APPROVED
By Olivia Yu at 1:18 pm, Feb 28, 2017

Approved closure for 1RP-4406

Remediation Summary and Closure Report

Lynch Station Tank Line 1459
Plains SRS No. 2016-135
NMOCD Ref. No. 1RP-4406
Lea County, New Mexico
Unit Letter "G", Section 34, Township 20 South, Range 34 East
Latitude 32.533014° / Longitude -103.545923°

January 19, 2017
Terracon Project No. AR167190

Distribution:

Copy 1: Plains – Midland, TX
Copy 2: New Mexico Oil Conservation Division – Hobbs

Prepared for:
Plains Pipeline, L.P.
Midland, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

December 1, 2016

Terracon

Plains Pipeline, L.P.
505 N. Big Spring, Suite 600
Midland, Texas 79701

Attn: Ms. Camille Bryant
P: (432) 221-7922
E: cjbryant@paalp.com

Re: Remediation Summary and Closure Report
Lynch Station Tank Line 1459
Plains SRS No. 2016-135
NMOCD Ref. No. 1RP-4406
Lea County, New Mexico
Latitude 32.533014° / Longitude -103.545923°
Terracon Project No. AR167190

Dear Ms. Bryant:

Terracon is pleased to submit two copies of the *Remediation Summary and Closure Report* for the above-referenced site.

We appreciate the opportunity to provide environmental consulting services at the Lynch Station Tank Line 1459 Site for Plains Pipeline, L.P. Please contact the undersigned at (806) 300-0140 if you have questions regarding the information provided in the report.

Sincerely,
Terracon Consultants, Inc.

Joel Lowry
Project Geologist
Lubbock

Erin Loyd, PG
Senior Associate
Office Manager – Lubbock

Table of Contents

LIST OF APPENDICES

REMEDIATION SUMMARY AND CLOSURE REPORT

Lynch Station Tank Line 1459
Plains SRS No. 2016-135
NMOCD Ref. No. 1RP-4406
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January 19, 2017

1.0 INTRODUCTION & BACKGROUND INFORMATION

Terracon Consultants Inc. (Terracon), on behalf of Plains Pipeline (Plains), has prepared this *Remediation Summary and Closure Report* for the release site known as Lynch Station Tank Line 1459 (hereafter referred to as the "site"). The site is located at 32.533014° North Latitude and 103.545923° West Longitude in Unit Letter "G", Section 34, Township 20 South, Range 34 East, in Lea County, New Mexico. The release occurred on property owned by Danny Berry, then flowed onto property owned by Plains; a majority of the affected property is owned by Plains. A "Site Location Map" is provided as Figure 1 in Appendix A.

On August 8, 2016, Plains discovered a release had occurred at the Lynch Station facility. The release was attributed to the failure of a 12-inch pipeline as a result of external corrosion. The "Release Notification and Correction Action Form" (NMOCD Form C-141) indicated that approximately 250 barrels (bbls) of crude oil were released, with approximately 200 bbls being recovered. The release affected an area within the facility measuring approximately 13,000 square feet (sq. ft.). Between August 9, 2016 and October 27, 2016, Terracon personnel oversaw excavation of affected soil and conducted confirmation soil sampling activities at the site. Photographs of the site are provided in Appendix D.

Pursuant to the New Mexico Administrative Code (NMAC) 19.15.29, Plains personnel notified the New Mexico Oil Conservation Division (NMOCD) of the occurrence of the release due to the estimated volume of the release being greater than five barrels. A copy of the NMOCD Form C-141 is provided in Appendix E.

1.1 Site Description

Site Name	Lynch Station Tank Line 1459
GPS	Lat.: 32.533014°, Long: -103.545923°
Legal Description	U/L "G", Section 34, Township 20 South, Range 34 East
County	Lea County
General Description	The site consists of an approximate 13-acre crude oil gathering facility which includes two aboveground storage tanks (ASTs) along with multiple above and below grade pipelines.

1.2 Regulatory Framework

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

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

Ranking Score Criteria		
General Site Characteristics		**Score**
Depth to Ground Water	< 50 feet	20
	50 – 99 feet	10
	> 100 feet	0
Well Head Protection Area <1,000 feet from water source, or <200 feet from private domestic water source	Yes	20
	No	0
Distance to Surface Water Body	< 200 feet	20
	200 – 1,000 feet	10
	> 1,000 feet	0

The total ranking score is the sum of the four individual ranking criteria and the basis for determining the recommended remediation action levels at the site.

Recommended Remediation Action Levels			
Contaminant of Concern	**Total Ranking Score**		
	>19	**10-19**	**0-9**
Benzene	10 mg/kg	10 mg/kg	10 mg/kg
BTEX	50 mg/kg	50 mg/kg	50 mg/kg
TPH	100 mg/kg	1,000 mg/kg	5,000 mg/kg

The NMAC does not specify a recommended remediation action level for chloride in soil. Recommended remediation action levels for chloride are determined by the NMOCD on a site-specific basis.

