

Appendix E

Analytical Report 519877

for Tetra Tech- Midland

Project Manager: Ike Tavaréz

Globe Eunice Facility

212C-MD-00374

24-MAY-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

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Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)

Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)



24-MAY-16

Project Manager: **Ike Tavaréz**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **519877**
Globe Eunice Facility
Project Address: Lea Co, NM

Ike Tavaréz:

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) 519877. 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. 519877 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,

Kelsey Brooks

Project Manager

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Tetra Tech- Midland, Midland, TX

Globe Eunice Facility

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH 1 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-001
AH 1 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-002
AH 1 (2-2.5')	S	11-19-15 00:00	2 - 2.5 ft	519877-003
AH 2 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-004
AH 2 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-005
AH 3 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-006
AH 4 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-007
AH 4 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-008
AH 4 (2-2.5')	S	11-19-15 00:00	2 - 2.5 ft	519877-009
AH 4 (2.5-3')	S	11-19-15 00:00	2.5 - 3 ft	519877-010
AH 5 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-011
AH 5 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-012
AH 5 (2-2.5')	S	11-19-15 00:00	2 - 2.5 ft	519877-013
AH 5 (2.5-3')	S	11-19-15 00:00	2.5 - 3 ft	519877-014
AH 6 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-015
AH 7 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-016
AH 8 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-017
AH 9 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-018
AH 9 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-019
AH 10 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-020
AH 11 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-021
AH 11 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-022
AH 12 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-023
AH 13 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-024
AH 14 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-025
AH 15 (0-6")	S	11-19-15 00:00	0 - 6 In	519877-026
AH 16 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-027
AH 16 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-028
AH 17 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-029
AH 18 (0-6")	S	11-19-15 00:00	0 - 6 In	519877-030
AH 19 (0-6")	S	11-19-15 00:00	0 - 6 In	519877-031
AH 20 (0-6")	S	11-19-15 00:00	0 - 6 In	519877-032
AH 21 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-033
AH 21 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-034
AH 22 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-035
AH 22 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-036
AH 23 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-037
AH 23 (1-1.5')	S	11-19-15 00:00	1 - 1.5 ft	519877-038
AH 23 (2-2.5')	S	11-19-15 00:00	2 - 2.5 ft	519877-039
AH 24 (0-1')	S	11-19-15 00:00	0 - 1 ft	519877-040

*Client Name: Tetra Tech- Midland**Project Name: Globe Eunice Facility*

Project ID: 212C-MD-00374

Work Order Number(s): 519877

Report Date: 24-MAY-16

Date Received: 11/20/2015

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-982346 BTEX by EPA 8021B

Lab Sample ID 519877-026 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 519877-001, -006, -007, -017, -026, -027, -033, -035.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Ethylbenzene Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 519877-001, -006, -007, -017, -026, -027, -033, -035



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	519877-001	519877-002	519877-003	519877-004	519877-005	519877-006
	<i>Field Id:</i>	AH 1 (0-1')	AH 1 (1-1.5')	AH 1 (2-2.5')	AH 2 (0-1')	AH 2 (1-1.5')	AH 3 (0-1')
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	0-1 ft	1-1.5 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-25-15 13:00					Nov-25-15 13:00
	<i>Analyzed:</i>	Nov-25-15 16:38					Nov-30-15 11:30
	<i>Units/RL:</i>	mg/kg RL					mg/kg RL
Benzene		ND 0.00101					ND 0.00166
Toluene		ND 0.00202					ND 0.00332
Ethylbenzene		ND 0.00101					ND 0.00166
m,p-Xylenes		ND 0.00202					ND 0.00332
o-Xylene		ND 0.00101					ND 0.00166
Total Xylenes		ND 0.00101					ND 0.00166
Total BTEX		ND 0.00101					ND 0.00166
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00
	<i>Analyzed:</i>	Nov-24-15 16:06	Nov-24-15 16:52	Nov-24-15 18:00	Nov-30-15 11:44	Nov-30-15 12:07	Nov-24-15 19:08
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		320 20.0	1020 100	4590 400	3080 200	2800 200	625 40.0
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-23-15 18:00	Nov-25-15 16:00		Nov-23-15 18:00		Nov-23-15 18:00
	<i>Analyzed:</i>	Nov-24-15 23:32	Nov-25-15 16:41		Nov-24-15 03:53		Nov-24-15 04:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL		mg/kg RL		mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	16.6 15.0		ND 14.9		ND 15.0
C10-C28 Diesel Range Hydrocarbons		350 15.0	ND 15.0		ND 14.9		826 15.0
Total TPH		350 15.0	16.6 15.0		ND 14.9		826 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.
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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	519877-007	519877-008	519877-009	519877-010	519877-011	519877-012
	<i>Field Id:</i>	AH 4 (0-1')	AH 4 (1-1.5')	AH 4 (2-2.5')	AH 4 (2.5-3')	AH 5 (0-1')	AH 5 (1-1.5')
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	2.5-3 ft	0-1 ft	1-1.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-25-15 13:00		Nov-30-15 15:00			
	<i>Analyzed:</i>	Nov-25-15 17:11		Nov-30-15 15:23			
	<i>Units/RL:</i>	mg/kg RL		mg/kg RL			
Benzene		ND 0.00101		ND 0.00101			
Toluene		ND 0.00202		ND 0.00202			
Ethylbenzene		ND 0.00101		ND 0.00101			
m,p-Xylenes		ND 0.00202		ND 0.00202			
o-Xylene		ND 0.00101		ND 0.00101			
Total Xylenes		ND 0.00101		ND 0.00101			
Total BTEX		ND 0.00101		ND 0.00101			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00
	<i>Analyzed:</i>	Nov-24-15 19:30	Nov-24-15 19:53	Nov-24-15 20:16	Nov-24-15 20:38	Nov-24-15 21:01	Nov-24-15 22:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		676 40.0	971 100	4080 200	5190 400	110 10.0	32.2 10.0
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-23-15 18:00	Nov-25-15 16:00	Nov-25-15 16:00	Nov-25-15 17:00	Nov-23-15 18:00	
	<i>Analyzed:</i>	Nov-24-15 04:45	Nov-25-15 17:13	Nov-25-15 17:43	Nov-30-15 12:30	Nov-24-15 05:14	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C10 Gasoline Range Hydrocarbons		116 74.9	ND 15.0	ND 15.0	ND 15.0	ND 15.0	
C10-C28 Diesel Range Hydrocarbons		2690 74.9	183 15.0	223 15.0	133 15.0	ND 15.0	
Total TPH		2810 74.9	183 15.0	223 15.0	133 15.0	ND 15.0	

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	519877-013	519877-014	519877-015	519877-016	519877-017	519877-018
	Field Id:	AH 5 (2-2.5')	AH 5 (2.5-3')	AH 6 (0-1')	AH 7 (0-1')	AH 8 (0-1')	AH 9 (0-1')
	Depth:	2-2.5 ft	2.5-3 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
BTEX by EPA 8021B	Extracted:					Nov-25-15 13:00	
	Analyzed:					Nov-30-15 11:13	
	Units/RL:					mg/kg RL	
	Benzene					ND 0.00164	
	Toluene					ND 0.00328	
	Ethylbenzene					ND 0.00164	
	m,p-Xylenes					ND 0.00328	
	o-Xylene					ND 0.00164	
Total Xylenes					ND 0.00164		
Total BTEX					ND 0.00164		
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 15:00
	Analyzed:	Nov-24-15 22:55	Nov-24-15 23:17	Nov-24-15 23:40	Nov-25-15 00:03	Nov-25-15 00:25	Nov-25-15 00:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		70.9 10.0	29.7 10.0	3050 200	588 40.0	44.1 10.0	1370 100
TPH By SW8015 Mod	Extracted:			Nov-23-15 18:00	Nov-23-15 18:00	Nov-23-15 18:00	Nov-23-15 18:00
	Analyzed:			Nov-24-15 05:41	Nov-24-15 06:09	Nov-24-15 06:38	Nov-24-15 07:31
	Units/RL:			mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons				ND 15.0	ND 15.0	107 74.7	ND 15.0
C10-C28 Diesel Range Hydrocarbons				ND 15.0	ND 15.0	1260 74.7	ND 15.0
Total TPH				ND 15.0	ND 15.0	1370 74.7	ND 15.0



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	519877-019	519877-020	519877-021	519877-022	519877-023	519877-024
	Field Id:	AH 9 (1-1.5')	AH 10 (0-1')	AH 11 (0-1')	AH 11 (1-1.5')	AH 12 (0-1')	AH 13 (0-1')
	Depth:	1-1.5 ft	0-1 ft	0-1 ft	1-1.5 ft	0-1 ft	0-1 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-24-15 15:00	Nov-24-15 15:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00
	Analyzed:	Nov-25-15 01:11	Nov-25-15 01:33	Nov-25-15 03:50	Nov-25-15 04:35	Nov-25-15 04:58	Nov-25-15 05:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		32.6 10.0	215 200	64.4 2.00	69.3 2.00	1230 100	610 40.0
TPH By SW8015 Mod	Extracted:		Nov-23-15 18:00	Nov-23-15 18:00		Nov-23-15 18:00	Nov-23-15 18:00
	Analyzed:		Nov-24-15 07:57	Nov-24-15 08:23		Nov-24-15 08:50	Nov-24-15 09:16
	Units/RL:		mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons			ND 15.0	ND 15.0		ND 15.0	ND 14.9
C10-C28 Diesel Range Hydrocarbons			ND 15.0	ND 15.0		ND 15.0	ND 14.9
Total TPH			ND 15.0	ND 15.0		ND 15.0	ND 14.9

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	519877-025	519877-026	519877-027	519877-028	519877-029	519877-030
	<i>Field Id:</i>	AH 14 (0-1')	AH 15 (0-6")	AH 16 (0-1')	AH 16 (1-1.5')	AH 17 (0-1')	AH 18 (0-6")
	<i>Depth:</i>	0-1 ft	0-6 In	0-1 ft	1-1.5 ft	0-1 ft	0-6 In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
BTEX by EPA 8021B	<i>Extracted:</i>		Nov-25-15 13:00	Nov-25-15 13:00			
	<i>Analyzed:</i>		Nov-25-15 14:40	Nov-25-15 14:59			
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL			
Benzene			ND 0.000992	ND 0.00101			
Toluene			ND 0.00198	ND 0.00201			
Ethylbenzene			ND 0.000992	ND 0.00101			
m,p-Xylenes			ND 0.00198	ND 0.00201			
o-Xylene			ND 0.000992	ND 0.00101			
Total Xylenes			ND 0.000992	ND 0.00101			
Total BTEX			ND 0.000992	ND 0.00101			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00
	<i>Analyzed:</i>	Nov-25-15 05:43	Nov-25-15 06:06	Nov-25-15 07:14	Nov-25-15 07:37	Nov-25-15 08:45	Nov-25-15 08:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1340 100	8.83 2.00	20.4 2.00	36.5 10.0	3210 200	47.9 2.00
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-23-15 18:00	Nov-23-15 18:00	Nov-23-15 18:00	Nov-25-15 16:00	Nov-23-15 18:00	Nov-23-15 18:00
	<i>Analyzed:</i>	Nov-24-15 09:42	Nov-24-15 23:58	Nov-25-15 00:22	Nov-25-15 18:13	Nov-25-15 00:47	Nov-25-15 01:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	566 15.0	387 15.0	ND 15.0	283 15.0	24.7 15.0
Total TPH		ND 15.0	566 15.0	387 15.0	ND 15.0	283 15.0	24.7 15.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	519877-031	519877-032	519877-033	519877-034	519877-035	519877-036
	<i>Field Id:</i>	AH 19 (0-6")	AH 20 (0-6")	AH 21 (0-1')	AH 21 (1-1.5')	AH 22 (0-1')	AH 22 (1-1.5')
	<i>Depth:</i>	0-6 In	0-6 In	0-1 ft	1-1.5 ft	0-1 ft	1-1.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00
BTEX by EPA 8021B	<i>Extracted:</i>			Nov-25-15 13:00		Nov-25-15 13:00	Nov-30-15 15:00
	<i>Analyzed:</i>			Nov-25-15 16:21		Nov-25-15 17:43	Nov-30-15 16:12
	<i>Units/RL:</i>			mg/kg RL		mg/kg RL	mg/kg RL
	Benzene			ND 0.000996		ND 0.00101	ND 0.00164
	Toluene			ND 0.00199		ND 0.00202	ND 0.00329
Ethylbenzene				ND 0.000996		ND 0.00101	ND 0.00164
m,p-Xylenes				ND 0.00199		ND 0.00202	ND 0.00329
o-Xylene				ND 0.000996		ND 0.00101	ND 0.00164
Total Xylenes				ND 0.000996		ND 0.00101	ND 0.00164
Total BTEX				ND 0.000996		ND 0.00101	ND 0.00164
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00
	<i>Analyzed:</i>	Nov-25-15 08:00	Nov-25-15 09:30	Nov-25-15 09:53	Nov-25-15 10:16	Nov-25-15 12:55	Nov-25-15 13:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	14.6 2.00	36.8 2.00	15.4 10.0	727 100	8.36 2.00	7.64 2.00
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-23-15 18:00	Nov-23-15 18:00	Nov-23-15 19:00	Nov-25-15 16:00	Nov-23-15 19:00	Nov-25-15 16:00
	<i>Analyzed:</i>	Nov-25-15 01:40	Nov-25-15 02:05	Nov-25-15 05:50	Nov-25-15 18:44	Nov-25-15 06:15	Nov-25-15 19:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	C6-C10 Gasoline Range Hydrocarbons	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 14.9	ND 15.0
	C10-C28 Diesel Range Hydrocarbons	224 15.0	299 15.0	320 15.0	36.7 15.0	530 14.9	375 15.0
Total TPH		224 15.0	299 15.0	320 15.0	36.7 15.0	530 14.9	375 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.

