.55
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3021705	Date Prep: 07.07.17 08.30	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	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		



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + 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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2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



QC Summary 556810

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

Analytical Method: Seq Number: MB Sample Id:	Chloride by EPA 3 3021783 727344-1-BLK	00	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 3	00						Pr	ep Metho	od: E30	0P	
Seq Number:	3021784			Matrix:	Solid				Date Pre	ep: 07.0	7.17	
MB Sample Id:	727342-1-BLK		LCS Sar	nple Id:	727342-1	-BKS		LCSI	D Sample	e Id: 7273	342-1-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 30	00						Pr	ep Metho	od: E30)P	
Seq Number:	3021783			Matrix:	Soil				Date Pre	ep: 07.0	7.17	
Parent Sample Id:	556808-001		MS Sar	nple Id:	556808-00	01 S		MSI	O Sample	Id: 5568	308-001 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 30	00						Pr	ep Metho	d: E30	OP	
Seq Number:	3021783		Matrix: Soil				Date Prep: 07.07.17					
Parent Sample Id:	556808-017 MS Sample				556808-017 S MSD Sample Id:				Id: 5568	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	Х

Analytical Method:	Chloride by EPA 30	00						Pr	ep Metho	od: E30	OP	
Seq Number:	3021784			Matrix:	Soil				Date Pre	ep: 07.0	7.17	
Parent Sample Id:	556810-004 MS Sam				556810-004 S MSD Sample				Id: 5568	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	Х

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	od: E300	OP		
Seq Number:	3021784 Matrix:				Soil Date Prep: 07.07.17					7.17			
Parent Sample Id:	556930-002 MS Sample Id:				556930-00	02 S		MSI	D Sample	Id: 5569	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	Х	



Analytical Method:	Analytical Method: TPH by SW8015 Mod								Pı	ep Meth	od: TX1	005P	
Seq Number:	3021777				Matrix:	Solid				Date Pr	ep: 07.0	4.17	
MB Sample Id:	727236-1-	BLK		LCS Sar	nple Id:	727236-1	-BKS		LCS	D Sample	e Id: 7272	236-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	oons (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		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1-Chlorooctane		110		1	00		102		70	-135	%	07.04.17 21:40	
o-Terphenyl		117		9	98		102		70)-135	%	07.04.17 21:40	

Analytical Method: Seq Number: MB Sample Id:	TPH by S 3021792 727359-1-		od		Matrix: nple Id:	Solid 727359-1-	-BKS			ep Meth Date Pr D Sample	ep: 07.0	005P 6.17 359-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (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		CS Rec	LCS Flag	LCSI %Ree			mits	Units	Analysis Date	
1-Chlorooctane		117		1	28		120		70	-135	%	07.06.17 13:50	
o-Terphenyl		124		1	28		119		70	-135	%	07.06.17 13:50	

Analytical Method: Seq Number:	TPH by S 3021777	W8015 M	lod		Matrix:					ep Meth Date Pr	ep: 07.0		
Parent Sample Id:	556808-02	.1		MS San	nple Id:	556808-02	21 S		MSI	D Sample	e Id: 5568	808-021 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (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					IS Rec	MS Flag	MSD %Re			mits	Units	Analysis Date	
1-Chlorooctane				1	15		104		70	-135	%	07.04.17 22:45	
o-Terphenyl				ç	9 7		87		70	-135	%	07.04.17 22:45	



