

PRELIMINARY RESULTS

May
2018

State of New Mexico Energy, Minerals, and Natural Resources Oil Conservation Division (OCD) Delineation Report

Prepared For
Venable's Construction
West Texas / New Mexico Division
1315 West County Road 114
Midland, TX 79706

Case Number: 1RP-4935

Subject Property
North Hobbs Satellite 31 East CO2
32.71476°, -103.17909°

Prepared By:



Civil · Environmental · Safety
Texas Registered Engineering Firm F-9992
Texas Licensed Survey Firm 10193863
Texas Licensed Asbestos Consultant Agency 100535
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1.0 Report Summary

A release of produced water and hydrocarbon mix occurred on the North Hobbs Satellite 31 East CO2 facility located in Unit J, Section 29, Township 18 South, Range 38 East, in Lea County, Hobbs, New Mexico on January 9, 2018, with the latitude of 32.714805° and Longitude of -103.178939°. The release was caused by a 3rd-party line strike that resulted in the release of 150 barrels (bbls) of produced water and 10 bbls of oil. A volume of 150 bbls was recovered by vacuum truck shortly after the release occurred, to remedy the situation. The release's surficial flow was contained by the excavated trench. Overspray from the release was directed by strong winds to the northwest during the release. This is evident by light topsoil staining shown in appendices photo log. Stockpiles of material that had been excavated during construction of the trench had covered the ground next to the trench. The stockpiles prevented overspray from impacting the grounds natural surface near the opening of the trench. A natural depression located where overspray had contacted the ground surface allowed liquids to collect and be contained. Pooled liquids in the depression were then removed by vacuum truck shortly after the release had occurred. Staining is present where overspray had contacted the surface. This area is shown in appendix D. The Site's surficial runoff gradient is to the east and southeast, with a gentle slope of approximately 10-15 ft. to the mile. Site elevation indicates a gentle drop of elevation from 3,650 ft. to the northwest to an elevation of 3,639 ft. to the southwest.

On Wednesday March 28, 2018, the first round of sampling was conducted. Four samples were collected (SB01--SB04, Lab Id 580850-001, 580850-002, 580850-003, and 580850-004) from accessible sampling points inside the approximate 380 linear foot excavation trench. Samples were collected from 0-6 in. below ground surface (bgs) from the bottom of the excavation. The first figure in the appendices indicates the locations of the sampling locations. Samples were collected and sent to Xenco Laboratories, a certified testing lab located in Lubbock, Texas. Xenco conducted all analytical testing for this case. When preliminary results were made available from the week prior, it was determined that an additional sample was needed from inside the trench due to elevated TPH levels where sample SB03 580850-003 had been taken. After further visual and olfactory investigation inside the trench, an additional grab sample labeled SB-3C (Lab Id 581204-055) was collected April 3, 2018 from a depth of 14-16 ft. bgs by use of excavator. Soil from excavation was placed in lined roll-off containers left on-site to await approval for disposal. These test results are found on the first page of the Testing Summary in the appendices.

On April 2, 2018, the second round of sampling was conducted. Additional samples were taken from seven soil borings (SB01-SB07) to be analyzed. The second figure in appendix B depicts the area of additional sample locations. These test results are found beginning on the second page of the Testing Summary in the appendices.

On April 3, 2018, the third round of sampling was conducted. Additional samples were taken from nine soil borings (SB08-SB09, SB11-17,) and one grab sample from inside the trench (SB-3C) to be analyzed. The second figure in appendix B depicts the area of additional sample locations. These test results are found on the second page of the Testing Summary in the appendices.

Sample SB-3 taken March 28, 2018 indicated elevated levels of TPH in the trench bottom. A second grab sample SB-3C taken April 3, 2018 was sampled 14-16 ft. bgs measured from the opening or top of the excavation. Sample SB-3C analytical results showed TPH concentration to be under regulatory limits. Analytical results for SB-3C are found in appendix A.

Additionally, the Site is to be scrapped, contoured and reseeded as part of the pipe line right-of way agreement. As such soils in 0-2 ft. bgs were not sampled. Visual inspection and analytical data received from samples in the 2-4 ft. bgs interval are used to determine areas impacted by overspray and are to be addressed accordingly in the remediation plan. All material removed was stockpiled on heavy mil plastic inside roll off containers left on-site awaiting approval for disposal.

2.0 Appendices

Supporting documentation for the preparation of this report is located in the attached appendices

Appendix A

Testing Summary

Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2

Date Reported: April 2, 2018

Testing By: Xenco Laboratory, Lubbock, TX

Chloride						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	551	mg/Kg	---
580850-002	SB-02	3/28/2018	soil	252	mg/Kg	---
580850-003	SB-03	3/28/2018	soil	381	mg/Kg	---
580850-004	SB-04	3/28/2018	soil	159	mg/Kg	---

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

BTEX						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	0.303	mg/Kg	---
580850-002	SB-02	3/28/2018	soil	1.05	mg/Kg	---
580850-003	SB-03	3/28/2018	soil	118	mg/Kg	---
580850-004	SB-04	3/28/2018	soil	<0.000996	mg/Kg	---

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Total TPH						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	133	mg/Kg	---
580850-002	SB-02	3/28/2018	soil	497	mg/Kg	---
580850-003	SB-03	3/28/2018	soil	11000	mg/Kg	---
580850-004	SB-04	3/28/2018	soil	<49.8	mg/Kg	---

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2

Date Reported: April 10, 2018

Testing By: Xenco Laboratory, Lubbock, TX

Chloride						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
581204-001	SB-01 6-8	4/2/2018	SOIL	21.5	mg/Kg	---
581204-005	SB-01 14-16	4/2/2018	SOIL	20.8	mg/Kg	---
581204-006	SB-02 8-10	4/2/2018	SOIL	5.99	mg/Kg	---
581204-009	SB-02 14-16	4/2/2018	SOIL	2.82	mg/Kg	---
581204-010	SB-03 6-8	4/2/2018	SOIL	8.15	mg/Kg	---
581204-014	SB-03 14-16	4/2/2018	SOIL	5.62	mg/Kg	---
581204-015	SB-04 6-8	4/2/2018	SOIL	2.84	mg/Kg	---
581204-018	SB-04 12-14	4/2/2018	SOIL	2.75	mg/Kg	---
581204-019	SB-05 4-6	4/2/2018	SOIL	7.39	mg/Kg	---
581204-023	SB-05 12-14	4/2/2018	SOIL	7.32	mg/Kg	---
581204-024	SB-06 4-6	4/2/2018	SOIL	14.9	mg/Kg	---
581204-028	SB-06 12-14	4/2/2018	SOIL	3.48	mg/Kg	---
581204-029	SB-07 4-6	4/2/2018	SOIL	59.1	mg/Kg	---
581204-033	SB-07 12-14	4/2/2018	SOIL	216	mg/Kg	---
581204-034	SB-08 2-4	4/3/2018	SOIL	185	mg/Kg	---
581204-035	SB-08 6-8	4/3/2018	SOIL	123	mg/Kg	---
581204-036	SB-08 DUP	4/3/2018	SOIL	179	mg/Kg	---
581204-037	SB-08 DUP	4/3/2018	SOIL	123	mg/Kg	---
581204-038	SB-09 2-4	4/3/2018	SOIL	301	mg/Kg	---
581204-039	SB-09 6-8	4/3/2018	SOIL	12.8	mg/Kg	---
581204-040	SB-11 2-4	4/3/2018	SOIL	5.87	mg/Kg	---
581204-041	SB-11 6-8	4/3/2018	SOIL	4.61	mg/Kg	---
581204-042	SB-12 2-4	4/3/2018	SOIL	22.4	mg/Kg	---
581204-043	SB-12 6-8	4/3/2018	SOIL	4.51	mg/Kg	---
581204-044	SB-13 2-4	4/3/2018	SOIL	3.71	mg/Kg	---
581204-045	SB-13 6-8	4/3/2018	SOIL	23.9	mg/Kg	---
581204-046	SB-14 2-4	4/3/2018	SOIL	4.2	mg/Kg	---
581204-048	SB-14 6-8	4/3/2018	SOIL	16.4	mg/Kg	---
581204-049	SB-15 2-4	4/3/2018	SOIL	6.11	mg/Kg	---
581204-050	SB-15 6-8	4/3/2018	SOIL	7.52	mg/Kg	---
581204-051	SB-16 2-4	4/3/2018	SOIL	105	mg/Kg	---
581204-052	SB-16 6-8	4/3/2018	SOIL	192	mg/Kg	---
581204-053	SB-17 2-4	4/3/2018	SOIL	106	mg/Kg	---
581204-054	SB-17 6-8	4/3/2018	SOIL	43.5	mg/Kg	---
581204-055	SB- 3 C	4/3/2018	SOIL	8.08	mg/Kg	---

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2

Date Reported: April 10, 2018

Testing By: Xenco Laboratory, Lubbock, TX

BTEX						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
581204-001	SB-01 6-8	4/2/2018	SOIL	<0.000468	mg/Kg	---
581204-005	SB-01 14-16	4/2/2018	SOIL	<0.000436	mg/Kg	---
581204-006	SB-02 8-10	4/2/2018	SOIL	<0.000476	mg/Kg	---
581204-009	SB-02 14-16	4/2/2018	SOIL	0.000927	mg/Kg	---
581204-010	SB-03 6-8	4/2/2018	SOIL	<0.000495	mg/Kg	---
581204-014	SB-03 14-16	4/2/2018	SOIL	<0.000502	mg/Kg	---
581204-015	SB-04 6-8	4/2/2018	SOIL	<0.000463	mg/Kg	---
581204-018	SB-04 12-14	4/2/2018	SOIL	<0.000458	mg/Kg	---
581204-019	SB-05 4-6	4/2/2018	SOIL	0.00161	mg/Kg	---
581204-023	SB-05 12-14	4/2/2018	SOIL	<0.000499	mg/Kg	---
581204-024	SB-06 4-6	4/2/2018	SOIL	<0.000485	mg/Kg	---
581204-028	SB-06 12-14	4/2/2018	SOIL	<0.000482	mg/Kg	---
581204-029	SB-07 4-6	4/2/2018	SOIL	<0.000483	mg/Kg	---
581204-033	SB-07 12-14	4/2/2018	SOIL	<0.000482	mg/Kg	---
581204-034	SB-08 2-4	4/3/2018	SOIL	0.000563	mg/Kg	---
581204-035	SB-08 6-8	4/3/2018	SOIL	<0.000459	mg/Kg	---
581204-036	SB-08 DUP	4/3/2018	SOIL	0.000529	mg/Kg	---
581204-037	SB-08 DUP	4/3/2018	SOIL	<0.000490	mg/Kg	---
581204-038	SB-09 2-4	4/3/2018	SOIL	<0.000446	mg/Kg	---
581204-039	SB-09 6-8	4/3/2018	SOIL	<0.000479	mg/Kg	---
581204-040	SB-11 2-4	4/3/2018	SOIL	0.00222	mg/Kg	---
581204-041	SB-11 6-8	4/3/2018	SOIL	<0.000459	mg/Kg	---
581204-042	SB-12 2-4	4/3/2018	SOIL	0.000761	mg/Kg	---
581204-043	SB-12 6-8	4/3/2018	SOIL	<0.000533	mg/Kg	---
581204-044	SB-13 2-4	4/3/2018	SOIL	<0.000370	mg/Kg	---
581204-045	SB-13 6-8	4/3/2018	SOIL	<0.000558	mg/Kg	---
581204-046	SB-14 2-4	4/3/2018	SOIL	<0.000592	mg/Kg	---
581204-048	SB-14 6-8	4/3/2018	SOIL	<0.000620	mg/Kg	---
581204-049	SB-15 2-4	4/3/2018	SOIL	<0.000572	mg/Kg	---
581204-050	SB-15 6-8	4/3/2018	SOIL	<0.000476	mg/Kg	---
581204-051	SB-16 2-4	4/3/2018	SOIL	<0.000540	mg/Kg	---
581204-052	SB-16 6-8	4/3/2018	SOIL	<0.000416	mg/Kg	---
581204-053	SB-17 2-4	4/3/2018	SOIL	0.00779	mg/Kg	---
581204-054	SB-17 6-8	4/3/2018	SOIL	0.00533	mg/Kg	---
581204-055	SB- 3 C	4/3/2018	SOIL	<0.00100	mg/Kg	---

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2

Date Reported: April 10, 2018

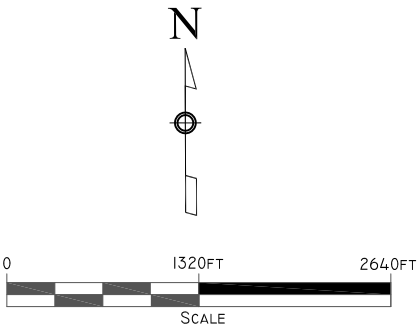
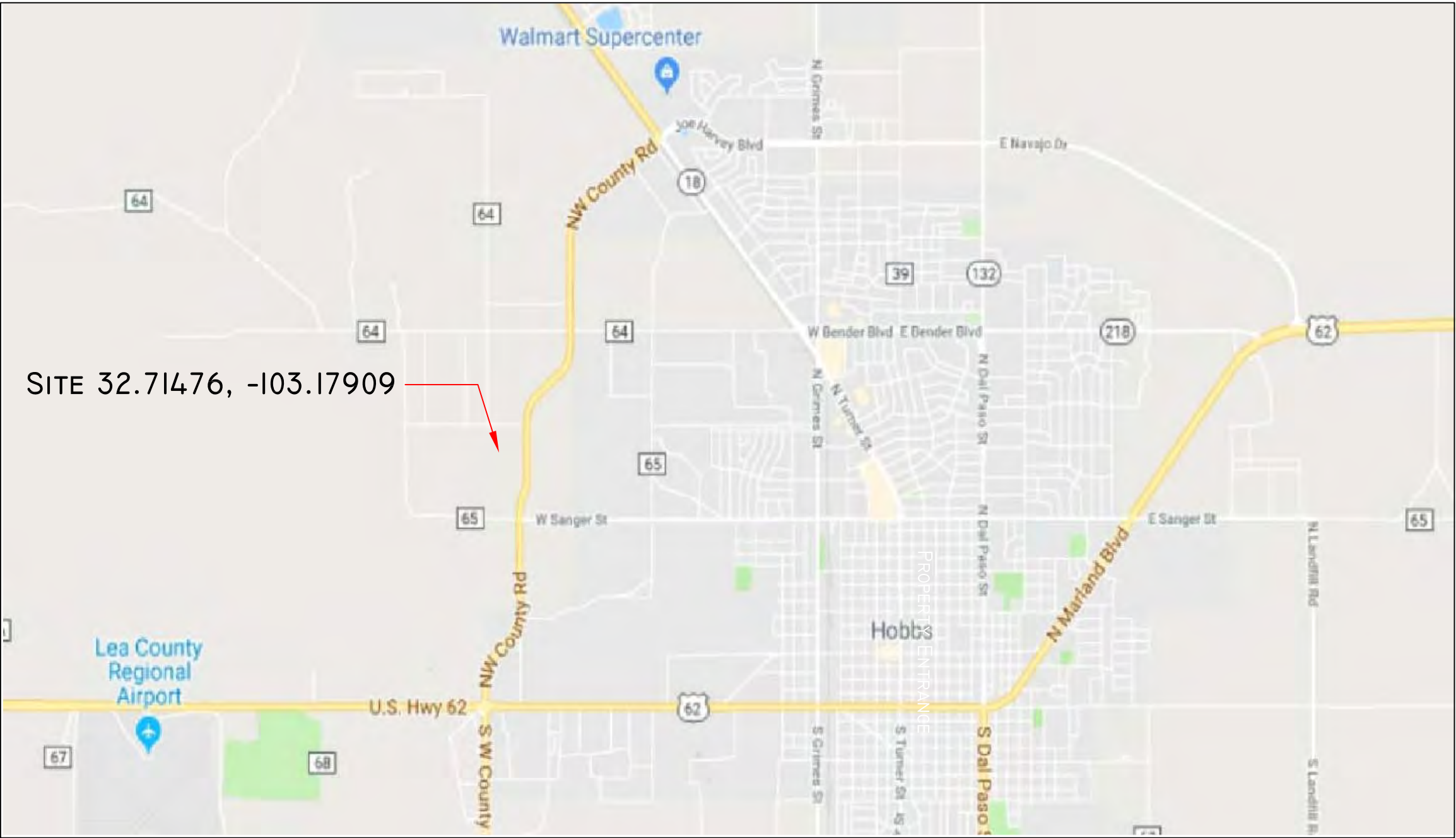
Testing By: Xenco Laboratory, Lubbock, TX

Total TPH						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
581204-001	SB-01 6-8	4/2/2018	SOIL	71.2	mg/Kg	---
581204-005	SB-01 14-16	4/2/2018	SOIL	73.5	mg/Kg	---
581204-006	SB-02 8-10	4/2/2018	SOIL	35.6	mg/Kg	---
581204-009	SB-02 14-16	4/2/2018	SOIL	35.2	mg/Kg	---
581204-010	SB-03 6-8	4/2/2018	SOIL	29	mg/Kg	---
581204-014	SB-03 14-16	4/2/2018	SOIL	33	mg/Kg	---
581204-015	SB-04 6-8	4/2/2018	SOIL	33.1	mg/Kg	---
581204-018	SB-04 12-14	4/2/2018	SOIL	34.6	mg/Kg	---
581204-019	SB-05 4-6	4/2/2018	SOIL	82.3	mg/Kg	---
581204-023	SB-05 12-14	4/2/2018	SOIL	75.3	mg/Kg	---
581204-024	SB-06 4-6	4/2/2018	SOIL	35.9	mg/Kg	---
581204-028	SB-06 12-14	4/2/2018	SOIL	51.6	mg/Kg	---
581204-029	SB-07 4-6	4/2/2018	SOIL	33.3	mg/Kg	---
581204-033	SB-07 12-14	4/2/2018	SOIL	46.8	mg/Kg	---
581204-034	SB-08 2-4	4/3/2018	SOIL	48	mg/Kg	---
581204-035	SB-08 6-8	4/3/2018	SOIL	36.6	mg/Kg	---
581204-036	SB-08 DUP	4/3/2018	SOIL	50.7	mg/Kg	---
581204-037	SB-08 DUP	4/3/2018	SOIL	34.5	mg/Kg	---
581204-038	SB-09 2-4	4/3/2018	SOIL	61	mg/Kg	---
581204-039	SB-09 6-8	4/3/2018	SOIL	35.8	mg/Kg	---
581204-040	SB-11 2-4	4/3/2018	SOIL	46.2	mg/Kg	---
581204-041	SB-11 6-8	4/3/2018	SOIL	33.4	mg/Kg	---
581204-042	SB-12 2-4	4/3/2018	SOIL	56.1	mg/Kg	---
581204-043	SB-12 6-8	4/3/2018	SOIL	56.3	mg/Kg	---
581204-044	SB-13 2-4	4/3/2018	SOIL	37.4	mg/Kg	---
581204-045	SB-13 6-8	4/3/2018	SOIL	36.8	mg/Kg	---
581204-046	SB-14 2-4	4/3/2018	SOIL	57.2	mg/Kg	---
581204-048	SB-14 6-8	4/3/2018	SOIL	36.1	mg/Kg	---
581204-049	SB-15 2-4	4/3/2018	SOIL	40.7	mg/Kg	---
581204-050	SB-15 6-8	4/3/2018	SOIL	35.8	mg/Kg	---
581204-051	SB-16 2-4	4/3/2018	SOIL	34.4	mg/Kg	---
581204-052	SB-16 6-8	4/3/2018	SOIL	30.8	mg/Kg	---
581204-053	SB-17 2-4	4/3/2018	SOIL	25.9	mg/Kg	---
581204-054	SB-17 6-8	4/3/2018	SOIL	31.1	mg/Kg	---
581204-055	SB- 3 C	4/3/2018	SOIL	32.1	mg/Kg	---

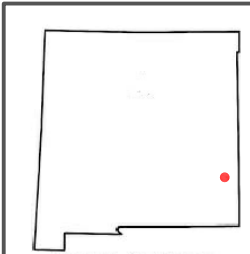
1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Appendix B

Figures



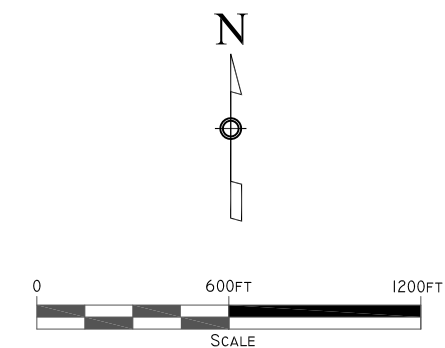
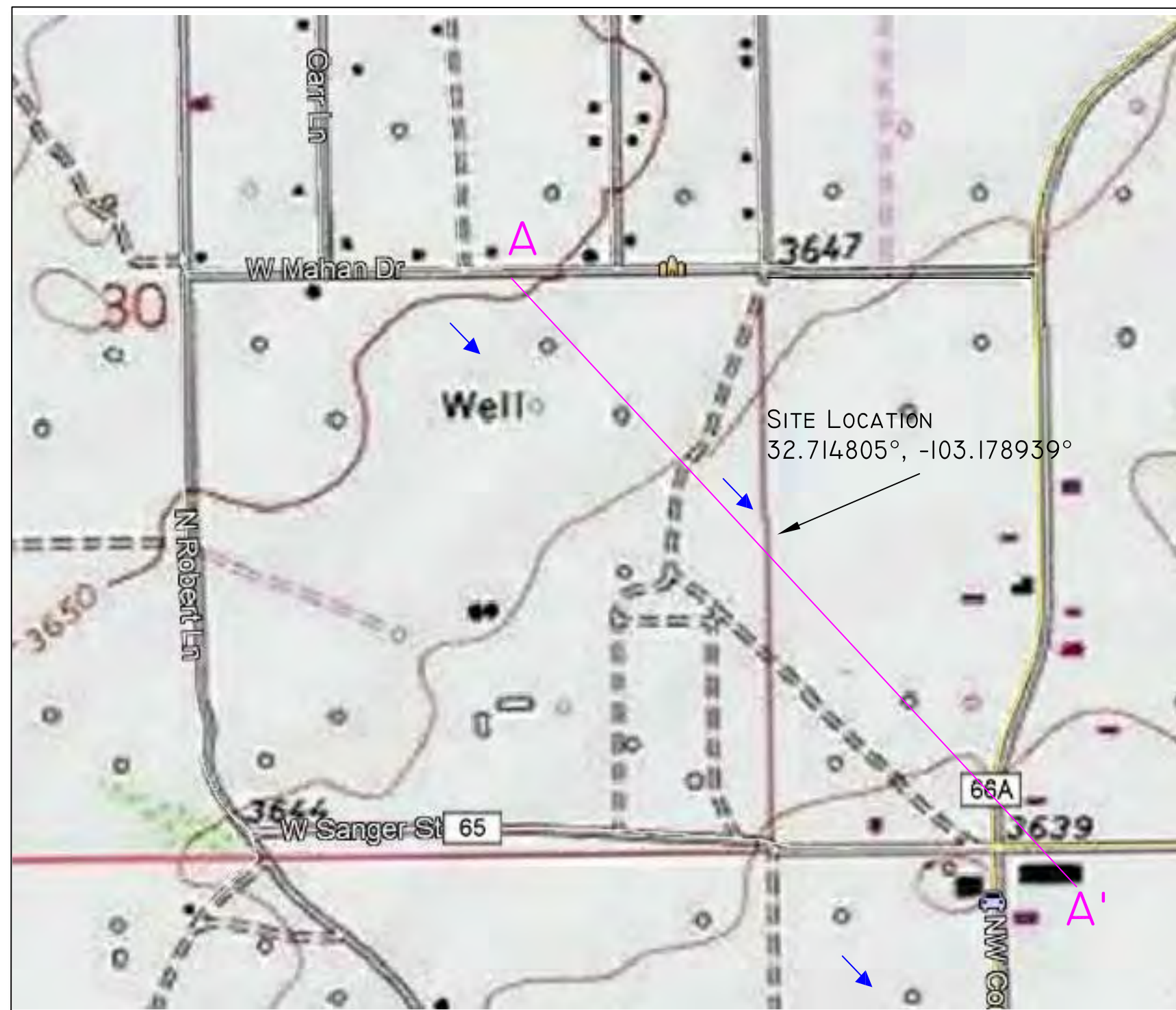
AREA MAP