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 519877

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Facility



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Nov-20-15 11:18 am

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	519877-037	519877-038	519877-039	519877-040		
	Field Id:	AH 23 (0-1')	AH 23 (1-1.5')	AH 23 (2-2.5')	AH 24 (0-1')		
	Depth:	0-1 ft	1-1.5 ft	2-2.5 ft	0-1 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00	Nov-19-15 00:00		
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00	Nov-24-15 17:00		
	Analyzed:	Nov-25-15 13:40	Nov-25-15 14:03	Nov-30-15 12:30	Nov-25-15 14:48		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		345 20.0	284 20.0	104 10.0	30.5 10.0		
TPH By SW8015 Mod	Extracted:	Nov-23-15 19:00			Nov-23-15 19:00		
	Analyzed:	Nov-24-15 16:52			Nov-24-15 17:21		
	Units/RL:	mg/kg RL			mg/kg RL		
C6-C10 Gasoline Range Hydrocarbons		ND 15.0			ND 15.0		
C10-C28 Diesel Range Hydrocarbons		ND 15.0			ND 15.0		
Total TPH		ND 15.0			ND 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.

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Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 03:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	99.6	86	70-135	
o-Terphenyl	37.1	49.8	74	70-135	

Lab Batch #: 982118

Sample: 519877-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 04:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	99.9	98	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 982118

Sample: 519877-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 04:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.8	95	70-135	
o-Terphenyl	45.2	49.9	91	70-135	

Lab Batch #: 982118

Sample: 519877-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 05:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.7	86	70-135	
o-Terphenyl	36.7	49.9	74	70-135	

Lab Batch #: 982118

Sample: 519877-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 05:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	99.9	86	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 06:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	99.9	85	70-135	
o-Terphenyl	36.7	50.0	73	70-135	

Lab Batch #: 982118

Sample: 519877-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 06:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.3	99.6	84	70-135	
o-Terphenyl	36.5	49.8	73	70-135	

Lab Batch #: 982118

Sample: 519877-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 07:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.3	100	84	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 982118

Sample: 519877-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 07:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.0	99.7	80	70-135	
o-Terphenyl	34.9	49.9	70	70-135	

Lab Batch #: 982118

Sample: 519877-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 08:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	99.9	92	70-135	
o-Terphenyl	38.5	50.0	77	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 08:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.6	99.7	83	70-135	
o-Terphenyl	34.9	49.9	70	70-135	

Lab Batch #: 982118

Sample: 519877-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 09:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.3	99.6	82	70-135	
o-Terphenyl	34.9	49.8	70	70-135	

Lab Batch #: 982118

Sample: 519877-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 09:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	99.9	85	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 982123

Sample: 519877-037 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 16:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.9	82	70-135	
o-Terphenyl	37.0	50.0	74	70-135	

Lab Batch #: 982123

Sample: 519877-040 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 17:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	99.9	83	70-135	
o-Terphenyl	38.4	50.0	77	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 23:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	99.9	86	70-135	
o-Terphenyl	36.6	50.0	73	70-135	

Lab Batch #: 982118

Sample: 519877-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/24/15 23:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	99.7	88	70-135	
o-Terphenyl	36.1	49.9	72	70-135	

Lab Batch #: 982118

Sample: 519877-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 00:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	99.9	83	70-135	
o-Terphenyl	35.0	50.0	70	70-135	

Lab Batch #: 982118

Sample: 519877-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 00:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100	97	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 982118

Sample: 519877-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 01:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	100	84	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 01:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	99.7	89	70-135	
o-Terphenyl	36.7	49.9	74	70-135	

Lab Batch #: 982118

Sample: 519877-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 02:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	39.4	50.0	79	70-135	

Lab Batch #: 982123

Sample: 519877-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 05:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	99.9	92	70-135	
o-Terphenyl	36.3	50.0	73	70-135	

Lab Batch #: 982123

Sample: 519877-035 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 06:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	99.6	97	70-135	
o-Terphenyl	37.5	49.8	75	70-135	

Lab Batch #: 982346

Sample: 519877-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 14:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982346

Sample: 519877-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 14:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 982346

Sample: 519877-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 16:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 982346

Sample: 519877-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 16:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 982345

Sample: 519877-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 16:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.2	99.9	89	70-135	
o-Terphenyl	41.5	50.0	83	70-135	

Lab Batch #: 982346

Sample: 519877-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 17:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982345

Sample: 519877-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 17:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.8	90	70-135	
o-Terphenyl	42.5	49.9	85	70-135	

Lab Batch #: 982345

Sample: 519877-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 17:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	99.9	88	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 982346

Sample: 519877-035 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 17:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0240	0.0300	80	80-120	

Lab Batch #: 982345

Sample: 519877-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 18:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	100	87	70-135	
o-Terphenyl	39.9	50.0	80	70-135	

Lab Batch #: 982345

Sample: 519877-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 18:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.5	99.7	86	70-135	
o-Terphenyl	39.9	49.9	80	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982345

Sample: 519877-036 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 19:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	46.7	49.9	94	70-135	

Lab Batch #: 982346

Sample: 519877-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 11:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 982346

Sample: 519877-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 11:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 982345

Sample: 519877-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 12:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.9	92	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 982385

Sample: 519877-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 15:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982385

Sample: 519877-036 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 16:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0241	0.0300	80	80-120	

Lab Batch #: 982118

Sample: 701340-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 02:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

Lab Batch #: 982123

Sample: 701346-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 13:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	42.4	50.0	85	70-135	

Lab Batch #: 982345

Sample: 701491-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 23:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	135	100	135	70-135	
o-Terphenyl	58.5	50.0	117	70-135	

Lab Batch #: 982346

Sample: 701407-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/15 14:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982385

Sample: 701508-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/30/15 10:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 982118

Sample: 701340-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 02:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 982123

Sample: 701346-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 14:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 982345

Sample: 701491-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/15 08:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 982346

Sample: 701407-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/15 13:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0360	0.0300	120	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982385

Sample: 701508-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/30/15 09:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 982118

Sample: 701340-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 02:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 982123

Sample: 701346-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/24/15 14:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 982345

Sample: 701491-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/15 08:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 982346

Sample: 701407-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/15 13:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982385

Sample: 701508-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/30/15 10:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 982118

Sample: 519877-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 02:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.0	100	90	70-135	
o-Terphenyl	43.1	50.0	86	70-135	

Lab Batch #: 982123

Sample: 519929-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 06:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 982346

Sample: 519877-026 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 18:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0347	0.0300	116	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 982385

Sample: 519877-009 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 16:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Facility

Work Orders : 519877, 519877

Project ID: 212C-MD-00374

Lab Batch #: 982118

Sample: 519877-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 02:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	100	84	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

Lab Batch #: 982123

Sample: 519929-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 07:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	99.9	99	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 982346

Sample: 519877-026 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/15 19:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 982385

Sample: 519877-009 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/30/15 16:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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

Project Name: Globe Eunice Facility

Work Order #: 519877, 519877

Project ID: 212C-MD-00374

Analyst: SYG

Date Prepared: 11/25/2015

Date Analyzed: 11/25/2015

Lab Batch ID: 982346

Sample: 701407-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.0807	81	0.100	0.0839	84	4	70-130	35	
Toluene	<0.00200	0.100	0.0812	81	0.100	0.0858	86	6	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0979	98	0.100	0.0924	92	6	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.190	95	5	70-135	35	
o-Xylene	<0.00100	0.100	0.0986	99	0.100	0.0898	90	9	71-133	35	

Analyst: SYG

Date Prepared: 11/30/2015

Date Analyzed: 11/30/2015

Lab Batch ID: 982385

Sample: 701508-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.0978	98	0.100	0.0919	92	6	70-130	35	
Toluene	<0.00200	0.100	0.102	102	0.100	0.0953	95	7	70-130	35	
Ethylbenzene	<0.00100	0.100	0.107	107	0.100	0.101	101	6	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.223	112	0.200	0.208	104	7	70-135	35	
o-Xylene	<0.00100	0.100	0.103	103	0.100	0.0983	98	5	71-133	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Globe Eunice Facility

Work Order #: 519877, 519877

Project ID: 212C-MD-00374

Analyst: MNR

Date Prepared: 11/24/2015

Date Analyzed: 11/24/2015

Lab Batch ID: 982224

Sample: 701316-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	48.9	98	50.0	49.0	98	0	90-110	20	

Analyst: MNR

Date Prepared: 11/24/2015

Date Analyzed: 11/25/2015

Lab Batch ID: 982303

Sample: 701317-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	48.7	97	50.0	46.5	93	5	90-110	20	

Analyst: PJB

Date Prepared: 11/23/2015

Date Analyzed: 11/24/2015

Lab Batch ID: 982118

Sample: 701340-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1120	112	1000	1080	108	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1180	118	1000	1070	107	10	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: Globe Eunice Facility

Work Order #: 519877, 519877

Project ID: 212C-MD-00374

Analyst: PJB

Date Prepared: 11/23/2015

Date Analyzed: 11/24/2015

Lab Batch ID: 982123

Sample: 701346-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1110	111	1000	1110	111	0	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1160	116	1000	1080	108	7	70-135	35	

Analyst: PJB

Date Prepared: 11/24/2015

Date Analyzed: 11/25/2015

Lab Batch ID: 982345

Sample: 701491-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1060	106	1000	1080	108	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	966	97	1000	1040	104	7	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Globe Eunice Facility



Work Order #: 519877

Lab Batch #: 982224

Date Analyzed: 11/24/2015

QC- Sample ID: 519877-001 S

Reporting Units: mg/kg

Date Prepared: 11/24/2015

Batch #: 1

Project ID: 212C-MD-00374

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	320	500	807	97	80-120	

Lab Batch #: 982224

Date Analyzed: 11/24/2015

QC- Sample ID: 519877-011 S

Reporting Units: mg/kg

Date Prepared: 11/24/2015

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	110	250	344	94	80-120	

Lab Batch #: 982303

Date Analyzed: 11/25/2015

QC- Sample ID: 519877-021 S

Reporting Units: mg/kg

Date Prepared: 11/24/2015

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	64.4	50.0	108	87	80-120	

Lab Batch #: 982303

Date Analyzed: 11/25/2015

QC- Sample ID: 519877-029 S

Reporting Units: mg/kg

Date Prepared: 11/24/2015

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	3210	5000	8340	103	80-120	

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

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Globe Eunice Facility

Work Order #: 519877

Project ID: 212C-MD-00374

Lab Batch ID: 982346

QC- Sample ID: 519877-026 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/25/2015

Date Prepared: 11/25/2015

Analyst: SYG

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000996	0.0996	0.0828	83	0.0994	0.0813	82	2	70-130	35	
Toluene	<0.00199	0.0996	0.0599	60	0.0994	0.0475	48	23	70-130	35	X
Ethylbenzene	<0.000996	0.0996	0.0534	54	0.0994	0.0358	36	39	71-129	35	XF
m,p-Xylenes	<0.00199	0.199	0.101	51	0.199	0.0709	36	35	70-135	35	X
o-Xylene	<0.000996	0.0996	0.0496	50	0.0994	0.0362	36	31	71-133	35	X

Lab Batch ID: 982385

QC- Sample ID: 519877-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/30/2015

Date Prepared: 11/30/2015

Analyst: SYG

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0915	92	0.100	0.0943	94	3	70-130	35	
Toluene	<0.00201	0.100	0.0891	89	0.100	0.0896	90	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0890	89	0.100	0.0900	90	1	71-129	35	
m,p-Xylenes	<0.00201	0.201	0.182	91	0.201	0.187	93	3	70-135	35	
o-Xylene	<0.00100	0.100	0.0858	86	0.100	0.0865	87	1	71-133	35	

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

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

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

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



Form 3 - MS / MSD Recoveries



Project Name: Globe Eunice Facility

Work Order #: 519877

Project ID: 212C-MD-00374

Lab Batch ID: 982118

QC- Sample ID: 519877-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/25/2015

Date Prepared: 11/23/2015

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1020	102	1000	1010	101	1	70-135	35	
C10-C28 Diesel Range Hydrocarbons	350	1000	1310	96	1000	1280	93	2	70-135	35	

Lab Batch ID: 982123

QC- Sample ID: 519929-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/25/2015

Date Prepared: 11/23/2015

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<17.0	1140	1230	108	1130	1210	107	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	1070	1140	1860	69	1130	1830	67	2	70-135	35	X

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

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

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

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

**1910 N. Big Spring St.
Midland, Texas 79705**

(432) 682-4559 • Fax (432) 682-3946

5/19/87

ANALYSIS REQUEST
(Circle or Specify Method No.)