Analytical Method:						Pr	ep Meth	od: TX1	005P				
Seq Number:	3021792				Matrix:	Soil				Date Pr	ep: 07.0	6.17	
Parent Sample Id:	556810-00)6		MS Sar	nple Id:	556810-00	06 S		MSI	D Sample	e Id: 5568	810-006 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	oons (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					AS Rec	MS Flag	MSD %Re			mits	Units	Analysis Date	
1-Chlorooctane				1	10		110		70	-135	%	07.06.17 14:50	
o-Terphenyl				1	00		106		70	-135	%	07.06.17 14:50	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3021700 727313-1-BLK	1B	LCS San	Matrix: nple Id:	Solid 727313-1	-BKS			rep Metho Date Pro D Sample	ep: 07.0	5030B 6.17 313-1-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		CS Rec	LCS Flag	LCSE %Rec			imits	Units	Analysis Date	
1,4-Difluorobenzene	96		8	37		95		80)-120	%	07.06.17 21:17	
4-Bromofluorobenzene	111		8	36		91		80)-120	%	07.06.17 21:17	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3021705 727314-1-BLK	1B	LCS Sar	Matrix: nple Id:	Solid 727314-1	-BKS			rep Methe Date Pr D Sample	ep: 07.0	5030B 7.17 314-1-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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	103		8	38		94		80)-120	%	07.07.17 08:50	
4-Bromofluorobenzene	106		1	15		99		80	0-120	%	07.07.17 08:50	



Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3021965 727471-1-BLK	1B		Matrix: nple Id:	Solid 727471-1-	-BKS			rep Meth Date Pr D Sample	ep: 07.1	5030B 0.17 471-1-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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	89		5	84		106		80	0-120	%	07.11.17 01:06	
4-Bromofluorobenzene	96		9	93		97		80	0-120	%	07.11.17 01:06	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3021700 556808-007	1B	Matrix: Soil MS Sample Id: 556808- MS MS MS			07 S			ep Methe Date Pre D Sample	ep: 07.0	5030B 6.17 808-007 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				1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene			8	38		107		80	-120	%	07.06.17 21:49	
4-Bromofluorobenzene			1	18		101		80	0-120	%	07.06.17 21:49	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3021705 556810-012	1B	MS San	Matrix: nple Id:		12 S			ep Methe Date Pr D Sample	ep: 07.0	5030B 7.17 310-012 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				1S Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene			ç	95		98		80	-120	%	07.07.17 09:23	
4-Bromofluorobenzene			ç	98		98		80	-120	%	07.07.17 09:23	



Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3021965 556811-001	1B		Matrix: nple Id:	Soil 556811-0	01 S			rep Metho Date Pr D Samplo	ep: 07.1	5030B 0.17 811-001 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				/IS Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene			5	88		98		8	0-120	%	07.11.17 11:14	
4-Bromofluorobenzene			9	98		103		8	0-120	%	07.11.17 11:14	

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Stafford, Texas (281-240-4200)

CHAIN OF CUSTODY

Page 1 Of 2

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

Phoenix, Arizona (480-355-0900)

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be involced at \$5 per sample. These terms will be enforced unless previously negoliated under a fully executed client contract. Project Contact: Nikki Green **Company Address:** Company Name / Branch: No. Samplers's Name: Nikki Green ngreen@trcsolutions.com Email 2057 Commerce Drive TRC 10 9 c, 8 6 ω N 4 4 idland, Texas 79703 3 Day EMERGENCY Relinquished by Samply Same Day TAT Dallas Texas (214-902-0300) Relinquished by: Relinquished by: Trench-2 8" Trench-2 6' Trench-2 4' Trench-2 3' Trench-1 12' Trench-1 6' Trench-2 14' Trench-2 11' Trench-1 2' TAT Starts Day received by Lab, if received by 5:00 pm 2 Day EMERGENCY Next Day EMERGENCY **Client / Reporting Information Turnaround Time (Business** Field ID / Point of Collection days) X Contract TAT 7 Day TAT SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY 5 Day TAT 432-664-6699 Phone No: Date Time: Date Time: Date Time: Sample Depth Rebecca Haskell with COG Operating LLC rhaskell@concho.com 600 W Illinois Avenue | Midland, TX 79701 Direct: 432-818-2372 | Main: 432.683.7443 Merlin State Com #002H (1/11/17) Lea County, NM PO Number: Project Name/Number: Midland, Texas (432-704-5251) Collection nvoice To: Project Location: 28-Jun 28-Jun 28-Jun 28-Jun 28-Jun 28-Jun 28-Jun 28-Jun 28-Jun Date TRRP Checklist × **Received By:** Received By: Received By: 1607 1550 1545 1530 1450 1445 1320 1225 Time 1555 Project Information Level 3 (CLP Forms) Level III Std QC+ Forms Level II Std QC Matrix s s S S S s S S S www.xenco.com **Data Deliverable Information** # of bottles --------4 HCI NaOH/Zn Acetate HNO3 of presu **Relinquished By:** Custody Seal # Relinquished By: H2SO4 **TRRP Level IV** Level IV (Full Data Pkg /raw data) UST / RG -411 NaOH NaHSO4 MEOH × × × × × × × × × NONE Xenco Quote # × × × × × × **TPH 8015M EXT 36** × × × Preserved where applicable **BTEX 8021B** × × × × × × × × × Date Time: Date Time: Chloride E300.0 × × × × × × × Analytical Information FED-EX / UPS: Tracking # Notes: Xenco Job # **Received By: Received By:** СF:(0-6: -0.2°С) (6-23: +0.2°С) Corrected Temp: *Ч* Temp: 5-1 On Ice Space Cooler Temp. Field Comments IR ID:R-8 GW =Ground Water DW = Drinking Water W = Water S = Soil/Sed/Solid SL = Sludge SW = Surface water P = Product WI = Wipe OW =Ocean/Sea Water WW= Waste Water A = Air 0 = 01 Thermo, Corr. Factor Matrix Codes