1.3 NMOCD Site Ranking

Based on Terracon's evaluation of the site ranking criteria, the Site has an initial total ranking score of 10 points, based on the following:

- Review of the New Mexico Water Rights Reporting System (NMWRRS) database indicates the average depth to groundwater for Section 29, Township 20 South, Range 38 East is approximately 850 ft. below grade surface (bgs). A depth the groundwater gradient map commonly used by the NMOCD suggests groundwater should be encountered at approximately 80 ft. bgs.
- Review of the NMWRRS database indicates there are no registered water wells within 1,000 feet of the Site.
- Review of available United States Geological Survey (USGS) topographical maps indicates that there are no surface water bodies within 1,000 feet of the Site.

Total Ranking Score for Site			
Ranking Score Criteria			**Score**
Depth to Ground Water	< 50 feet	20	**10**
	50 – 99 feet	10	
	> 100 feet	0	
Well Head Protection Area, <1,000 feet from water source, or; <200 feet from private domestic water source	Yes	20	**0**
	No	0	
Distance to Surface Water Body	< 200 feet	20	**0**
	200 – 1,000 feet	10	
	> 1,000 feet	0	
Total Ranking Score			**10**

Recommended remediation action levels for a site with a total ranking score of 10 points are as follows:

- Benzene – 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene and xylene (BTEX) – 50 mg/kg
- Total petroleum hydrocarbons (TPH) – 1,000 mg/kg

1.4 Scope of Services

The Scope of Services for Terracon as requested by Plains Pipeline included:

- Oversight of the remediation of impacted soil;

- Collection of confirmation soil samples; and
- Submittal of a Remediation Summary and Closure Report detailing field activities and laboratory analytical result of confirmation samples.

2.0 LIMITATIONS

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

2.2 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this remediation activities. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of Plains Pipeline, L.P., and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Plains Pipeline, L.P. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in this report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

3.0 SUMMARY OF FIELD ACTIVITIES

3.1 Site Investigation

Following notification of a crude oil release that occurred on August 8, 2016 at the Lynch Station facility, Terracon visited the site with a Plains representative. The release was attributed to the failure of a 12-inch pipeline. It is estimated that approximately 250 bbls of crude oil were released, with approximately 200 bbls being recovered. The release affected an area measuring approximately 13,000 sq. ft. within the facility boundaries. During initial response activities, Plains personnel responded to the reported incident, secured the release site, recovered free-standing fluid and replaced the affected pipeline. A "Site and Sample Location Map" is provided as Figure 2 in Appendix A.

3.2 Remediation Summary and Soil Sampling Activities

August 10, 2016
Remediation activities commenced at the release site. Basin Environmental Services (Basin) excavated impacted soil from within the release margins. The floor and sidewalls of the excavation were advanced until field observations suggested concentrations of TPH and BTEX were less than the NMOCD Recommended Remediation Action Levels. Excavated soil was stockpiled on-site, atop a poly-urethane liner, pending final disposition.

August 11, 2016
Terracon collected three confirmation soil samples (Floor #3 @ 1', Floor #6 @ 18" and Floor #7 @ 1') from the floor of the excavated areas and submitted them with the chain of custody forms to Xenco Laboratories of Midland, Texas, for TPH and BTEX analysis. Laboratory analytical results indicated TPH concentrations ranged from 107 milligrams per kilogram (mg/kg) in soil sample Floor #7 @ 1' to 673 mg/kg in soil sample Floor #6 @ 18". Analytical results indicated benzene concentrations ranged from less than the applicable laboratory sample detection limit (SDL) in soil samples Floor #6 @ 18" and Floor #7 @ 1' to 0.00749 mg/kg in soil sample Floor #3 @ 1'. Total BTEX concentrations ranged from 0.00749 mg/kg in soil sample Floor #3 @ 1' to 0.172 mg/kg in soil sample Floor #6 @ 18". BTEX and TPH concentrations were less than the NMOCD Recommended Remediation Action Levels in each of the submitted soil samples. A summary of confirmation soil sample analytical results is provided in Table 1 of Appendix B. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix C.

A test trench (TT-1) was advanced adjacent to the release point in an effort to determine the vertical extent of soil impacts. During the advancement of the delineation trench, soil samples (TT-1 @ 5', TT-1 @ 7' and TT-1 @ 9') were collected at approximate 2-foot intervals and submitted to the laboratory for analysis of BTEX. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory SDL in soil sample TT-9 @ 9' to 18.2 mg/kg in soil sample TT-1 @ 7'. Total BTEX concentrations ranged from less than the laboratory SDL

in soil sample TT-1 @ 9' to 258 mg/kg in soil sample TT-1 @ 5'. Soil samples TT-1 @ 7 and TT-1 @ 9' were also analyzed for concentrations of TPH which were determined to be 5,580 and 79.0 mg/kg, respectively. Laboratory analytical results indicate soil was not affected above the NMOCD Recommended Remediation Action Level for TPH and BTEX beyond 9 feet below grade surface (bgs) in the area characterized by TT-1.

In addition, three hand-augered soil bores (SB-2, SB-4 and SB-5) were advanced within the release path and/or pooling areas in an effort to determine the vertical extent of soil impacts.