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ENGINEERING

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Texas Licensed Surveying Firm 10193863
5012 50th Ste. 204 P: 806-783-9944
Lubbock, TX 79414 F: 806-783-9966
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COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: AREA MAP
LOCATION: HOBBS, NM
DATE: 4-2018



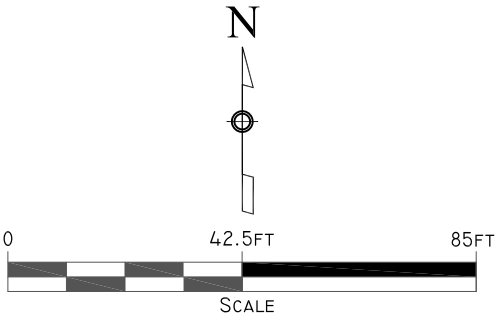
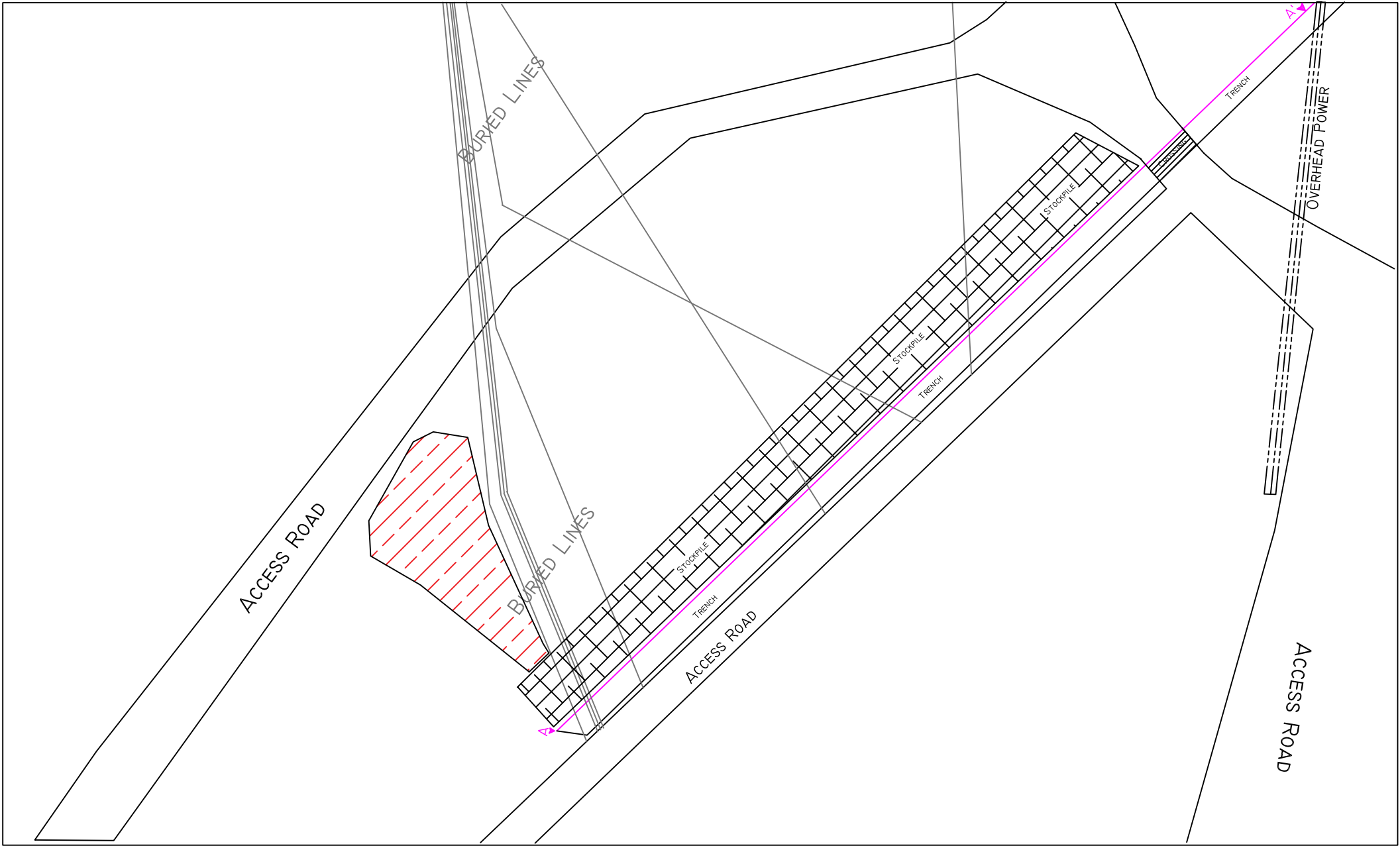
→ SURFACE WATER
FLOW

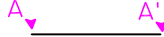
A 3,650 FT.

A' 3,639 FT.

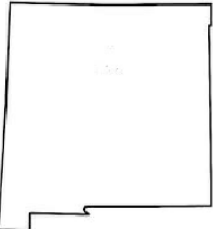
TOPOGRAPHIC MAP

	 Texas Registered Engineering Firm F-9992 Texas Licensed Surveying Firm 10193863 5012 50th Ste. 204 P: 806-783-9944 Lubbock, TX 79414 F: 806-783-9966 www.R2Meng.com	COMPANY: VENABLE'S CONSTRUCTION
		PROJECT: IRP-4935
		TITLE: TOPOGRAPHIC MAP
		LOCATION: HOBBS, NM
		DATE: 4-2018



-  EXCAVATION STOCKPILES
-  LENGTH 290'
-  OVERSPRAY LIQUIDS

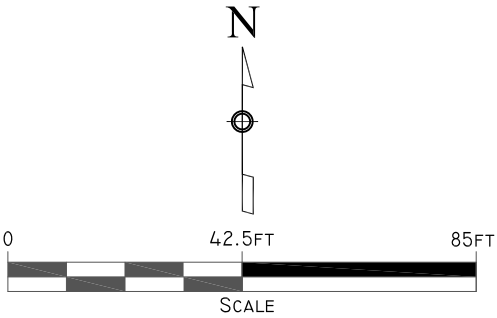
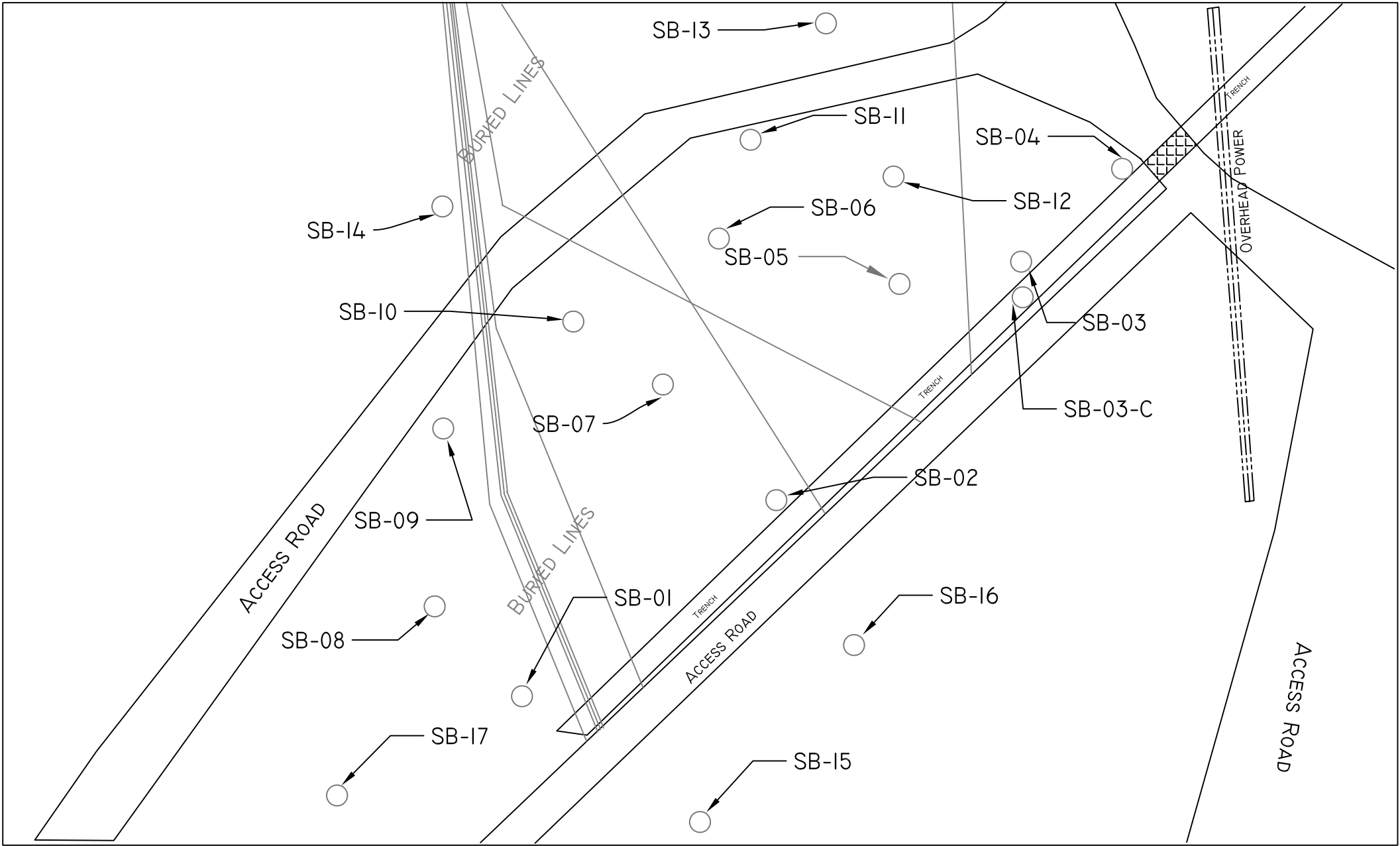
OVERSPRAY





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Lubbock, TX 79414 F: 806-783-9966
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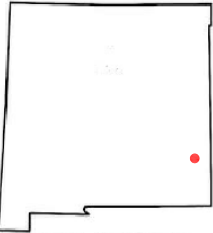
COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: OVERSPRAY
LOCATION: HOBBS, NM
DATE: 5-2018



NAME	LATITUDE	LONGITUDE
SB-01	32.71466	-103.17957
SB-02	32.71479	-103.17933
SB-03	32.71484	-103.17941
SB-03-C	32.714979	-103.17921
SB-04	32.71511	-103.17899
SB-05	32.71496	-103.17924
SB-06	32.71494	-103.17942
SB-07	32.71491	-103.17943
SB-08	32.71469	-103.17962
SB-09	32.71485	-103.17963
SB-10	32.71494	-103.17952
SB-11	32.71507	-103.17937
SB-12	32.71503	-103.17924
SB-13	32.71523	-103.17928
SB-14	32.71502	-103.17964
SB-15	32.71456	-103.17941
SB-16	32.71469	-103.17928
SB-17	32.71458	-103.17973

○ SAMPLE LOCATION

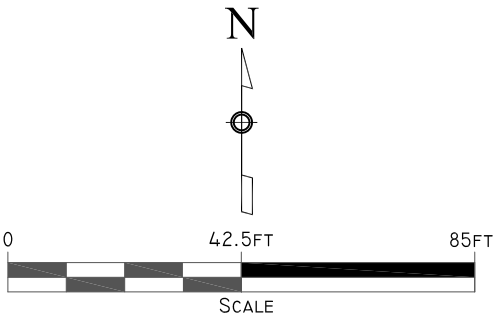
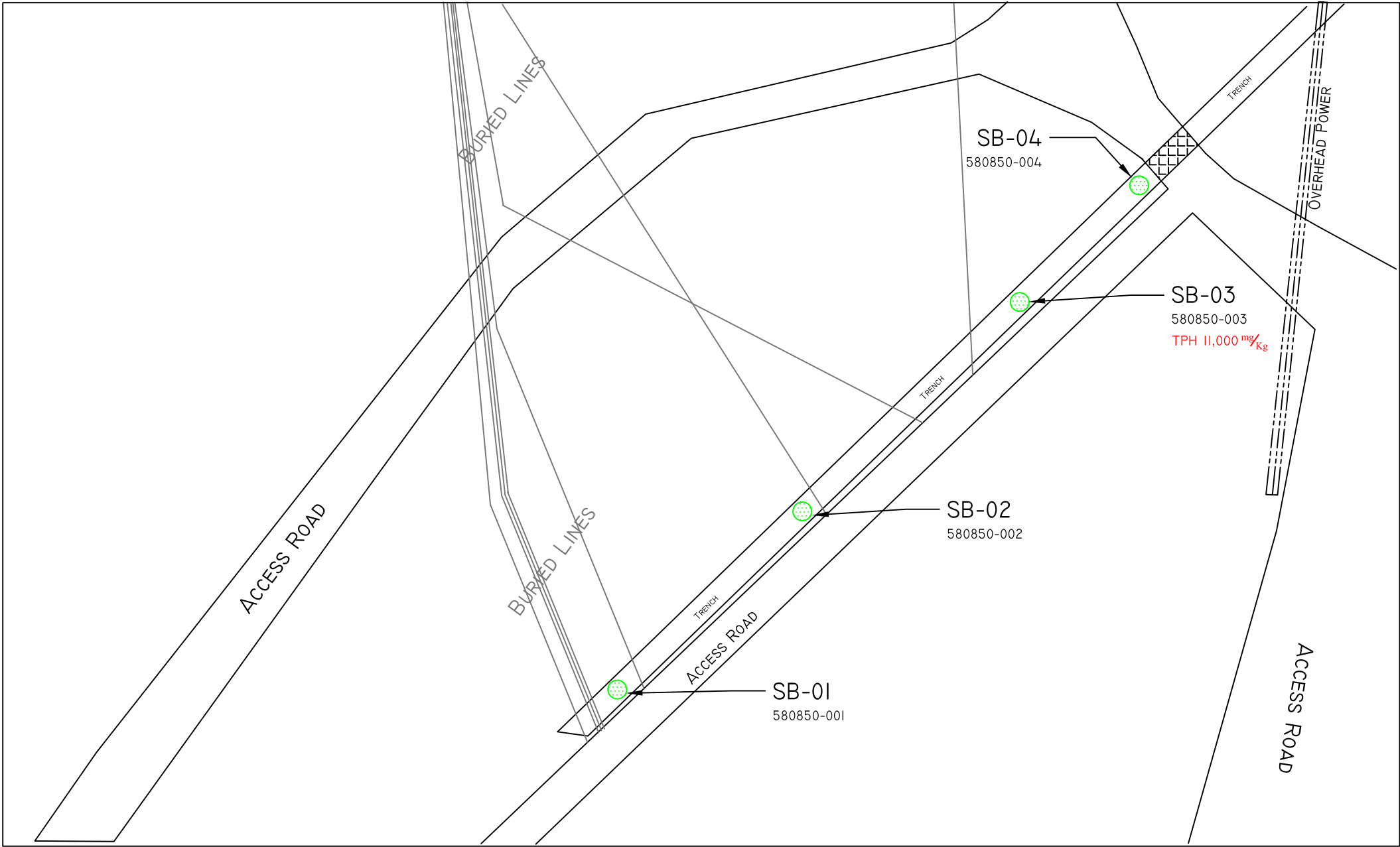
SITE MAP





Texas Registered Engineering Firm F-9992
Texas Licensed Surveying Firm 10193863
5012 50th Ste. 204 P: 806-783-9944
Lubbock, TX 79414 F: 806-783-9966
www.R2Meng.com

COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: SOIL BORING GPS
LOCATION: HOBBS, NM
DATE: 4-2018



Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2
Date Reported: April 2, 2018
Testing By: Xenco Labratory, Lubbock, TX

Chloride						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RI Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	551	mg/Kg	--
580850-002	SB-02	3/28/2018	soil	252	mg/Kg	--
580850-003	SB-03	3/28/2018	soil	381	mg/Kg	--
580850-004	SB-04	3/28/2018	soil	159	mg/Kg	--

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

BTEX						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RI Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	0.303	mg/Kg	--
580850-002	SB-02	3/28/2018	soil	1.05	mg/Kg	--
580850-003	SB-03	3/28/2018	soil	118	mg/Kg	--
580850-004	SB-04	3/28/2018	soil	<0.000996	mg/Kg	--

1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

Total TPH						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RI Results	Unit	Field Screen Results (ppm)
580850-001	SB-01	3/28/2018	soil	133	mg/Kg	--
580850-002	SB-02	3/28/2018	soil	497	mg/Kg	--
580850-003	SB-03	3/28/2018	soil	11000	mg/Kg	--
580850-004	SB-04	3/28/2018	soil	<49.8	mg/Kg	--

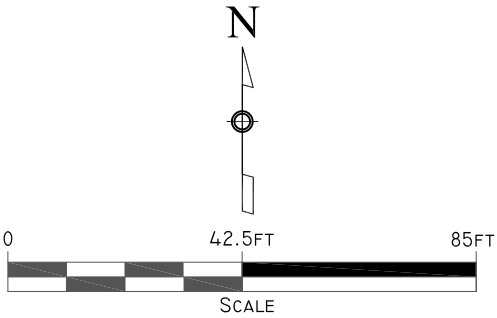
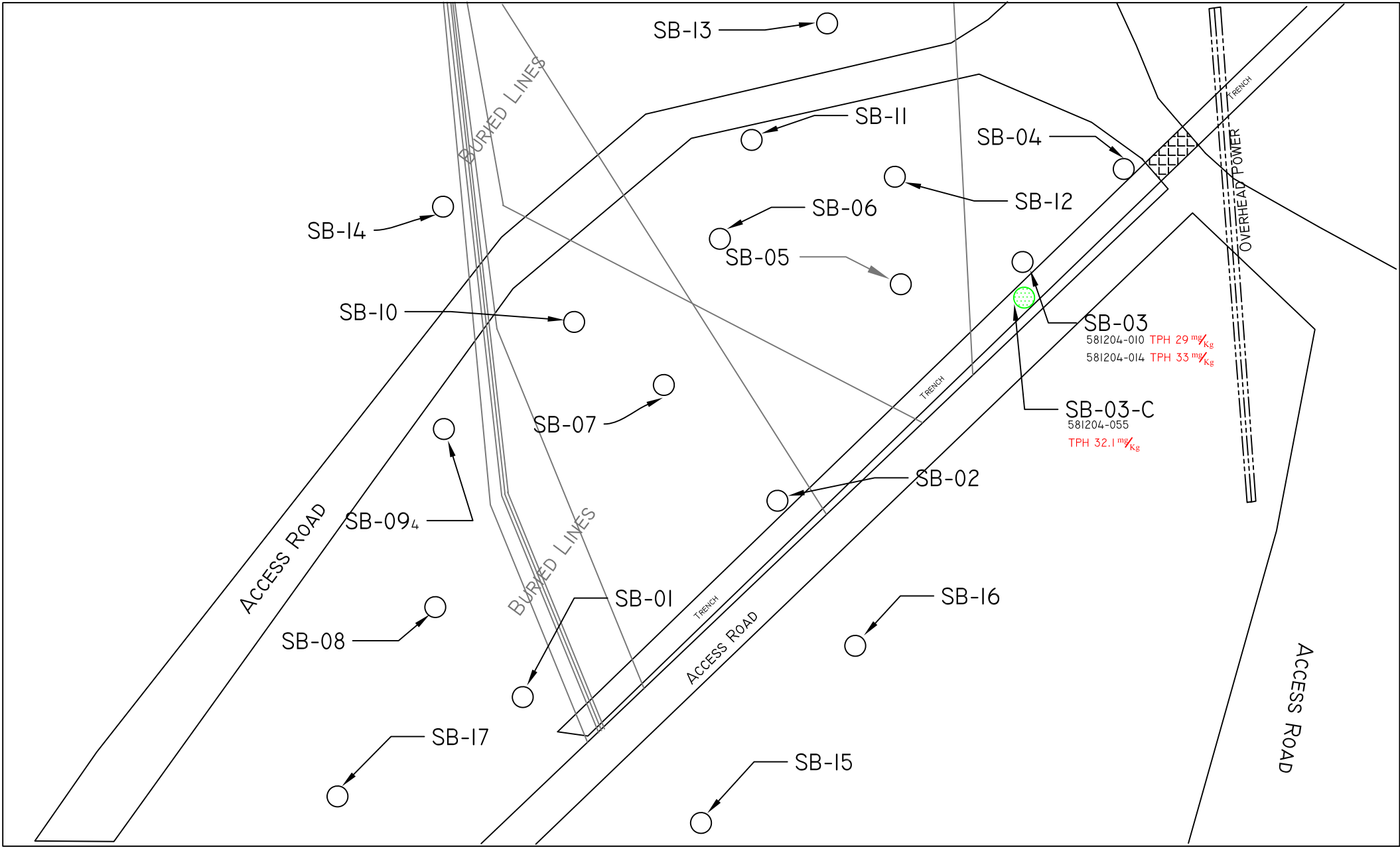
1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