Stafford.Texas (281-240-4200)	Setting the Standard since 1990	XENCO

CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

Baseline Biology Res	Client / Reporting Information Company Name / Branch: TRC Company Address: 2057 Commerce Drive Midland, Texas 73703	Project Merlin Project	Project Location:	Project Information her: her: h#002H (1/11/17) Lea County, NM	www.xenco.com armation (11/17) (2, NM	nco.co	B						(enco	Xenco Quote #		ytical	Analytical Information	ation	Xenco Job #	
Subio Green Collection Number of pressived bolitss Depth Number of pressived bolitss Simple rench-12 Depth Data Depth Time Mark s' of 128-Jun 1 Number of pressived bolitss Simple rench-12 Depth Data Depth 28-Jun 1665 S 1 Number of pressived bolitss Simple rench-12 28-Jun 1665 S 1 Number of pressived bolitss Simple Number of pressived bolitss Simple rench-12 28-Jun 1665 S 1 Number of pressived bolitss Simple Number of pressived bolitsi Simple Number of pressived bolitss Simple	utions.com	Invoice 1 Rebecca 600 W III Direct: 4	o: Haskell with C nois Avenue / 32-818-2372 M	:OG Opera Midland, 1 Nain: 432.6	ating LLC TX 79701 683.7443	rhaskell	@conch	o.com					36		-					
Lat D / Point of Collection Collection Sample Depth Depth </td <td>Nikki Green</td> <td>PO Num</td> <td>ber:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>XT</td> <td>1</td> <td>.0</td> <td>_</td> <td>_</td> <td>-</td> <td></td>	Nikki Green	PO Num	ber:										XT	1	.0	_	_	-		
Collection Collection Sample Number of preserved boltses Sample Number of preserved boltses 1 Vector french of Collection 2 North Trench-1 2? Sample Number of preserved boltses 2 North Trench-1 2? Sample Number of preserved boltse 3 Sample Number of preserved boltses 4 South Trench-1 2? Salun North Trench-1 2? Salun Solt Colspan="2">North Trench-1 2? Salue Solt North Trench-1 2? Salue Solt North Trench-1 2? North Trench-1 2? Norther Solt North Trench-1 2? <th colsp<="" td=""><td>Samplers's Name: Nikki Green</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>E)</td><td>-</td><td>00.</td><td>_</td><td></td><td>-</td><td>-</td></th>	<td>Samplers's Name: Nikki Green</td> <td></td> <td>E)</td> <td>-</td> <td>00.</td> <td>_</td> <td></td> <td>-</td> <td>-</td>	Samplers's Name: Nikki Green												E)	-	00.	_		-	-
Bit Field D / Point of Collection Sample Dath Date Time Mark Statute Sample Statute Sample Stat		Collec	ion				Numbe	rofpr	eserv	ed bo	ttles		15M	_	e E30	_	_	-		
1 West Trench-1 2'' 28-Jun 1246 S 1 I<			1.5	Matrix			NaOH/Zn Acetate	HNO3	NaOH	NaHSO4	меон	NONE	TPH 801		Chloride	-		-	-	
2 North Trench-1 2' 28-Jun 100 1 <td>1 West Trench-1 2'</td> <td>-</td> <td></td> <td>s</td> <td></td> <td>-</td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td>×</td> <td>×</td> <td>-</td> <td>×</td> <td>_</td> <td></td> <td>-</td> <td></td>	1 West Trench-1 2'	-		s		-		-	-			×	×	-	×	_		-		
3 East Trench-1 2' 28-Jun 638 S 1 I I X <td></td> <td>28-Ju</td> <td></td> <td>s</td> <td>-</td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td>×</td> <td>×</td> <td>×</td> <td>×</td> <td>-</td> <td>+</td> <td>+</td> <td>-</td>		28-Ju		s	-			-	-			×	×	×	×	-	+	+	-	
4 South Trench-1 2' 28. Jun 1645 S 1 I X		28-Ju		s	-			-	-			×	×	×	×	-	-	+	+	
5	-	28-Ju		s	1			-		1		×	×	×	×	-	-	-	+	
6	5							_							_	-	-	-	-	
7 7	6															_		-	-	
8	7								-						_	_	_	-	-	