During the advancement of SB-2, soil sample SB-2 @ 2' was collected and submitted to the laboratory for analysis of TPH and BTEX. Laboratory analytical results indicated TPH and benzene concentrations were less than the applicable laboratory SDL; the total BTEX concentration was 0.00511 mg/kg.

During the advancement of SB-4, soil sample SB-4 @ 3' was collected and submitted to the laboratory for analysis of TPH and BTEX. Laboratory analytical results indicated soil sample SB-4 @ 3' exhibited a TPH concentration of 118 mg/kg, a benzene concentration of less than the laboratory SDL and a total BTEX concentration of 0.00706 mg/kg.

During the advancement of SB-5, soil samples SB-5 @ 18" and SB-5 @ 2.5' were collected and submitted to the laboratory for analysis of TPH and BTEX. Laboratory analytical results indicated soil sample SB-5 @ 18" exhibited a TPH concentration of 6,340 mg/kg, a benzene concentration of 2.00 mg/kg and a total BTEX concentration of 98.3 mg/kg. Analytical results indicated soil sample SB-5 @ 2.5' exhibited a TPH concentration 2,260 mg/kg, a benzene concentration of 0.198 mg/kg and a total BTEX concentration of 45.1 mg/kg. TPH, benzene and BTEX concentrations were below the NMOCD Recommended Remediation Action Levels in each of the submitted soil samples with the exception of the TPH and total BTEX concentrations in soil sample SB-5 @ 18", and the TPH concentration in soil sample SB-5 @ 2.5'. Excavation activities continued at the release site. Excavated material was placed into the existing soil stockpiles.

September 22, 2016

Terracon collected 30 confirmation soil samples (RP Floor #1 @ 7', RP SSW #1, RP WSW #1, RP ESW #1, RP Floor #2 @ 10', RP NSW #2, RP WSW #2, RP ESW #2, Floor #2 @ 18", WSW #2, ESW #2, NSW #3, WSW #3, ESW #3, SSW #3, Floor #4 @ 18", NSW #4, SSW #4, WSW #4, Floor #5 @ 2', WSW #5, ESW #5, NSW #6, WSW #6, ESW #6, SSW #6, NSW #7, WSW #7, SSW #7 and ESW #7) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of TPH and BTEX concentrations.

Laboratory analytical results indicated TPH concentrations ranged from less than the applicable laboratory SDL in soil samples RP SSW #1, RP ESW #1, RP NSW #2, RP WSW #2, RP ESW #2, ESW #3, NSW #4, SSW #4, WSW #4, ESW #5, SSW #6, SSW #7 and ESW #7 to 3,820 mg/kg in soil sample Floor #2 @ 18". TPH concentrations were less than the NMOCD

Recommended Remediation Action Levels in each of the submitted soil samples with the exception of Floor #2 @ 18" and WSW #2, which exhibited TPH concentrations of 3,820 and 1,310 mg/kg, respectively.

Benzene and total BTEX concentrations were less than the applicable laboratory SDL in each of the submitted soil samples with the exception of soil sample NSW #3, which exhibited benzene and total BTEX concentrations of 0.305 mg/kg and soil sample WSW #6, which exhibited total BTEX concentration of 0.00447 mg/kg.

Soil sample RP Floor #2 @ 10' was also analyzed for concentrations of chloride, which were determined to be 13.6 mg/kg.

Impacted soil exhibiting TPH concentrations above the NMOCD Recommended Remediation Action Level represented by soil samples Floor #2 @ 18" and WSW #2 was excavated. Excavated material was placed in the existing soil stockpiles.

In addition, Terracon collected two five-point composite (9/22 N. Stockpile and 9/22 S. Stockpile) stockpile characterization soil samples and submitted them to the laboratory for analysis of TPH concentrations, which were determined to be 3,700 and 6,790 mg/kg, respectively.

October 13, 2016
Basin began transporting excavated soil stockpiles represented by soil samples 9/22 N. Stockpile and 9/22 S. Stockpile to Lazy Ace Landfarm, LLC (Permit No. NM1-0041) for disposal.

October 14, 2016
Terracon collected two confirmation soil samples (Floor #2b @ 24" and WSW #2b) from the recently excavated areas previously identified as exhibiting TPH concentrations above NMOCD Recommended Remediation Action Levels and submitted them to the laboratory for analysis of TPH. Laboratory analytical results indicated soil samples Floor #2b @ 24" and WSW #2b exhibited TPH concentrations of less than the laboratory SDL and 147 mg/kg, respectively.

Upon receiving NMOCD permission, the excavated area was backfilled with locally purchased, native material. Excavation backfill was compacted and graded to meet the needs of the facility. Prior to backfilling, the final dimensions of the excavated area were approximately 850 ft. in length, 20 to 200 ft. in width and 1 to 10 ft. in depth.

Between October 13, and 19, 2016, approximately 1,392 cubic yards (cy) of impacted soil represented by soil samples 9/22 N. Stockpile and 9/22 S. Stockpile were transported to Lazy Ace Landfarm, LLC (Permit No. NM1-0041). Copies of waste manifests are provided in Appendix F.