Major Anions/Cations, pH, TDS

RUSH Charges Authorized:	
Yes	No

Yes	No
<p>Authorized:</p>	

Final 1.002

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

5/18/75

OF:

(Circle or Specify Method No.,)

SITE MANAGER:

PROJECT NAME:

200c Ennice Facility see pg 18

DATE	TIME
------	------

MATRIX
COMP.
GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

<p> 1 </p> <p> 2 </p> <p> 3 </p> <p> 4 </p> <p> 5 </p> <p> 6 </p> <p> 7 </p> <p> 8 </p> <p> 9 </p> <p> 10 </p> <p> 11 </p> <p> 12 </p> <p> 13 </p> <p> 14 </p> <p> 15 </p> <p> 16 </p> <p> 17 </p> <p> 18 </p> <p> 19 </p> <p> 20 </p> <p> 21 </p> <p> 22 </p> <p> 23 </p> <p> 24 </p> <p> 25 </p> <p> 26 </p> <p> 27 </p> <p> 28 </p> <p> 29 </p> <p> 30 </p> <p> 31 </p> <p> 32 </p> <p> 33 </p> <p> 34 </p> <p> 35 </p> <p> 36 </p> <p> 37 </p> <p> 38 </p> <p> 39 </p> <p> 40 </p> <p> 41 </p> <p> 42 </p> <p> 43 </p> <p> 44 </p> <p> 45 </p> <p> 46 </p> <p> 47 </p> <p> 48 </p> <p> 49 </p> <p> 50 </p> <p> 51 </p> <p> 52 </p> <p> 53 </p> <p> 54 </p> <p> 55 </p> <p> 56 </p> <p> 57 </p> <p> 58 </p> <p> 59 </p> <p> 60 </p> <p> 61 </p> <p> 62 </p> <p> 63 </p> <p> 64 </p> <p> 65 </p> <p> 66 </p> <p> 67 </p> <p> 68 </p> <p> 69 </p> <p> 70 </p> <p> 71 </p> <p> 72 </p> <p> 73 </p> <p> 74 </p> <p> 75 </p> <p> 76 </p> <p> 77 </p> <p> 78 </p> <p> 79 </p> <p> 80 </p> <p> 81 </p> <p> 82 </p> <p> 83 </p> <p> 84 </p> <p> 85 </p> <p> 86 </p> <p> 87 </p> <p> 88 </p> <p> 89 </p> <p> 90 </p> <p> 91 </p> <p> 92 </p> <p> 93 </p> <p> 94 </p> <p> 95 </p> <p> 96 </p> <p> 97 </p> <p> 98 </p> <p> 99 </p> <p> 100 </p>	<p> 1 </p> <p> 2 </p> <p> 3 </p> <p> 4 </p> <p> 5 </p> <p> 6 </p> <p> 7 </p> <p> 8 </p> <p> 9 </p> <p> 10 </p> <p> 11 </p> <p> 12 </p> <p> 13 </p> <p> 14 </p> <p> 15 </p> <p> 16 </p> <p> 17 </p> <p> 18 </p> <p> 19 </p> <p> 20 </p> <p> 21 </p> <p> 22 </p> <p> 23 </p> <p> 24 </p> <p> 25 </p> <p> 26 </p> <p> 27 </p> <p> 28 </p> <p> 29 </p> <p> 30 </p> <p> 31 </p> <p> 32 </p> <p> 33 </p> <p> 34 </p> <p> 35 </p> <p> 36 </p> <p> 37 </p> <p> 38 </p> <p> 39 </p> <p> 40 </p> <p> 41 </p> <p> 42 </p> <p> 43 </p> <p> 44 </p> <p> 45 </p> <p> 46 </p> <p> 47 </p> <p> 48 </p> <p> 49 </p> <p> 50 </p> <p> 51 </p> <p> 52 </p> <p> 53 </p> <p> 54 </p> <p> 55 </p> <p> 56 </p> <p> 57 </p> <p> 58 </p> <p> 59 </p> <p> 60 </p> <p> 61 </p> <p> 62 </p> <p> 63 </p> <p> 64 </p> <p> 65 </p> <p> 66 </p> <p> 67 </p> <p> 68 </p> <p> 69 </p> <p> 70 </p> <p> 71 </p> <p> 72 </p> <p> 73 </p> <p> 74 </p> <p> 75 </p> <p> 76 </p> <p> 77 </p> <p> 78 </p> <p> 79 </p> <p> 80 </p> <p> 81 </p> <p> 82 </p> <p> 83 </p> <p> 84 </p> <p> 85 </p> <p> 86 </p> <p> 87 </p> <p> 88 </p> <p> 89 </p> <p> 90 </p> <p> 91 </p> <p> 92 </p> <p> 93 </p> <p> 94 </p> <p> 95 </p> <p> 96 </p> <p> 97 </p> <p> 98 </p> <p> 99 </p> <p> 100 </p>	<p> 1 </p> <p> 2 </p> <p> 3 </p> <p> 4 </p> <p> 5 </p> <p> 6 </p> <p> 7 </p> <p> 8 </p> <p> 9 </p> <p> 10 </p> <p> 11 </p> <p> 12 </p> <p> 13 </p> <p> 14 </p> <p> 15 </p> <p> 16 </p> <p> 17 </p> <p> 18 </p> <p> 19 </p> <p> 20 </p> <p> 21 </p> <p> 22 </p> <p> 23 </p> <p> 24 </p> <p> 25 </p> <p> 26 </p> <p> 27 </p> <p> 28 </p> <p> 29 </p> <p> 30 </p> <p> 31 </p> <p> 32 </p> <p> 33 </p> <p> 34 </p> <p> 35 </p> <p> 36 </p> <p> 37 </p> <p> 38 </p> <p> 39 </p> <p> 40 </p> <p> 41 </p> <p> 42 </p> <p> 43 </p> <p> 44 </p> <p> 45 </p> <p> 46 </p> <p> 47 </p> <p> 48 </p> <p> 49 </p> <p> 50 </p> <p> 51 </p> <p> 52 </p> <p> 53 </p> <p> 54 </p> <p> 55 </p> <p> 56 </p> <p> 57 </p> <p> 58 </p> <p> 59 </p> <p> 60 </p> <p> 61 </p> <p> 62 </p> <p> 63 </p> <p> 64 </p> <p> 65 </p> <p> 66 </p> <p> 67 </p> <p> 68 </p> <p> 69 </p> <p> 70 </p> <p> 71 </p> <p> 72 </p> <p> 73 </p>
---	---	---

HCL

 HNO_3

ICE

NONE

(BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC.MS Vol. 8240/8260/624

GC.MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

STATE: TX PHONE: _____

11-16-13
11/18

RECEIVED BY: (Signature)	<i>[Signature]</i>
RECEIVED BY: (Signature)	
RECEIVED BY: (Signature)	
RECEIVED BY: (Signature)	
DATE: _____	

NAME _____

() _____

() _____

() _____

TIME _____

[illegible]

SAMPLED BY: (Print & Initial)
<i>[Signature]</i>
SAMPLE SHIPPED BY: (Original)
FEDEX
HAND DELIVERED
TETRA TECH CONTACT PERSON

(e) S S S

Date:	1/19/93
Time:	
AIRBILL #:	
OTHER:	
Results by:	
RUSH Charges	
Authorized:	
Yes	No

100

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

Client: Tetra Tech- Midland

Date/ Time Received: 11/20/2015 11:18:00 AM

Work Order #: 519877

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Carley Owens

Date: 11/20/2015

Checklist reviewed by:



Kelsey Brooks

Date: 11/20/2015

Analytical Report 523498

for Tetra Tech- Midland

Project Manager: Ike Tavaréz

Globe Eunice Yard

212C-MD-00374

24-MAY-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), 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 (T104704534-15-1)

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

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)

Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)



24-MAY-16

Project Manager: **Ike Tavaréz**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **523498**
Globe Eunice Yard
Project Address: Lea Co, NM

Ike Tavaréz:

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) 523498. 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. 523498 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,

Kelsey Brooks

Project Manager

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

Certified and approved by numerous States and Agencies.

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

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Tetra Tech- Midland, Midland, TX

Globe Eunice Yard

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-001
AH-2H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-002
AH-2H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-003
AH-3H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-004
AH-4H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-006
AH-5H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-007
AH-5H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-008
AH-5H 2-2.5	S	01-21-16 00:00	2 - 2.5 ft	523498-009
AH-6H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-010
AH-6H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-011
AH-6H 2-2.5	S	01-21-16 00:00	2 - 2.5 ft	523498-012
AH-7H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-013
AH-7H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-014
AH-8H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-015
AH-8H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-016
AH-9H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-017
AH-9H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-018
AH-10H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-019
AH-10H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-020
AH-11H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-021
AH-12H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-022
AH-13H 0-6"	S	01-21-16 00:00	0 - 6 In	523498-023
AH-14H 0-6"	S	01-21-16 00:00	0 - 6 In	523498-024
AH-15H 0-1	S	01-21-16 00:00	0 - 1 ft	523498-025
AH-15H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	523498-026
AH-16H 0-6"	S	01-21-16 00:00	0 - 6 In	523498-027
AH-3H 1-1.5	S	01-21-16 00:00	1 - 1.5 ft	Not Analyzed



CASE NARRATIVE



Client Name: Tetra Tech- Midland

Project Name: Globe Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 523498

Report Date: 24-MAY-16
Date Received: 01/22/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 523498

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523498-001	523498-002	523498-003	523498-004	523498-006	523498-007
	<i>Field Id:</i>	AH-1H 0-1	AH-2H 0-1	AH-2H 1-1.5	AH-3H 0-1	AH-4H 0-1	AH-5H 0-1
	<i>Depth:</i>	0-1 ft	0-1 ft	1-1.5 ft	0-1 ft	0-1 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00		Jan-28-16 11:00	Jan-28-16 11:00
	<i>Analyzed:</i>	Jan-28-16 17:05	Jan-28-16 17:41	Jan-28-16 17:59		Jan-28-16 18:18	Jan-28-16 18:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL
Chloride		2.33 2.00	ND 2.00	2.93 2.00		531 10.0	ND 2.00
TPH By SW8015 Mod	<i>Extracted:</i>				Jan-27-16 11:00	Jan-27-16 11:00	Jan-27-16 11:00
	<i>Analyzed:</i>				Jan-28-16 13:57	Jan-28-16 14:25	Jan-28-16 14:53
	<i>Units/RL:</i>				mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons					ND 14.9	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons					ND 14.9	ND 15.0	ND 15.0
Total TPH					ND 14.9	ND 15.0	ND 15.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523498

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523498-008	523498-009	523498-010	523498-011	523498-012	523498-013
	<i>Field Id:</i>	AH-5H 1-1.5	AH-5H 2-2.5	AH-6H 0-1	AH-6H 1-1.5	AH-6H 2-2.5	AH-7H 0-1
	<i>Depth:</i>	1-1.5 ft	2-2.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00
	<i>Analyzed:</i>	Jan-28-16 18:54	Jan-29-16 16:41	Jan-28-16 20:07	Jan-28-16 20:25	Jan-29-16 17:00	Jan-28-16 21:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3.45 2.00	316 10.0	2.80 2.00	ND 2.00	4.00 2.00	30.1 2.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523498

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523498-014	523498-015	523498-016	523498-017	523498-018	523498-019
	<i>Field Id:</i>	AH-7H 1-1.5	AH-8H 0-1	AH-8H 1-1.5	AH-9H 0-1	AH-9H 1-1.5	AH-10H 0-1
	<i>Depth:</i>	1-1.5 ft	0-1 ft	1-1.5 ft	0-1 ft	1-1.5 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00	Jan-28-16 11:00
	<i>Analyzed:</i>	Jan-28-16 21:38	Jan-28-16 21:56	Jan-28-16 22:14	Jan-28-16 22:33	Jan-29-16 17:36	Jan-28-16 23:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		216 10.0	3.58 2.00	8.93 2.00	5.52 2.00	9.80 2.00	11.3 2.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523498

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523498-020	523498-021	523498-022	523498-023	523498-024	523498-025
	<i>Field Id:</i>	AH-10H 1-1.5	AH-11H 0-1	AH-12H 0-1	AH-13H 0-6"	AH-14H 0-6"	AH-15H 0-1
	<i>Depth:</i>	1-1.5 ft	0-1 ft	0-1 ft	0-6 In	0-6 In	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 11:00	Jan-28-16 11:00		Jan-28-16 11:00	Jan-28-16 10:00	Jan-28-16 10:00
	<i>Analyzed:</i>	Jan-29-16 00:04	Jan-29-16 00:22		Jan-29-16 00:40	Jan-29-16 02:29	Jan-29-16 03:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL
Chloride		18.9 2.00	3.34 2.00		4.31 2.00	18.8 2.00	ND 2.00
TPH By SW8015 Mod	<i>Extracted:</i>			Jan-27-16 11:00	Jan-27-16 11:00	Jan-27-16 11:00	Jan-27-16 11:00
	<i>Analyzed:</i>			Jan-28-16 15:19	Jan-28-16 15:47	Jan-28-16 16:41	Jan-28-16 17:10
	<i>Units/RL:</i>			mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons				ND 14.9	ND 15.0	15.0 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons				ND 14.9	ND 15.0	ND 15.0	ND 15.0
Total TPH				ND 14.9	ND 15.0	15.0 15.0	ND 15.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523498

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	523498-026	523498-027				
	Field Id:	AH-15H 1-1.5	AH-16H 0-6"				
	Depth:	1-1.5 ft	0-6 In				
	Matrix:	SOIL	SOIL				
	Sampled:	Jan-21-16 00:00	Jan-21-16 00:00				
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-28-16 10:00	Jan-28-16 10:00				
	Analyzed:	Jan-29-16 03:24	Jan-29-16 03:42				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		ND 2.00	2.62 2.00				
TPH By SW8015 Mod	Extracted:		Jan-27-16 11:00				
	Analyzed:		Jan-28-16 17:39				
	Units/RL:		mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons			23.4 15.0				
C10-C28 Diesel Range Hydrocarbons			711 15.0				
Total TPH			734 15.0				

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Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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(432) 563-1800	(432) 563-1713
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523498, 523498

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 523498-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 13:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.1	99.6	78	70-135	
o-Terphenyl	38.7	49.8	78	70-135	

Lab Batch #: 986710

Sample: 523498-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 14:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.0	99.7	80	70-135	
o-Terphenyl	39.4	49.9	79	70-135	

Lab Batch #: 986710

Sample: 523498-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 14:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.2	100	85	70-135	
o-Terphenyl	41.9	50.0	84	70-135	

Lab Batch #: 986710

Sample: 523498-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 15:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.6	85	70-135	
o-Terphenyl	41.2	49.8	83	70-135	

Lab Batch #: 986710

Sample: 523498-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 15:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	99.9	83	70-135	
o-Terphenyl	41.4	50.0	83	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523498, 523498