9 Turnaround Time (Business days) Data Deliverable Information No 10 Turnaround Time (Business days) Data Deliverable Information No 1 Same Day TAT 5 Day TAT Data Deliverable Information No 1 Same Day TAT 5 Day TAT X Level II Std QC Level IV (Full Data Pkg /raw data) No 1 Next Day EMERGENCY [7 Day TAT] Level III Std QC+ Forms TRRP Level IV TRRP Level IV 2 Day EMERGENCY X Contract TAT Level II Std QC+ Forms TRRP Level IV Level 11 3 Day EMERGENCY X Contract TAT Level 3 (CLP Forms) UST / RG - 411 Level 11 3 Day EMERGENCY X Contract TAT Level 3 (CLP Forms) UST / RG - 411 Level 11 5 Samp Le CustODY MUST BE DOCUMENTED BELOW EACH TIME SAMP LES CHANGE POSSESSION, INCLUDING COURIER DELIVERY FED-EX / Received By: Date Time: Received By: Date Time: Date Time: Received By: Date Time: Date Time:	8														_	-		1		
internation Turnaround Time (Business days) Data Deliverable Information No internation Data Deliverable Information No internation Data Deliverable Information No internation S Day TAT Data Deliverable Information No internation S Day TAT X Level II Std OC Level IV (Full Data Pkg /raw data) No internation Internation X Level II Std OC Internation No internation Internation X Level II Std OC Internation No internation Internation X Level II Std OC Internation Internation No internation X Contract TAT Internation Level II Std OC Internation Internation Internation No internation X Contract TAT Internation Level II Std OC + Forms Internation Internatinternatinternation Internation	9																_	-	-	
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Image: Same Day TAT S Day TAT Image: Source of the so	Turnaround Time (Business days)				Data Deli	verable	Informat	ion							-		No		em	
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2 Day EMERGENCY X Contract TAT Level 3 (CLP Forms) UST / RG -411 3 Day EMERGENCY Image: Contract TAT Image: Contrat Image: Contrat				evel III St	td QC+ F	orms		Ц	FRRP	level	2					-		0	Orre	
a Day EMERGENCY TRRP Checklist TAT Starts Day received by Lab, if received by 5:00 pm Image: Comparison of the custor must be commented below each time samples change possession, including course delivery Relinquished by: Sample custor must be commented by: Date Time: Relinquished by: Date Time: Redived By: Relinquished By: Relinquished by: Date Time: Redived By: Relinquished By: Relinquished By:				evel 3 (C	LP Form	IS)		Ц	JST / F	RG -4	-									
TAT Starts Day received by Lab, if received by 5:00 pm SAMPLE CUSTODY MUST BE DOCUMENTED BELOW FACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Relinquished M Samples Date Time: Received By: Date Time: Relinquished by: Date Time: Received By: Relinquished By: Date Time: Relinquished by: Date Time: Received By: Relinquished By: Date Time:	_			RRP Che	ecklist											-				
Relinquished W Sampler: SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Relinquished W Date Time: Received By: Reference Relinquished By: Date Time: Relinquished by: Date Time: Received By: Reference Relinquished By: Date Time:	TAT Starts Day received by Lab, if received by 5:	00 pm		-												2	ED-EX	/ UPS	: Trac	
The image of t	11 11 11	Date Time:	Receive	By://	AE SAMPL	LES CHA	NIGE PC	SSESS	elinqu	shed	By:	OURIE		_	Date Ti	ne:		R	ceive	
	Relinquished by:			d By:	A	F	i	R	elinqu	ished	By:				Date Ti	me:		R	ceive	