3.3 Laboratory Analytical Methods

Confirmation soil samples collected at the site were placed in laboratory-prepared containers, labeled and placed on ice in the field. The samples were relinquished with chain-of-custody forms to Xenco Laboratories, of Midland, Texas, for analysis of BTEX, TPH and/or chloride using the following methods:

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method 300.

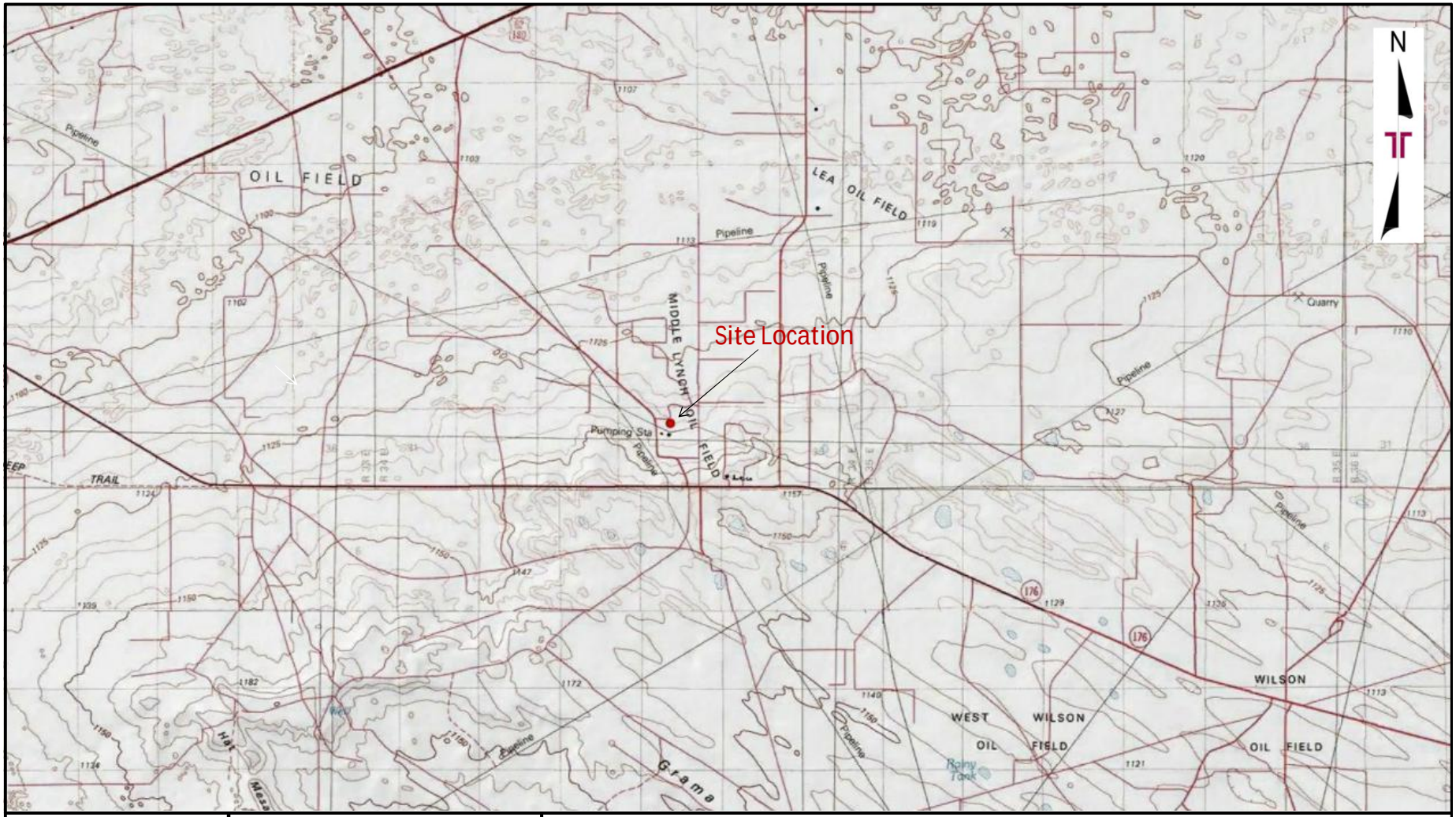
4.0 RECOMMENDATIONS

Remediation activities conducted at the Lynch Station Tank Line 1459 site met the objectives set forth by the NMOCD. Based on the completion of field activities and review of laboratory analytical results from confirmation soil samples, Terracon recommends no further action be taken in regards to the documented release at the site at this time.

Terracon respectfully submits this Remediation *Summary and Closure Report* to Plains Pipeline, L.P., as documentation of the site remediation activities at the Lynch Station Tank Line 1459 site.