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 523498-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 16:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.3	100	91	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 986710

Sample: 523498-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 17:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.3	99.8	72	70-135	
o-Terphenyl	36.2	49.9	73	70-135	

Lab Batch #: 986710

Sample: 523498-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 17:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.5	99.9	81	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 986710

Sample: 704112-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 12:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 986710

Sample: 704112-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 12:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523498, 523498

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 704112-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 13:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

Lab Batch #: 986710

Sample: 523500-024 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 22:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.4	99.9	82	70-135	
o-Terphenyl	36.2	50.0	72	70-135	

Lab Batch #: 986710

Sample: 523500-024 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 22:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	99.7	97	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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

Project Name: Globe Eunice Yard

Work Order #: 523498, 523498

Project ID: 212C-MD-00374

Analyst: MNR

Date Prepared: 01/28/2016

Date Analyzed: 01/28/2016

Lab Batch ID: 986826

Sample: 704135-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	46.6	93	50.0	47.2	94	1	90-110	20	

Analyst: MNR

Date Prepared: 01/28/2016

Date Analyzed: 01/29/2016

Lab Batch ID: 986839

Sample: 704137-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	46.7	93	50.0	47.1	94	1	90-110	20	

Analyst: PJB

Date Prepared: 01/27/2016

Date Analyzed: 01/28/2016

Lab Batch ID: 986710

Sample: 704112-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	913	91	1000	859	86	6	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	991	99	1000	925	93	7	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Globe Eunice Yard



Work Order #: 523498

Lab Batch #: 986826

Date Analyzed: 01/28/2016

QC- Sample ID: 523498-001 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Project ID: 212C-MD-00374

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	2.33	50.0	46.6	89	80-120	

Lab Batch #: 986826

Date Analyzed: 01/28/2016

QC- Sample ID: 523498-013 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	30.1	50.0	75.0	90	80-120	

Lab Batch #: 986839

Date Analyzed: 01/29/2016

QC- Sample ID: 523498-024 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	18.8	50.0	63.5	89	80-120	

Lab Batch #: 986839

Date Analyzed: 01/29/2016

QC- Sample ID: 523500-007 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	505	500	979	95	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Globe Eunice Yard

Work Order # : 523498

Project ID: 212C-MD-00374

Lab Batch ID: 986710

QC- Sample ID: 523500-024 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/28/2016

Date Prepared: 01/27/2016

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	827	83	997	880	88	6	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	999	808	81	997	946	95	16	70-135	35	

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

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

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



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 01/22/2016 02:05:00 PM

Work Order #: 523498

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : r8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Carley Owens

Carley Owens

Date: 01/25/2016

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 01/25/2016

Analytical Report 523500

for Tetra Tech- Midland

Project Manager: Ike Tavaréz

Globe Eunice Yard

212C-MD-00374

24-MAY-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), 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 (T104704534-15-1)

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

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)

Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)



24-MAY-16

Project Manager: **Ike Tavaréz**

Tetra Tech- Midland

4000 N. Big Spring Suite 401

Midland, TX 79705

Reference: XENCO Report No(s): **523500**

Globe Eunice Yard

Project Address: Lea Co, NM

Ike Tavaréz:

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) 523500. 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. 523500 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,

Kelsey Brooks

Project Manager

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Tetra Tech- Midland, Midland, TX

Globe Eunice Yard

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 (AH-6) 0-1	S	01-20-16 00:00	0 - 1 ft	523500-001
BH-1 (AH-6) 2-3	S	01-20-16 00:00	2 - 3 ft	523500-002
BH-1 (AH-6) 4-5	S	01-20-16 00:00	4 - 5 ft	523500-003
BH-1 (AH-6) 6-7	S	01-20-16 00:00	6 - 7 ft	523500-004
BH-1 (AH-6) 9-10	S	01-20-16 00:00	9 - 10 ft	523500-005
BH-1 (AH-6) 14-15	S	01-20-16 00:00	14 - 15 ft	523500-006
BH-1 (AH-6) 19-20	S	01-20-16 00:00	19 - 20 ft	523500-007
BH-1 (AH-6) 24-25	S	01-20-16 00:00	24 - 25 ft	523500-008
BH-2 (AH-7) 0-1	S	01-20-16 00:00	0 - 1 ft	523500-009
BH-2 (AH-7) 2-3	S	01-20-16 00:00	2 - 3 ft	523500-010
BH-2 (AH-7) 4-5	S	01-20-16 00:00	4 - 5 ft	523500-011
BH-2 (AH-7) 6-7	S	01-20-16 00:00	6 - 7 ft	523500-012
BH-2 (AH-7) 9-10	S	01-20-16 00:00	9 - 10 ft	523500-013
BH-2 (AH-7) 14-15	S	01-20-16 00:00	14 - 15 ft	523500-014
BH-2 (AH-7) 19-20	S	01-20-16 00:00	19 - 20 ft	523500-015
BH-2 (AH-7) 24-25	S	01-20-16 00:00	24 - 25 ft	523500-016
BH-3 (AH-8) 2-3	S	01-20-16 00:00	2 - 3 ft	523500-018
BH-4 (AH-4) 0-1	S	01-20-16 00:00	0 - 1 ft	523500-022
BH-4 (AH-4) 2-3	S	01-20-16 00:00	2 - 3 ft	523500-023
BH-4 (AH-4) 4-5	S	01-20-16 00:00	4 - 5 ft	523500-024
BH-4 (AH-4) 6-7	S	01-20-16 00:00	6 - 7 ft	523500-025
BH-4 (AH-4) 9-10	S	01-20-16 00:00	9 - 10 ft	523500-026
BH-4 (AH-4) 14-15	S	01-20-16 00:00	14 - 15 ft	523500-027
BH-4 (AH-4) 19-20	S	01-20-16 00:00	19 - 20 ft	523500-028
BH-4 (AH-4) 24-25	S	01-20-16 00:00	24 - 25 ft	523500-029
BH-5 (AH-3) 0-1	S	01-20-16 00:00	0 - 1 ft	523500-030
BH-5 (AH-3) 2-3	S	01-20-16 00:00	2 - 3 ft	523500-031
BH-5 (AH-3) 4-5	S	01-20-16 00:00	4 - 5 ft	523500-032
BH-5 (AH-3) 6-7	S	01-20-16 00:00	6 - 7 ft	523500-033
BH-5 (AH-3) 9-10	S	01-20-16 00:00	9 - 10 ft	523500-034
BH-5 (AH-3) 14-15	S	01-20-16 00:00	14 - 15 ft	523500-035
BH-5 (AH-3) 19-20	S	01-20-16 00:00	19 - 20 ft	523500-036
BH-5 (AH-3) 24-25	S	01-20-16 00:00	24 - 25 ft	523500-037
BH-6 (AH-1) 0-1	S	01-21-16 00:00	0 - 1 ft	523500-038
BH-6 (AH-1) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-039
BH-6 (AH-1) 4-5	S	01-21-16 00:00	4 - 5 ft	523500-040
BH-6 (AH-1) 6-7	S	01-21-16 00:00	6 - 7 ft	523500-041
BH-6 (AH-1) 9-10	S	01-21-16 00:00	9 - 10 ft	523500-042
BH-6 (AH-1) 14-15	S	01-21-16 00:00	14 - 15 ft	523500-043
BH-6 (AH-1) 19-20	S	01-21-16 00:00	19 - 20 ft	523500-044
BH-6 (AH-1) 24-25	S	01-21-16 00:00	24 - 25 ft	523500-045
BH-7 (AH-14) 0-1	S	01-21-16 00:00	0 - 1 ft	523500-046
BH-7 (AH-14) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-047

Tetra Tech- Midland, Midland, TX

Globe Eunice Yard

BH-7 (AH-14) 4-5	S	01-21-16 00:00	4 - 5 ft	523500-048
BH-8 (AH-15) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-050
BH-9 (AH-19 & AH-20) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-055
BH-10 (AH-17) 0-1	S	01-21-16 00:00	0 - 1 ft	523500-059
BH-10 (AH-17) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-060
BH-10 (AH-17) 4-5	S	01-21-16 00:00	4 - 5 ft	523500-061
BH-10 (AH-17) 6-7	S	01-21-16 00:00	6 - 7 ft	523500-062
BH-10 (AH-17) 9-10	S	01-21-16 00:00	9 - 10 ft	523500-063
BH-10 (AH-17) 14-15	S	01-21-16 00:00	14 - 15 ft	523500-064
BH-10 (AH-17) 19-20	S	01-21-16 00:00	19 - 20 ft	523500-065
BH-10 (AH-17) 24-25	S	01-21-16 00:00	24 - 25 ft	523500-066
BH-11 (AH-21) 0-1	S	01-21-16 00:00	0 - 1 ft	523500-067
BH-11 (AH-21) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-068
BH-11 (AH-21) 4-5	S	01-21-16 00:00	4 - 5 ft	523500-069
BH-11 (AH-21) 6-7	S	01-21-16 00:00	6 - 7 ft	523500-070
BH-11 (AH-21) 9-10	S	01-21-16 00:00	9 - 10 ft	523500-071
BH-11 (AH-21) 14-15	S	01-21-16 00:00	14 - 15 ft	523500-072
BH-11 (AH-21) 19-20	S	01-21-16 00:00	19 - 20 ft	523500-073
BH-12 (AH-22) 2-3	S	01-21-16 00:00	2 - 3 ft	523500-075
BH-3 (AH-8) 0-1	S	01-20-16 00:00	0 - 1 ft	Not Analyzed
BH-3 (AH-8) 4-5	S	01-20-16 00:00	4 - 5 ft	Not Analyzed
BH-3 (AH-8) 6-7	S	01-20-16 00:00	6 - 7 ft	Not Analyzed
BH-3 (AH-8) 9-10	S	01-20-16 00:00	9 - 10 ft	Not Analyzed
BH-8 (AH-15) 0-1	S	01-21-16 00:00	0 - 1 ft	Not Analyzed
BH-8 (AH-15) 4-5	S	01-21-16 00:00	4 - 5 ft	Not Analyzed
BH-8 (AH-15) 6-7	S	01-21-16 00:00	6 - 7 ft	Not Analyzed
BH-8 (AH-15) 9-10	S	01-21-16 00:00	9 - 10 ft	Not Analyzed
BH-9 (AH-19 & AH-20) 0-1	S	01-21-16 00:00	0 - 1 ft	Not Analyzed
BH-9 (AH-19 & AH-20) 4-5	S	01-21-16 00:00	4 - 5 ft	Not Analyzed
BH-9 (AH-19 & AH-20) 6-7	S	01-21-16 00:00	6 - 7 ft	Not Analyzed
BH-9 (AH-19 & AH-20) 9-10	S	01-21-16 00:00	9 - 10 ft	Not Analyzed
BH-12 (AH-22) 0-1	S	01-21-16 00:00	0 - 1 ft	Not Analyzed
BH-12 (AH-22) 4-5	S	01-21-16 00:00	4 - 5 ft	Not Analyzed
BH-12 (AH-22) 6-7	S	01-21-16 00:00	6 - 7 ft	Not Analyzed
BH-12 (AH-22) 9-10	S	01-21-16 00:00	9 - 10 ft	Not Analyzed



CASE NARRATIVE



Client Name: Tetra Tech- Midland

Project Name: Globe Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 523500

Report Date: 24-MAY-16
Date Received: 01/22/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-001	523500-002	523500-003	523500-004	523500-005	523500-006
	<i>Field Id:</i>	BH-1 (AH-6) 0-1	BH-1 (AH-6) 2-3	BH-1 (AH-6) 4-5	BH-1 (AH-6) 6-7	BH-1 (AH-6) 9-10	BH-1 (AH-6) 14-15
	<i>Depth:</i>	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00
	<i>Analyzed:</i>	Jan-29-16 04:00	Jan-29-16 04:19	Jan-29-16 11:43	Jan-29-16 12:01	Jan-29-16 12:26	Jan-29-16 12:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		11.4 10.0	2740 200	8850 400	2960 100	217 20.0	840 40.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-007	523500-008	523500-009	523500-010	523500-011	523500-012
	<i>Field Id:</i>	BH-1 (AH-6) 19-20	BH-1 (AH-6) 24-25	BH-2 (AH-7) 0-1	BH-2 (AH-7) 2-3	BH-2 (AH-7) 4-5	BH-2 (AH-7) 6-7
	<i>Depth:</i>	19-20 ft	24-25 ft	0-1 ft	2-3 ft	4-5 ft	6-7 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00
	<i>Analyzed:</i>	Jan-29-16 13:03	Jan-29-16 13:39	Jan-29-16 13:57	Jan-29-16 14:16	Jan-29-16 14:34	Jan-29-16 15:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		505 20.0	286 40.0	2360 200	8890 400	2030 100	619 40.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-013	523500-014	523500-015	523500-016	523500-018	523500-022
	<i>Field Id:</i>	BH-2 (AH-7) 9-10	BH-2 (AH-7) 14-15	BH-2 (AH-7) 19-20	BH-2 (AH-7) 24-25	BH-3 (AH-8) 2-3	BH-4 (AH-4) 0-1
	<i>Depth:</i>	9-10 ft	14-15 ft	19-20 ft	24-25 ft	2-3 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00	Jan-28-16 10:00		Jan-29-16 09:00
	<i>Analyzed:</i>	Jan-29-16 15:47	Jan-29-16 16:05	Jan-29-16 16:23	Jan-29-16 19:44		Jan-30-16 13:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
Chloride		338 20.0	381 20.0	99.0 10.0	455 20.0		4880 400
TPH By SW8015 Mod	<i>Extracted:</i>					Jan-27-16 11:00	
	<i>Analyzed:</i>					Jan-28-16 18:45	
	<i>Units/RL:</i>					mg/kg RL	
C6-C10 Gasoline Range Hydrocarbons						ND 14.9	
C10-C28 Diesel Range Hydrocarbons						ND 14.9	
Total TPH						ND 14.9	