losses or expenses incurred by the Client If such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 07/03/2017 11:55:00 AM Temperature Measuring device used : R8 Work Order #: 556810 Comments Sample Receipt Checklist 4.9 #1 *Temperature of cooler(s)? #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 relinguished/ 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#:

Date: 07/03/2017

Checklist completed by: Jessica Veamer Jessica Kramer Checklist reviewed by: Muss Morah Kelsey Brooks

Date: 07/03/2017

Page 40 of 40



Project Id:Contact:Nikki GreenProject Location:Lea Co NM

Certificate of Analysis Summary 556811

TRC Solutions, Inc, Midland, TX

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



Date Received in Lab:Mon Jul-03-17 11:55 amReport Date:11-JUL-17Project Manager:Kelsey Brooks

	Lab Id:	556811-001			
	Field Id:	BG-1 1'			
Analysis Requested	Depth:				
	Matrix:	SOIL			
	Sampled:	Jun-28-17 17:07			
BTEX by EPA 8021B	Extracted:	Jul-10-17 18:00	1		
	Analyzed:	Jul-11-17 09:21			
	Units/RL:	mg/kg RL			
Benzene		<0.00345 0.00345			
Toluene		<0.00345 0.00345			
Ethylbenzene		<0.00345 0.00345			
m,p-Xylenes		0.0181 0.00690			
o-Xylene		<0.00345 0.00345			
Total Xylenes		0.0181 0.00345			
Total BTEX		0.0181 0.00345			
Chloride by EPA 300	Extracted:	Jul-07-17 17:10			
	Analyzed:	Jul-08-17 01:39			
	Units/RL:	mg/kg RL			
Chloride		12.1 4.99			
TPH by SW8015 Mod	Extracted:	Jul-05-17 08:00			
	Analyzed:	Jul-05-17 18:34			
	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

Mike Kimmel Client Services Manager

Analytical Report 556811

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)





SUP ACCREDIE

Project Manager: **Nikki Green TRC Solutions, Inc** 2057 Commerce Midland, TX 79703

Reference: XENCO Report No(s): **556811** 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) 556811. 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. 556811 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,

le p

Mike Kimmel Client Services Manager

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Sample Id

BG-1 1'

Sample Cross Reference 556811





Matrix	Date Collected	Sample Depth	Lab Sample Id
S	06-28-17 17:07		556811-001



CASE NARRATIVE

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

Project ID: Work Order Number(s): 556811
 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-3021965 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





TRC Solutions, Inc, Midland, TX

Sample Id: BG-1 1' Lab Sample Id: 556811-001		Matrix: Date Collec	Soil cted: 06.28.17 17.07		Date Received:07.	03.17 11.5	5
Analytical Method: Chloride by EF	PA 300				Prep Method: E30)0P	
Tech: MGO					% Moisture:		
Analyst: MGO		Date Prep:	07.07.17 17.10		Basis: We	t Weight	
Seq Number: 3021784		1				Ū	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.1	4.99	mg/kg	07.08.17 01.39		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: TX	1005P	
Tech: ARM					% Moisture:		
Analyst: ARM		Date Prep:	07.05.17 08.00		Basis: We	t Weight	
Seq Number: 3021778		-					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.17 18.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mø/kø	07.05.17.18.34	U	1