APPENDIX A

Figure 1 – Site Location Map
Figure 2 – Site and Sample Location Map

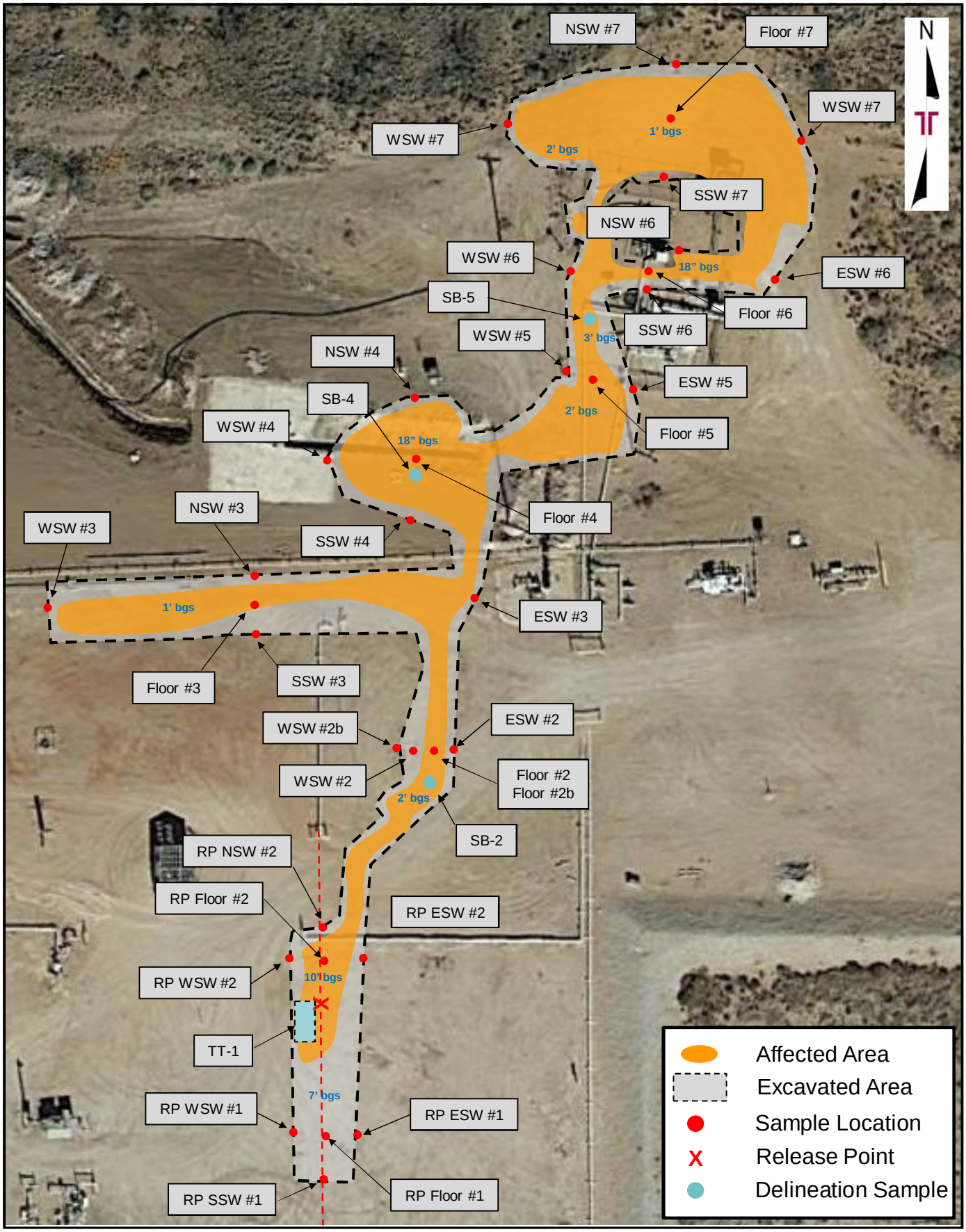


Project No.	AR167190
Scale:	1" = ~ 10,000'
Source:	Google Earth
Date:	2014

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 1 – Site Location Map

Lynch Station Tank Line 1459
Plains SRS No. 2016-135
32.53301° , -103.54592°
Lea County, New Mexico



Project No.	AR167190
Scale:	1"=90'
Source:	GoogleEarth
Date:	2014

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
Phone (806) 300-0140 Fax (806) 797-0947

Figure 2 – Site and Sample Location Map

Lynch Station Tank Line 1459
Plains SRS No. 2016-135
32.533014° , -103.545923°
Lea County, New Mexico

APPENDIX B

Table 1 – Confirmation Soil Sample Analytical Results

TABLE 1
Confirmation Soil Sample Analytical Results - TPH[1], BTEX[2] and Chloride[3]
Lynch Station
Plains All American Pipeline, L.P.
Latitude: 32.53301°, Longitude: -103.54592°
Terracon Project No. AR167190