SAMPLE LOCATION INSIDE TRENCH

SITE MAP

Texas Registered Engineering Firm F-9992
Texas Licensed Surveying Firm 10193863
5012 50th Ste. 204 P: 806-783-9944
Lubbock, TX 79414 F: 806-783-9966
www.R2Meng.com

COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: SITE MAP
LOCATION: HOBBS, NM
DATE: 4-2018



Summary of Release Analytical Results

Project Site: North Hobbs Satellite 31 East CO2
Date Reported: April 10, 2018
Testing By: Xenco Laboratory, Lubbock, TX

Total TPH						
Lab Sample I.D.	Sample Description	Date Sampled	Matrix	RL Results	Unit	Field Screen Results (ppm)
581204-010	SB-03 6-8	4/2/2018	SOIL	29	mg/Kg	---
581204-014	SB-03 14-16	4/2/2018	SOIL	33	mg/Kg	---
581204-055	SB-3 C	4/3/2018	SOIL	32.1	mg/Kg	---

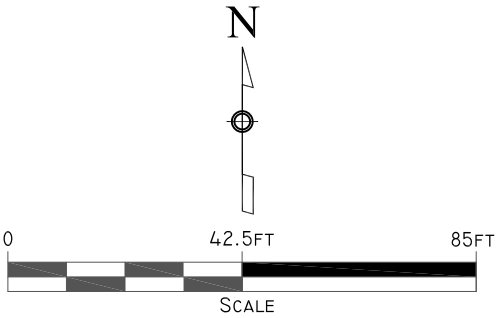
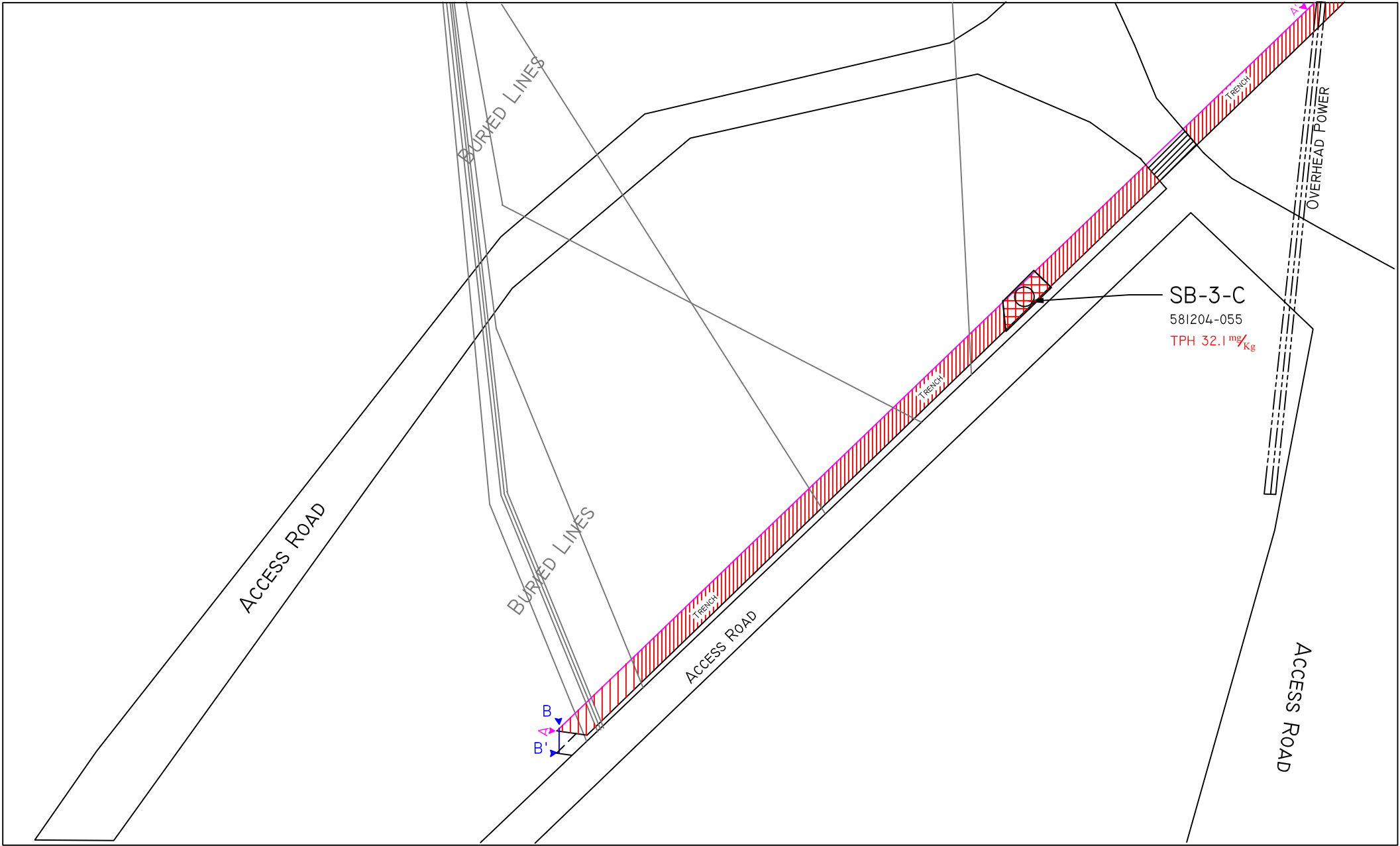
1) Note: Results preceded by "<" indicate a negative result below the indicated detection limit.

- SAMPLE LOCATION INSIDE TRENCH
- SAMPLE LOCATION

SITE MAP

Texas Registered Engineering Firm F-9992
Texas Licensed Surveying Firm 10193863
5012 50th Ste. 204 P: 806-783-9944
Lubbock, TX 79414 F: 806-783-9966
www.R2Meng.com

COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: SOIL BORING 4/02/2018
LOCATION: HOBBS, NM
DATE: 4-2018



- TRENCH DEPTH 4'
- TRENCH DEPTH 6'
- TRENCH DEPTH 16'
- SAMPLE LOCTION
- LENGTH 290'
- DEPTH 6'

SITE MAP

Texas Registered Engineering Firm F-9992
Texas Licensed Surveying Firm 10193863
5012 50th Ste. 204 P: 806-783-9944
Lubbock, TX 79414 F: 806-783-9966
www.R2Meng.com

COMPANY: VENABLE'S CONSTRUCTION
PROJECT: IRP-4935
TITLE: TRENCH DEPTH
LOCATION: HOBBS, NM
DATE: 4-2018

Appendix C

Soil Test Data- Xenco Laboratory



Certificate of Analysis Summary 580850

R2M Engineering, Lubbock, TX

Project Name: VC Hobbs



Project Id: 18-3535
Contact: Marissa Mires
Project Location:

Date Received in Lab: Thu Mar-29-18 03:45 pm
Report Date: 02-APR-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	580850-001	580850-002	580850-003	580850-004		
	<i>Field Id:</i>	Sb 01	Sb 02	Sb 03	Sb 04		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Mar-28-18 14:10	Mar-28-18 14:17	Mar-28-18 14:25	Mar-28-18 14:31		
BTEX by SW 8260B	<i>Extracted:</i>	Apr-01-18 11:50	Apr-01-18 11:50	Apr-01-18 11:50	Apr-01-18 11:50		
SUB: TX104704215-18-24	<i>Analyzed:</i>	Apr-01-18 15:31	Apr-01-18 15:47	Apr-01-18 16:46	Apr-01-18 15:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.0251 0.0251	<0.0251 0.0251	<0.199 0.199	<0.000996 0.000996		
Toluene		<0.0251 0.0251	<0.0251 0.0251	3.81 0.199	<0.000996 0.000996		
Ethylbenzene		<0.0251 0.0251	0.120 0.0251	7.86 0.199	<0.000996 0.000996		
m,p-Xylenes		0.129 0.0501	0.568 0.0502	51.5 0.398	<0.00199 0.00199		
o-Xylene		0.174 0.0251	0.357 0.0251	54.4 0.199	<0.000996 0.000996		
Total Xylenes		0.303 0.0251	0.925 0.0251	106 0.199	<0.000996 0.000996		
Total BTEX		0.303 0.0251	1.05 0.0251	118 0.199	<0.000996 0.000996		
Chloride by EPA 300	<i>Extracted:</i>	Mar-31-18 09:00	Mar-31-18 09:00	Mar-31-18 09:00	Mar-31-18 09:00		
SUB: TX104704215-18-24	<i>Analyzed:</i>	Mar-31-18 19:06	Mar-31-18 19:16	Mar-31-18 19:27	Mar-31-18 19:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		551 9.98	252 9.96	381 9.86	159 9.82		
TPH By SW8015 Mod	<i>Extracted:</i>	Mar-30-18 10:24	Mar-30-18 10:27	Mar-30-18 10:30	Mar-30-18 10:33		
SUB: TX104704215-18-24	<i>Analyzed:</i>	Apr-01-18 09:28	Apr-01-18 10:32	Apr-02-18 11:16	Apr-01-18 08:46		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		75.9 49.8	192 49.7	8990 D 248	<49.8 49.8		
Diesel Range Organics (DRO)		57.4 49.8	305 49.7	1830 49.6	<49.8 49.8		
Oil Range Hydrocarbons (ORO)		<49.8 49.8	<49.7 49.7	215 49.6	<49.8 49.8		
Total TPH		133 49.8	497 49.7	11000 49.6	<49.8 49.8		

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

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 580850

for R2M Engineering

Project Manager: Marissa Mires

VC Hobbs

18-3535

02-APR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

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

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

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)



02-APR-18

Project Manager: **Marissa Mires**
R2M Engineering
5012 50th
Suite 204
Lubbock, TX 79414

Reference: XENCO Report No(s): **580850**
VC Hobbs
Project Address:

Marissa Mires :

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) 580850. 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. 580850 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer
Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sb 01	S	03-28-18 14:10		580850-001
Sb 02	S	03-28-18 14:17		580850-002
Sb 03	S	03-28-18 14:25		580850-003
Sb 04	S	03-28-18 14:31		580850-004



CASE NARRATIVE

Client Name: R2M Engineering

Project Name: VC Hobbs

Project ID: 18-3535
Work Order Number(s): 580850

Report Date: 02-APR-18
Date Received: 03/29/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3045468 BTEX by SW 8260B

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

Sample 580850-001,002,003 required dilution due to the sample matrix.



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX VC Hobbs

Sample Id: **Sb 01**
Lab Sample Id: 580850-001

Matrix: Soil
Date Collected: 03.28.18 14.10

Date Received: 03.29.18 15.45

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3045371

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	551	9.98	mg/kg	03.31.18 19.06		1

Analytical Method: TPH By SW8015 Mod

Tech: ARL

Analyst: ISU

Seq Number: 3045393

Date Prep: 03.30.18 10.24

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	75.9	49.8	mg/kg	04.01.18 09.28		1
Diesel Range Organics (DRO)	C10C28DRO	57.4	49.8	mg/kg	04.01.18 09.28		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<49.8	49.8	mg/kg	04.01.18 09.28	U	1
Total TPH	PHC635	133	49.8	mg/kg	04.01.18 09.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.01.18 09.28	
o-Terphenyl	84-15-1	116	%	70-135	04.01.18 09.28	



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id: **Sb 01**
Lab Sample Id: 580850-001

Matrix: Soil
Date Collected: 03.28.18 14.10

Date Received: 03.29.18 15.45

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030B

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.01.18 11.50

Basis: Wet Weight

Seq Number: 3045468

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0251	0.0251	mg/kg	04.01.18 15.31	U	25
Toluene	108-88-3	<0.0251	0.0251	mg/kg	04.01.18 15.31	U	25
Ethylbenzene	100-41-4	<0.0251	0.0251	mg/kg	04.01.18 15.31	U	25
m,p-Xylenes	179601-23-1	0.129	0.0501	mg/kg	04.01.18 15.31		25
o-Xylene	95-47-6	0.174	0.0251	mg/kg	04.01.18 15.31		25
Total Xylenes	1330-20-7	0.303	0.0251	mg/kg	04.01.18 15.31		25
Total BTEX		0.303	0.0251	mg/kg	04.01.18 15.31		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	109	%	74-126	04.01.18 15.31		
1,2-Dichloroethane-D4	17060-07-0	112	%	80-120	04.01.18 15.31		
Toluene-D8	2037-26-5	97	%	73-132	04.01.18 15.31		



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id: **Sb 02**
Lab Sample Id: 580850-002

Matrix: Soil
Date Collected: 03.28.18 14.17

Date Received: 03.29.18 15.45

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3045371

Prep Method: E300P

% Moisture:

Date Prep: 03.31.18 09.00

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	252	9.96	mg/kg	03.31.18 19.16		1

Analytical Method: TPH By SW8015 Mod

Tech: ARL

Analyst: ISU

Seq Number: 3045393

Prep Method: TX1005P

% Moisture:

Date Prep: 03.30.18 10.27

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	192	49.7	mg/kg	04.01.18 10.32		1
Diesel Range Organics (DRO)	C10C28DRO	305	49.7	mg/kg	04.01.18 10.32		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<49.7	49.7	mg/kg	04.01.18 10.32	U	1
Total TPH	PHC635	497	49.7	mg/kg	04.01.18 10.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.01.18 10.32	
o-Terphenyl	84-15-1	93	%	70-135	04.01.18 10.32	



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id: **Sb 02**
Lab Sample Id: 580850-002

Matrix: Soil
Date Collected: 03.28.18 14.17

Date Received: 03.29.18 15.45

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030B

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.01.18 11.50

Basis: Wet Weight

Seq Number: 3045468

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0251	0.0251	mg/kg	04.01.18 15.47	U	25
Toluene	108-88-3	<0.0251	0.0251	mg/kg	04.01.18 15.47	U	25
Ethylbenzene	100-41-4	0.120	0.0251	mg/kg	04.01.18 15.47		25
m,p-Xylenes	179601-23-1	0.568	0.0502	mg/kg	04.01.18 15.47		25
o-Xylene	95-47-6	0.357	0.0251	mg/kg	04.01.18 15.47		25
Total Xylenes	1330-20-7	0.925	0.0251	mg/kg	04.01.18 15.47		25
Total BTEX		1.05	0.0251	mg/kg	04.01.18 15.47		25

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	74-126	04.01.18 15.47	
1,2-Dichloroethane-D4	17060-07-0	97	%	80-120	04.01.18 15.47	
Toluene-D8	2037-26-5	96	%	73-132	04.01.18 15.47	



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX VC Hobbs

Sample Id: **Sb 03**
Lab Sample Id: 580850-003

Matrix: Soil
Date Collected: 03.28.18 14.25

Date Received: 03.29.18 15.45

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3045371

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	381	9.86	mg/kg	03.31.18 19.27		1

Analytical Method: TPH By SW8015 Mod

Tech: ARL

Analyst: ISU

Seq Number: 3045393

Date Prep: 03.30.18 10.30

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	8990	248	mg/kg	04.02.18 11.37	D	5
Diesel Range Organics (DRO)	C10C28DRO	1830	49.6	mg/kg	04.02.18 11.16		1
Oil Range Hydrocarbons (ORO)	PHCG2835	215	49.6	mg/kg	04.02.18 11.16		1
Total TPH	PHC635	11000	49.6	mg/kg	04.02.18 11.37		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	04.02.18 11.16	
o-Terphenyl	84-15-1	105	%	70-135	04.02.18 11.16	



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX VC Hobbs

Sample Id: **Sb 03**
Lab Sample Id: 580850-003

Matrix: Soil
Date Collected: 03.28.18 14.25

Date Received: 03.29.18 15.45

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030B

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.01.18 11.50

Basis: Wet Weight

Seq Number: 3045468

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.199	0.199	mg/kg	04.01.18 16.46	U	200
Toluene	108-88-3	3.81	0.199	mg/kg	04.01.18 16.46		200
Ethylbenzene	100-41-4	7.86	0.199	mg/kg	04.01.18 16.46		200
m,p-Xylenes	179601-23-1	51.5	0.398	mg/kg	04.01.18 16.46		200
o-Xylene	95-47-6	54.4	0.199	mg/kg	04.01.18 16.46		200
Total Xylenes	1330-20-7	106	0.199	mg/kg	04.01.18 16.46		200
Total BTEX		118	0.199	mg/kg	04.01.18 16.46		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	98	%	74-126	04.01.18 16.46		
1,2-Dichloroethane-D4	17060-07-0	86	%	80-120	04.01.18 16.46		
Toluene-D8	2037-26-5	89	%	73-132	04.01.18 16.46		



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id: **Sb 04**
Lab Sample Id: 580850-004

Matrix: Soil
Date Collected: 03.28.18 14.31

Date Received: 03.29.18 15.45

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3045371

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	159	9.82	mg/kg	03.31.18 19.38		1

Analytical Method: TPH By SW8015 Mod

Tech: ARL

Analyst: ISU

Seq Number: 3045393

Date Prep: 03.30.18 10.33

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.01.18 08.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.01.18 08.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<49.8	49.8	mg/kg	04.01.18 08.46	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.01.18 08.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	04.01.18 08.46	
o-Terphenyl	84-15-1	91	%	70-135	04.01.18 08.46	



Certificate of Analytical Results 580850



R2M Engineering, Lubbock, TX

VC Hobbs

Sample Id: **Sb 04**
Lab Sample Id: 580850-004

Matrix: Soil
Date Collected: 03.28.18 14.31

Date Received: 03.29.18 15.45

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030B

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.01.18 11.50

Basis: Wet Weight

Seq Number: 3045468

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	04.01.18 15.06	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
Total BTEX		<0.000996	0.000996	mg/kg	04.01.18 15.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	108	%	74-126	04.01.18 15.06		
1,2-Dichloroethane-D4	17060-07-0	103	%	80-120	04.01.18 15.06		
Toluene-D8	2037-26-5	103	%	73-132	04.01.18 15.06		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

R2M Engineering
VC Hobbs

Analytical Method: Chloride by EPA 300

Seq Number: 3045371

MB Sample Id: 7641778-1-BLK

Matrix: Solid

LCS Sample Id: 7641778-1-BKS

Prep Method: SW9056P

Date Prep: 03.31.18

LCSD Sample Id: 7641778-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	102	102	102	102	80-120	0	20	mg/kg	03.31.18 17:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3045371

Parent Sample Id: 580133-001

Matrix: Solid Waste

MS Sample Id: 580133-001 S

Prep Method: SW9056P

Date Prep: 03.31.18

MSD Sample Id: 580133-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	222	99.4	314	93	314	93	80-120	0	20	mg/kg	03.31.18 17:51	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3045393

MB Sample Id: 7641760-1-BLK

Matrix: Solid

LCS Sample Id: 7641760-1-BKS

Prep Method: TX1005P

Date Prep: 03.30.18

LCSD Sample Id: 7641760-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	860	86	927	93	70-135	7	35	mg/kg	04.01.18 02:05	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1160	116	70-135	8	35	mg/kg	04.01.18 02:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		83		88		70-135	%	04.01.18 02:05
o-Terphenyl	108		90		94		70-135	%	04.01.18 02:05

Analytical Method: BTEX by SW 8260B

Seq Number: 3045468

MB Sample Id: 7641881-1-BLK

Matrix: Solid

LCS Sample Id: 7641881-1-BKS

Prep Method: SW5030B

Date Prep: 04.01.18

LCSD Sample Id: 7641881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0927	93	0.0917	92	62-132	1	25	mg/kg	04.01.18 12:17	
Toluene	<0.00100	0.100	0.0971	97	0.100	100	66-124	3	25	mg/kg	04.01.18 12:17	
Ethylbenzene	<0.00100	0.100	0.0938	94	0.0940	94	71-134	0	25	mg/kg	04.01.18 12:17	
m,p-Xylenes	<0.00200	0.200	0.179	90	0.186	93	69-128	4	25	mg/kg	04.01.18 12:17	
o-Xylene	<0.00100	0.100	0.0905	91	0.0897	90	72-131	1	25	mg/kg	04.01.18 12:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	95		106		105		74-126	%	04.01.18 12:17
1,2-Dichloroethane-D4	91		110		92		80-120	%	04.01.18 12:17
Toluene-D8	95		111		107		73-132	%	04.01.18 12:17

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



R2M Engineering
VC Hobbs

Analytical Method: BTEX by SW 8260B

Seq Number: 3045468

Parent Sample Id: 580850-004

Matrix: Soil

MS Sample Id: 580850-004 S

Prep Method: SW5030B

Date Prep: 04.01.18

MSD Sample Id: 580850-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0915	92	0.0980	98	62-132	7	25	mg/kg	04.01.18 17:21	
Toluene	<0.000998	0.0998	0.0935	94	0.0950	95	66-124	2	25	mg/kg	04.01.18 17:21	
Ethylbenzene	<0.000998	0.0998	0.107	107	0.111	111	71-134	4	25	mg/kg	04.01.18 17:21	
m,p-Xylenes	<0.00200	0.200	0.201	101	0.218	110	69-128	8	25	mg/kg	04.01.18 17:21	
o-Xylene	<0.000998	0.0998	0.0991	99	0.105	105	72-131	6	25	mg/kg	04.01.18 17:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	106		106		74-126	%	04.01.18 17:21
1,2-Dichloroethane-D4	107		116		80-120	%	04.01.18 17:21
Toluene-D8	104		98		73-132	%	04.01.18 17:21

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

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

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

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

LAB Order ID #

Page of

Trace Analysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1236
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAqualic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name:

Address: (Street, City, Zip)

Phone #:

Fax #:

Contact Person:

E-mail:

Invoice to:

(if different from above)

Project #:

Project Name:

Project Location (including state):

Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB #
(LAB USE ONLY)

FIELD CODE

CONTAINERS

Volume / Amount

WATER
SOIL
AIR
SLUDGEHCl
HNO₃
H₂SO₄
NaOH
ICE
NONE

DATE

TIME

MTBE 8021 / 602 / 8260 / 624

BTEX 8021 / 602 / 8260 / 624

TPH 418.1 / TX1005 / TX1005 Ext(C35)

TPH 8015 GRO / DRO / TVHC

PAH 8270 / 625

Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

TCLP Pesticides

RCI

GC/MS Vol. 8260 / 624

GC/MS Semi. Vol. 8270 / 625

PCB's 8082 / 608

Pesticides 8081 / 608

BOD, TSS, pH

Moisture Content

Cl, F, SO₄, NO₃, NO₂, -N, PO₄, -P, Alkalinity

Na, Ca, Mg, K, TDS, EC

Chloride 300

Turn Around Time if different from standard

Hold

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST
OBS
COR

LAB USE ONLY

REMARKS:

NEED results Monday

AFTERNOON or Tuesday

48-HR

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST
OBS
COR

LAB USE ONLY

REMARKS:

NEED results Monday

AFTERNOON or Tuesday

48-HR

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST
OBS
COR

LAB USE ONLY

REMARKS:

NEED results Monday

AFTERNOON or Tuesday

48-HR

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier #



Inter-Office Shipment

Page 1 of 1

IOS Number **1058377**

Date/Time: 03/29/18 16:53

Created by: Katie Lowe

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**

Air Bill No.: 771870338528

Phone:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
580850-001	S	Sb 01	03/28/18 14:10	E300_CL	Chloride by EPA 300	04/02/18	04/26/18	JKR	CL	
580850-001	S	Sb 01	03/28/18 14:10	SW8260BTX	BTEX by SW 8260B	04/02/18	04/12/18	JKR	BZ BZME EBZ XYLENES	
580850-001	S	Sb 01	03/28/18 14:10	SW8015MOD_NM	TPH By SW8015 Mod	04/02/18	04/12/18	JKR	PHCC10C28 PHCC28C35 I	
580850-002	S	Sb 02	03/28/18 14:17	SW8015MOD_NM	TPH By SW8015 Mod	04/02/18	04/12/18	JKR	PHCC10C28 PHCC28C35 I	
580850-002	S	Sb 02	03/28/18 14:17	SW8260BTX	BTEX by SW 8260B	04/02/18	04/12/18	JKR	BZ BZME EBZ XYLENES	
580850-002	S	Sb 02	03/28/18 14:17	E300_CL	Chloride by EPA 300	04/02/18	04/26/18	JKR	CL	
580850-003	S	Sb 03	03/28/18 14:25	SW8260BTX	BTEX by SW 8260B	04/02/18	04/12/18	JKR	BZ BZME EBZ XYLENES	
580850-003	S	Sb 03	03/28/18 14:25	SW8015MOD_NM	TPH By SW8015 Mod	04/02/18	04/12/18	JKR	PHCC10C28 PHCC28C35 I	
580850-003	S	Sb 03	03/28/18 14:25	E300_CL	Chloride by EPA 300	04/02/18	04/26/18	JKR	CL	
580850-004	S	Sb 04	03/28/18 14:31	E300_CL	Chloride by EPA 300	04/02/18	04/26/18	JKR	CL	
580850-004	S	Sb 04	03/28/18 14:31	SW8260BTX	BTEX by SW 8260B	04/02/18	04/12/18	JKR	BZ BZME EBZ XYLENES	
580850-004	S	Sb 04	03/28/18 14:31	SW8015MOD_NM	TPH By SW8015 Mod	04/02/18	04/12/18	JKR	PHCC10C28 PHCC28C35 I	

Inter Office Shipment or Sample Comments:

Relinquished By

Katie Lowe

Received By:

Rene Vandenberghe

Date Relinquished: 03/30/2018

Date Received: 03/30/2018 09:25

Cooler Temperature: 2.3



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 1058377

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : hou-068

Sent By: Katie Lowe

Date Sent: 03/29/2018 04:53 PM

Received By: Rene Vandenberghe

Date Received: 03/30/2018 09:25 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

R. C. Vandenberghe
Rene Vandenberghe

Date: 03/30/2018



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: R2M Engineering

Date/ Time Received: 03/29/2018 03:45:00 PM

Work Order #: 580850

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)?	2.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	N/A

TPH received in bulk container

Houston

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 03/29/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/30/2018



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-001	581204-005	581204-006	581204-009	581204-010	581204-014
	Field Id:	SB-01 6-8	SB-01 14-16	SB-02 8-10	SB-02 14-16	SB-03 6-8	SB-03 14-16
	Depth:	6-8	14-16	8-10	14-16	6-8	14-16
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-02-18 14:15	Apr-02-18 14:15	Apr-02-18 14:30	Apr-02-18 14:30	Apr-02-18 14:50	Apr-02-18 14:50
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-05-18 12:00
	Analyzed:	Apr-07-18 14:49	Apr-07-18 15:04	Apr-07-18 15:18	Apr-07-18 15:33	Apr-07-18 15:47	Apr-05-18 13:34
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	<0.000446 0.000891	<0.000495 0.000990	<0.000502 0.00100
Toluene		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	<0.000446 0.000891	<0.000495 0.000990	<0.000502 0.00100
Ethylbenzene		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	<0.000446 0.000891	<0.000495 0.000990	<0.000502 0.00100
m,p-Xylenes		<0.000936 0.00187	<0.000873 0.00175	<0.000952 0.00190	0.000927 J 0.00178	<0.000990 0.00198	<0.00100 0.00201
o-Xylene		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	<0.000446 0.000891	<0.000495 0.000990	<0.000502 0.00100
Total Xylenes		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	0.000927 0.000891	<0.000495 0.000990	<0.000502 0.00100
Total BTEX		<0.000468 0.000936	<0.000436 0.000873	<0.000476 0.000952	0.000927 0.000891	<0.000495 0.000990	<0.000502 0.00100
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35
	Analyzed:	Apr-06-18 16:47	Apr-06-18 17:19	Apr-06-18 17:30	Apr-06-18 17:41	Apr-06-18 17:51	Apr-06-18 18:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		21.5 9.94	20.8 9.92	5.99 J 9.86	2.82 J 9.82	8.15 J 9.80	5.62 J 9.92
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-04-18 17:45	Apr-04-18 17:48	Apr-04-18 17:51	Apr-04-18 17:54	Apr-04-18 17:57	Apr-04-18 18:00
	Analyzed:	Apr-05-18 20:36	Apr-05-18 20:58	Apr-05-18 21:19	Apr-05-18 21:40	Apr-05-18 22:01	Apr-05-18 22:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<9.93 49.7	<9.99 50.0	<9.98 49.9	<9.95 49.8	<10.0 50.0	<9.99 50.0
Diesel Range Organics (DRO)		35.9 J 49.7	29.2 J 50.0	14.3 J 49.9	13.8 J 49.8	13.4 J 50.0	13.1 J 50.0
Oil Range Hydrocarbons (ORO)		35.3 J 49.7	44.3 J 50.0	21.3 J 49.9	21.4 J 49.8	15.6 J 50.0	19.9 J 50.0
Total TPH		71.2 49.7	73.5 50.0	35.6 J 49.9	35.2 J 49.8	29.0 J 50.0	33.0 J 50.0

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-015	581204-018	581204-019	581204-023	581204-024	581204-028
	Field Id:	SB-04 6-8	SB-04 12-14	SB-05 4-6	SB-05 12-14	SB-06 4-6	SB-06 12-14
	Depth:	6-8	12-14	4-6	12-14	4-6	12-14
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-02-18 15:05	Apr-02-18 15:05	Apr-02-18 15:35	Apr-02-18 15:35	Apr-02-18 16:00	Apr-02-18 16:00
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-05-18 14:00	Apr-07-18 10:20	Apr-07-18 10:20
	Analyzed:	Apr-07-18 16:01	Apr-07-18 16:16	Apr-07-18 16:30	Apr-05-18 14:40	Apr-07-18 16:44	Apr-07-18 16:59
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000463 0.000926	<0.000458 0.000916	<0.000459 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
Toluene		<0.000463 0.000926	<0.000458 0.000916	0.000596 J 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
Ethylbenzene		<0.000463 0.000926	<0.000458 0.000916	<0.000459 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
m,p-Xylenes		<0.000926 0.00185	<0.000916 0.00183	0.00101 J 0.00183	<0.000998 0.00200	<0.000971 0.00194	<0.000963 0.00193
o-Xylene		<0.000463 0.000926	<0.000458 0.000916	<0.000459 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
Total Xylenes		<0.000463 0.000926	<0.000458 0.000916	0.00101 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
Total BTEX		<0.000463 0.000926	<0.000458 0.000916	0.00161 0.000917	<0.000499 0.000998	<0.000485 0.000971	<0.000482 0.000963
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35
	Analyzed:	Apr-06-18 18:34	Apr-06-18 18:45	Apr-06-18 19:38	Apr-06-18 20:10	Apr-06-18 20:21	Apr-06-18 20:32
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2.84 J 9.77	2.75 J 9.90	7.39 J 9.92	7.32 J 9.90	14.9 9.88	3.48 J 9.82
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-04-18 18:03	Apr-05-18 12:10	Apr-05-18 12:13	Apr-05-18 12:16	Apr-05-18 12:19	Apr-05-18 12:22
	Analyzed:	Apr-05-18 22:43	Apr-05-18 23:04	Apr-05-18 23:25	Apr-06-18 00:08	Apr-06-18 00:29	Apr-06-18 00:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<9.99 50.0	<9.96 49.8	<9.96 49.8	<9.91 49.6	<9.90 49.5	<10.0 50.0
Diesel Range Organics (DRO)		12.5 J 50.0	12.8 J 49.8	22.7 J 49.8	23.1 J 49.6	13.1 J 49.5	17.9 J 50.0
Oil Range Hydrocarbons (ORO)		20.6 J 50.0	21.8 J 49.8	59.6 49.8	52.2 49.6	22.8 J 49.5	33.7 J 50.0
Total TPH		33.1 J 50.0	34.6 J 49.8	82.3 49.8	75.3 49.6	35.9 J 49.5	51.6 50.0

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Holly Taylor
Project Manager



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-029	581204-033	581204-034	581204-035	581204-036	581204-037
	Field Id:	SB-07 4-6	SB-07 12-14	SB-08 2-4	SB-08 6-8	SB-08 DUP	SB-08 DUP
	Depth:	4-6	12-14	2-4	6-8	2-4	6-8
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-02-18 16:35	Apr-02-18 16:35	Apr-03-18 08:00	Apr-03-18 08:00	Apr-03-18 08:00	Apr-03-18 08:00
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20
	Analyzed:	Apr-07-18 17:13	Apr-07-18 17:27	Apr-07-18 17:42	Apr-07-18 17:56	Apr-07-18 18:11	Apr-07-18 18:25
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000483 0.000965	<0.000482 0.000963	<0.000477 0.000954	<0.000459 0.000917	<0.000481 0.000962	<0.000490 0.000980
Toluene		<0.000483 0.000965	<0.000482 0.000963	0.000563 J 0.000954	<0.000459 0.000917	0.000529 J 0.000962	<0.000490 0.000980
Ethylbenzene		<0.000483 0.000965	<0.000482 0.000963	<0.000477 0.000954	<0.000459 0.000917	<0.000481 0.000962	<0.000490 0.000980
m,p-Xylenes		<0.000965 0.00193	<0.000963 0.00193	<0.000954 0.00191	<0.000917 0.00183	<0.000962 0.00192	<0.000980 0.00196
o-Xylene		<0.000483 0.000965	<0.000482 0.000963	<0.000477 0.000954	<0.000459 0.000917	<0.000481 0.000962	<0.000490 0.000980
Total Xylenes		<0.000483 0.000965	<0.000482 0.000963	<0.000477 0.000954	<0.000459 0.000917	<0.000481 0.000962	<0.000490 0.000980
Total BTEX		<0.000483 0.000965	<0.000482 0.000963	0.000563 J 0.000954	<0.000459 0.000917	0.000529 J 0.000962	<0.000490 0.000980
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 12:35	Apr-09-18 08:12	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35	Apr-06-18 12:35
	Analyzed:	Apr-06-18 20:42	Apr-09-18 14:39	Apr-06-18 18:55	Apr-06-18 19:06	Apr-06-18 20:57	Apr-06-18 21:07
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		59.1 9.84	216 10.0	185 9.92	123 9.86	179 9.92	123 9.96
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-05-18 12:25	Apr-05-18 12:28	Apr-05-18 12:31	Apr-05-18 12:34	Apr-05-18 12:37	Apr-05-18 12:40
	Analyzed:	Apr-06-18 01:11	Apr-06-18 01:32	Apr-06-18 01:54	Apr-06-18 02:15	Apr-06-18 02:36	Apr-06-18 02:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<9.97 49.9	<9.94 49.7	<9.94 49.7	<9.91 49.6	<9.94 49.7	<9.96 49.8
Diesel Range Organics (DRO)		15.4 J 49.9	17.0 J 49.7	18.0 J 49.7	15.2 J 49.6	19.2 J 49.7	14.6 J 49.8
Oil Range Hydrocarbons (ORO)		17.9 J 49.9	29.8 J 49.7	30.0 J 49.7	21.4 J 49.6	31.5 J 49.7	19.9 J 49.8
Total TPH		33.3 J 49.9	46.8 J 49.7	48.0 J 49.7	36.6 J 49.6	50.7 49.7	34.5 J 49.8

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Holly Taylor
Project Manager



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-038	581204-039	581204-040	581204-041	581204-042	581204-043
	Field Id:	SB-09 2-4	SB-09 6-8	SB-11 2-4	SB-11 6-8	SB-12 2-4	SB-12 6-8
	Depth:	2-4	6-8	2-4	6-8	2-4	6-8
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-03-18 08:25	Apr-03-18 08:25	Apr-03-18 09:00	Apr-03-18 09:00	Apr-03-18 09:15	Apr-03-18 09:15
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-07-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20
	Analyzed:	Apr-07-18 18:40	Apr-07-18 18:54	Apr-07-18 19:08	Apr-07-18 19:23	Apr-09-18 11:56	Apr-09-18 13:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000446 0.000893	<0.000479 0.000958	<0.000480 0.000960	<0.000459 0.000917	<0.000604 0.00121	<0.000533 0.00107
Toluene		<0.000446 0.000893	<0.000479 0.000958	0.00102 0.000960	<0.000459 0.000917	0.000761 J 0.00121	<0.000533 0.00107
Ethylbenzene		<0.000446 0.000893	<0.000479 0.000958	<0.000480 0.000960	<0.000459 0.000917	<0.000604 0.00121	<0.000533 0.00107
m,p-Xylenes		<0.000893 0.00179	<0.000958 0.00192	0.00120 J 0.00192	<0.000917 0.00183	<0.00121 0.00242	<0.00107 0.00213
o-Xylene		<0.000446 0.000893	<0.000479 0.000958	<0.000480 0.000960	<0.000459 0.000917	<0.000604 0.00121	<0.000533 0.00107
Total Xylenes		<0.000446 0.000893	<0.000479 0.000958	0.00120 0.000960	<0.000459 0.000917	<0.000604 0.00121	<0.000533 0.00107
Total BTEX		<0.000446 0.000893	<0.000479 0.000958	0.00222 0.000960	<0.000459 0.000917	0.000761 J 0.00121	<0.000533 0.00107
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04
	Analyzed:	Apr-06-18 22:11	Apr-06-18 22:22	Apr-06-18 22:33	Apr-06-18 22:43	Apr-06-18 22:54	Apr-06-18 23:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		301 9.88	12.8 9.92	5.87 J 9.92	4.61 J 9.82	22.4 9.90	4.51 J 9.86
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-05-18 12:43	Apr-05-18 12:46	Apr-05-18 12:49	Apr-05-18 12:52	Apr-05-18 12:55	Apr-05-18 12:58
	Analyzed:	Apr-06-18 03:19	Apr-06-18 04:01	Apr-06-18 04:23	Apr-06-18 04:44	Apr-06-18 05:05	Apr-06-18 05:26
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<9.90 49.5	<9.95 49.8	<9.98 49.9	<9.90 49.5	<9.93 49.7	<9.90 49.5
Diesel Range Organics (DRO)		21.0 J 49.5	15.7 J 49.8	17.1 J 49.9	13.4 J 49.5	20.3 J 49.7	18.9 J 49.5
Oil Range Hydrocarbons (ORO)		40.0 J 49.5	20.1 J 49.8	29.1 J 49.9	20.0 J 49.5	35.8 J 49.7	37.4 J 49.5
Total TPH		61.0 49.5	35.8 J 49.8	46.2 J 49.9	33.4 J 49.5	56.1 49.7	56.3 49.5

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Holly Taylor
Project Manager



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-044	581204-045	581204-046	581204-048	581204-049	581204-050
	Field Id:	SB-13 2-4	SB-13 6-8	SB-14 2-4	SB-14 6-8	SB-15 2-4	SB-15 6-8
	Depth:	2-4	6-8	2-4	6-8	2-4	6-8
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-03-18 09:30	Apr-03-18 09:30	Apr-03-18 10:00	Apr-03-18 10:00	Apr-03-18 10:00	Apr-03-18 10:00
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20
	Analyzed:	Apr-09-18 13:53	Apr-09-18 14:07	Apr-09-18 14:22	Apr-09-18 14:36	Apr-09-18 14:51	Apr-09-18 15:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
	Toluene	<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
Ethylbenzene		<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
m,p-Xylenes		<0.000741 0.00148	<0.00112 0.00223	<0.00118 0.00237	<0.00124 0.00248	<0.00114 0.00229	<0.000952 0.00190
o-Xylene		<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
Total Xylenes		<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
Total BTEX		<0.000370 0.000741	<0.000558 0.00112	<0.000592 0.00118	<0.000620 0.00124	<0.000572 0.00114	<0.000476 0.000952
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04
	Analyzed:	Apr-06-18 23:15	Apr-06-18 23:47	Apr-06-18 23:58	Apr-07-18 00:30	Apr-07-18 00:41	Apr-07-18 00:51
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	3.71 J 9.96	23.9 9.90	4.20 J 9.94	16.4 9.88	6.11 J 9.84	7.52 J 9.92
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-05-18 13:01	Apr-05-18 13:04	Apr-05-18 12:01	Apr-06-18 09:43	Apr-06-18 09:46	Apr-06-18 09:49
	Analyzed:	Apr-06-18 05:47	Apr-06-18 14:00	Apr-05-18 19:33	Apr-10-18 00:29	Apr-10-18 00:50	Apr-10-18 01:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<9.90 49.5	<9.91 49.6	<9.99 50.0	<9.98 49.9	<9.91 49.6	<9.90 49.5
	Diesel Range Organics (DRO)	15.6 J 49.5	12.6 J 49.6	19.8 J 50.0	15.1 J 49.9	16.1 J 49.6	16.2 J 49.5
Oil Range Hydrocarbons (ORO)		21.8 J 49.5	24.2 J 49.6	37.4 J 50.0	21.0 J 49.9	24.6 J 49.6	19.6 J 49.5
Total TPH		37.4 J 49.5	36.8 J 49.6	57.2 50.0	36.1 J 49.9	40.7 J 49.6	35.8 J 49.5

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Holly Taylor
Project Manager



Certificate of Analysis Summary 581204

R2M Engineering, Lubbock, TX

Project Name: 18-3453

Project Id:

Contact: Mason Sanders

Project Location: Hobbs, N.M.

Date Received in Lab: Tue Apr-03-18 02:00 pm

Report Date: 10-APR-18

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	581204-051	581204-052	581204-053	581204-054	581204-055	
	Field Id:	SB-16 2-4	SB-16 6-8	SB-17 2-4	SB-17 6-8	SB- 3 C	
	Depth:	2-4	6-8	2-4	6-8		
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Apr-03-18 10:00	Apr-03-18 10:00	Apr-03-18 10:25	Apr-03-18 10:25	Apr-03-18 10:25	
BTEX by SW 8260B SUB: TX104704295-17-16	Extracted:	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20	Apr-09-18 10:20	Apr-04-18 11:00	
	Analyzed:	Apr-09-18 15:20	Apr-09-18 15:35	Apr-09-18 15:49	Apr-09-18 16:03	Apr-04-18 15:15	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
		<0.000540 0.00108	<0.000416 0.000832	0.000870 J 0.000988	<0.000411 0.000821	<0.00100 0.00200	
Benzene		<0.000540 0.00108	<0.000416 0.000832	0.00352 0.000988	0.00243 0.000821	<0.00100 0.00200	
Toluene		<0.000540 0.00108	<0.000416 0.000832	0.000662 J 0.000988	0.000476 J 0.000821	<0.00100 0.00200	
Ethylbenzene		<0.000540 0.00108	<0.000416 0.000832	0.00211 0.00198	0.00187 0.00164	<0.00200 0.00400	
m,p-Xylenes		<0.000540 0.00108	<0.000416 0.000832	0.000623 J 0.000988	0.000550 J 0.000821	<0.00100 0.00200	
o-Xylene		<0.000540 0.00108	<0.000416 0.000832	0.00273 0.000988	0.00242 0.000821	<0.00100 0.00200	
Total Xylenes		<0.000540 0.00108	<0.000416 0.000832	0.00779 0.000988	0.00533 0.000821	<0.00100 0.00200	
Total BTEX		<0.000540 0.00108	<0.000416 0.000832				
Chloride by EPA 300 SUB: TX104704215-18-24	Extracted:	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-06-18 13:04	Apr-04-18 11:30	
	Analyzed:	Apr-07-18 01:02	Apr-07-18 01:13	Apr-07-18 01:24	Apr-07-18 01:56	Apr-04-18 13:31	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
		105 9.90	192 9.84	106 9.80	43.5 9.78	8.08 J 9.86	
Chloride							
TPH By SW8015 Mod SUB: TX104704215-18-24	Extracted:	Apr-06-18 09:52	Apr-06-18 09:55	Apr-06-18 09:58	Apr-06-18 10:01	Apr-04-18 15:48	
	Analyzed:	Apr-10-18 01:32	Apr-10-18 01:53	Apr-10-18 02:14	Apr-10-18 02:36	Apr-04-18 17:14	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
		<9.90 49.5	<9.93 49.7	<9.98 49.9	<9.94 49.7	32.1 J 49.9	
Gasoline Range Hydrocarbons (GRO)		15.4 J 49.5	14.4 J 49.7	15.7 J 49.9	17.8 J 49.7	<9.97 49.9	
Diesel Range Organics (DRO)		19.0 J 49.5	16.4 J 49.7	10.2 J 49.9	13.3 J 49.7	<9.97 49.9	
Oil Range Hydrocarbons (ORO)		34.4 J 49.5	30.8 J 49.7	25.9 J 49.9	31.1 J 49.7	32.1 J 49.9	
Total TPH							

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Holly Taylor
Project Manager

Analytical Report 581204

for R2M Engineering

Project Manager: Mason Sanders

18-3453

10-APR-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

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

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

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)



10-APR-18

Project Manager: **Mason Sanders**

R2M Engineering

5012 50th

Suite 204

Lubbock, TX 79414

Reference: XENCO Report No(s): **581204**

18-3453

Project Address: Hobbs, N.M.