Seq Pranoer.								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.05.17 18.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.05.17 18.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.05.17 18.34	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.05.17 18.34	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	113	%	70-135	07.05.17 18.34		
o-Terphenyl		84-15-1	120	%	70-135	07.05.17 18.34		





TRC Solutions, Inc, Midland, TX

Sample Id: BG-1 1' Lab Sample Id: 556811-001		Matrix: Date Collecte	Soil d: 06.28.17 17.07		Date Received	1:07.03	3.17 11.55	
Analytical Method:BTEX by EPA 80Tech:ALJAnalyst:ALJSeq Number:3021965	21B	Date Prep:	07.10.17 18.00		Prep Method: % Moisture: Basis:		030B Weight	
Parameter	Cas Number	Result F	RL	Units	Analysis D	ate	Flag	Dil

			112		Cinto	Tinuiyois Dute	1 145	21
Benzene	71-43-2	< 0.00345	0.00345		mg/kg	07.11.17 09.21	U	1
Toluene	108-88-3	< 0.00345	0.00345		mg/kg	07.11.17 09.21	U	1
Ethylbenzene	100-41-4	< 0.00345	0.00345		mg/kg	07.11.17 09.21	U	1
m,p-Xylenes	179601-23-1	0.0181	0.00690		mg/kg	07.11.17 09.21		1
o-Xylene	95-47-6	< 0.00345	0.00345		mg/kg	07.11.17 09.21	U	1
Total Xylenes	1330-20-7	0.0181	0.00345		mg/kg	07.11.17 09.21		1
Total BTEX		0.0181	0.00345		mg/kg	07.11.17 09.21		1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	91	%	80-120	07.11.17 09.21		
1,4-Difluorobenzene		540-36-3	82	%	80-120	07.11.17 09.21		



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + 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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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



QC Summary 556811

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

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	d: E30	OP 90	
Seq Number:	3021784			Matrix:	Solid				Date Pre	ep: 07.0	7.17	
MB Sample Id:	727342-1-BLK		LCS Sar	nple Id:	727342-1-	BKS		LCSI	D Sample	Id: 7273	342-1-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 30	00						Pr	ep Metho	d: E30	OP 90	
Seq Number:	3021784			Matrix:	Soil				Date Pre	ep: 07.0	7.17	
Parent Sample Id:	556810-004		MS Sar	nple Id:	556810-00)4 S		MSI	O Sample	Id: 5568	310-004 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	Х

Analytical Method:	Chloride by EPA 30)0						Pr	ep Metho	od: E300)P	
Seq Number:	3021784			Matrix:	Soil				Date Pre	ep: 07.0	7.17	
Parent Sample Id:	556930-002		MS Sar	nple Id:	556930-00)2 S		MSI	O Sample	Id: 5569	930-002 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	Х

Analytical Method: Seq Number: MB Sample Id:	TPH by S 3021778 727238-1-		od	LCS Sar	Matrix: nple Id:	Solid 727238-1	-BKS			ep Meth Date Pr O Sample	ep: 07.0	1005P 95.17 238-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	oons (GRO)	<15.0	1000	988	99	999	100	70-135	1	35	mg/kg	07.05.17 10:08	
Diesel Range Organics	(DRO)	<15.0	1000	952	95	953	95	70-135	0	35	mg/kg	07.05.17 10:08	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			mits	Units	Analysis Date	
1-Chlorooctane		109		1	10		108		70	-135	%	07.05.17 10:08	
o-Terphenyl		117		1	11		100		70	-135	%	07.05.17 10:08	