Sample ID	Depth	Date	Sample Type	Soil Status	TPH				Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
					C_6-C_{12} (mg/kg)	C_{12}-C_{28} (mg/kg)	C_{28}-C_{35} (mg/kg)	C_6-C_{35} (mg/kg)						
Floor #3 @ 1'	1'	8/11/2016	Grab	In-Situ	<15.0	310	<15.0	310	0.00749	<0.00200	<0.00200	<0.00200	0.00749	-
Floor #6 @ 18"	1.5'	8/11/2016	Grab	In-Situ	59.8	613	<15.0	673	<0.00150	0.0191	0.0260	0.127	0.172	-
Floor #7 @ 1'	1'	8/11/2016	Grab	In-Situ	17.1	89.7	<15.0	107	<0.00150	<0.00200	<0.00200	0.0271	0.0271	-
TT-1 @ 5'	5'	8/11/2016	Grab	Excavated	-	-	-	-	**14.6**	91.0	48.3	105	**258**	-
TT-1 @ 7'	7'	8/11/2016	Grab	Excavated	2,020	3,560	<15.0	**5,580**	**18.2**	89.4	45.6	101	**254**	-
TT-1 @ 9'	9'	8/11/2016	Grab	Excavated	<15.0	79.0	<15.0	79.0	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	-
SB-2 @ 2'	2'	8/11/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00199	<0.00199	0.00511	0.00511	-
SB-4 @ 3'	3'	8/11/2016	Grab	In-Situ	15.4	103	<15.0	118	<0.00149	<0.00199	<0.00199	0.00706	0.00706	-
SB-5 @ 18"	1.5'	8/11/2016	Grab	Excavated	1,390	4,950	<15.0	**6,340**	2.00	24.7	24.5	47.1	**98.3**	-
SB-5 @ 2.5'	2.5'	8/11/2016	Grab	Excavated	526	1,730	<15.0	**2,260**	0.198	9.15	13.3	22.5	45.1	-
RP Floor #1 @ 7'	7'	9/22/2016	Grab	In-Situ	<15.0	16.0	<15.0	16.0	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
RP SSW #1	5'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	-
RP WSW #1	5'	9/22/2016	Grab	In-Situ	15	279	<15.0	279	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
RP ESW #1	5'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
RP Floor #2 @ 10'	10'	9/22/2016	Grab	In-Situ	<15.0	18.4	<15.0	18.4	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	13.6
RP NSW #2	8'	9/22/2016	Grab	In-Situ	<14.9	<14.9	<14.9	<14.9	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
RP WSW #2	8'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	-
RP ESW #2	8'	9/22/2016	Grab	In-Situ	<14.9	<14.9	<14.9	<14.9	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
Floor #2 @ 18"	1.5'	9/22/2016	Grab	Excavated	23.3	3,800	<15.0	**3,820**	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
WSW #2	1'	9/22/2016	Grab	Excavated	15.4	1,290	<15.0	**1,310**	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
ESW #2	1'	9/22/2016	Grab	In-Situ	<15.0	49.5	<15.0	49.5	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
NSW #3	0.5'	9/22/2016	Grab	In-Situ	<15.0	250	<15.0	250	0.30500	<0.00199	<0.00199	<0.00199	0.30500	-
WSW #3	0.5'	9/22/2016	Grab	In-Situ	<15.0	547	<15.0	547	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
ESW #3	0.5'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
SSW #3	0.5'	9/22/2016	Grab	In-Situ	<14.9	164	<14.9	164	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
Floor #4 @ 18"	1.5'	9/22/2016	Grab	In-Situ	<14.9	82.3	<14.9	82.3	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
NSW #4	1'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
SSW #4	1'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	-
WSW #4	1'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	
Floor #5 @ 2'	2'	9/22/2016	Grab	In-Situ	<15.0	226	<15.0	226	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	
WSW #5	2'	9/22/2016	Grab	In-Situ	<15.0	110	<15.0	110	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
ESW #5	2'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
NSW #6	1'	9/22/2016	Grab	In-Situ	<15.0	36.2	<15.0	36.2	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
WSW #6	1'	9/22/2016	Grab	In-Situ	16.2	280	<14.9	296	<0.00150	<0.00200	<0.00200	0.00447	0.00447	-
ESW #6	1'	9/22/2016	Grab	In-Situ	<14.9	31.3	<14.9	31.3	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
SSW #6	1'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
NSW #7	0.5'	9/22/2016	Grab	In-Situ	<15.0	90.0	<15.0	90.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
WSW #7	0.5'	9/22/2016	Grab	In-Situ	<15.0	177	<15.0	177	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	-
SSW #7	0.5'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	-
ESW #7	0.5'	9/22/2016	Grab	In-Situ	<15.0	<15.0	<15.0	<15.0	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	-
9/22 N. Stockpile	N/A	9/22/2016	Comp.	Stockpiled	862	2,840	<15.0	**3,700**	-	-	-	-	-	-
9/22 S. Stockpile	N/A	9/22/2016	Comp.	Stockpiled	281	6,510	<74.9	**6,790**	-	-	-	-	-	-
Floor #2b @ 24"	2'	10/14/2016	Grab	In-Situ	<8.00	<8.13	<9.88	<8.00	-	-	-	-	-	-
WSW #2b	1'	10/14/2016	Grab	In-Situ	<7.99	147	<9.86	147	-	-	-	-	-	-
New Mexico Oil Conservation Division Regulatory Remediation Action Levels								**1,000**	**10**	**N/A**	**N/A**	**N/A**	**50**	**250***