Mason Sanders:

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) 581204. 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. 581204 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-01 6-8	S	04-02-18 14:15	6 - 8	581204-001
SB-01 14-16	S	04-02-18 14:15	14 - 16	581204-005
SB-02 8-10	S	04-02-18 14:30	8 - 10	581204-006
SB-02 14-16	S	04-02-18 14:30	14 - 16	581204-009
SB-03 6-8	S	04-02-18 14:50	6 - 8	581204-010
SB-03 14-16	S	04-02-18 14:50	14 - 16	581204-014
SB-04 6-8	S	04-02-18 15:05	6 - 8	581204-015
SB-04 12-14	S	04-02-18 15:05	12 - 14	581204-018
SB-05 4-6	S	04-02-18 15:35	4 - 6	581204-019
SB-05 12-14	S	04-02-18 15:35	12 - 14	581204-023
SB-06 4-6	S	04-02-18 16:00	4 - 6	581204-024
SB-06 12-14	S	04-02-18 16:00	12 - 14	581204-028
SB-07 4-6	S	04-02-18 16:35	4 - 6	581204-029
SB-07 12-14	S	04-02-18 16:35	12 - 14	581204-033
SB-08 2-4	S	04-03-18 08:00	2 - 4	581204-034
SB-08 6-8	S	04-03-18 08:00	6 - 8	581204-035
SB-08 DUP	S	04-03-18 08:00	2 - 4	581204-036
SB-08 DUP	S	04-03-18 08:00	6 - 8	581204-037
SB-09 2-4	S	04-03-18 08:25	2 - 4	581204-038
SB-09 6-8	S	04-03-18 08:25	6 - 8	581204-039
SB-11 2-4	S	04-03-18 09:00	2 - 4	581204-040
SB-11 6-8	S	04-03-18 09:00	6 - 8	581204-041
SB-12 2-4	S	04-03-18 09:15	2 - 4	581204-042
SB-12 6-8	S	04-03-18 09:15	6 - 8	581204-043
SB-13 2-4	S	04-03-18 09:30	2 - 4	581204-044
SB-13 6-8	S	04-03-18 09:30	6 - 8	581204-045
SB-14 2-4	S	04-03-18 10:00	2 - 4	581204-046
SB-14 6-8	S	04-03-18 10:00	6 - 8	581204-048
SB-15 2-4	S	04-03-18 10:00	2 - 4	581204-049
SB-15 6-8	S	04-03-18 10:00	6 - 8	581204-050
SB-16 2-4	S	04-03-18 10:00	2 - 4	581204-051
SB-16 6-8	S	04-03-18 10:00	6 - 8	581204-052
SB-17 2-4	S	04-03-18 10:25	2 - 4	581204-053
SB-17 6-8	S	04-03-18 10:25	6 - 8	581204-054
SB- 3 C	S	04-03-18 10:25		581204-055
SB-01 8-10	S	04-02-18 14:15	8 - 10	Not Analyzed
SB-01 10-12	S	04-02-18 14:15	10 - 12	Not Analyzed
SB-01 12-14	S	04-02-18 14:15	12 - 14	Not Analyzed
SB-02 10-12	S	04-02-18 14:30	10 - 12	Not Analyzed
SB-02 12-14	S	04-02-18 14:30	12 - 14	Not Analyzed
SB-03 8-10	S	04-02-18 14:50	8 - 10	Not Analyzed
SB-03 10-12	S	04-02-18 14:50	10 - 12	Not Analyzed
SB-03 12-14	S	04-02-18 14:50	12 - 14	Not Analyzed



Sample Cross Reference 581204

R2M Engineering, Lubbock, TX

18-3453

SB-04 8-10	S	04-02-18 15:05	8 - 10	Not Analyzed
SB-04 10-12	S	04-02-18 15:05	10 - 12	Not Analyzed
SB-05 6-8	S	04-02-18 15:35	6 - 8	Not Analyzed
SB-05 8-10	S	04-02-18 15:35	8 - 10	Not Analyzed
SB-05 10-12	S	04-02-18 15:35	10 - 12	Not Analyzed
SB-06 6-8	S	04-02-18 16:00	6 - 8	Not Analyzed
SB-06 8-10	S	04-02-18 16:00	8 - 10	Not Analyzed
SB-06 10-12	S	04-02-18 16:00	10 - 12	Not Analyzed
SB-07 6-8	S	04-02-18 16:35	6 - 8	Not Analyzed
SB-07 8-10	S	04-02-18 16:35	8 - 10	Not Analyzed
SB-07 10-12	S	04-02-18 16:35	10 - 12	Not Analyzed
SB-14 2-4 MS/MSD	S	04-03-18 10:00	2 - 4	Not Analyzed



CASE NARRATIVE

Client Name: R2M Engineering

Project Name: 18-3453

Project ID:
Work Order Number(s): 581204

Report Date: 10-APR-18
Date Received: 04/03/2018

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3045682 BTEX by SW 8260B

Sample 581204-055 required 2X dilution due to sample matrix. Suroggate fail on the 1X run.

Batch: LBA-3045884 BTEX by SW 8260B

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

Batch: LBA-3046052 BTEX by SW 8260B

Surrogate 1,2-Dichloroethane-D4 recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 581204-034,581204-040,581204-038,581204-036.

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



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-01 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-001

Date Collected: 04.02.18 14.15

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.5	9.94	0.352	mg/kg	04.06.18 16.47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 17.45

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	04.05.18 20.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	35.9	49.7	9.93	mg/kg	04.05.18 20.36	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	35.3	49.7	9.93	mg/kg	04.05.18 20.36	J	1
Total TPH	PHC635	71.2	49.7	9.93	mg/kg	04.05.18 20.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.05.18 20.36	
o-Terphenyl	84-15-1	102	%	70-135	04.05.18 20.36	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-01 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-001

Date Collected: 04.02.18 14.15

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
Toluene	108-88-3	<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
Ethylbenzene	100-41-4	<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
m,p-Xylenes	179601-23-1	<0.000936	0.00187	0.000936	mg/kg	04.07.18 14.49	U	1
o-Xylene	95-47-6	<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
Total Xylenes	1330-20-7	<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
Total BTEX		<0.000468	0.000936	0.000468	mg/kg	04.07.18 14.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	105	%	74-126	04.07.18 14.49			
1,2-Dichloroethane-D4	17060-07-0	118	%	75-125	04.07.18 14.49			
Toluene-D8	2037-26-5	93	%	73-132	04.07.18 14.49			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 14.49			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-01 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-005

Date Collected: 04.02.18 14.15

Sample Depth: 14 - 16

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.8	9.92	0.351	mg/kg	04.06.18 17.19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 17.48

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	04.05.18 20.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	29.2	50.0	9.99	mg/kg	04.05.18 20.58	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	44.3	50.0	9.99	mg/kg	04.05.18 20.58	J	1
Total TPH	PHC635	73.5	50.0	9.99	mg/kg	04.05.18 20.58		1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	82	%	70-135	04.05.18 20.58	
84-15-1	101	%	70-135	04.05.18 20.58	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-01 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-005

Date Collected: 04.02.18 14.15

Sample Depth: 14 - 16

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
Toluene	108-88-3	<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
Ethylbenzene	100-41-4	<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
m,p-Xylenes	179601-23-1	<0.000873	0.00175	0.000873	mg/kg	04.07.18 15.04	U	1
o-Xylene	95-47-6	<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
Total Xylenes	1330-20-7	<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
Total BTEX		<0.000436	0.000873	0.000436	mg/kg	04.07.18 15.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	99	%	74-126	04.07.18 15.04			
1,2-Dichloroethane-D4	17060-07-0	114	%	75-125	04.07.18 15.04			
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 15.04			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.07.18 15.04			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-02 8-10**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-006

Date Collected: 04.02.18 14.30

Sample Depth: 8 - 10

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.99	9.86	0.349	mg/kg	04.06.18 17.30	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 17.51

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	04.05.18 21.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	14.3	49.9	9.98	mg/kg	04.05.18 21.19	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.3	49.9	9.98	mg/kg	04.05.18 21.19	J	1
Total TPH	PHC635	35.6	49.9	9.98	mg/kg	04.05.18 21.19	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	04.05.18 21.19	
o-Terphenyl	84-15-1	99	%	70-135	04.05.18 21.19	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-02 8-10**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-006

Date Collected: 04.02.18 14.30

Sample Depth: 8 - 10

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
Toluene	108-88-3	<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
Ethylbenzene	100-41-4	<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
m,p-Xylenes	179601-23-1	<0.000952	0.00190	0.000952	mg/kg	04.07.18 15.18	U	1
o-Xylene	95-47-6	<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
Total Xylenes	1330-20-7	<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
Total BTEX		<0.000476	0.000952	0.000476	mg/kg	04.07.18 15.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	103	%	74-126	04.07.18 15.18			
1,2-Dichloroethane-D4	17060-07-0	113	%	75-125	04.07.18 15.18			
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 15.18			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.07.18 15.18			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-02 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-009

Date Collected: 04.02.18 14.30

Sample Depth: 14 - 16

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2.82	9.82	0.348	mg/kg	04.06.18 17.41	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 17.54

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.95	49.8	9.95	mg/kg	04.05.18 21.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.8	49.8	9.95	mg/kg	04.05.18 21.40	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.4	49.8	9.95	mg/kg	04.05.18 21.40	J	1
Total TPH	PHC635	35.2	49.8	9.95	mg/kg	04.05.18 21.40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.05.18 21.40	
o-Terphenyl	84-15-1	109	%	70-135	04.05.18 21.40	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-02 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-009

Date Collected: 04.02.18 14.30

Sample Depth: 14 - 16

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000446	0.000891	0.000446	mg/kg	04.07.18 15.33	U	1
Toluene	108-88-3	<0.000446	0.000891	0.000446	mg/kg	04.07.18 15.33	U	1
Ethylbenzene	100-41-4	<0.000446	0.000891	0.000446	mg/kg	04.07.18 15.33	U	1
m,p-Xylenes	179601-23-1	0.000927	0.00178	0.000891	mg/kg	04.07.18 15.33	J	1
o-Xylene	95-47-6	<0.000446	0.000891	0.000446	mg/kg	04.07.18 15.33	U	1
Total Xylenes	1330-20-7	0.000927	0.000891	0.000446	mg/kg	04.07.18 15.33		1
Total BTEX		0.000927	0.000891	0.000446	mg/kg	04.07.18 15.33		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	104	%	74-126	04.07.18 15.33			
1,2-Dichloroethane-D4	17060-07-0	115	%	75-125	04.07.18 15.33			
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 15.33			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 15.33			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-03 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-010

Date Collected: 04.02.18 14.50

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.15	9.80	0.347	mg/kg	04.06.18 17.51	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 17.57

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	04.05.18 22.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.4	50.0	10.0	mg/kg	04.05.18 22.01	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	15.6	50.0	10.0	mg/kg	04.05.18 22.01	J	1
Total TPH	PHC635	29.0	50.0	10.0	mg/kg	04.05.18 22.01	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.05.18 22.01	
o-Terphenyl	84-15-1	100	%	70-135	04.05.18 22.01	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-03 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-010

Date Collected: 04.02.18 14.50

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
Toluene	108-88-3	<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
Ethylbenzene	100-41-4	<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
m,p-Xylenes	179601-23-1	<0.000990	0.00198	0.000990	mg/kg	04.07.18 15.47	U	1
o-Xylene	95-47-6	<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
Total Xylenes	1330-20-7	<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
Total BTEX		<0.000495	0.000990	0.000495	mg/kg	04.07.18 15.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	100	%	74-126	04.07.18 15.47			
1,2-Dichloroethane-D4	17060-07-0	114	%	75-125	04.07.18 15.47			
Toluene-D8	2037-26-5	95	%	73-132	04.07.18 15.47			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.07.18 15.47			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-03 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-014

Date Collected: 04.02.18 14.50

Sample Depth: 14 - 16

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.62	9.92	0.351	mg/kg	04.06.18 18.23	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 18.00

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	04.05.18 22.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.1	50.0	9.99	mg/kg	04.05.18 22.22	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.9	50.0	9.99	mg/kg	04.05.18 22.22	J	1
Total TPH	PHC635	33.0	50.0	9.99	mg/kg	04.05.18 22.22	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.05.18 22.22	
o-Terphenyl	84-15-1	102	%	70-135	04.05.18 22.22	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-03 14-16**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-014

Date Collected: 04.02.18 14.50

Sample Depth: 14 - 16

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.05.18 12.00

Basis: Wet Weight

Seq Number: 3045904

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
Toluene	108-88-3	<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
Ethylbenzene	100-41-4	<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.00201	0.00100	mg/kg	04.05.18 13.34	U	1
o-Xylene	95-47-6	<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
Total Xylenes	1330-20-7	<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
Total BTEX		<0.000502	0.00100	0.000502	mg/kg	04.05.18 13.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	124	%	74-126	04.05.18 13.34			
1,2-Dichloroethane-D4	17060-07-0	91	%	80-120	04.05.18 13.34			
Toluene-D8	2037-26-5	88	%	73-132	04.05.18 13.34			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-04 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-015

Date Collected: 04.02.18 15.05

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2.84	9.77	0.346	mg/kg	04.06.18 18.34	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.04.18 18.03

Basis: Wet Weight

Seq Number: 3045875

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	04.05.18 22.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.5	50.0	9.99	mg/kg	04.05.18 22.43	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.6	50.0	9.99	mg/kg	04.05.18 22.43	J	1
Total TPH	PHC635	33.1	50.0	9.99	mg/kg	04.05.18 22.43	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.05.18 22.43	
o-Terphenyl	84-15-1	101	%	70-135	04.05.18 22.43	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-04 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-015

Date Collected: 04.02.18 15.05

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
Toluene	108-88-3	<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
Ethylbenzene	100-41-4	<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
m,p-Xylenes	179601-23-1	<0.000926	0.00185	0.000926	mg/kg	04.07.18 16.01	U	1
o-Xylene	95-47-6	<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
Total Xylenes	1330-20-7	<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
Total BTEX		<0.000463	0.000926	0.000463	mg/kg	04.07.18 16.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	101	%	74-126	04.07.18 16.01			
1,2-Dichloroethane-D4	17060-07-0	115	%	75-125	04.07.18 16.01			
Toluene-D8	2037-26-5	95	%	73-132	04.07.18 16.01			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 16.01			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-04 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-018

Date Collected: 04.02.18 15.05

Sample Depth: 12 - 14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2.75	9.90	0.350	mg/kg	04.06.18 18.45	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.10

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	04.05.18 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.8	49.8	9.96	mg/kg	04.05.18 23.04	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.8	49.8	9.96	mg/kg	04.05.18 23.04	J	1
Total TPH	PHC635	34.6	49.8	9.96	mg/kg	04.05.18 23.04	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.05.18 23.04	
o-Terphenyl	84-15-1	108	%	70-135	04.05.18 23.04	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-04 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-018

Date Collected: 04.02.18 15.05

Sample Depth: 12 - 14

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
Toluene	108-88-3	<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
Ethylbenzene	100-41-4	<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
m,p-Xylenes	179601-23-1	<0.000916	0.00183	0.000916	mg/kg	04.07.18 16.16	U	1
o-Xylene	95-47-6	<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
Total Xylenes	1330-20-7	<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
Total BTEX		<0.000458	0.000916	0.000458	mg/kg	04.07.18 16.16	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	104		%	74-126	04.07.18 16.16		
1,2-Dichloroethane-D4	17060-07-0	116		%	75-125	04.07.18 16.16		
Toluene-D8	2037-26-5	95		%	73-132	04.07.18 16.16		
4-Bromofluorobenzene	460-00-4	103		%	58-152	04.07.18 16.16		



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-05 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-019

Date Collected: 04.02.18 15.35

Sample Depth: 4 - 6

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.39	9.92	0.351	mg/kg	04.06.18 19.38	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.13

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	04.05.18 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	22.7	49.8	9.96	mg/kg	04.05.18 23.25	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	59.6	49.8	9.96	mg/kg	04.05.18 23.25		1
Total TPH	PHC635	82.3	49.8	9.96	mg/kg	04.05.18 23.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.05.18 23.25	
o-Terphenyl	84-15-1	103	%	70-135	04.05.18 23.25	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-05 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-019

Date Collected: 04.02.18 15.35

Sample Depth: 4 - 6

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000459	0.000917	0.000459	mg/kg	04.07.18 16.30	U	1
Toluene	108-88-3	0.000596	0.000917	0.000459	mg/kg	04.07.18 16.30	J	1
Ethylbenzene	100-41-4	<0.000459	0.000917	0.000459	mg/kg	04.07.18 16.30	U	1
m,p-Xylenes	179601-23-1	0.00101	0.00183	0.000917	mg/kg	04.07.18 16.30	J	1
o-Xylene	95-47-6	<0.000459	0.000917	0.000459	mg/kg	04.07.18 16.30	U	1
Total Xylenes	1330-20-7	0.00101	0.000917	0.000459	mg/kg	04.07.18 16.30		1
Total BTEX		0.00161	0.000917	0.000459	mg/kg	04.07.18 16.30		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	102		%	74-126	04.07.18 16.30		
1,2-Dichloroethane-D4	17060-07-0	119		%	75-125	04.07.18 16.30		
Toluene-D8	2037-26-5	96		%	73-132	04.07.18 16.30		
4-Bromofluorobenzene	460-00-4	100		%	58-152	04.07.18 16.30		



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-05 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-023

Date Collected: 04.02.18 15.35

Sample Depth: 12 - 14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.32	9.90	0.350	mg/kg	04.06.18 20.10	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.16

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	04.06.18 00.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	23.1	49.6	9.91	mg/kg	04.06.18 00.08	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	52.2	49.6	9.91	mg/kg	04.06.18 00.08		1
Total TPH	PHC635	75.3	49.6	9.91	mg/kg	04.06.18 00.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.06.18 00.08	
o-Terphenyl	84-15-1	101	%	70-135	04.06.18 00.08	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-05 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-023

Date Collected: 04.02.18 15.35

Sample Depth: 12 - 14

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030B

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.05.18 14.00

Basis: Wet Weight

Seq Number: 3045884

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
Toluene	108-88-3	<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
Ethylbenzene	100-41-4	<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
m,p-Xylenes	179601-23-1	<0.000998	0.00200	0.000998	mg/kg	04.05.18 14.40	U	1
o-Xylene	95-47-6	<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
Total Xylenes	1330-20-7	<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
Total BTEX		<0.000499	0.000998	0.000499	mg/kg	04.05.18 14.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	95	%	74-126	04.05.18 14.40			
1,2-Dichloroethane-D4	17060-07-0	98	%	80-120	04.05.18 14.40			
Toluene-D8	2037-26-5	102	%	73-132	04.05.18 14.40			



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-06 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-024

Date Collected: 04.02.18 16.00

Sample Depth: 4 - 6

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.9	9.88	0.350	mg/kg	04.06.18 20.21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.19

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.06.18 00.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.1	49.5	9.90	mg/kg	04.06.18 00.29	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	22.8	49.5	9.90	mg/kg	04.06.18 00.29	J	1
Total TPH	PHC635	35.9	49.5	9.90	mg/kg	04.06.18 00.29	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.18 00.29	
o-Terphenyl	84-15-1	104	%	70-135	04.06.18 00.29	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-06 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-024

Date Collected: 04.02.18 16.00

Sample Depth: 4 - 6

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
Toluene	108-88-3	<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
Ethylbenzene	100-41-4	<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
m,p-Xylenes	179601-23-1	<0.000971	0.00194	0.000971	mg/kg	04.07.18 16.44	U	1
o-Xylene	95-47-6	<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
Total Xylenes	1330-20-7	<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
Total BTEX		<0.000485	0.000971	0.000485	mg/kg	04.07.18 16.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	104	%	74-126	04.07.18 16.44			
1,2-Dichloroethane-D4	17060-07-0	120	%	75-125	04.07.18 16.44			
Toluene-D8	2037-26-5	98	%	73-132	04.07.18 16.44			
4-Bromofluorobenzene	460-00-4	101	%	58-152	04.07.18 16.44			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-06 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-028

Date Collected: 04.02.18 16.00

Sample Depth: 12 - 14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3.48	9.82	0.348	mg/kg	04.06.18 20.32	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.22

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	04.06.18 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.9	50.0	10.0	mg/kg	04.06.18 00.50	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	33.7	50.0	10.0	mg/kg	04.06.18 00.50	J	1
Total TPH	PHC635	51.6	50.0	10.0	mg/kg	04.06.18 00.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	04.06.18 00.50	
o-Terphenyl	84-15-1	101	%	70-135	04.06.18 00.50	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-06 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-028

Date Collected: 04.02.18 16.00

Sample Depth: 12 - 14

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
Toluene	108-88-3	<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
Ethylbenzene	100-41-4	<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
m,p-Xylenes	179601-23-1	<0.000963	0.00193	0.000963	mg/kg	04.07.18 16.59	U	1
o-Xylene	95-47-6	<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
Total Xylenes	1330-20-7	<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
Total BTEX		<0.000482	0.000963	0.000482	mg/kg	04.07.18 16.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	99	%	74-126	04.07.18 16.59			
1,2-Dichloroethane-D4	17060-07-0	121	%	75-125	04.07.18 16.59			
Toluene-D8	2037-26-5	95	%	73-132	04.07.18 16.59			
4-Bromofluorobenzene	460-00-4	104	%	58-152	04.07.18 16.59			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-07 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-029

Date Collected: 04.02.18 16.35

Sample Depth: 4 - 6

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.1	9.84	0.348	mg/kg	04.06.18 20.42		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.25

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.97	49.9	9.97	mg/kg	04.06.18 01.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.4	49.9	9.97	mg/kg	04.06.18 01.11	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	17.9	49.9	9.97	mg/kg	04.06.18 01.11	J	1
Total TPH	PHC635	33.3	49.9	9.97	mg/kg	04.06.18 01.11	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.18 01.11	
o-Terphenyl	84-15-1	99	%	70-135	04.06.18 01.11	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-07 4-6**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-029

Date Collected: 04.02.18 16.35

Sample Depth: 4 - 6

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1
Toluene	108-88-3	<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1
Ethylbenzene	100-41-4	<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1
m,p-Xylenes	179601-23-1	<0.000965	0.00193	0.000965	mg/kg	04.07.18 17.13	U	1
o-Xylene	95-47-6	<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1
Total Xylenes	1330-20-7	<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1
Total BTEX		<0.000483	0.000965	0.000483	mg/kg	04.07.18 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	74-126	04.07.18 17.13	
1,2-Dichloroethane-D4	17060-07-0	116	%	75-125	04.07.18 17.13	
Toluene-D8	2037-26-5	94	%	73-132	04.07.18 17.13	
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 17.13	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-07 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-033

Date Collected: 04.02.18 16.35

Sample Depth: 12 - 14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.09.18 08.12

Basis: Wet Weight

Seq Number: 3046169

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	216	10.0	0.354	mg/kg	04.09.18 14.39		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.28

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	04.06.18 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.0	49.7	9.94	mg/kg	04.06.18 01.32	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	29.8	49.7	9.94	mg/kg	04.06.18 01.32	J	1
Total TPH	PHC635	46.8	49.7	9.94	mg/kg	04.06.18 01.32	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.18 01.32	
o-Terphenyl	84-15-1	106	%	70-135	04.06.18 01.32	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-07 12-14**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-033