Analytical Method:	TPH by S	W8015 M	lod						Pr	ep Meth	od: TX1	005P	
Seq Number:	3021778				Matrix:	Soil				Date Pr	ep: 07.0	5.17	
Parent Sample Id:	556812-00)2		MS Sar	nple Id:	556812-00	02 S		MS	D Sample	e Id: 5568	812-002 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<15.0	1000	1060	106	1090	109	70-135	3	35	mg/kg	07.05.17 11:29	
Diesel Range Organics	(DRO)	<15.0	1000	1090	109	1100	110	70-135	1	35	mg/kg	07.05.17 11:29	
Surrogate					IS Rec	MS Flag	MSD %Ree			mits	Units	Analysis Date	
1-Chlorooctane				1	24		123		70	-135	%	07.05.17 11:29	
o-Terphenyl				1	22		116		70	-135	%	07.05.17 11:29	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3021965 727471-1-BLK	1B	LCS San	Matrix: nple Id:	Solid 727471-1	-BKS			rep Methe Date Pr D Sample	ep: 07.1	5030B 0.17 471-1-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 Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	89		8	34		106		80)-120	%	07.11.17 01:06	
4-Bromofluorobenzene	96		9	03		97		80)-120	%	07.11.17 01:06	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3021965 556811-001	1B		Matrix: nple Id:	Soil 556811-00	01 S			rep Metho Date Pro D Sample	ep: 07.1	5030B 0.17 811-001 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				1S Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene			8	38		98		80	0-120	%	07.11.17 11:14	
4-Bromofluorobenzene			ç	98		103		80	0-120	%	07.11.17 11:14	

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Setting the Standard since 199	SX'
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Stafford, Texas (281-240-4200)

CHAIN OF CUSTODY

Page 1 Of 1

San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300)		miqianu,	Midiand, Lexas (432-704-3251)	2-104-0	www.xenco.com	enco.co	m						Xenco Quote #	Quote	*				Xenco Job #	ob #	0	5	8200	-	
													1		An	Analytical Information	Info	matio	-				(-	Matrix Codes
Client / Reporting Information			Pro	Project Information	rmation															_	-	-			
Company Name / Branch: TRC		Project Name/Number: Merlin State Com #	Project Name/Number: Merlin State Com #002H (1/11/17)	002H (1/	11/17)																_	_			W = Water
Company Address: 2057 Commerce Drive		Project Location:	Le cation:	Lea County, NM	, NM										-		_	_							GW =Ground Water DW = Drinking Water
Email: Phone No: Phone No: 422-564-569		Invoice To: Rebecca Ha	Invoice To: Rebecca Haskell with COG Operating LLC rhaskell@concho.com	OG Opera	ating LLC	rhaske	ll@con	cho.cor	-									_				-			P = Product SW = Surface water
		Direct: 432-	600 W Illinois Avenue Midland, 1X 79701 Direct: 432-818-2372 Main: 432 683.7443	Midland,	1X 79701								36					_		_					OW =Ocean/Sea Water
Project Contact: Nikki Green		PO Number:	a la tavala	nam, ves,	000.14440								KT :		.0					_					WI = Wipe
Samplers's Name: Nikki Green												5	E)	3	00.			_				-			WW= Waste Water
		Collection	1				Numt	Number of preserved bottles	preser	ved by	ottles		5M	215	E30				_	_	-	-			A = Air
							1.100111	10101	10001	100	1000		301	80	de				_	_	-	1			
No, Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	нсі	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	MEOH	NONE	TPH 80	BTEX	Chlorid							-		Fiel	Field Comments
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Turnaround Time (Business days)					Data Deliverable Information	iverable	Inform	ation										Notes:		-	-		-		
Same Day TAT 5 Day TAT			×	Level II Std QC	d QC				Level	Level IV (Full Data Pkg	II Dat	a Pkg	/raw data)	lata)						Temp: 5 ·)	D	0	-	_	IR ID:R-8
Next Day EMERGENCY				Level III Std QC+ Forms	td QC+ I	Forms	2		TRRF	TRRP Level IV	N								1	CF:	0-6	-0	CF:(0-6: -0.2°C)		
2 Day EMERGENCY X Contract TAT				Level 3 (CLP Forms)	LP Forn	ns)			UST	UST / RG -411	11								. 1		6-2	3.4	(6-23: +0.2°C) 4 9	4	2
3 Day EMERGENCY				TRRP Checklist	ecklist														1	COL	ecti	d	cilip.		
TAT Starts Day received by Lab, if received by 5:00 pm	5:00 pm			1 4													FED-E	X/U	S: Tr	FED-EX / UPS: Tracking #	#				
Relinquished by Sampler:	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURTER DELIVERY	DOCUMENT	Received By	d By:	ALE SAMP	LES CH	ANGE	POSSE	Relinquished By:	uishe	1 By:	OURIE	R DEL	IVERY	Date Time:	fime:			Recei	Received By:					
Relinquished by:			Received By:	d By:		-	ł	ł	Relinquished By:	uishe	1 By:				Date Time:	fime:		_	Receiv	Received By:					
Relinquished by:	Date Time:		Received By:	d By:					Custody Seal #	dy Sea	#			Pres	Preserved where applicable	where	applic				On Ice		Cooler Temp.	ıp.	Thermo. Corr. Factor