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	523500-023	523500-024	523500-025	523500-026	523500-027	523500-028
	Field Id:	BH-4 (AH-4) 2-3	BH-4 (AH-4) 4-5	BH-4 (AH-4) 6-7	BH-4 (AH-4) 9-10	BH-4 (AH-4) 14-15	BH-4 (AH-4) 19-20
	Depth:	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft	19-20 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00
	Analyzed:	Jan-30-16 14:29	Jan-30-16 14:47	Jan-30-16 15:05	Jan-30-16 15:23	Jan-30-16 15:42	Jan-30-16 16:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		6460 400	9060 400	6570 400	10200 400	10100 400	3780 400
TPH By SW8015 Mod	Extracted:		Jan-27-16 11:00				
	Analyzed:		Jan-28-16 21:35				
	Units/RL:		mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons			ND 15.0				
C10-C28 Diesel Range Hydrocarbons			ND 15.0				
Total TPH			ND 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

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-029	523500-030	523500-031	523500-032	523500-033	523500-034
	<i>Field Id:</i>	BH-4 (AH-4) 24-25	BH-5 (AH-3) 0-1	BH-5 (AH-3) 2-3	BH-5 (AH-3) 4-5	BH-5 (AH-3) 6-7	BH-5 (AH-3) 9-10
	<i>Depth:</i>	24-25 ft	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00
	<i>Analyzed:</i>	Jan-30-16 16:54	Jan-30-16 17:13	Jan-30-16 17:31	Jan-30-16 17:49	Jan-30-16 18:26	Jan-30-16 18:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1320 100	133 20.0	7070 400	3150 200	1340 100	234 20.0
TPH By SW8015 Mod	<i>Extracted:</i>			Jan-27-16 11:00			
	<i>Analyzed:</i>			Jan-28-16 18:10			
	<i>Units/RL:</i>			mg/kg RL			
C6-C10 Gasoline Range Hydrocarbons				ND 15.0			
C10-C28 Diesel Range Hydrocarbons				ND 15.0			
Total TPH				ND 15.0			

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-035	523500-036	523500-037	523500-038	523500-039	523500-040
	<i>Field Id:</i>	BH-5 (AH-3) 14-15	BH-5 (AH-3) 19-20	BH-5 (AH-3) 24-25	BH-6 (AH-1) 0-1	BH-6 (AH-1) 2-3	BH-6 (AH-1) 4-5
	<i>Depth:</i>	14-15 ft	19-20 ft	24-25 ft	0-1 ft	2-3 ft	4-5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-20-16 00:00	Jan-20-16 00:00	Jan-20-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00	Jan-29-16 09:00
	<i>Analyzed:</i>	Jan-30-16 19:02	Jan-30-16 19:20	Jan-31-16 11:17	Jan-31-16 11:35	Jan-31-16 11:53	Jan-31-16 12:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		146 10.0	44.2 10.0	426 20.0	525 20.0	3700 400	7630 400

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-041	523500-042	523500-043	523500-044	523500-045	523500-046
	<i>Field Id:</i>	BH-6 (AH-1) 6-7	BH-6 (AH-1) 9-10	BH-6 (AH-1) 14-15	BH-6 (AH-1) 19-20	BH-6 (AH-1) 24-25	BH-7 (AH-14) 0-1
	<i>Depth:</i>	6-7 ft	9-10 ft	14-15 ft	19-20 ft	24-25 ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 09:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00
	<i>Analyzed:</i>	Jan-31-16 12:30	Jan-31-16 13:42	Jan-31-16 14:56	Jan-31-16 15:14	Jan-31-16 15:32	Jan-31-16 15:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1920 100	1620 100	720 40.0	235 20.0	370 20.0	15.3 2.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-047	523500-048	523500-050	523500-055	523500-059	523500-060
	<i>Field Id:</i>	BH-7 (AH-14) 2-3	BH-7 (AH-14) 4-5	BH-8 (AH-15) 2-3	BH-9 (AH-19 & AH-20) 2-3	BH-10 (AH-17) 0-1	BH-10 (AH-17) 2-3
	<i>Depth:</i>	2-3 ft	4-5 ft	2-3 ft	2-3 ft	0-1 ft	2-3 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 12:00	Jan-29-16 12:00			Jan-29-16 12:00	Jan-29-16 12:00
	<i>Analyzed:</i>	Jan-31-16 16:08	Jan-31-16 16:27			Jan-31-16 16:45	Jan-31-16 17:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			mg/kg RL	mg/kg RL
Chloride		41.5 10.0	8.38 2.00			131 10.0	4210 400
TPH By SW8015 Mod	<i>Extracted:</i>			Jan-27-16 11:00	Jan-27-16 11:00		Jan-27-16 11:00
	<i>Analyzed:</i>			Jan-28-16 20:27	Jan-28-16 19:20		Jan-28-16 21:04
	<i>Units/RL:</i>			mg/kg RL	mg/kg RL		mg/kg RL
C6-C10 Gasoline Range Hydrocarbons				ND 14.9	ND 15.0		ND 15.0
C10-C28 Diesel Range Hydrocarbons				ND 14.9	ND 15.0		ND 15.0
Total TPH				ND 14.9	ND 15.0		ND 15.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-061	523500-062	523500-063	523500-064	523500-065	523500-066
	<i>Field Id:</i>	BH-10 (AH-17) 4-5	BH-10 (AH-17) 6-7	BH-10 (AH-17) 9-10	BH-10 (AH-17) 14-15	BH-10 (AH-17) 19-20	BH-10 (AH-17) 24-25
	<i>Depth:</i>	4-5 ft	6-7 ft	9-10 ft	14-15 ft	19-20 ft	24-25 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00	Jan-29-16 12:00
	<i>Analyzed:</i>	Jan-31-16 17:21	Jan-31-16 17:39	Jan-31-16 18:52	Jan-31-16 19:11	Jan-31-16 19:29	Jan-31-16 19:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		259 20.0	128 10.0	254 20.0	196 10.0	50.8 10.0	76.1 10.0

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavaréz

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	523500-067	523500-068	523500-069	523500-070	523500-071	523500-072
	<i>Field Id:</i>	BH-11 (AH-21) 0-1	BH-11 (AH-21) 2-3	BH-11 (AH-21) 4-5	BH-11 (AH-21) 6-7	BH-11 (AH-21) 9-10	BH-11 (AH-21) 14-15
	<i>Depth:</i>	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00	Jan-21-16 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Jan-29-16 12:00	Jan-29-16 15:00	Jan-29-16 15:00	Jan-29-16 15:00	Jan-29-16 15:00	Jan-29-16 15:00
	<i>Analyzed:</i>	Jan-31-16 20:05	Jan-31-16 21:18	Jan-31-16 22:32	Jan-31-16 22:50	Jan-31-16 23:08	Jan-31-16 23:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 2.00	4170 400	82.2 10.0	14.3 2.00	78.0 2.00	40.7 2.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 523500

Tetra Tech- Midland, Midland, TX

Project Name: Globe Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co, NM

Date Received in Lab: Fri Jan-22-16 02:05 pm

Report Date: 24-MAY-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	523500-073	523500-075				
	Field Id:	BH-11 (AH-21) 19-20	BH-12 (AH-22) 2-3				
	Depth:	19-20 ft	2-3 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Jan-21-16 00:00	Jan-21-16 00:00				
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-29-16 15:00					
	Analyzed:	Jan-31-16 23:44					
	Units/RL:	mg/kg RL					
Chloride		69.5 2.00					
TPH By SW8015 Mod	Extracted:		Jan-27-16 11:00				
	Analyzed:		Jan-28-16 19:54				
	Units/RL:		mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons			ND 15.0				
C10-C28 Diesel Range Hydrocarbons			ND 15.0				
Total TPH			ND 15.0				

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Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523500, 523500

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 523500-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 18:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.9	99.9	77	70-135	
o-Terphenyl	37.8	50.0	76	70-135	

Lab Batch #: 986710

Sample: 523500-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 18:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	99.6	81	70-135	
o-Terphenyl	40.1	49.8	81	70-135	

Lab Batch #: 986710

Sample: 523500-055 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 19:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.5	99.8	77	70-135	
o-Terphenyl	38.3	49.9	77	70-135	

Lab Batch #: 986710

Sample: 523500-075 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 19:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	99.9	85	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 986710

Sample: 523500-050 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 20:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.6	85	70-135	
o-Terphenyl	41.7	49.8	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523500, 523500

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 523500-060 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 21:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.3	100	79	70-135	
o-Terphenyl	39.1	50.0	78	70-135	

Lab Batch #: 986710

Sample: 523500-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 21:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.1	99.8	70	70-135	
o-Terphenyl	35.1	49.9	70	70-135	

Lab Batch #: 986710

Sample: 704112-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 12:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 986710

Sample: 704112-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 12:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 986710

Sample: 704112-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/28/16 13:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe Eunice Yard

Work Orders : 523500, 523500

Project ID: 212C-MD-00374

Lab Batch #: 986710

Sample: 523500-024 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 22:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.4	99.9	82	70-135	
o-Terphenyl	36.2	50.0	72	70-135	

Lab Batch #: 986710

Sample: 523500-024 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/28/16 22:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	99.7	97	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



BS / BSD Recoveries



Project Name: Globe Eunice Yard

Work Order #: 523500, 523500

Project ID: 212C-MD-00374

Analyst: MNR

Date Prepared: 01/28/2016

Date Analyzed: 01/29/2016

Lab Batch ID: 986839

Sample: 704137-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	46.7	93	50.0	47.1	94	1	90-110	20	

Analyst: MNR

Date Prepared: 01/29/2016

Date Analyzed: 01/30/2016

Lab Batch ID: 986872

Sample: 704166-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	46.6	93	50.0	46.2	92	1	90-110	20	

Analyst: MNR

Date Prepared: 01/29/2016

Date Analyzed: 01/31/2016

Lab Batch ID: 986875

Sample: 704168-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	50.7	101	50.0	47.3	95	7	90-110	20	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Globe Eunice Yard

Work Order #: 523500, 523500

Project ID: 212C-MD-00374

Analyst: MNR

Date Prepared: 01/29/2016

Date Analyzed: 01/31/2016

Lab Batch ID: 986876

Sample: 704169-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<2.00	50.0	46.8	94	50.0	46.6	93	0	90-110	20	

Analyst: PJB

Date Prepared: 01/27/2016

Date Analyzed: 01/28/2016

Lab Batch ID: 986710

Sample: 704112-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	913	91	1000	859	86	6	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	991	99	1000	925	93	7	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Globe Eunice Yard



Work Order #: 523500

Lab Batch #: 986839

Date Analyzed: 01/29/2016

QC- Sample ID: 523498-024 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Project ID: 212C-MD-00374

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	18.8	50.0	63.5	89	80-120	

Lab Batch #: 986839

Date Analyzed: 01/29/2016

QC- Sample ID: 523500-007 S

Reporting Units: mg/kg

Date Prepared: 01/28/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	505	500	979	95	80-120	

Lab Batch #: 986872

Date Analyzed: 01/30/2016

QC- Sample ID: 523500-022 S

Reporting Units: mg/kg

Date Prepared: 01/29/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	4880	10000	13900	90	80-120	

Lab Batch #: 986872

Date Analyzed: 01/30/2016

QC- Sample ID: 523500-032 S

Reporting Units: mg/kg

Date Prepared: 01/29/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	3150	5000	7990	97	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: Globe Eunice Yard



Work Order #: 523500

Lab Batch #: 986875

Date Analyzed: 01/31/2016

QC- Sample ID: 523500-042 S

Reporting Units: mg/kg

Date Prepared: 01/29/2016

Batch #: 1

Project ID: 212C-MD-00374

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1620	2500	4240	105	80-120	

Lab Batch #: 986875

Date Analyzed: 01/31/2016

QC- Sample ID: 523500-062 S

Reporting Units: mg/kg

Date Prepared: 01/29/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	128	250	371	97	80-120	

Lab Batch #: 986876

Date Analyzed: 01/31/2016

QC- Sample ID: 523500-068 S

Reporting Units: mg/kg

Date Prepared: 01/29/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	4170	10000	14100	99	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Globe Eunice Yard

Work Order # : 523500

Project ID: 212C-MD-00374

Lab Batch ID: 986710

QC- Sample ID: 523500-024 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/28/2016

Date Prepared: 01/27/2016

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	827	83	997	880	88	6	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	999	808	81	997	946	95	16	70-135	35	

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

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

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

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

503500

CLIENT NAME:

SITE MANAGER:

PROJECT NO.:

PROJECT NAME:

LAB I.D. NUMBER

DATE

TIME

MATRIX
COMP.
GRAB

SAMPLE IDENTIFICATION
Lea Co. NM

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Vr Pd Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/624

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

PAGE: 1

OF: 3

ANALYSIS REQUEST
(Circle or Specify Method No.)

RELINQUISHED BY: (Signature) [Signature] Date: 1/22/10 Time: 1315

RECEIVED BY: (Signature) [Signature] Date: 1/22/10 Time: 1315

RELINQUISHED BY: (Signature) [Signature] Date: 1/22/10 Time: 1315

RECEIVED BY: (Signature) [Signature] Date: 1/22/10 Time: 1315

RECEIVING LABORATORY: _____ RECEIVED BY: (Signature) _____

ADDRESS: _____

CITY: _____ STATE: _____ PHONE: _____ ZIP: _____

SAMPLE CONDITION WHEN RECEIVED: 1.8°C

REMARKS: Rm deeper samples if TPH exceeds 100 mg/kg (BHL-1 Heavy Metals)

SAMPLED BY: (Print & Initial) CG Date: 1/22/10 Time: 1315

SAMPLE SHIPPED BY: (Circle) _____ Date: 1/22/10 Time: 1315

FED-EX _____

HAND DELIVERED _____

UPS _____

TETRA TECH CONTACT PERSON: _____

Results by: _____

RUSH Charges Authorized: _____

Yes _____ No _____

PAGE: 7 OF 8



(432) 682-4559 • Fax (432) 682-3946

503500

SITE MANAGER:

PROJECT NAME: 6710522

212C-MD-00374

Elmida

MATRIX
COMP.
GRAB

SAMPLE IDENTIFICATION

NONE

Major Anions/Cations, pH, TDS

ANALYSIS REQUEST
(Circle or Specify Method No.)