Date Collected: 04.02.18 16.35

Sample Depth: 12 - 14

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
Toluene	108-88-3	<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
Ethylbenzene	100-41-4	<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
m,p-Xylenes	179601-23-1	<0.000963	0.00193	0.000963	mg/kg	04.07.18 17.27	U	1
o-Xylene	95-47-6	<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
Total Xylenes	1330-20-7	<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
Total BTEX		<0.000482	0.000963	0.000482	mg/kg	04.07.18 17.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	105	%	74-126	04.07.18 17.27			
1,2-Dichloroethane-D4	17060-07-0	119	%	75-125	04.07.18 17.27			
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 17.27			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 17.27			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-08 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-034

Date Collected: 04.03.18 08.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	185	9.92	0.351	mg/kg	04.06.18 18.55		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.31

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	04.06.18 01.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.0	49.7	9.94	mg/kg	04.06.18 01.54	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	30.0	49.7	9.94	mg/kg	04.06.18 01.54	J	1
Total TPH	PHC635	48.0	49.7	9.94	mg/kg	04.06.18 01.54	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.06.18 01.54	
o-Terphenyl	84-15-1	104	%	70-135	04.06.18 01.54	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-034

Date Collected: 04.03.18 08.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000477	0.000954	0.000477	mg/kg	04.07.18 17.42	U	1
Toluene	108-88-3	0.000563	0.000954	0.000477	mg/kg	04.07.18 17.42	J	1
Ethylbenzene	100-41-4	<0.000477	0.000954	0.000477	mg/kg	04.07.18 17.42	U	1
m,p-Xylenes	179601-23-1	<0.000954	0.00191	0.000954	mg/kg	04.07.18 17.42	U	1
o-Xylene	95-47-6	<0.000477	0.000954	0.000477	mg/kg	04.07.18 17.42	U	1
Total Xylenes	1330-20-7	<0.000477	0.000954	0.000477	mg/kg	04.07.18 17.42	U	1
Total BTEX		0.000563	0.000954	0.000477	mg/kg	04.07.18 17.42	J	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	97	%	74-126	04.07.18 17.42			
1,2-Dichloroethane-D4	17060-07-0	129	%	75-125	04.07.18 17.42		**	
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 17.42			
4-Bromofluorobenzene	460-00-4	101	%	58-152	04.07.18 17.42			



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-035

Date Collected: 04.03.18 08.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	123	9.86	0.349	mg/kg	04.06.18 19.06		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.34

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	04.06.18 02.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.2	49.6	9.91	mg/kg	04.06.18 02.15	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.4	49.6	9.91	mg/kg	04.06.18 02.15	J	1
Total TPH	PHC635	36.6	49.6	9.91	mg/kg	04.06.18 02.15	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.18 02.15	
o-Terphenyl	84-15-1	104	%	70-135	04.06.18 02.15	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-035

Date Collected: 04.03.18 08.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
Toluene	108-88-3	<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
Ethylbenzene	100-41-4	<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
m,p-Xylenes	179601-23-1	<0.000917	0.00183	0.000917	mg/kg	04.07.18 17.56	U	1
o-Xylene	95-47-6	<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
Total Xylenes	1330-20-7	<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
Total BTEX		<0.000459	0.000917	0.000459	mg/kg	04.07.18 17.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	102	%	74-126	04.07.18 17.56			
1,2-Dichloroethane-D4	17060-07-0	119	%	75-125	04.07.18 17.56			
Toluene-D8	2037-26-5	96	%	73-132	04.07.18 17.56			
4-Bromofluorobenzene	460-00-4	104	%	58-152	04.07.18 17.56			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 DUP**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-036

Date Collected: 04.03.18 08.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	179	9.92	0.351	mg/kg	04.06.18 20.57		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.37

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	04.06.18 02.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	19.2	49.7	9.94	mg/kg	04.06.18 02.36	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	31.5	49.7	9.94	mg/kg	04.06.18 02.36	J	1
Total TPH	PHC635	50.7	49.7	9.94	mg/kg	04.06.18 02.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.18 02.36	
o-Terphenyl	84-15-1	104	%	70-135	04.06.18 02.36	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 DUP**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-036

Date Collected: 04.03.18 08.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000481	0.000962	0.000481	mg/kg	04.07.18 18.11	U	1
Toluene	108-88-3	0.000529	0.000962	0.000481	mg/kg	04.07.18 18.11	J	1
Ethylbenzene	100-41-4	<0.000481	0.000962	0.000481	mg/kg	04.07.18 18.11	U	1
m,p-Xylenes	179601-23-1	<0.000962	0.00192	0.000962	mg/kg	04.07.18 18.11	U	1
o-Xylene	95-47-6	<0.000481	0.000962	0.000481	mg/kg	04.07.18 18.11	U	1
Total Xylenes	1330-20-7	<0.000481	0.000962	0.000481	mg/kg	04.07.18 18.11	U	1
Total BTEX		0.000529	0.000962	0.000481	mg/kg	04.07.18 18.11	J	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	94	%	74-126	04.07.18 18.11			
1,2-Dichloroethane-D4	17060-07-0	126	%	75-125	04.07.18 18.11		**	
Toluene-D8	2037-26-5	98	%	73-132	04.07.18 18.11			
4-Bromofluorobenzene	460-00-4	99	%	58-152	04.07.18 18.11			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 DUP**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-037

Date Collected: 04.03.18 08.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 12.35

Basis: Wet Weight

Seq Number: 3046026

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	123	9.96	0.353	mg/kg	04.06.18 21.07		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.40

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	04.06.18 02.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	14.6	49.8	9.96	mg/kg	04.06.18 02.57	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.9	49.8	9.96	mg/kg	04.06.18 02.57	J	1
Total TPH	PHC635	34.5	49.8	9.96	mg/kg	04.06.18 02.57	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	04.06.18 02.57	
o-Terphenyl	84-15-1	99	%	70-135	04.06.18 02.57	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-08 DUP**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-037

Date Collected: 04.03.18 08.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
Toluene	108-88-3	<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
Ethylbenzene	100-41-4	<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
m,p-Xylenes	179601-23-1	<0.000980	0.00196	0.000980	mg/kg	04.07.18 18.25	U	1
o-Xylene	95-47-6	<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
Total Xylenes	1330-20-7	<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
Total BTEX		<0.000490	0.000980	0.000490	mg/kg	04.07.18 18.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	105	%	74-126	04.07.18 18.25			
1,2-Dichloroethane-D4	17060-07-0	125	%	75-125	04.07.18 18.25			
Toluene-D8	2037-26-5	95	%	73-132	04.07.18 18.25			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.07.18 18.25			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-09 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-038

Date Collected: 04.03.18 08.25

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	301	9.88	0.350	mg/kg	04.06.18 22.11		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.43

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.06.18 03.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	21.0	49.5	9.90	mg/kg	04.06.18 03.19	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	40.0	49.5	9.90	mg/kg	04.06.18 03.19	J	1
Total TPH	PHC635	61.0	49.5	9.90	mg/kg	04.06.18 03.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.06.18 03.19	
o-Terphenyl	84-15-1	109	%	70-135	04.06.18 03.19	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-09 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-038

Date Collected: 04.03.18 08.25

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
Toluene	108-88-3	<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
Ethylbenzene	100-41-4	<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
m,p-Xylenes	179601-23-1	<0.000893	0.00179	0.000893	mg/kg	04.07.18 18.40	U	1
o-Xylene	95-47-6	<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
Total Xylenes	1330-20-7	<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
Total BTEX		<0.000446	0.000893	0.000446	mg/kg	04.07.18 18.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	114	%	74-126	04.07.18 18.40			
1,2-Dichloroethane-D4	17060-07-0	131	%	75-125	04.07.18 18.40	**		
Toluene-D8	2037-26-5	83	%	73-132	04.07.18 18.40			
4-Bromofluorobenzene	460-00-4	123	%	58-152	04.07.18 18.40			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-09 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-039

Date Collected: 04.03.18 08.25

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	9.92	0.351	mg/kg	04.06.18 22.22		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.46

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.95	49.8	9.95	mg/kg	04.06.18 04.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.7	49.8	9.95	mg/kg	04.06.18 04.01	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.1	49.8	9.95	mg/kg	04.06.18 04.01	J	1
Total TPH	PHC635	35.8	49.8	9.95	mg/kg	04.06.18 04.01	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.06.18 04.01	
o-Terphenyl	84-15-1	107	%	70-135	04.06.18 04.01	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-09 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-039

Date Collected: 04.03.18 08.25

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
Toluene	108-88-3	<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
Ethylbenzene	100-41-4	<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
m,p-Xylenes	179601-23-1	<0.000958	0.00192	0.000958	mg/kg	04.07.18 18.54	U	1
o-Xylene	95-47-6	<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
Total Xylenes	1330-20-7	<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
Total BTEX		<0.000479	0.000958	0.000479	mg/kg	04.07.18 18.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	98	%	74-126	04.07.18 18.54			
1,2-Dichloroethane-D4	17060-07-0	118	%	75-125	04.07.18 18.54			
Toluene-D8	2037-26-5	97	%	73-132	04.07.18 18.54			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.07.18 18.54			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-11 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-040

Date Collected: 04.03.18 09.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.87	9.92	0.351	mg/kg	04.06.18 22.33	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.49

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	04.06.18 04.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.1	49.9	9.98	mg/kg	04.06.18 04.23	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	29.1	49.9	9.98	mg/kg	04.06.18 04.23	J	1
Total TPH	PHC635	46.2	49.9	9.98	mg/kg	04.06.18 04.23	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.06.18 04.23	
o-Terphenyl	84-15-1	109	%	70-135	04.06.18 04.23	



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R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-11 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-040

Date Collected: 04.03.18 09.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000480	0.000960	0.000480	mg/kg	04.07.18 19.08	U	1
Toluene	108-88-3	0.00102	0.000960	0.000480	mg/kg	04.07.18 19.08		1
Ethylbenzene	100-41-4	<0.000480	0.000960	0.000480	mg/kg	04.07.18 19.08	U	1
m,p-Xylenes	179601-23-1	0.00120	0.00192	0.000960	mg/kg	04.07.18 19.08	J	1
o-Xylene	95-47-6	<0.000480	0.000960	0.000480	mg/kg	04.07.18 19.08	U	1
Total Xylenes	1330-20-7	0.00120	0.000960	0.000480	mg/kg	04.07.18 19.08		1
Total BTEX		0.00222	0.000960	0.000480	mg/kg	04.07.18 19.08		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	115	%	74-126	04.07.18 19.08			
1,2-Dichloroethane-D4	17060-07-0	136	%	75-125	04.07.18 19.08			
Toluene-D8	2037-26-5	99	%	73-132	04.07.18 19.08			
4-Bromofluorobenzene	460-00-4	100	%	58-152	04.07.18 19.08			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-11 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-041

Date Collected: 04.03.18 09.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.61	9.82	0.348	mg/kg	04.06.18 22.43	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.52

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.06.18 04.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.4	49.5	9.90	mg/kg	04.06.18 04.44	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.0	49.5	9.90	mg/kg	04.06.18 04.44	J	1
Total TPH	PHC635	33.4	49.5	9.90	mg/kg	04.06.18 04.44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.18 04.44	
o-Terphenyl	84-15-1	103	%	70-135	04.06.18 04.44	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-11 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-041

Date Collected: 04.03.18 09.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5030

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.07.18 10.20

Basis: Wet Weight

Seq Number: 3046052

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
Toluene	108-88-3	<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
Ethylbenzene	100-41-4	<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
m,p-Xylenes	179601-23-1	<0.000917	0.00183	0.000917	mg/kg	04.07.18 19.23	U	1
o-Xylene	95-47-6	<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
Total Xylenes	1330-20-7	<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
Total BTEX		<0.000459	0.000917	0.000459	mg/kg	04.07.18 19.23	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	100		%	74-126	04.07.18 19.23		
1,2-Dichloroethane-D4	17060-07-0	117		%	75-125	04.07.18 19.23		
Toluene-D8	2037-26-5	97		%	73-132	04.07.18 19.23		
4-Bromofluorobenzene	460-00-4	103		%	58-152	04.07.18 19.23		



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

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Sample Id: **SB-12 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-042

Date Collected: 04.03.18 09.15

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.4	9.90	0.350	mg/kg	04.06.18 22.54		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.55

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	04.06.18 05.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.3	49.7	9.93	mg/kg	04.06.18 05.05	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	35.8	49.7	9.93	mg/kg	04.06.18 05.05	J	1
Total TPH	PHC635	56.1	49.7	9.93	mg/kg	04.06.18 05.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.18 05.05	
o-Terphenyl	84-15-1	105	%	70-135	04.06.18 05.05	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

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Sample Id: **SB-12 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-042

Date Collected: 04.03.18 09.15

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000604	0.00121	0.000604	mg/kg	04.09.18 11.56	U	1
Toluene	108-88-3	0.000761	0.00121	0.000604	mg/kg	04.09.18 11.56	J	1
Ethylbenzene	100-41-4	<0.000604	0.00121	0.000604	mg/kg	04.09.18 11.56	U	1
m,p-Xylenes	179601-23-1	<0.00121	0.00242	0.00121	mg/kg	04.09.18 11.56	U	1
o-Xylene	95-47-6	<0.000604	0.00121	0.000604	mg/kg	04.09.18 11.56	U	1
Total Xylenes	1330-20-7	<0.000604	0.00121	0.000604	mg/kg	04.09.18 11.56	U	1
Total BTEX		0.000761	0.00121	0.000604	mg/kg	04.09.18 11.56	J	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	107	%	74-126	04.09.18 11.56			
1,2-Dichloroethane-D4	17060-07-0	121	%	75-125	04.09.18 11.56			
Toluene-D8	2037-26-5	98	%	73-132	04.09.18 11.56			
4-Bromofluorobenzene	460-00-4	101	%	58-152	04.09.18 11.56			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-12 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-043

Date Collected: 04.03.18 09.15

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.51	9.86	0.349	mg/kg	04.06.18 23.05	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.58

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.06.18 05.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.9	49.5	9.90	mg/kg	04.06.18 05.26	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	37.4	49.5	9.90	mg/kg	04.06.18 05.26	J	1
Total TPH	PHC635	56.3	49.5	9.90	mg/kg	04.06.18 05.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.06.18 05.26	
o-Terphenyl	84-15-1	108	%	70-135	04.06.18 05.26	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-12 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-043

Date Collected: 04.03.18 09.15

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
Toluene	108-88-3	<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
Ethylbenzene	100-41-4	<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
m,p-Xylenes	179601-23-1	<0.00107	0.00213	0.00107	mg/kg	04.09.18 13.39	U	1
o-Xylene	95-47-6	<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
Total Xylenes	1330-20-7	<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
Total BTEX		<0.000533	0.00107	0.000533	mg/kg	04.09.18 13.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	108	%	74-126	04.09.18 13.39			
1,2-Dichloroethane-D4	17060-07-0	131	%	75-125	04.09.18 13.39	**		
Toluene-D8	2037-26-5	94	%	73-132	04.09.18 13.39			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.09.18 13.39			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

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Sample Id: **SB-13 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-044

Date Collected: 04.03.18 09.30

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3.71	9.96	0.353	mg/kg	04.06.18 23.15	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 13.01

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.06.18 05.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.6	49.5	9.90	mg/kg	04.06.18 05.47	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.8	49.5	9.90	mg/kg	04.06.18 05.47	J	1
Total TPH	PHC635	37.4	49.5	9.90	mg/kg	04.06.18 05.47	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.06.18 05.47	
o-Terphenyl	84-15-1	108	%	70-135	04.06.18 05.47	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-13 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-044

Date Collected: 04.03.18 09.30

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
Toluene	108-88-3	<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
Ethylbenzene	100-41-4	<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
m,p-Xylenes	179601-23-1	<0.000741	0.00148	0.000741	mg/kg	04.09.18 13.53	U	1
o-Xylene	95-47-6	<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
Total Xylenes	1330-20-7	<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
Total BTEX		<0.000370	0.000741	0.000370	mg/kg	04.09.18 13.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	111	%	74-126	04.09.18 13.53			
1,2-Dichloroethane-D4	17060-07-0	129	%	75-125	04.09.18 13.53	**		
Toluene-D8	2037-26-5	100	%	73-132	04.09.18 13.53			
4-Bromofluorobenzene	460-00-4	104	%	58-152	04.09.18 13.53			



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Sample Id: **SB-13 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-045

Date Collected: 04.03.18 09.30

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.9	9.90	0.350	mg/kg	04.06.18 23.47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 13.04

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	04.06.18 14.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.6	49.6	9.91	mg/kg	04.06.18 14.00	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	24.2	49.6	9.91	mg/kg	04.06.18 14.00	J	1
Total TPH	PHC635	36.8	49.6	9.91	mg/kg	04.06.18 14.00	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	04.06.18 14.00	
o-Terphenyl	84-15-1	104	%	70-135	04.06.18 14.00	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-13 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-045

Date Collected: 04.03.18 09.30

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
Toluene	108-88-3	<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
Ethylbenzene	100-41-4	<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
m,p-Xylenes	179601-23-1	<0.00112	0.00223	0.00112	mg/kg	04.09.18 14.07	U	1
o-Xylene	95-47-6	<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
Total Xylenes	1330-20-7	<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
Total BTEX		<0.000558	0.00112	0.000558	mg/kg	04.09.18 14.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	106	%	74-126	04.09.18 14.07			
1,2-Dichloroethane-D4	17060-07-0	130	%	75-125	04.09.18 14.07	**		
Toluene-D8	2037-26-5	98	%	73-132	04.09.18 14.07			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.09.18 14.07			



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Sample Id: **SB-14 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-046

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.20	9.94	0.352	mg/kg	04.06.18 23.58	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARL

% Moisture:

Analyst: ISU

Date Prep: 04.05.18 12.01

Basis: Wet Weight

Seq Number: 3045864

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	04.05.18 19.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	19.8	50.0	9.99	mg/kg	04.05.18 19.33	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	37.4	50.0	9.99	mg/kg	04.05.18 19.33	J	1
Total TPH	PHC635	57.2	50.0	9.99	mg/kg	04.05.18 19.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.05.18 19.33	
o-Terphenyl	84-15-1	100	%	70-135	04.05.18 19.33	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-14 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-046

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
Toluene	108-88-3	<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
Ethylbenzene	100-41-4	<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
m,p-Xylenes	179601-23-1	<0.00118	0.00237	0.00118	mg/kg	04.09.18 14.22	U	1
o-Xylene	95-47-6	<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
Total Xylenes	1330-20-7	<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
Total BTEX		<0.000592	0.00118	0.000592	mg/kg	04.09.18 14.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	114	%	74-126	04.09.18 14.22			
1,2-Dichloroethane-D4	17060-07-0	136	%	75-125	04.09.18 14.22	**		
Toluene-D8	2037-26-5	98	%	73-132	04.09.18 14.22			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.09.18 14.22			



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Sample Id: **SB-14 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-048

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.4	9.88	0.350	mg/kg	04.07.18 00.30		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.43

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	04.10.18 00.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.1	49.9	9.98	mg/kg	04.10.18 00.29	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.0	49.9	9.98	mg/kg	04.10.18 00.29	J	1
Total TPH	PHC635	36.1	49.9	9.98	mg/kg	04.10.18 00.29	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.10.18 00.29	
o-Terphenyl	84-15-1	106	%	70-135	04.10.18 00.29	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-14 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-048

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
Toluene	108-88-3	<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
Ethylbenzene	100-41-4	<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
m,p-Xylenes	179601-23-1	<0.00124	0.00248	0.00124	mg/kg	04.09.18 14.36	U	1
o-Xylene	95-47-6	<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
Total Xylenes	1330-20-7	<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
Total BTEX		<0.000620	0.00124	0.000620	mg/kg	04.09.18 14.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	105	%	74-126	04.09.18 14.36			
1,2-Dichloroethane-D4	17060-07-0	124	%	75-125	04.09.18 14.36			
Toluene-D8	2037-26-5	100	%	73-132	04.09.18 14.36			
4-Bromofluorobenzene	460-00-4	102	%	58-152	04.09.18 14.36			



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Sample Id: **SB-15 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-049

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.11	9.84	0.348	mg/kg	04.07.18 00.41	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.46

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	04.10.18 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.1	49.6	9.91	mg/kg	04.10.18 00.50	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	24.6	49.6	9.91	mg/kg	04.10.18 00.50	J	1
Total TPH	PHC635	40.7	49.6	9.91	mg/kg	04.10.18 00.50	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.10.18 00.50	
o-Terphenyl	84-15-1	93	%	70-135	04.10.18 00.50	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-15 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-049

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
Toluene	108-88-3	<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
Ethylbenzene	100-41-4	<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
m,p-Xylenes	179601-23-1	<0.00114	0.00229	0.00114	mg/kg	04.09.18 14.51	U	1
o-Xylene	95-47-6	<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
Total Xylenes	1330-20-7	<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
Total BTEX		<0.000572	0.00114	0.000572	mg/kg	04.09.18 14.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	111	%	74-126	04.09.18 14.51			
1,2-Dichloroethane-D4	17060-07-0	137	%	75-125	04.09.18 14.51	**		
Toluene-D8	2037-26-5	100	%	73-132	04.09.18 14.51			
4-Bromofluorobenzene	460-00-4	101	%	58-152	04.09.18 14.51			



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-15 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-050

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.52	9.92	0.351	mg/kg	04.07.18 00.51	J	1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.49

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.10.18 01.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.2	49.5	9.90	mg/kg	04.10.18 01.11	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.6	49.5	9.90	mg/kg	04.10.18 01.11	J	1
Total TPH	PHC635	35.8	49.5	9.90	mg/kg	04.10.18 01.11	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.10.18 01.11	
o-Terphenyl	84-15-1	103	%	70-135	04.10.18 01.11	



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R2M Engineering, Lubbock, TX

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Sample Id: **SB-15 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-050

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
Toluene	108-88-3	<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
Ethylbenzene	100-41-4	<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
m,p-Xylenes	179601-23-1	<0.000952	0.00190	0.000952	mg/kg	04.09.18 15.05	U	1
o-Xylene	95-47-6	<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
Total Xylenes	1330-20-7	<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
Total BTEX		<0.000476	0.000952	0.000476	mg/kg	04.09.18 15.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	105	%	74-126	04.09.18 15.05			
1,2-Dichloroethane-D4	17060-07-0	129	%	75-125	04.09.18 15.05	**		
Toluene-D8	2037-26-5	97	%	73-132	04.09.18 15.05			
4-Bromofluorobenzene	460-00-4	106	%	58-152	04.09.18 15.05			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-16 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-051

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	105	9.90	0.350	mg/kg	04.07.18 01.02		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.52