Page 11 of 12



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 07/03/2017 11:55:00 AM Temperature Measuring device used : R8 Work Order #: 556811 Comments Sample Receipt Checklist 4.9 #1 *Temperature of cooler(s)? #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 relinguished/ 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#:

Date: 07/03/2017

Checklist completed by: Jessica Vramer Jessica Kramer Checklist reviewed by: Muss Moak Kelsey Brooks

Date: 07/03/2017

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

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

			Rele	ase Notific	ation	and Co	orrective A	ction		
						OPERA	ror	Σ		Report 🔲 Final Report
Name of Co			G Operati			Contact:	•		rt McNe	
Address:				land TX 79701		<u>Felephone N</u>			583-7443	
Facility Nan	ne: N	AERLIN STA	ATECO	M #002H	1	Facility Typ	e:	I and	c Battery	
Surface Ow	ner:	State		Mineral C	wner:				API No.	30-025-41938
						OF REI		1 -		-
Unit Letter D	Section 32	Township 21S	Range 34E	Feet from the 440'		South Line North	Feet from the 660'	East/We		County Lea
<u> </u>				Latitude 32.44	19975	Longitu	ıde 103.498359)7	·	
				NAT	URE	OF RELI	EASE			
Type of Rele	ase:					Volume of			Volume	Recovered:
		Oil & Produc	ed Water			70bbls O	il & 55bbls of Pr	oduced	68bbls	s of Oil & 53bbls of Produced
Source of Re	lancat					Data and U	Water lour of Occurrent		Data and	Water d Hour of Discovery:
Source of Re	ICASC.	FWK	0			1	1-2017 09:00 a			1-11-2017 09:00 am
Was Immedia	ate Notice (If YES, To			-2.	
		\boxtimes	Yes 🗌	No 🔲 Not Re	equired		Ms. Lync	h – NMOO	CD/Ms. C	Groves - SLO
By Whom?			Grubbs Jr.			Date and H			/12/2017	2:11 PM
Was a Water	course Read	ched?				If YES, Vo	lume Impacting	the Watero	course.	
			Yes 🛛	NO						
If a Watercou	irse was Im	pacted, Descri	ibe Fully.*	:			RECEIVI	ED		
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Describe Cau	use of Probl	em and Reme	dial Actio	n Taken.*		('	by Ulivia	TUal	1.09 p	om, Jan 18, 2017
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Describe Are	a Allested	and Creanup 7	sector ran	CII.						
										te sampled to delineate any
	amination I	from the releas	se and we	will present a rem	nediation	work plan to	the NMOCD fo	r approval	prior to a	ny significant remediation
work.										
I hereby certi	ify that the	information gi	iven above	is true and comp	lete to th	ne best of my	knowledge and 1	understand	that pursu	uant to NMOCD rules and
										ases which may endanger
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		ws and/or regu			report d		e nie operator or			
							OIL CON	SERVA	TION	DIVISION
Signature:		Zalat	· Ann						· 4	-1 ()
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Title:	S	enior HSE Co	ordinator			Approval Da	te: 01/18/20	Ех	piration I	Date:
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Operator/Responsible Party,

The OCD has received the form C-141 you provided on _01/13/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-4569__ has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _02/18/2017__. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

• Nominal detection limits for field and laboratory analyses must be provided.

• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us