Date: 11/20/16
Time: _____
AIRBILL #: _____
OTHER: _____
Results by: _____

**RUSH Charges
Authorized:**

1

180

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

503500

CLIENT NAME:

Globe Energy

SITE MANAGER:

Joe Tavares

PROJECT NO.:

212C-MD-00574

PROJECT NAME:

Enure Guard

LAB I.D. NUMBER

DATE TIME

MATRIX COMP. GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE METHOD

BTEX 8021B

PH 8015 MOD TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Vr Pd Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC.MS Vol. 8240/8260/624

GC.MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

PAGE: 3

OF: 8

ANALYSIS REQUEST
(Circle or Specify Method No.)

RELINQUISHED BY: (Signature)
RELINQUISHED BY: (Signature)
RELINQUISHED BY: (Signature)

DATE: 1/22/10
DATE: 1/22/10
DATE: 1/22/10

RECEIVED BY: (Signature)
RECEIVED BY: (Signature)
RECEIVED BY: (Signature)

DATE: 1/22/10
DATE: 1/22/10
DATE: 1/22/10

RECEIVED BY: (Signature)
RECEIVED BY: (Signature)
RECEIVED BY: (Signature)

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DATE: 1/22/10
DATE: 1/22/10
DATE: 1/22/10

RECEIVED BY: (Signature)
RECEIVED BY: (Signature)
RECEIVED BY: (Signature)

DATE: 1/22/10
DATE: 1/22/10
DATE: 1/22/10

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

PHONE:

ZIP:

DATE:

TIME:

REMARKS:

REMARKS:

SAMPLE CONDITION WHEN RECEIVED:

1.8°C

REMARKS:

REMARKS:

REMARKS:

REMARKS:

REMARKS:

REMARKS:

REMARKS:

REMARKS:

PAGE: 6 OF 8



(432) 682-4559 • Fax (432) 682-3946

503500

SITE MANAGER:

PROJECT NAME: 671D/22

Erinice Garg

SAMPLE IDENTIFICATION

Major Anions/Cations, pH, TDS

OHIO

1/2/11

Results by:

USH Charges
Authorized:

Yes	No
-----	----

Please fill out all copies - Laboratory retains Yellow copy - Returns Original to patient



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 01/22/2016 02:05:00 PM

Work Order #: 523500

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : r8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Carley Owens
Carley Owens

Date: 01/25/2016

Checklist reviewed by:

Kelsey Brooks
Kelsey Brooks

Date: 01/25/2016

Analytical Report 537253

**for
Tetra Tech- Midland**

Project Manager: Ike Tavaréz

Eunice Yard

212C-MD-00374

27-SEP-16

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)

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Chain of Custody	16
Sample Receipt Conformance Report	17



27-SEP-16

Project Manager: **Ike Tavaréz**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **537253**
Eunice Yard
Project Address: Lea Co NM

Ike Tavaréz:

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) 537253. 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. 537253 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,

Kelsey Brooks

Project Manager

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Sample Cross Reference 537253



Tetra Tech- Midland, Midland, TX

Eunice Yard

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1 5'	S	09-20-16 00:00	- 5 ft	537253-001
MW-1 10'	S	09-20-16 00:00	- 10 ft	537253-002
MW-1 15'	S	09-20-16 00:00	- 15 ft	537253-003
MW-1 20'	S	09-20-16 00:00	- 20 ft	537253-004



CASE NARRATIVE



Client Name: Tetra Tech- Midland

Project Name: Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 537253

Report Date: 27-SEP-16
Date Received: 09/21/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



CASE NARRATIVE



Client Name: Tetra Tech- Midland

Project Name: Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 537253

Report Date: 27-SEP-16
Date Received: 09/21/2016

Batch: LBA-3000607 BTEX by EPA 8021B

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



Certificate of Analysis Summary 537253

Tetra Tech- Midland, Midland, TX

Project Name: Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co NM

Date Received in Lab: Wed Sep-21-16 04:35 pm

Report Date: 27-SEP-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	537253-001	537253-002	537253-003	537253-004		
	Field Id:	MW-1 5'	MW-1 10'	MW-1 15'	MW-1 20'		
	Depth:	5 ft	10 ft	15 ft	20 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Sep-20-16 00:00	Sep-20-16 00:00	Sep-20-16 00:00	Sep-20-16 00:00		
BTEX by EPA 8021B	Extracted:		Sep-22-16 16:30		Sep-22-16 16:30		
	Analyzed:		Sep-22-16 21:49		Sep-22-16 22:05		
	Units/RL:		mg/kg RL		mg/kg RL		
	Benzene		ND 0.00149		ND 0.00149		
	Toluene		ND 0.00199		ND 0.00198		
Ethylbenzene			ND 0.00199		ND 0.00198		
m,p-Xylenes			ND 0.00199		ND 0.00198		
o-Xylene			ND 0.00298		ND 0.00298		
Total Xylenes			ND 0.00199		ND 0.00198		
Total BTEX			ND 0.00149		ND 0.00149		
Inorganic Anions by EPA 300/300.1	Extracted:	Sep-26-16 14:00	Sep-26-16 14:00	Sep-26-16 14:00	Sep-26-16 14:00		
	Analyzed:	Sep-26-16 17:21	Sep-26-16 17:44	Sep-26-16 17:52	Sep-26-16 18:00		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	294 50.0	197 10.0	239 10.0	193 10.0		
TPH by SW 8015B	Extracted:		Sep-23-16 09:00		Sep-23-16 09:00		
	Analyzed:		Sep-23-16 10:41		Sep-23-16 11:53		
	Units/RL:		mg/kg RL		mg/kg RL		
	C6-C10 Gasoline Range Hydrocarbons		ND 15.0		ND 15.0		
	C10-C28 Diesel Range Organics		ND 15.0		21.9 15.0		
Total TPH			ND 15.0		21.9 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

Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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 5332 Blackberry Drive, San Antonio TX 78238
 1211 W Florida Ave, Midland, TX 79701
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Eunice Yard

Work Orders : 537253,

Lab Batch #: 3000607

Sample: 537253-002 / SMP

Project ID: 212C-MD-00374

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/22/16 21:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 3000607

Sample: 537253-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/22/16 22:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 3000616

Sample: 537253-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/23/16 10:41

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	54.6	49.9	109	70-135	

Lab Batch #: 3000616

Sample: 537253-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/23/16 11:53

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	54.6	50.0	109	70-135	

Lab Batch #: 3000607

Sample: 714109-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/22/16 17:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Eunice Yard

Work Orders : 537253,

Project ID: 212C-MD-00374

Lab Batch #: 3000616

Sample: 714121-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/23/16 09:04

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 3000607

Sample: 714109-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/22/16 16:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 3000616

Sample: 714121-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/23/16 09:29

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 3000607

Sample: 714109-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/22/16 16:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 3000616

Sample: 714121-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/23/16 09:54

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Eunice Yard

Work Orders : 537253,

Lab Batch #: 3000607

Sample: 537253-002 S / MS

Project ID: 212C-MD-00374

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/22/16 16:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 3000616

Sample: 537253-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/23/16 11:05

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.9	124	70-135	
o-Terphenyl	64.9	50.0	130	70-135	

Lab Batch #: 3000607

Sample: 537253-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/22/16 17:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 3000616

Sample: 537253-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/23/16 11:29

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	63.7	50.0	127	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



BS / BSD Recoveries



Project Name: Eunice Yard

Work Order #: 537253

Project ID: 212C-MD-00374

Analyst: PJB

Date Prepared: 09/22/2016

Date Analyzed: 09/22/2016

Lab Batch ID: 3000607

Sample: 714109-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00150	0.100	0.0958	96	0.100	0.0919	92	4	70-130	35	
Toluene	<0.00200	0.100	0.0979	98	0.100	0.0936	94	4	70-130	35	
Ethylbenzene	<0.00200	0.100	0.100	100	0.100	0.0968	97	3	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.205	103	0.200	0.200	100	2	70-135	35	
o-Xylene	<0.00300	0.100	0.100	100	0.100	0.0976	98	2	71-133	35	

Analyst: MNR

Date Prepared: 09/26/2016

Date Analyzed: 09/26/2016

Lab Batch ID: 3000774

Sample: 714198-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<10.0	250	241	96	250	240	96	0	90-110	20	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Eunice Yard

Work Order #: 537253

Project ID: 212C-MD-00374

Analyst: ARM

Date Prepared: 09/23/2016

Date Analyzed: 09/23/2016

Lab Batch ID: 3000616

Sample: 714121-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	882	88	1000	874	87	1	70-135	35	
C10-C28 Diesel Range Organics	<15.0	1000	899	90	1000	916	92	2	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Eunice Yard

Work Order #: 537253

Project ID: 212C-MD-00374

Lab Batch ID: 3000607

QC- Sample ID: 537253-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/22/2016

Date Prepared: 09/22/2016

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0969	97	0.0998	0.0904	91	7	70-130	35	
Toluene	<0.00200	0.100	0.0985	99	0.0998	0.0922	92	7	70-130	35	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0998	0.0953	95	7	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.210	105	0.200	0.196	98	7	70-135	35	
o-Xylene	<0.00300	0.100	0.103	103	0.0998	0.0970	97	6	71-133	35	

Lab Batch ID: 3000774

QC- Sample ID: 537235-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/26/2016

Date Prepared: 09/26/2016

Analyst: MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	253	1250	1550	104	1250	1580	106	2	90-110	20	

Lab Batch ID: 3000774

QC- Sample ID: 537253-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/26/2016

Date Prepared: 09/26/2016

Analyst: MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	294	1250	1590	104	1250	1540	100	3	90-110	20	

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

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

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

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



Form 3 - MS / MSD Recoveries



Project Name: Eunice Yard

Work Order # : 537253

Project ID: 212C-MD-00374

Lab Batch ID: 3000616

QC- Sample ID: 537253-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/23/2016

Date Prepared: 09/23/2016

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	959	96	1000	975	98	2	70-135	35	
C10-C28 Diesel Range Organics	<15.0	999	977	98	1000	978	98	0	70-135	35	

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

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

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

537253

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: <i>Gibbs Energy Services</i>	PROJECT NAME: <i>Eunice yard</i>	SITE MANAGER: <i>Ike Tovar</i>	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD				
					HCL	HNO3	ICE	NONE	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION <i>Loa Co. NM</i>			
	2010								
	9/20		S		X	MW-1	5'		
	9/20		S		X	MW-1	10'		
	9/20		S		X	MW-1	15'		
	9/20		S		X	MW-1	20'		

RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 9/20/10	TIME: 10:35
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE:	TIME:
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE:	TIME:
RECEIVING LABORATORY: <i>Xerox</i>	RECEIVED BY: (Signature)	DATE:	TIME:
CITY: _____	STATE: _____	ZIP: _____	DATE: _____
CONTACT: _____	PHONE: _____	REMARKS:	

DATE: 9/20/10
TIME: 10:35
AIRBILL #: _____
OTHER: _____
RESULTS BY: *Jeanne Fitch*
RUSH Charges Authorized: Yes ☒ No ☐
51°C

Client: Tetra Tech- Midland

Date/ Time Received: 09/21/2016 04:35:00 PM

Work Order #: 537253

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	Yes
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer

Date: 09/22/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 09/22/2016

Analytical Report 537440

**for
Tetra Tech- Midland**

Project Manager: Ike Tavaréz

Eunice Yard

212C-MD-00374

03-OCT-16

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)

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03-OCT-16

Project Manager: **Ike Tavaréz**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **537440**
Eunice Yard
Project Address: Lea Co NM

Ike Tavaréz:

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) 537440. 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. 537440 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,

Kelsey Brooks

Project Manager

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Sample Cross Reference 537440



Tetra Tech- Midland, Midland, TX

Eunice Yard

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	09-22-16 10:22		537440-001



CASE NARRATIVE



Client Name: Tetra Tech- Midland

Project Name: Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 537440

Report Date: 03-OCT-16
Date Received: 09/23/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 537440

Tetra Tech- Midland, Midland, TX

Project Name: Eunice Yard



Project Id: 212C-MD-00374

Contact: Ike Tavarez

Project Location: Lea Co NM

Date Received in Lab: Fri Sep-23-16 11:55 am

Report Date: 03-OCT-16

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	537440-001					
	Field Id:	MW-1					
	Depth:						
	Matrix:	WATER					
	Sampled:	Sep-22-16 10:22					
BTEX by EPA 8021B	Extracted:	Sep-26-16 18:00					
	Analyzed:	Sep-27-16 15:49					
	Units/RL:	mg/L RL					
Benzene		ND 0.00200					
Toluene		ND 0.00150					
Ethylbenzene		ND 0.00200					
m,p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00200					
Total Xylenes		ND 0.00200					
Total BTEX		ND 0.00150					
Inorganic Anions by EPA 300	Extracted:	Sep-30-16 18:07					
	Analyzed:	Sep-30-16 18:07					
	Units/RL:	mg/L RL					
Chloride		1610 10.0					

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

Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Eunice Yard

Work Orders : 537440,

Lab Batch #: 3000832

Sample: 537440-001 / SMP

Project ID: 212C-MD-00374

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 15:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 3000832

Sample: 714262-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 05:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 3000832

Sample: 714262-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 04:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3000832