1. TPH = Total petroleum hydrocarbons analyzed by EPA Method SW-846 8015M.
2. BTEX = BTEX analyzed by EPA Method SW-846 8021b.
3. Chlorides = Chlorides analyzed by EPA Method E 300.
- = Soil sample not analyzed for that constituent.
< = Constituent not detected above the indicated laboratory reporting limit (RL).
N/A = Not Applicable
* = Remediation Action Levels for chloride are not currently specified in the New Mexico Administrative Code and are set by the NMOCD on a site-specific basis.
Bold denotes concentrations that exceeds NMOCD Regulatory Remediation Action Levels

APPENDIX C

Laboratory Analytical Reports

Analytical Report 534981

for

Plains All American EH&S

Project Manager: Joel Lowry

Lynch Station SRS 2016-135

24-AUG-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Table of Contents

24-AUG-16

Project Manager: **Joel Lowry**
Plains All American EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): **534981**
Lynch Station SRS 2016-135
Project Address:

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 534981. 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. 534981 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 534981

Plains All American EH&S, Midland, TX

Lynch Station SRS 2016-135

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @5'	S	08-11-16 15:15	4.5 - 5 ft	534981-001
TT-1 @7'	S	08-11-16 15:20	6.5 - 7 ft	534981-002
TT-1 @9'	S	08-11-16 15:25	8.5 - 9 ft	534981-003
SB-2 @2'	S	08-11-16 15:30	1.5 - 2 ft	534981-004
Floor # 3 @1'	S	08-11-16 15:35	.5 - 1 ft	534981-005
SB-4 @3'	S	08-11-16 15:40	2.5 - 3 ft	534981-006
SB-5 @1.5'	S	08-11-16 15:45	1 - 1.5 ft	534981-007
SB-5 @2.5'	S	08-11-16 15:50	2 - 2.5 ft	534981-008
Floor #6 @18'	S	08-11-16 15:55	17.5 - 18 ft	534981-009
Floor #7 @1'	S	08-11-16 16:00	.5 - 1 ft	534981-010

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-999978 TPH By SW8015B Mod

Lab Sample ID 534981-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). C28-C35 Oil Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 534981-002, -004, -005, -006, -007, -009, -010.

C28-C35 Oil Range Hydrocarbons recovered below QC limits in the Blank Spike and Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 534981-002, -004, -005, -006, -007, -009, -010.

Batch: LBA-999994 BTEX by EPA 8021B

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

Batch: LBA-1000026 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-1000403 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 534981

Plains All American EH&S, Midland, TX

Project Name: Lynch Station SRS 2016-135

Project Id:
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Aug-12-16 12:45 pm
Report Date: 24-AUG-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	534981-001		534981-002		534981-003		534981-004		534981-005		534981-006	
	Field Id:	TT-1 @5'		TT-1 @7'		TT-1 @9'		SB-2 @2'		Floor # 3 @1'		SB-4 @3'	
	Depth:	4.5-5 ft		6.5-7 ft		8.5-9 ft		1.5-2 ft		.5-1 ft		2.5-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-11-16 15:15		Aug-11-16 15:20		Aug-11-16 15:25		Aug-11-16 15:30		Aug-11-16 15:35		Aug-11-16 15:40	
BTEX by EPA 8021B	***Extracted:***	Aug-23-16 15:30		Aug-16-16 18:00		Aug-23-16 15:30		Aug-16-16 18:00		Aug-15-16 11:00		Aug-16-16 18:00	
	Analyzed:	Aug-23-16 20:57		Aug-17-16 01:05		Aug-23-16 20:41		Aug-16-16 19:41		Aug-15-16 20:55		Aug-17-16 14:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		14.6	0.375	18.2	0.374	ND	0.00149	ND	0.00149	0.00749	0.00150	ND	0.00149
Toluene		91.0	0.500	89.4	0.499	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199
Ethylbenzene		48.3	0.500	45.6	0.499	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199
m_p-Xylenes		76.5	0.500	74.4	0.499	ND	0.00198	ND	0.00199	ND	0.00200	0.00324	0.00199
o-Xylene		28.0	0.750	26.1	0.749	ND	0.00298	0.00511	0.00299	ND	0.00300	0.00382	0.00298
Total Xylenes		105	0.500	101	0.499	ND	0.00198	0.00511	0.00199	ND	0.00200	0.00706	0.00199
Total BTEX		258	0.375	254	0.374	ND	0.00149	0.00511	0.00149	0.00749	0.00150	0.00706	0.00149
TPH By SW8015B Mod	***Extracted:***			Aug-15-16 15:00		Aug-22-16 10:00		Aug-15-16 15:00		Aug-15-16 15:00		Aug-15-16 15:00	
	Analyzed:			Aug-16-16 04:28		Aug-22-16 14:43		Aug-16-16 04:52		Aug-16-16 05:15		Aug-16-16 05:39	
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons				2020	15.0	ND	15.0	ND	15.0	ND	15.0	15.4	15.0
C10-C28 Diesel Range Hydrocarbons				3560	15.0	79.0	15.0	ND	15.0	310	15.0	103	15.0
C28-C35 Oil Range Hydrocarbons				ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0
Total TPH				5580	15.0	79.0	15.0	ND	15.0	310	15.0	118	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 534981