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	04.10.18 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.4	49.5	9.90	mg/kg	04.10.18 01.32	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.0	49.5	9.90	mg/kg	04.10.18 01.32	J	1
Total TPH	PHC635	34.4	49.5	9.90	mg/kg	04.10.18 01.32	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.10.18 01.32	
o-Terphenyl	84-15-1	111	%	70-135	04.10.18 01.32	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-16 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-051

Date Collected: 04.03.18 10.00

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
Toluene	108-88-3	<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
Ethylbenzene	100-41-4	<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
m,p-Xylenes	179601-23-1	<0.00108	0.00216	0.00108	mg/kg	04.09.18 15.20	U	1
o-Xylene	95-47-6	<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
Total Xylenes	1330-20-7	<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
Total BTEX		<0.000540	0.00108	0.000540	mg/kg	04.09.18 15.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	112	%	74-126	04.09.18 15.20			
1,2-Dichloroethane-D4	17060-07-0	135	%	75-125	04.09.18 15.20	**		
Toluene-D8	2037-26-5	98	%	73-132	04.09.18 15.20			
4-Bromofluorobenzene	460-00-4	103	%	58-152	04.09.18 15.20			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-16 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-052

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	192	9.84	0.348	mg/kg	04.07.18 01.13		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.55

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	04.10.18 01.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	14.4	49.7	9.93	mg/kg	04.10.18 01.53	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	16.4	49.7	9.93	mg/kg	04.10.18 01.53	J	1
Total TPH	PHC635	30.8	49.7	9.93	mg/kg	04.10.18 01.53	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.10.18 01.53	
o-Terphenyl	84-15-1	101	%	70-135	04.10.18 01.53	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-16 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-052

Date Collected: 04.03.18 10.00

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
Toluene	108-88-3	<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
Ethylbenzene	100-41-4	<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
m,p-Xylenes	179601-23-1	<0.000832	0.00166	0.000832	mg/kg	04.09.18 15.35	U	1
o-Xylene	95-47-6	<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
Total Xylenes	1330-20-7	<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
Total BTEX		<0.000416	0.000832	0.000416	mg/kg	04.09.18 15.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	108	%	74-126	04.09.18 15.35			
1,2-Dichloroethane-D4	17060-07-0	136	%	75-125	04.09.18 15.35			
Toluene-D8	2037-26-5	96	%	73-132	04.09.18 15.35			
4-Bromofluorobenzene	460-00-4	104	%	58-152	04.09.18 15.35			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-17 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-053

Date Collected: 04.03.18 10.25

Sample Depth: 2 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	106	9.80	0.347	mg/kg	04.07.18 01.24		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 09.58

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	04.10.18 02.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.7	49.9	9.98	mg/kg	04.10.18 02.14	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	10.2	49.9	9.98	mg/kg	04.10.18 02.14	J	1
Total TPH	PHC635	25.9	49.9	9.98	mg/kg	04.10.18 02.14	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.10.18 02.14	
o-Terphenyl	84-15-1	102	%	70-135	04.10.18 02.14	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-17 2-4**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-053

Date Collected: 04.03.18 10.25

Sample Depth: 2 - 4

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.000870	0.000988	0.000494	mg/kg	04.09.18 15.49	J	1
Toluene	108-88-3	0.00352	0.000988	0.000494	mg/kg	04.09.18 15.49		1
Ethylbenzene	100-41-4	0.000662	0.000988	0.000494	mg/kg	04.09.18 15.49	J	1
m,p-Xylenes	179601-23-1	0.00211	0.00198	0.000988	mg/kg	04.09.18 15.49		1
o-Xylene	95-47-6	0.000623	0.000988	0.000494	mg/kg	04.09.18 15.49	J	1
Total Xylenes	1330-20-7	0.00273	0.000988	0.000494	mg/kg	04.09.18 15.49		1
Total BTEX		0.00779	0.000988	0.000494	mg/kg	04.09.18 15.49		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	119	%	74-126	04.09.18 15.49			
1,2-Dichloroethane-D4	17060-07-0	141	%	75-125	04.09.18 15.49	**		
Toluene-D8	2037-26-5	99	%	73-132	04.09.18 15.49			
4-Bromofluorobenzene	460-00-4	104	%	58-152	04.09.18 15.49			



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-17 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-054

Date Collected: 04.03.18 10.25

Sample Depth: 6 - 8

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.06.18 13.04

Basis: Wet Weight

Seq Number: 3046027

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.5	9.78	0.346	mg/kg	04.07.18 01.56		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 04.06.18 10.01

Basis: Wet Weight

Seq Number: 3046189

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	04.10.18 02.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.8	49.7	9.94	mg/kg	04.10.18 02.36	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	13.3	49.7	9.94	mg/kg	04.10.18 02.36	J	1
Total TPH	PHC635	31.1	49.7	9.94	mg/kg	04.10.18 02.36	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.10.18 02.36	
o-Terphenyl	84-15-1	106	%	70-135	04.10.18 02.36	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB-17 6-8**

Matrix: Soil

Date Received: 04.03.18 14.00

Lab Sample Id: 581204-054

Date Collected: 04.03.18 10.25

Sample Depth: 6 - 8

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SOZ

% Moisture:

Analyst: SOZ

Date Prep: 04.09.18 10.20

Basis: Wet Weight

Seq Number: 3046068

SUB: TX104704295-17-16

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000411	0.000821	0.000411	mg/kg	04.09.18 16.03	U	1
Toluene	108-88-3	0.00243	0.000821	0.000411	mg/kg	04.09.18 16.03		1
Ethylbenzene	100-41-4	0.000476	0.000821	0.000411	mg/kg	04.09.18 16.03	J	1
m,p-Xylenes	179601-23-1	0.00187	0.00164	0.000821	mg/kg	04.09.18 16.03		1
o-Xylene	95-47-6	0.000550	0.000821	0.000411	mg/kg	04.09.18 16.03	J	1
Total Xylenes	1330-20-7	0.00242	0.000821	0.000411	mg/kg	04.09.18 16.03		1
Total BTEX		0.00533	0.000821	0.000411	mg/kg	04.09.18 16.03		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	119		%	74-126	04.09.18 16.03		
1,2-Dichloroethane-D4	17060-07-0	138		%	75-125	04.09.18 16.03	**	
Toluene-D8	2037-26-5	99		%	73-132	04.09.18 16.03		
4-Bromofluorobenzene	460-00-4	101		%	58-152	04.09.18 16.03		



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB- 3 C**
Lab Sample Id: 581204-055

Matrix: Soil
Date Collected: 04.03.18 10.25

Date Received: 04.03.18 14.00

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3045677

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.08	9.86	0.349	mg/kg	04.04.18 13.31	J	1

Analytical Method: TPH By SW8015 Mod

Tech: ARL

Analyst: ISU

Seq Number: 3045681

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: TX104704215-18-24

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	32.1	49.9	9.97	mg/kg	04.04.18 17.14	J	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	04.04.18 17.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<9.97	49.9	9.97	mg/kg	04.04.18 17.14	U	1
Total TPH	PHC635	32.1	49.9	9.97	mg/kg	04.04.18 17.14	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.04.18 17.14	
o-Terphenyl	84-15-1	103	%	70-135	04.04.18 17.14	



Certificate of Analytical Results 581204

R2M Engineering, Lubbock, TX

18-3453

Sample Id: **SB- 3 C**
Lab Sample Id: 581204-055

Matrix: Soil
Date Collected: 04.03.18 10.25

Date Received: 04.03.18 14.00

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: JTR

% Moisture:

Analyst: JTR

Date Prep: 04.04.18 11.00

Basis: Wet Weight

Seq Number: 3045682

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
Toluene	108-88-3	<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
Ethylbenzene	100-41-4	<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00400	0.00200	mg/kg	04.04.18 15.15	U	1
o-Xylene	95-47-6	<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
Total Xylenes	1330-20-7	<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
Total BTEX		<0.00100	0.00200	0.00100	mg/kg	04.04.18 15.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
Dibromofluoromethane	1868-53-7	113	%	74-126	04.04.18 15.15			
1,2-Dichloroethane-D4	17060-07-0	106	%	80-120	04.04.18 15.15			
Toluene-D8	2037-26-5	102	%	73-132	04.04.18 15.15			

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

R2M Engineering
18-3453**Analytical Method: Chloride by EPA 300**

Seq Number: 3045677

MB Sample Id: 7642031-1-BLK

Matrix: Solid

LCS Sample Id: 7642031-1-BKS

Prep Method: E300P

Date Prep: 04.04.18

LCSD Sample Id: 7642031-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	100	100	100	100	80-120	0	20	mg/kg	04.04.18 13:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3046026

MB Sample Id: 7642160-1-BLK

Matrix: Solid

LCS Sample Id: 7642160-1-BKS

Prep Method: E300P

Date Prep: 04.06.18

LCSD Sample Id: 7642160-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	94.1	94	93.6	94	80-120	1	20	mg/kg	04.06.18 16:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3046027

MB Sample Id: 7642168-1-BLK

Matrix: Solid

LCS Sample Id: 7642168-1-BKS

Prep Method: E300P

Date Prep: 04.06.18

LCSD Sample Id: 7642168-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	101	101	99.3	99	80-120	2	20	mg/kg	04.06.18 21:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3046169

MB Sample Id: 7642307-1-BLK

Matrix: Solid

LCS Sample Id: 7642307-1-BKS

Prep Method: SW9056P

Date Prep: 04.09.18

LCSD Sample Id: 7642307-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	102	102	102	102	80-120	0	20	mg/kg	04.10.18 01:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3045677

Parent Sample Id: 581204-055

Matrix: Soil

MS Sample Id: 581204-055 S

Prep Method: E300P

Date Prep: 04.04.18

MSD Sample Id: 581204-055 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.08	98.2	100	94	106	100	80-120	6	20	mg/kg	04.04.18 13:46	

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



QC Summary 581204

R2M Engineering

18-3453

Analytical Method: Chloride by EPA 300

Seq Number: 3046026

Parent Sample Id: 581204-001

Matrix: Soil

MS Sample Id: 581204-001 S

Prep Method: E300P

Date Prep: 04.06.18

MSD Sample Id: 581204-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.5	99.0	122	102	123	103	80-120	1	20	mg/kg	04.06.18 16:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3046026

Parent Sample Id: 581204-019

Matrix: Soil

MS Sample Id: 581204-019 S

Prep Method: E300P

Date Prep: 04.06.18

MSD Sample Id: 581204-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.39	98.0	104	99	104	99	80-120	0	20	mg/kg	04.06.18 19:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3046027

Parent Sample Id: 581204-046

Matrix: Soil

MS Sample Id: 581204-046 S

Prep Method: E300P

Date Prep: 04.06.18

MSD Sample Id: 581204-046 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.20	99.8	104	100	105	101	80-120	1	20	mg/kg	04.07.18 00:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3046027

Parent Sample Id: 581204-054

Matrix: Soil

MS Sample Id: 581204-054 S

Prep Method: E300P

Date Prep: 04.06.18

MSD Sample Id: 581204-054 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.5	98.8	145	103	143	101	80-120	1	20	mg/kg	04.07.18 02:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3046169

Parent Sample Id: 581359-001

Matrix: Soil

MS Sample Id: 581359-001 S

Prep Method: SW9056P

Date Prep: 04.09.18

MSD Sample Id: 581359-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.22	107	117	101	115	99	80-120	2	20	mg/kg	04.10.18 01:59	

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

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

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

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



R2M Engineering

18-3453

Analytical Method: Chloride by EPA 300

Seq Number: 3046169

Parent Sample Id: 581384-006

Matrix: Solid

MS Sample Id: 581384-006 S

Prep Method: SW9056P

Date Prep: 04.09.18

MSD Sample Id: 581384-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.41	121	129	104	129	104	80-120	0	20	mg/kg	04.10.18 04:50	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3045681

MB Sample Id: 7642027-1-BLK

Matrix: Solid

LCS Sample Id: 7642027-1-BKS

Prep Method: TX1005P

Date Prep: 04.04.18

LCSD Sample Id: 7642027-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	928	93	926	93	70-135	0	35	mg/kg	04.04.18 10:46	
Diesel Range Organics (DRO)	<10.0	1000	967	97	1050	105	70-135	8	35	mg/kg	04.04.18 10:46	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	79		83		85		70-135	%	04.04.18 10:46
o-Terphenyl	97		89		94		70-135	%	04.04.18 10:46

Analytical Method: TPH By SW8015 Mod

Seq Number: 3045875

MB Sample Id: 7642067-1-BLK

Matrix: Solid

LCS Sample Id: 7642067-1-BKS

Prep Method: TX1005P

Date Prep: 04.04.18

LCSD Sample Id: 7642067-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	969	97	927	93	70-135	4	35	mg/kg	04.05.18 10:38	
Diesel Range Organics (DRO)	<10.0	1000	1120	112	1060	106	70-135	6	35	mg/kg	04.05.18 10:38	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		88		85		70-135	%	04.05.18 10:38
o-Terphenyl	102		98		94		70-135	%	04.05.18 10:38

Analytical Method: TPH By SW8015 Mod

Seq Number: 3045864

MB Sample Id: 7642072-1-BLK

Matrix: Solid

LCS Sample Id: 7642072-1-BKS

Prep Method: TX1005P

Date Prep: 04.05.18

LCSD Sample Id: 7642072-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	995	100	1030	103	70-135	3	35	mg/kg	04.05.18 18:29	
Diesel Range Organics (DRO)	<10.0	1000	1050	105	1100	110	70-135	5	35	mg/kg	04.05.18 18:29	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		85		88		70-135	%	04.05.18 18:29
o-Terphenyl	99		96		100		70-135	%	04.05.18 18:29

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

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

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

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



QC Summary 581204

R2M Engineering

18-3453

Analytical Method: TPH By SW8015 Mod

Seq Number: 3046189

MB Sample Id: 7642194-1-BLK

Matrix: Solid

LCS Sample Id: 7642194-1-BKS

Prep Method: TX1005P

Date Prep: 04.06.18

LCSD Sample Id: 7642194-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	1020	102	952	95	70-135	7	35	mg/kg	04.09.18 20:39	
Diesel Range Organics (DRO)	<10.0	1000	1070	107	1030	103	70-135	4	35	mg/kg	04.09.18 20:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		100		98		70-135	%	04.09.18 20:39
o-Terphenyl	116		115		111		70-135	%	04.09.18 20:39

Analytical Method: TPH By SW8015 Mod

Seq Number: 3045864

Parent Sample Id: 581204-046

Matrix: Soil

MS Sample Id: 581204-046 S

Prep Method: TX1005P

Date Prep: 04.05.18

MSD Sample Id: 581204-046 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<9.93	993	1030	104	981	99	70-135	5	35	mg/kg	04.05.18 19:54	
Diesel Range Organics (DRO)	19.8	993	1150	114	1090	108	70-135	5	35	mg/kg	04.05.18 19:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		83		70-135	%	04.05.18 19:54
o-Terphenyl	98		89		70-135	%	04.05.18 19:54

Analytical Method: BTEX by SW 8260B

Seq Number: 3045682

MB Sample Id: 7642032-1-BLK

Matrix: Solid

LCS Sample Id: 7642032-1-BKS

Prep Method: SW5030B

Date Prep: 04.04.18

LCSD Sample Id: 7642032-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.0781	78	0.0827	83	62-132	6	25	mg/kg	04.04.18 11:18	
Toluene	<0.000500	0.100	0.0753	75	0.0778	78	66-124	3	25	mg/kg	04.04.18 11:18	
Ethylbenzene	<0.000500	0.100	0.0950	95	0.0916	92	71-134	4	25	mg/kg	04.04.18 11:18	
m,p-Xylenes	<0.00100	0.200	0.167	84	0.166	83	69-128	1	25	mg/kg	04.04.18 11:18	
o-Xylene	<0.000500	0.100	0.0861	86	0.0816	82	72-131	5	25	mg/kg	04.04.18 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	111		107		117		74-126	%	04.04.18 11:18
1,2-Dichloroethane-D4	96		111		114		80-120	%	04.04.18 11:18
Toluene-D8	100		96		104		73-132	%	04.04.18 11:18

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

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

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

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

R2M Engineering
18-3453

Analytical Method: BTEX by SW 8260B

Seq Number: 3045884

MB Sample Id: 7642148-1-BLK

Matrix: Solid

LCS Sample Id: 7642148-1-BKS

Prep Method: SW5030B

Date Prep: 04.05.18

LCSD Sample Id: 7642148-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.0839	84	0.0933	93	62-132	11	25	mg/kg	04.05.18 11:16	
Toluene	<0.000500	0.100	0.0997	100	0.106	106	66-124	6	25	mg/kg	04.05.18 11:16	
Ethylbenzene	<0.000500	0.100	0.0931	93	0.104	104	71-134	11	25	mg/kg	04.05.18 11:16	
m,p-Xylenes	<0.00100	0.200	0.191	96	0.212	106	69-128	10	25	mg/kg	04.05.18 11:16	
o-Xylene	<0.000500	0.100	0.0945	95	0.108	108	72-131	13	25	mg/kg	04.05.18 11:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	92		95		95		74-126	%	04.05.18 11:16
1,2-Dichloroethane-D4	86		99		99		80-120	%	04.05.18 11:16
Toluene-D8	99		101		98		73-132	%	04.05.18 11:16

Analytical Method: BTEX by SW 8260B

Seq Number: 3045904

MB Sample Id: 7642166-1-BLK

Matrix: Solid

LCS Sample Id: 7642166-1-BKS

Prep Method: SW5035A

Date Prep: 04.05.18

LCSD Sample Id: 7642166-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.0866	87	0.0870	87	62-132	0	25	mg/kg	04.05.18 11:16	
Toluene	<0.000500	0.100	0.0913	91	0.0976	98	66-124	7	25	mg/kg	04.05.18 11:16	
Ethylbenzene	<0.000500	0.100	0.0805	81	0.0886	89	71-134	10	25	mg/kg	04.05.18 11:16	
m,p-Xylenes	<0.00100	0.200	0.159	80	0.174	87	69-128	9	25	mg/kg	04.05.18 11:16	
o-Xylene	<0.000500	0.100	0.0820	82	0.0878	88	72-131	7	25	mg/kg	04.05.18 11:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	113		104		105		74-126	%	04.05.18 11:16
1,2-Dichloroethane-D4	100		100		101		80-120	%	04.05.18 11:16
Toluene-D8	95		101		100		73-132	%	04.05.18 11:16

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

R2M Engineering
18-3453

Analytical Method: BTEX by SW 8260B

Seq Number: 3046052

MB Sample Id: 7642247-1-BLK

Matrix: Solid

LCS Sample Id: 7642247-1-BKS

Prep Method: SW5030

Date Prep: 04.07.18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.0954	95	62-132	mg/kg	04.07.18 13:07	
Toluene	<0.000500	0.100	0.102	102	66-124	mg/kg	04.07.18 13:07	
Ethylbenzene	<0.000500	0.100	0.110	110	71-134	mg/kg	04.07.18 13:07	
m,p-Xylenes	<0.00100	0.200	0.239	120	69-128	mg/kg	04.07.18 13:07	
o-Xylene	<0.000500	0.100	0.0990	99	72-131	mg/kg	04.07.18 13:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		102		74-126	%	04.07.18 13:07
1,2-Dichloroethane-D4	108		106		75-125	%	04.07.18 13:07
Toluene-D8	97		97		73-132	%	04.07.18 13:07
4-Bromofluorobenzene	103		101		58-152	%	04.07.18 13:07

Analytical Method: BTEX by SW 8260B

Seq Number: 3046068

MB Sample Id: 7642263-1-BLK

Matrix: Solid

LCS Sample Id: 7642263-1-BKS

Prep Method: SW5035A

Date Prep: 04.09.18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.102	102	62-132	mg/kg	04.09.18 08:51	
Toluene	<0.000500	0.100	0.111	111	66-124	mg/kg	04.09.18 08:51	
Ethylbenzene	<0.000500	0.100	0.120	120	71-134	mg/kg	04.09.18 08:51	
m,p-Xylenes	<0.00100	0.200	0.252	126	69-128	mg/kg	04.09.18 08:51	
o-Xylene	<0.000500	0.100	0.103	103	72-131	mg/kg	04.09.18 08:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	103		100		74-126	%	04.09.18 08:51
1,2-Dichloroethane-D4	113		106		75-125	%	04.09.18 08:51
Toluene-D8	99		96		73-132	%	04.09.18 08:51
4-Bromofluorobenzene	103		101		58-152	%	04.09.18 08:51

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

R2M Engineering
18-3453

Analytical Method: BTEX by SW 8260B

Seq Number: 3045682

Parent Sample Id: 580497-010

Matrix: Soil

MS Sample Id: 580497-010 S

Prep Method: SW5030B

Date Prep: 04.04.18

MSD Sample Id: 580497-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000499	0.0998	0.110	110	0.106	106	62-132	4	25	mg/kg	04.04.18 16:43	
Toluene	<0.000499	0.0998	0.113	113	0.104	104	66-124	8	25	mg/kg	04.04.18 16:43	
Ethylbenzene	<0.000499	0.0998	0.124	124	0.118	118	71-134	5	25	mg/kg	04.04.18 16:43	
m,p-Xylenes	<0.000998	0.200	0.239	120	0.233	117	69-128	3	25	mg/kg	04.04.18 16:43	
o-Xylene	<0.000499	0.0998	0.120	120	0.110	110	72-131	9	25	mg/kg	04.04.18 16:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	109		102		74-126	%	04.04.18 16:43
1,2-Dichloroethane-D4	114		104		80-120	%	04.04.18 16:43
Toluene-D8	106		101		73-132	%	04.04.18 16:43

Analytical Method: BTEX by SW 8260B

Seq Number: 3045884

Parent Sample Id: 581204-023

Matrix: Soil

MS Sample Id: 581204-023 S

Prep Method: SW5030B

Date Prep: 04.05.18

MSD Sample Id: 581204-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000501	0.100	0.0960	96	0.0911	91	62-132	5	25	mg/kg	04.05.18 18:51	
Toluene	<0.000501	0.100	0.120	120	0.112	112	66-124	7	25	mg/kg	04.05.18 18:51	
Ethylbenzene	<0.000501	0.100	0.115	115	0.109	109	71-134	5	25	mg/kg	04.05.18 18:51	
m,p-Xylenes	<0.00100	0.200	0.233	117	0.221	111	69-128	5	25	mg/kg	04.05.18 18:51	
o-Xylene	<0.000501	0.100	0.119	119	0.115	115	72-131	3	25	mg/kg	04.05.18 18:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	89		91		74-126	%	04.05.18 18:51
1,2-Dichloroethane-D4	90		89		80-120	%	04.05.18 18:51
Toluene-D8	112		112		73-132	%	04.05.18 18:51