Sample: 714262-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 04:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 3000832

Sample: 537482-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 04:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Eunice Yard

Work Orders : 537440,

Lab Batch #: 3000832

Sample: 537482-001 SD / MSD

Project ID: 212C-MD-00374

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/27/16 04:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



BS / BSD Recoveries



Project Name: Eunice Yard

Work Order #: 537440

Project ID: 212C-MD-00374

Analyst: PJB

Date Prepared: 09/26/2016

Date Analyzed: 09/27/2016

Lab Batch ID: 3000832

Sample: 714262-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.108	108	0.100	0.104	104	4	70-125	25	
Toluene	<0.00150	0.100	0.108	108	0.100	0.102	102	6	70-125	25	
Ethylbenzene	<0.00200	0.100	0.110	110	0.100	0.103	103	7	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.227	114	0.200	0.211	106	7	70-131	25	
o-Xylene	<0.00200	0.100	0.111	111	0.100	0.103	103	7	71-133	25	

Analyst: MNR

Date Prepared: 09/30/2016

Date Analyzed: 09/30/2016

Lab Batch ID: 3001231

Sample: 714435-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.500	25.0	26.3	105	25.0	26.3	105	0	90-110	20	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Eunice Yard

Work Order #: 537440

Project ID: 212C-MD-00374

Lab Batch ID: 3000832

QC- Sample ID: 537482-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 09/27/2016

Date Prepared: 09/26/2016

Analyst: PJB

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.103	103	0.100	0.0994	99	4	70-125	25	
Toluene	<0.00150	0.100	0.103	103	0.100	0.0977	98	5	70-125	25	
Ethylbenzene	<0.00200	0.100	0.106	106	0.100	0.0997	100	6	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.216	108	0.200	0.204	102	6	70-131	25	
o-Xylene	<0.00200	0.100	0.107	107	0.100	0.101	101	6	71-133	25	

Lab Batch ID: 3001231

QC- Sample ID: 537440-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 09/30/2016

Date Prepared: 09/30/2016

Analyst: MNR

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1610	500	2120	102	500	2110	100	0	90-110	20	

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

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

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



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 09/23/2016 11:55:00 AM

Work Order #: 537440

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Jessica Kramer

Jessica Kramer

Date: 09/23/2016

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 09/23/2016

Analytical Report 547863

**for
Tetra Tech- Midland**

Project Manager: Clair Gonzales

Globe-Eunice Yard

212C-MD-00374

06-MAR-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)



06-MAR-17

Project Manager: **Clair Gonzales**

Tetra Tech- Midland

4000 N. Big Spring Suite 401

Midland, TX 79705

Reference: XENCO Report No(s): **547863**

Globe-Eunice Yard

Project Address: Lea Co NM

Clair Gonzales:

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) 547863. 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. 547863 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,

Kelsey Brooks

Project Manager

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Tetra Tech- Midland, Midland, TX

Globe-Eunice Yard

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH 20 North Sidewall	S	03-01-17 00:00	N/A	547863-001
AH 20 South Sidewall	S	03-01-17 00:00	N/A	547863-002
AH 22 North West Sidewall	S	03-01-17 00:00	N/A	547863-003
AH17 West Sidewall	S	03-01-17 00:00	N/A	547863-004
AH17 Bottom Hole 2' BEB	S	03-01-17 00:00	- 2 ft	547863-005
BH 8 North Sidewall	S	03-01-17 00:00	N/A	547863-006
BH 8 West Sidewall	S	03-01-17 00:00	N/A	547863-007
BH 8 South Sidewall	S	03-01-17 00:00	N/A	547863-008
AH 19 West Sidewall	S	03-01-17 00:00	N/A	547863-009
BH 7 Bottom North (1.5 BEB)	S	03-03-17 00:00	N/A	547863-010
BH 7 South West Sidewall	S	03-03-17 00:00	N/A	547863-011
BH 7 North West Sidewall	S	03-03-17 00:00	N/A	547863-012
BH 7 South Sidewall	S	03-03-17 00:00	N/A	547863-013
BH 7 North Sidewall	S	03-03-17 00:00	N/A	547863-014
BH 7 North East Sidewall	S	03-03-17 00:00	N/A	547863-015



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Globe-Eunice Yard

Project ID: 212C-MD-00374
Work Order Number(s): 547863

Report Date: 06-MAR-17
Date Received: 03/03/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 547863

Tetra Tech- Midland, Midland, TX

Project Name: Globe-Eunice Yard



Project Id: 212C-MD-00374

Contact: Clair Gonzales

Project Location: Lea Co NM

Date Received in Lab: Fri Mar-03-17 03:50 pm

Report Date: 06-MAR-17

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	547863-001	547863-002	547863-003	547863-004	547863-005	547863-006
	<i>Field Id:</i>	AH 20 North Sidewall	AH 20 South Sidewall	AH 22 North West Sidewall	AH17 West Sidewall	AH17 Bottom Hole 2' BEB	BH 8 North Sidewall
	<i>Depth:</i>					2 ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-01-17 00:00	Mar-01-17 00:00	Mar-01-17 00:00	Mar-01-17 00:00	Mar-01-17 00:00	Mar-01-17 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>				Mar-03-17 16:21	Mar-03-17 16:21	
	<i>Analyzed:</i>				Mar-03-17 20:27	Mar-03-17 20:49	
	<i>Units/RL:</i>				mg/kg RL	mg/kg RL	
Chloride					152 4.96	76.2 4.96	
TPH By SW8015 Mod	<i>Extracted:</i>	Mar-03-17 17:00	Mar-03-17 17:00	Mar-03-17 17:00	Mar-03-17 17:00		Mar-03-17 17:00
	<i>Analyzed:</i>	Mar-04-17 14:23	Mar-04-17 14:41	Mar-04-17 15:00	Mar-04-17 15:20		Mar-04-17 01:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0		ND 15.0
C10-C28 Diesel Range Organics		1680 15.0	1610 15.0	375 15.0	952 15.0		ND 15.0
C28-C35 Oil Range Hydrocarbons		395 15.0	380 15.0	108 15.0	209 15.0		ND 15.0
Total TPH		2080 15.0	1990 15.0	483 15.0	1160 15.0		ND 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.

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 547863

Tetra Tech- Midland, Midland, TX

Project Name: Globe-Eunice Yard



Project Id: 212C-MD-00374

Contact: Clair Gonzales

Project Location: Lea Co NM

Date Received in Lab: Fri Mar-03-17 03:50 pm

Report Date: 06-MAR-17

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	547863-007	547863-008	547863-009	547863-010	547863-011	547863-012
	<i>Field Id:</i>	BH 8 West Sidewall	BH 8 South Sidewall	AH 19 West Sidewall	BH 7 Bottom North (1.5 BEI	BH 7 South West Sidewall	BH 7 North West Sidewall
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-01-17 00:00	Mar-01-17 00:00	Mar-01-17 00:00	Mar-03-17 00:00	Mar-03-17 00:00	Mar-03-17 00:00
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>				Mar-03-17 16:21	Mar-03-17 16:21	Mar-03-17 16:21
	<i>Analyzed:</i>				Mar-03-17 20:57	Mar-03-17 21:04	Mar-03-17 21:11
	<i>Units/RL:</i>				mg/kg RL	mg/kg RL	mg/kg RL
Chloride					54.4 4.87	6.61 4.95	6.01 4.89
TPH By SW8015 Mod	<i>Extracted:</i>	Mar-03-17 17:00	Mar-03-17 17:00	Mar-03-17 17:00			
	<i>Analyzed:</i>	Mar-04-17 01:49	Mar-04-17 02:09	Mar-04-17 15:39			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0			
C10-C28 Diesel Range Organics		308 15.0	178 15.0	808 15.0			
C28-C35 Oil Range Hydrocarbons		62.2 15.0	30.5 15.0	218 15.0			
Total TPH		370 15.0	209 15.0	1030 15.0			

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 547863

Tetra Tech- Midland, Midland, TX

Project Name: Globe-Eunice Yard



Project Id: 212C-MD-00374

Contact: Clair Gonzales

Project Location: Lea Co NM

Date Received in Lab: Fri Mar-03-17 03:50 pm

Report Date: 06-MAR-17

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	547863-013	547863-014	547863-015			
	<i>Field Id:</i>	BH 7 South Sidewall	BH 7 North Sidewall	BH 7 North East Sidewall			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Mar-03-17 00:00	Mar-03-17 00:00	Mar-03-17 00:00			
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Mar-03-17 16:21	Mar-03-17 16:21	Mar-03-17 16:21			
	<i>Analyzed:</i>	Mar-03-17 21:33	Mar-03-17 21:41	Mar-03-17 21:48			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		5.47 4.97	68.7 4.89	12.4 4.99			

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Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Globe-Eunice Yard

Work Orders : 547863, 547863

Project ID: 212C-MD-00374

Lab Batch #: 3011670

Sample: 547863-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 01:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	99.7	95	70-135	
o-Terphenyl	48.8	49.9	98	70-135	

Lab Batch #: 3011670

Sample: 547863-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 01:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.9	98	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

Lab Batch #: 3011670

Sample: 547863-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 02:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	52.2	49.9	105	70-135	

Lab Batch #: 3011670

Sample: 547863-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 14:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 3011670

Sample: 547863-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 14:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	99.8	92	70-135	
o-Terphenyl	43.0	49.9	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe-Eunice Yard

Work Orders : 547863, 547863

Project ID: 212C-MD-00374

Lab Batch #: 3011670

Sample: 547863-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 15:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.5	99.8	91	70-135	
o-Terphenyl	47.2	49.9	95	70-135	

Lab Batch #: 3011670

Sample: 547863-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 15:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	52.1	49.9	104	70-135	

Lab Batch #: 3011670

Sample: 547863-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/04/17 15:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	53.5	49.9	107	70-135	

Lab Batch #: 3011670

Sample: 721059-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/03/17 19:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 3011670

Sample: 721059-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/03/17 19:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51.4	50.0	103	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Globe-Eunice Yard

Work Orders : 547863, 547863

Project ID: 212C-MD-00374

Lab Batch #: 3011670

Sample: 721059-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/03/17 19:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	100	99	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



BS / BSD Recoveries



Project Name: Globe-Eunice Yard

Work Order #: 547863, 547863

Project ID: 212C-MD-00374

Analyst: MGO

Date Prepared: 03/03/2017

Date Analyzed: 03/03/2017

Lab Batch ID: 3011647

Sample: 721007-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<4.91	246	254	103	246	252	102	1	90-110	20	

Analyst: ARM

Date Prepared: 03/03/2017

Date Analyzed: 03/03/2017

Lab Batch ID: 3011670

Sample: 721059-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1080	108	1000	1040	104	4	70-135	35	
C10-C28 Diesel Range Organics	<15.0	1000	999	100	1000	954	95	5	70-135	35	

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

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Globe-Eunice Yard

Work Order # : 547863

Project ID: 212C-MD-00374

Lab Batch ID: 3011647

QC- Sample ID: 547863-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03/03/2017

Date Prepared: 03/03/2017

Analyst: MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	152	248	408	103	248	408	103	0	90-110	20	

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

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

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

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

547063

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible]

2 OF 2



Chair Con Zakes

ECT NAME: Class Eunice Lord

Les Co Nm

SAMPLE IDENTIFICATION

Major Anions/Cations, pH, TDS

ANALYSIS REQUEST
(Circle or Specify Method No.)Final 1.000



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 03/03/2017 03:50:00 PM

Work Order #: 547863

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Jessica Kramer

Jessica Kramer

Date: 03/03/2017

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 03/03/2017

March 13, 2017

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: GLOBE EUNICE YARD

Enclosed are the results of analyses for samples received by the laboratory on 03/08/17 14:30.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH 20 NORTH SIDEWALL	H700600-01	Soil	08-Mar-17 00:00	08-Mar-17 14:30
AH 20 SOUTH SIDEWALL	H700600-02	Soil	08-Mar-17 00:00	08-Mar-17 14:30
AH 22 NORTH WEST SIDEWALL	H700600-03	Soil	08-Mar-17 00:00	08-Mar-17 14:30
AH 17 WEST SIDEWALL	H700600-04	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 8 SOUTH SIDEWALL	H700600-05	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 8 WEST SIDEWALL	H700600-06	Soil	08-Mar-17 00:00	08-Mar-17 14:30
AH 19 WEST SIDEWALL	H700600-07	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 12 NORTH SIDEWALL	H700600-08	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 12 WEST SIDEWALL	H700600-09	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 7 SOUTH EAST SIDEWALL	H700600-10	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 7 SOUTH SIDEWALL	H700600-11	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 7 SOUTH BOTTOM HOLE 5.5	H700600-12	Soil	08-Mar-17 00:00	08-Mar-17 14:30
BH 11 BOTTOM HOLE 2'	H700600-13	Soil	08-Mar-17 00:00	08-Mar-17 14:30

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**AH 20 NORTH SIDEWALL
H700600-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	133		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	175		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			91.8 %	25.1-158		7030810	MS	09-Mar-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			91.8 %	26.8-170		7030810	MS	09-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**AH 20 SOUTH SIDEWALL****H700600-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	422		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	478		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctane			98.6 %	25.1-158		7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			99.5 %	26.8-170		7030810	MS	09-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

AH 22 NORTH WEST SIDEWALL

H700600-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctane			95.5 %	25.1-158		7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			90.6 %	26.8-170		7030810	MS	08-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**AH 17 WEST SIDEWALL****H700600-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	161		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	191		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>90.0 %</i>	<i>25.1-158</i>		<i>7030810</i>	<i>MS</i>	<i>09-Mar-17</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>92.3 %</i>	<i>26.8-170</i>		<i>7030810</i>	<i>MS</i>	<i>09-Mar-17</i>	<i>8015B</i>	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

BH 8 SOUTH SIDEWALL
H700600-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctane			95.4 %	25.1-158		7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			91.1 %	26.8-170		7030810	MS	08-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**BH 8 WEST SIDEWALL****H700600-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	37.4		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	68.3		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctane			52.0 %	25.1-158		7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			52.1 %	26.8-170		7030810	MS	09-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

AH 19 WEST SIDEWALL

H700600-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	113		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	162		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctane			76.3 %	25.1-158		7030810	MS	09-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			78.8 %	26.8-170		7030810	MS	09-Mar-17	8015B	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

BH 12 NORTH SIDEWALL

H700600-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
DRO >C10-C28	14.6		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
EXT DRO >C28-C36	17.1		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctane			96.8 %	25.1-158		7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			89.7 %	26.8-170		7030810	MS	08-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

BH 12 WEST SIDEWALL
H700600-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctane			89.1 %	25.1-158		7030810	MS	08-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			80.5 %	26.8-170		7030810	MS	08-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**BH 7 SOUTH EAST SIDEWALL****H700600-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	192		16.0	mg/kg	4	7030814	AC	09-Mar-17	4500-Cl-B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**BH 7 SOUTH SIDEWALL****H700600-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	144		16.0	mg/kg	4	7030814	AC	09-Mar-17	4500-Cl-B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
13-Mar-17 09:33**BH 7 SOUTH BOTTOM HOLE 5.5****H700600-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	144		16.0	mg/kg	4	7030815	AC	09-Mar-17	4500-Cl-B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

BH 11 BOTTOM HOLE 2'

H700600-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride	112		16.0	mg/kg	4	7030815	AC	09-Mar-17	4500-Cl-B	QR-03
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Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
DRO >C10-C28	185		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	
EXT DRO >C28-C36	246		10.0	mg/kg	1	7030810	MS	09-Mar-17	8015B	

Surrogate: 1-Chlorooctane 72.1 % 25.1-158 7030810 MS 09-Mar-17 8015B

Surrogate: 1-Chlorooctadecane 82.4 % 26.8-170 7030810 MS 09-Mar-17 8015B

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705

 Project: GLOBE EUNICE YARD
 Project Number: 212C-MD-00374
 Project Manager: IKE TAVAREZ
 Fax To: (432) 682-3946

 Reported:
 13-Mar-17 09:33

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 7030814 - 1:4 DI Water
Blank (7030814-BLK1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride ND 16.0 mg/kg

LCS (7030814-BS1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride 448 16.0 mg/kg 400 112 80-120

LCS Dup (7030814-BSD1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride 432 16.0 mg/kg 400 108 80-120 3.64 20

Batch 7030815 - 1:4 DI Water
Blank (7030815-BLK1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride ND 16.0 mg/kg

LCS (7030815-BS1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride 464 16.0 mg/kg 400 116 80-120

LCS Dup (7030815-BSD1)

Prepared: 08-Mar-17 Analyzed: 09-Mar-17

Chloride 448 16.0 mg/kg 400 112 80-120 3.51 20

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
13-Mar-17 09:33

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7030810 - General Prep - Organics

Blank (7030810-BLK1)

Prepared & Analyzed: 08-Mar-17

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	48.1		mg/kg	50.0		96.2	25.1-158			
Surrogate: 1-Chlorooctadecane	48.9		mg/kg	50.0		97.8	26.8-170			

LCS (7030810-BS1)

Prepared & Analyzed: 08-Mar-17

GRO C6-C10	193	10.0	mg/kg	200		96.6	78.6-112			
DRO >C10-C28	198	10.0	mg/kg	200		99.0	76.7-124			
Total TPH C6-C28	391	10.0	mg/kg	400		97.8	78.5-117			
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	25.1-158			
Surrogate: 1-Chlorooctadecane	49.3		mg/kg	50.0		98.6	26.8-170			

LCS Dup (7030810-BSD1)

Prepared & Analyzed: 08-Mar-17

GRO C6-C10	191	10.0	mg/kg	200		95.6	78.6-112	1.04	13	
DRO >C10-C28	196	10.0	mg/kg	200		98.2	76.7-124	0.803	15.5	
Total TPH C6-C28	388	10.0	mg/kg	400		96.9	78.5-117	0.922	13.6	
Surrogate: 1-Chlorooctane	53.7		mg/kg	50.0		107	25.1-158			
Surrogate: 1-Chlorooctadecane	48.2		mg/kg	50.0		96.4	26.8-170			

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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. Keene, Lab Director/Quality Manager

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

Major Anions/Cations, pH, TDS

OF:

ANALYSIS REQUEST
(Circle or Specify Method No.)

Page 19 of 20

[illegible]

OF: 2

ANALYSIS REQUEST
(Circle or Specify Method No.)Page 20 of 20

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

March 16, 2017

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: GLOBE EUNICE YARD

Enclosed are the results of analyses for samples received by the laboratory on 03/15/17 14:10.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 2 WEST SIDEWALL	H700685-01	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 2 EAST SIDEWALL	H700685-02	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 1 EAST SIDEWALL	H700685-03	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 1 WEST SIDEWALL	H700685-04	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 1 SOUTH SIDEWALL	H700685-05	Soil	15-Mar-17 00:00	15-Mar-17 14:10
BH 3 WEST SIDEWALL	H700685-06	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 3 EAST SIDEWALL	H700685-07	Soil	14-Mar-17 00:00	15-Mar-17 14:10
BH 5 SOUTH SIDEWALL	H700685-08	Soil	15-Mar-17 00:00	15-Mar-17 14:10
BH 6 SOUTH SIDEWALL	H700685-09	Soil	15-Mar-17 00:00	15-Mar-17 14:10
AH 9 SOUTH SIDEWALL	H700685-10	Soil	14-Mar-17 00:00	15-Mar-17 14:10
AH 20 NORTH SIDEWALL	H700685-11	Soil	10-Mar-17 00:00	15-Mar-17 14:10
AH 20 SOUTH SIDEWALL	H700685-12	Soil	10-Mar-17 00:00	15-Mar-17 14:10
AH 19 WEST SIDEWALL	H700685-13	Soil	10-Mar-17 00:00	15-Mar-17 14:10
AH 17 WEST SIDEWALL	H700685-14	Soil	10-Mar-17 00:00	15-Mar-17 14:10
BH 11 BOTTOM HOLE 2.5'	H700685-15	Soil	10-Mar-17 00:00	15-Mar-17 14:10
AH 9 WEST SIDEWALL	H700685-16	Soil	14-Mar-17 00:00	15-Mar-17 14:10

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 2 WEST SIDEWALL
H700685-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	48.0		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 2 EAST SIDEWALL****H700685-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5840		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 1 EAST SIDEWALL****H700685-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4160		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 1 WEST SIDEWALL****H700685-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	48.0		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 1 SOUTH SIDEWALL****H700685-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	192		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 3 WEST SIDEWALL****H700685-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			79.2 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			84.8 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 3 EAST SIDEWALL****H700685-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			73.9 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			76.9 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 5 SOUTH SIDEWALL****H700685-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	96.0		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**BH 6 SOUTH SIDEWALL****H700685-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	144		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**AH 9 SOUTH SIDEWALL****H700685-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	32.0		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
16-Mar-17 14:18

AH 20 NORTH SIDEWALL

H700685-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<50.0		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	311		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	370		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			51.2 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			97.6 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
16-Mar-17 14:18

AH 20 SOUTH SIDEWALL

H700685-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<50.0		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	170		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	219		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			69.3 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			104 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
16-Mar-17 14:18

AH 19 WEST SIDEWALL H700685-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<50.0		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	239		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	309		50.0	mg/kg	5	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			65.5 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			110 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**AH 17 WEST SIDEWALL****H700685-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			74.0 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			79.0 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705

 Project: GLOBE EUNICE YARD
 Project Number: 212C-MD-00374
 Project Manager: IKE TAVAREZ
 Fax To: (432) 682-3946

 Reported:
 16-Mar-17 14:18

BH 11 BOTTOM HOLE 2.5'
H700685-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
DRO >C10-C28	141		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
EXT DRO >C28-C36	171		10.0	mg/kg	1	7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctane			97.7 %	25.1-158		7031603	MS	16-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			120 %	26.8-170		7031603	MS	16-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
16-Mar-17 14:18**AH 9 WEST SIDEWALL****H700685-16 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	7031610	AC	16-Mar-17	4500-Cl-B	
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Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705

 Project: GLOBE EUNICE YARD
 Project Number: 212C-MD-00374
 Project Manager: IKE TAVAREZ
 Fax To: (432) 682-3946

 Reported:
 16-Mar-17 14:18

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 7031610 - 1:4 DI Water									
Blank (7031610-BLK1)					Prepared & Analyzed: 16-Mar-17				
Chloride	ND	16.0	mg/kg						
LCS (7031610-BS1)					Prepared & Analyzed: 16-Mar-17				
Chloride	416	16.0	mg/kg	400	104	80-120			
LCS Dup (7031610-BSD1)					Prepared & Analyzed: 16-Mar-17				
Chloride	416	16.0	mg/kg	400	104	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
16-Mar-17 14:18

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7031603 - General Prep - Organics

Blank (7031603-BLK1)

Prepared & Analyzed: 16-Mar-17

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	52.3		mg/kg	50.0		105	25.1-158			
Surrogate: 1-Chlorooctadecane	56.0		mg/kg	50.0		112	26.8-170			

LCS (7031603-BS1)

Prepared & Analyzed: 16-Mar-17

GRO C6-C10	189	10.0	mg/kg	200		94.4	78.6-112			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	76.7-124			
Total TPH C6-C28	387	10.0	mg/kg	400		96.9	78.5-117			
Surrogate: 1-Chlorooctane	55.0		mg/kg	50.0		110	25.1-158			
Surrogate: 1-Chlorooctadecane	56.3		mg/kg	50.0		113	26.8-170			

LCS Dup (7031603-BSD1)

Prepared & Analyzed: 16-Mar-17

GRO C6-C10	184	10.0	mg/kg	200		92.1	78.6-112	2.46	13	
DRO >C10-C28	193	10.0	mg/kg	200		96.7	76.7-124	2.69	15.5	
Total TPH C6-C28	378	10.0	mg/kg	400		94.4	78.5-117	2.58	13.6	
Surrogate: 1-Chlorooctane	53.4		mg/kg	50.0		107	25.1-158			
Surrogate: 1-Chlorooctadecane	54.8		mg/kg	50.0		110	26.8-170			

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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. Keene, Lab Director/Quality Manager

ANALYSIS REQUEST
(Circle or Specify Method No.)

OF:



**1910 N. Big Spring St.
Midland, Texas 79705**
(432) 682-4559 • Fax (432) 682-3946

Please fill out all copies - Laboratory retains Yellow copy - return to S

Breast Cancer from field T2 - 2/15/17

March 22, 2017

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: GLOBE EUNICE YARD

Enclosed are the results of analyses for samples received by the laboratory on 03/21/17 9:00.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
22-Mar-17 09:29

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH 20 NORTH SIDEWALL	H700728-01	Soil	20-Mar-17 00:00	21-Mar-17 09:00
AH 20 SOUTH SIDEWALL	H700728-02	Soil	20-Mar-17 00:00	21-Mar-17 09:00
BH 11 BOTTOM HOLE 3'	H700728-03	Soil	20-Mar-17 00:00	21-Mar-17 09:00

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
22-Mar-17 09:29**AH 20 NORTH SIDEWALL
H700728-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctane			89.3 %	25.1-158		7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			98.3 %	26.8-170		7032102	MS	21-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
22-Mar-17 09:29**AH 20 SOUTH SIDEWALL****H700728-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctane			82.7 %	25.1-158		7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			86.1 %	26.8-170		7032102	MS	21-Mar-17	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946Reported:
22-Mar-17 09:29**BH 11 BOTTOM HOLE 3'**
H700728-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctane			84.7 %	25.1-158		7032102	MS	21-Mar-17	8015B	
Surrogate: 1-Chlorooctadecane			89.4 %	26.8-170		7032102	MS	21-Mar-17	8015B	

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Analytical Results For:

TETRA TECH
1910 N. BIG SPRING STREET
MIDLAND TX, 79705

Project: GLOBE EUNICE YARD
Project Number: 212C-MD-00374
Project Manager: IKE TAVAREZ
Fax To: (432) 682-3946

Reported:
22-Mar-17 09:29

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7032102 - General Prep - Organics

Blank (7032102-BLK1)

Prepared & Analyzed: 21-Mar-17

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.0		mg/kg	50.0		90.0	25.1-158			
Surrogate: 1-Chlorooctadecane	45.7		mg/kg	50.0		91.3	26.8-170			

LCS (7032102-BS1)

Prepared & Analyzed: 21-Mar-17

GRO C6-C10	199	10.0	mg/kg	200		99.3	78.6-112			
DRO >C10-C28	204	10.0	mg/kg	200		102	76.7-124			
Total TPH C6-C28	402	10.0	mg/kg	400		101	78.5-117			
Surrogate: 1-Chlorooctane	51.7		mg/kg	50.0		103	25.1-158			
Surrogate: 1-Chlorooctadecane	49.8		mg/kg	50.0		99.5	26.8-170			

LCS Dup (7032102-BSD1)

Prepared & Analyzed: 21-Mar-17

GRO C6-C10	201	10.0	mg/kg	200		100	78.6-112	1.21	13	
DRO >C10-C28	208	10.0	mg/kg	200		104	76.7-124	2.04	15.5	
Total TPH C6-C28	409	10.0	mg/kg	400		102	78.5-117	1.63	13.6	
Surrogate: 1-Chlorooctane	52.7		mg/kg	50.0		105	25.1-158			
Surrogate: 1-Chlorooctadecane	51.2		mg/kg	50.0		102	26.8-170			

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RPD	Relative Percent Difference
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