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

R2M Engineering
18-3453

Analytical Method: BTEX by SW 8260B

Seq Number: 3045904

Parent Sample Id: 581204-014

Matrix: Soil

MS Sample Id: 581204-014 S

Prep Method: SW5035A

Date Prep: 04.05.18

MSD Sample Id: 581204-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000504	0.101	0.111	110	0.100	99	62-132	10	25	mg/kg	04.05.18 18:22	
Toluene	<0.000504	0.101	0.103	102	0.0968	96	66-124	6	25	mg/kg	04.05.18 18:22	
Ethylbenzene	<0.000504	0.101	0.117	116	0.109	108	71-134	7	25	mg/kg	04.05.18 18:22	
m,p-Xylenes	<0.00101	0.202	0.224	111	0.215	107	69-128	4	25	mg/kg	04.05.18 18:22	
o-Xylene	<0.000504	0.101	0.108	107	0.104	103	72-131	4	25	mg/kg	04.05.18 18:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	109		111		74-126	%	04.05.18 18:22
1,2-Dichloroethane-D4	119		106		80-120	%	04.05.18 18:22
Toluene-D8	97		101		73-132	%	04.05.18 18:22

Analytical Method: BTEX by SW 8260B

Seq Number: 3046052

Parent Sample Id: 581204-001

Matrix: Soil

MS Sample Id: 581204-001 S

Prep Method: SW5030

Date Prep: 04.07.18

MSD Sample Id: 581204-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000500	0.100	0.0975	98	0.0812	84	62-132	18	25	mg/kg	04.07.18 13:22	
Toluene	<0.000500	0.100	0.102	102	0.0853	88	66-124	18	25	mg/kg	04.07.18 13:22	
Ethylbenzene	<0.000500	0.100	0.110	110	0.0909	94	71-134	19	25	mg/kg	04.07.18 13:22	
m,p-Xylenes	<0.00100	0.200	0.240	120	0.193	99	69-128	22	25	mg/kg	04.07.18 13:22	
o-Xylene	<0.000500	0.100	0.0985	99	0.0798	82	72-131	21	25	mg/kg	04.07.18 13:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	104		103		74-126	%	04.07.18 13:22
1,2-Dichloroethane-D4	112		111		75-125	%	04.07.18 13:22
Toluene-D8	96		97		73-132	%	04.07.18 13:22
4-Bromofluorobenzene	101		99		58-152	%	04.07.18 13:22

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



R2M Engineering

18-3453

Analytical Method: BTEX by SW 8260B

Seq Number: 3046068

Parent Sample Id: 581204-042

Matrix: Soil

MS Sample Id: 581204-042 S

Prep Method: SW5035A

Date Prep: 04.09.18

MSD Sample Id: 581204-042 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000622	0.124	0.112	90	0.102	88	62-132	9	25	mg/kg	04.09.18 09:06	
Toluene	0.000761	0.124	0.116	93	0.109	93	66-124	6	25	mg/kg	04.09.18 09:06	
Ethylbenzene	<0.000622	0.124	0.125	101	0.115	99	71-134	8	25	mg/kg	04.09.18 09:06	
m,p-Xylenes	<0.00124	0.249	0.269	108	0.246	106	69-128	9	25	mg/kg	04.09.18 09:06	
o-Xylene	<0.000622	0.124	0.111	90	0.101	87	72-131	9	25	mg/kg	04.09.18 09:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	106		109		74-126	%	04.09.18 09:06
1,2-Dichloroethane-D4	117		122		75-125	%	04.09.18 09:06
Toluene-D8	95		98		73-132	%	04.09.18 09:06
4-Bromofluorobenzene	102		101		58-152	%	04.09.18 09:06

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

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

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

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



Setting the Standard since 1990

Stafford, TX (281) 240-4200
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Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge, LA (832) 712-8143

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Service Center- Hobbs, NM (575) 392-7550

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CHAIN OF CUSTODY

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Client / Reporting Information				Project Information				Analytical Information				Matrix Codes					
Company Name / Branch:				Project Name/Number:													
Company Address:				Project Location:													
Email:				Invoice To:													
Project Contact:				PO Number:													
Sampler's Name:																	
No.	Field ID / Point of Collection	Sample Depth	Collection	Date	Time	Matrix	# of bottles	IC	NaOH/Zn	Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SB-060	4-6	4-2-0	10-10	5	1											Hand
2		6-8															
3		8-10															
4		10-12															
5		12-14															
6	SB-07	4-6															
7		6-8															
8		8-10															
9		10-12															
10		12-14															

Data Deliverable Information				Notes:			
Turnaround Time (Business days)	Level II Std QC	Level IV (Full Data Pkg / raw data)	Level III Std QC+ Forms	TRRP Level IV	Level 3 (CLP Forms)	UST / RG 411	Level II Report with TRRP checklist
☐ Same Day TAT	☒ 5 Day TAT	☐	☐	☐	☐	☐	☐
☐ Next Day EMERGENCY	☐ 7 Day TAT	☐	☐	☐	☐	☐	☐
☐ 2 Day EMERGENCY	☐ Contract TAT	☐	☐	☐	☐	☐	☐
☐ 3 Day EMERGENCY		☐	☐	☐	☐	☐	☐

TAT Starts Day received by Lab, if received by 5:00 pm				FED-EX / UPS: Tracking #			
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY							
Relinquished by Sampler:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Received By:	Date Time:
1. Sam [Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10
Relinquished by:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Received By:	Date Time:
3. [Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10
Relinquished by:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Received By:	Date Time:
5. [Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10	[Signature]	10/10/10

On Ice: ☐ Cooler Temp: ☐ Thermo, Corr, Factor: ☐

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

CHAIN OF CUSTODY

Page ___ Of ___

Client/Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name/ Branch: <u>Ray M Engineering</u>				Project Name/Number: <u>581204</u>											
Company Address:				Project Location:											
Email:				Invoice To:											
Project Contact: <u>Steven Sanders</u>				Phone No:											
Sampler's Name:				PO Number:											
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments
1	SB-8	2-4	4-30-800	5	1										X BTEX
2		6-8													X TPH
3	SB-8 Dup	2-4													
4		6-8													
5	SB-9	2-4		825											
6	S	6-8													
7	SB-11	2-4		900											
8		6-8													
9	SB-12	2-4		915											
10		6-8													

Turnaround Time (Business days)		Data Deliverable Information		Notes:	
☐ Same Day TAT	☒ 5 Day TAT	☐ Level II Std QC	☐ Level IV (Full Data Pkg /raw data)		
☐ Next Day EMERGENCY	☐ 7 Day TAT	☐ Level III Std QC+ Forms	☐ TRRP Level IV		
☐ 2 Day EMERGENCY	☐ Contract TAT	☐ Level 3 (CLP Forms)	☐ UST / RG -411		
☐ 3 Day EMERGENCY		☐ Level II Report with TRRP checklist			

TAT Starts Day received by Lab, if received by 5:00 pm		FED-EX / UPS: Tracking #	
Relinquished by Sampler:	Relinquished By:	Date Time:	Received By:
1 <u>Steven Sanders</u>	1 <u>[Signature]</u>	1 <u>8/18/18</u>	2
Relinquished by:	Relinquished By:	Date Time:	Received By:
3	3		4
Relinquished by:	Relinquished By:	Date Time:	Received By:
5	5		4

On Ice	Cooler Temp	Thermo. Corr. Factor
☐	<u>113</u>	<u>113</u>

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



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Stafford, TX (281) 240-4200

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El Paso, TX (915) 585-3443

Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440

San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900

Service Center - Baton Rouge, LA (832) 712-8143

Service Center- Amarillo, TX (806) 678-4514
Service Center- Hobbs, NM (575) 392-7550

Revision 2016.1

CHAIN OF CUSTODY

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Xenco Quote # 581804 Xenco Job # 581804

Client / Reporting Information
Company Name/ Branch: Raim Engineering Project Name/Number: TPH

Company Address: 1000 Project Location: TPH

Email: March Sanders Phone No: 1000

Project Contact: March Sanders Invoice To: 1000

Sampler's Name: 1000 PO Number: 1000

No.	Field ID / Point of Collection	Collection			Matrix	# of bottles	Number of preserved bottles										Field Comments		
		Sample Depth	Date	Time			HCl	NaOH/Zn	Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE				
1	SB-13	2-4	4:30	930	5	1											X	BTEX	
2		6-8		1															
3	SB-14	2-4		1000															
4	SB-14 MS / MSD	2-4																	
5	SB-14 AASD	2-4																	
6	SB 14	6-8																	
7	SB 15	2-4																	
8		6-8																	
9	SB 14	2-4																	
10		6-8																	

Turnaround Time (Business days) _____

☐ Same Day TAT ☒ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data)

☐ Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC+ Forms ☐ TRRP Level IV

☐ 2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG -411

☐ 3 Day EMERGENCY ☐ Level II Report with TRRP checklist

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

Relinquished by Sampler: Carl Sean Elmer Received By: March Sanders Date Time: 4/19/13 4:30

Relinquished by: March Sanders Received By: March Sanders Date Time: 4/19/13 4:30

Relinquished by: March Sanders Received By: March Sanders Date Time: 4/19/13 4:30

Relinquished by: March Sanders Received By: March Sanders Date Time: 4/19/13 4:30

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



Inter-Office Shipment

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IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-001	S	SB-01 6-8	04/02/18 14:15	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-001	S	SB-01 6-8	04/02/18 14:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-001	S	SB-01 6-8	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-005	S	SB-01 14-16	04/02/18 14:15	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-005	S	SB-01 14-16	04/02/18 14:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-005	S	SB-01 14-16	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-006	S	SB-02 8-10	04/02/18 14:30	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-006	S	SB-02 8-10	04/02/18 14:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-006	S	SB-02 8-10	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-009	S	SB-02 14-16	04/02/18 14:30	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-009	S	SB-02 14-16	04/02/18 14:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-009	S	SB-02 14-16	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-010	S	SB-03 6-8	04/02/18 14:50	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-010	S	SB-03 6-8	04/02/18 14:50	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-010	S	SB-03 6-8	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-011	S	SB-03 8-10	04/02/18 14:50	E300_CL	Chloride by EPA 300	HOLD	04/30/18	HTA	CL	
581204-011	S	SB-03 8-10	04/02/18 14:50	SW8015MOD_NM	TPH By SW8015 Mod	HOLD	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-011	S	SB-03 8-10	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-014	S	SB-03 14-16	04/02/18 14:50	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-014	S	SB-03 14-16	04/02/18 14:50	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-014	S	SB-03 14-16	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-015	S	SB-04 6-8	04/02/18 15:05	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-015	S	SB-04 6-8	04/02/18 15:05	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-015	S	SB-04 6-8	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-018	S	SB-04 12-14	04/02/18 15:05	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	



Inter-Office Shipment

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IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-018	S	SB-04 12-14	04/02/18 15:05	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-018	S	SB-04 12-14	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-019	S	SB-05 4-6	04/02/18 15:35	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-019	S	SB-05 4-6	04/02/18 15:35	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-019	S	SB-05 4-6	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-023	S	SB-05 12-14	04/02/18 15:35	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-023	S	SB-05 12-14	04/02/18 15:35	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-023	S	SB-05 12-14	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-024	S	SB-06 4-6	04/02/18 16:00	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-024	S	SB-06 4-6	04/02/18 16:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-024	S	SB-06 4-6	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-028	S	SB-06 12-14	04/02/18 16:00	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-028	S	SB-06 12-14	04/02/18 16:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-028	S	SB-06 12-14	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-029	S	SB-07 4-6	04/02/18 16:35	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-029	S	SB-07 4-6	04/02/18 16:35	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-029	S	SB-07 4-6	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-033	S	SB-07 12-14	04/02/18 16:35	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-033	S	SB-07 12-14	04/02/18 16:35	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-033	S	SB-07 12-14	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-033	S	SB-07 12-14	04/02/18 16:35	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/16/18	HTA	PHCC10C28 PHCC28C35 I	
581204-033	S	SB-07 12-14	04/02/18 16:35	E300_CL	Chloride by EPA 300	04/04/18	04/30/18	HTA	CL	
581204-033	S	SB-07 12-14	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-034	S	SB-08 2-4	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-034	S	SB-08 2-4	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	



Inter-Office Shipment

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IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-034	S	SB-08 2-4	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-034	S	SB-08 2-4	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-034	S	SB-08 2-4	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-034	S	SB-08 2-4	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-035	S	SB-08 6-8	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-035	S	SB-08 6-8	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-035	S	SB-08 6-8	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-035	S	SB-08 6-8	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-035	S	SB-08 6-8	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-035	S	SB-08 6-8	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-036	S	SB-08 DUP	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-036	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-036	S	SB-08 DUP	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-036	S	SB-08 DUP	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-036	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-036	S	SB-08 DUP	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-037	S	SB-08 DUP	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-037	S	SB-08 DUP	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-037	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-037	S	SB-08 DUP	04/03/18 08:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-037	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-037	S	SB-08 DUP	04/03/18 08:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-038	S	SB-09 2-4	04/03/18 08:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35	
581204-038	S	SB-09 2-4	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-038	S	SB-09 2-4	04/03/18 08:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	



Inter-Office Shipment

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IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-038	S	SB-09 2-4	04/03/18 08:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-038	S	SB-09 2-4	04/03/18 08:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-038	S	SB-09 2-4	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-039	S	SB-09 6-8	04/03/18 08:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-039	S	SB-09 6-8	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-039	S	SB-09 6-8	04/03/18 08:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-039	S	SB-09 6-8	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-039	S	SB-09 6-8	04/03/18 08:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-039	S	SB-09 6-8	04/03/18 08:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-040	S	SB-11 2-4	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-040	S	SB-11 2-4	04/03/18 09:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-040	S	SB-11 2-4	04/03/18 09:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-040	S	SB-11 2-4	04/03/18 09:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-040	S	SB-11 2-4	04/03/18 09:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-040	S	SB-11 2-4	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-041	S	SB-11 6-8	04/03/18 09:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-041	S	SB-11 6-8	04/03/18 09:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-041	S	SB-11 6-8	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-041	S	SB-11 6-8	04/03/18 09:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-041	S	SB-11 6-8	04/03/18 09:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-041	S	SB-11 6-8	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-042	S	SB-12 2-4	04/03/18 09:15	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-042	S	SB-12 2-4	04/03/18 09:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-042	S	SB-12 2-4	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-042	S	SB-12 2-4	04/03/18 09:15	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	



Inter-Office Shipment

Page 5 of 9

IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-042	S	SB-12 2-4	04/03/18 09:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-042	S	SB-12 2-4	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-043	S	SB-12 6-8	04/03/18 09:15	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-043	S	SB-12 6-8	04/03/18 09:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-043	S	SB-12 6-8	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-043	S	SB-12 6-8	04/03/18 09:15	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-043	S	SB-12 6-8	04/03/18 09:15	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-043	S	SB-12 6-8	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-044	S	SB-13 2-4	04/03/18 09:30	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-044	S	SB-13 2-4	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-044	S	SB-13 2-4	04/03/18 09:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-044	S	SB-13 2-4	04/03/18 09:30	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-044	S	SB-13 2-4	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-044	S	SB-13 2-4	04/03/18 09:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-045	S	SB-13 6-8	04/03/18 09:30	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-045	S	SB-13 6-8	04/03/18 09:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-045	S	SB-13 6-8	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-045	S	SB-13 6-8	04/03/18 09:30	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-045	S	SB-13 6-8	04/03/18 09:30	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-045	S	SB-13 6-8	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-046	S	SB-14 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-046	S	SB-14 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-046	S	SB-14 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-046	S	SB-14 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 1	
581204-046	S	SB-14 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	



Inter-Office Shipment

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IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-046	S	SB-14 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-048	S	SB-14 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-048	S	SB-14 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-048	S	SB-14 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-048	S	SB-14 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-048	S	SB-14 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-048	S	SB-14 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-049	S	SB-15 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-049	S	SB-15 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-049	S	SB-15 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-049	S	SB-15 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-049	S	SB-15 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-049	S	SB-15 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-050	S	SB-15 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-050	S	SB-15 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-050	S	SB-15 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-050	S	SB-15 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-050	S	SB-15 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-050	S	SB-15 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	



Inter-Office Shipment

Page 7 of 9

IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-051	S	SB-16 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-051	S	SB-16 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-051	S	SB-16 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-051	S	SB-16 2-4	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-052	S	SB-16 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-052	S	SB-16 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-052	S	SB-16 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-052	S	SB-16 6-8	04/03/18 10:00	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	



Inter-Office Shipment

Page 8 of 9

IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-053	S	SB-17 2-4	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-054	S	SB-17 6-8	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-054	S	SB-17 6-8	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-054	S	SB-17 6-8	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-054	S	SB-17 6-8	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-055	S	SB- 3 C	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-055	S	SB- 3 C	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	



Inter-Office Shipment

Page 9 of 9

IOS Number **1058595**

Date/Time: 04/03/18 18:00

Created by: Brenda Ward

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 77190718737

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-055	S	SB-3 C	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-055	S	SB-3 C	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-055	S	SB-3 C	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-055	S	SB-3 C	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-055	S	SB-3 C	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	
581204-055	S	SB-3 C	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-055	S	SB-3 C	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-055	S	SB-3 C	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-055	S	SB-3 C	04/03/18 10:25	SW8015MOD_NM	TPH By SW8015 Mod	04/04/18	04/17/18	HTA	PHCC10C28 PHCC28C35 I	
581204-055	S	SB-3 C	04/03/18 10:25	E300_CL	Chloride by EPA 300	04/04/18	05/01/18	HTA	CL	

Inter Office Shipment or Sample Comments:

Relinquished By

Brenda Ward

Received By:

Monica Shakhshir

Date Relinquished: 04/04/2018

Date Received: 04/04/2018 09:05

Cooler Temperature: 1.9



Inter-Office Shipment

Page 1 of 3

IOS Number **1058786**

Date/Time: 04/06/18 12:38

Created by: Katie Lowe

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Dallas**

Air Bill No.:

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-001	S	SB-01 6-8	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-002	S	SB-01 8-10	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-003	S	SB-01 10-12	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-004	S	SB-01 12-14	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-005	S	SB-01 14-16	04/02/18 14:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-006	S	SB-02 8-10	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-007	S	SB-02 10-12	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-008	S	SB-02 12-14	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-009	S	SB-02 14-16	04/02/18 14:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-010	S	SB-03 6-8	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-011	S	SB-03 8-10	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-012	S	SB-03 10-12	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-013	S	SB-03 12-14	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-014	S	SB-03 14-16	04/02/18 14:50	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-015	S	SB-04 6-8	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-016	S	SB-04 8-10	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-017	S	SB-04 10-12	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-018	S	SB-04 12-14	04/02/18 15:05	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-019	S	SB-05 4-6	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-020	S	SB-05 6-8	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-021	S	SB-05 8-10	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-022	S	SB-05 10-12	04/02/18 15:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-024	S	SB-06 4-6	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-025	S	SB-06 6-8	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-026	S	SB-06 8-10	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	



Inter-Office Shipment

Page 2 of 3

IOS Number **1058786**

Date/Time: 04/06/18 12:38

Created by: Katie Lowe

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Dallas**

Air Bill No.:

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-027	S	SB-06 10-12	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-028	S	SB-06 12-14	04/02/18 16:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-029	S	SB-07 4-6	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-030	S	SB-07 6-8	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-031	S	SB-07 8-10	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-032	S	SB-07 10-12	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	HOLD	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-033	S	SB-07 12-14	04/02/18 16:35	SW8260BTX	BTEX by SW 8260B	04/04/18	04/16/18	HTA	BZ BZME EBZ XYLMP X	
581204-034	S	SB-08 2-4	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-035	S	SB-08 6-8	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-036	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-037	S	SB-08 DUP	04/03/18 08:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-038	S	SB-09 2-4	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-039	S	SB-09 6-8	04/03/18 08:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-040	S	SB-11 2-4	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-041	S	SB-11 6-8	04/03/18 09:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-042	S	SB-12 2-4	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-043	S	SB-12 6-8	04/03/18 09:15	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-044	S	SB-13 2-4	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-045	S	SB-13 6-8	04/03/18 09:30	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-046	S	SB-14 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-047	S	SB-14 2-4 MS/MSD	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	HOLD	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-048	S	SB-14 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-049	S	SB-15 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-050	S	SB-15 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-051	S	SB-16 2-4	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	



Inter-Office Shipment

Page 3 of 3

IOS Number **1058786**

Date/Time: 04/06/18 12:38

Created by: Katie Lowe

Please send report to: Holly Taylor

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Dallas**

Air Bill No.:

Phone:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
581204-052	S	SB-16 6-8	04/03/18 10:00	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-053	S	SB-17 2-4	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	
581204-054	S	SB-17 6-8	04/03/18 10:25	SW8260BTX	BTEX by SW 8260B	04/04/18	04/17/18	HTA	BZ BZME EBZ XYLMP X	

Inter Office Shipment or Sample Comments:

Received 01,05,06,09,10,11,14,15,18,19,24,28,29,33,34,35,36-46,48-54

Relinquished By

Andres Montoya

Andres Montoya

Date Relinquished: 04/06/2018

Received By:

Angelica Martinez

Angelica Martinez

Date Received: 04/06/2018 16:45

Cooler Temperature: 2.6



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 1058595

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Brenda Ward

Date Sent: 04/03/2018 06:00 PM

Received By: Monica Shakhshir

Date Received: 04/04/2018 09:05 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Monica Shakhshir

Date: 04/04/2018



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Dallas

IOS #: 1058786

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : XDA

Sent By: Katie Lowe

Date Sent: 04/06/2018 12:38 PM

Received By: Angelica Martinez

Date Received: 04/06/2018 04:45 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Received 01,05,06,09,10,11,14,15,18,19,24,28,29,33,34,35,36-46,48-54

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Angelica Martinez

Date: 04/06/2018



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: R2M Engineering

Date/ Time Received: 04/03/2018 02:00:00 PM

Work Order #: 581204

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Houston Xenco
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brenda Ward
Brenda Ward

Date: 04/04/2018

Checklist reviewed by:

Holly Taylor
Holly Taylor

Date: 04/04/2018

Appendix D

Photo Log

APPENDIX D

Photo Log Pictures

			
Day of release		Day of release	
			
Day of release		Light staining	
			
Debris in trench facing north		Debris in trench facing south	
			
Trench facing northeast		Scraping debris from trench	

APPENDIX D

	
Trench facing northeast	Line strike and SB-01 location
	
Field efforts April 2, 2018	Trench facing south
	
Exposed line	Exposed line
	
Exposed line	Exposed line

APPENDIX D

	
SB-03 and SB-3-C location	SB-03 and SB-3-C location
	
Excavator digging to depth for sample	Bottom of trench SB-3-C sample location
	
Field efforts April 3, 2018	Field efforts April 2, 2018
	
Plugged soil boring with bentonite	Site facing north northeast near strike

APPENDIX D

	
Stockpiles	View facing northwest
	
View facing south	Waste material in roll-off disposal