Plains All American EH&S, Midland, TX

Project Name: Lynch Station SRS 2016-135

Project Id:
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Aug-12-16 12:45 pm
Report Date: 24-AUG-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	534981-007		534981-008		534981-009		534981-010					
	Field Id:	SB-5 @1.5'		SB-5 @2.5'		Floor #6 @18'		Floor #7 @1'					
	Depth:	1-1.5 ft		2-2.5 ft		17.5-18 ft		.5-1 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-11-16 15:45		Aug-11-16 15:50		Aug-11-16 15:55		Aug-11-16 16:00					
BTEX by EPA 8021B	***Extracted:***	Aug-16-16 18:00		Aug-23-16 15:30		Aug-15-16 11:00		Aug-15-16 11:00					
	Analyzed:	Aug-17-16 00:48		Aug-23-16 21:13		Aug-15-16 21:45		Aug-15-16 21:28					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		2.00	0.150	0.198	0.0746	ND	0.00150	ND	0.00150				
Toluene		24.7	0.200	9.15	0.0994	0.0191	0.00200	ND	0.00200				
Ethylbenzene		24.5	0.200	13.3	0.0994	0.0260	0.00200	ND	0.00200				
m_p-Xylenes		31.2	0.200	13.9	0.0994	0.0819	0.00200	0.00468	0.00200				
o-Xylene		15.9	0.299	8.59	0.149	0.0446	0.00300	0.0224	0.00300				
Total Xylenes		47.1	0.200	22.5	0.0994	0.127	0.00200	0.0271	0.00200				
Total BTEX		98.3	0.150	45.1	0.0746	0.172	0.00150	0.0271	0.00150				
TPH By SW8015B Mod	***Extracted:***	Aug-15-16 15:00		Aug-22-16 10:00		Aug-15-16 15:00		Aug-15-16 15:00					
	Analyzed:	Aug-16-16 06:53		Aug-22-16 15:09		Aug-16-16 07:18		Aug-16-16 07:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		1390	15.0	526	15.0	59.8	15.0	17.1	15.0				
C10-C28 Diesel Range Hydrocarbons		4950	15.0	1730	15.0	613	15.0	89.7	15.0				
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0				
Total TPH		6340	15.0	2260	15.0	673	15.0	107	15.0				

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999994 **Sample:** 534981-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/15/16 20:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 999994 **Sample:** 534981-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/15/16 21:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 999994 **Sample:** 534981-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/15/16 21:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 999978 **Sample:** 534981-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 04:28

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.8	119	70-130	
o-Terphenyl	49.0	49.9	98	70-135	

Lab Batch #: 999978 **Sample:** 534981-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 04:52

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-130	
o-Terphenyl	47.7	49.9	96	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999978 **Sample:** 534981-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 05:15

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-130	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 999978 **Sample:** 534981-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 05:39

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	99.9	100	70-130	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 999978 **Sample:** 534981-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 06:53

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	99.7	122	70-130	
o-Terphenyl	50.0	49.9	100	70-135	

Lab Batch #: 999978 **Sample:** 534981-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 07:18

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.8	119	70-130	
o-Terphenyl	55.7	49.9	112	70-135	

Lab Batch #: 999978 **Sample:** 534981-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 07:43

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-130	
o-Terphenyl	47.4	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 1000026 **Sample:** 534981-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 19:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 1000026 **Sample:** 534981-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/17/16 00:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 1000026 **Sample:** 534981-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/17/16 01:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 1000026 **Sample:** 534981-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/17/16 14:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 1000327 **Sample:** 534981-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/16 14:43

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-130	
o-Terphenyl	46.0	49.9	92	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 1000327 **Sample:** 534981-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/16 15:09

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.7	126	70-130	
o-Terphenyl	61.5	49.9	123	70-135	

Lab Batch #: 1000403 **Sample:** 534981-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/23/16 20:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 1000403 **Sample:** 534981-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/23/16 20:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0350	0.0300	117	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 1000403 **Sample:** 534981-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/23/16 21:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 999994 **Sample:** 712179-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/15/16 12:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999978 **Sample:** 712120-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/16/16 03:16

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-130	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 1000026 **Sample:** 712715-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/17/16 13:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 1000327 **Sample:** 712894-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 12:55

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	100	96	70-130	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 1000403 **Sample:** 712951-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 22:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 999994 **Sample:** 712179-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/15/16 11:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999978 **Sample:** 712120-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/16/16 03:40

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 1000026 **Sample:** 712715-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/17/16 12:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 1000327 **Sample:** 712894-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 13:49

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-130	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 1000403 **Sample:** 712951-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 21:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 999994 **Sample:** 712179-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/15/16 11:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999978 **Sample:** 712120-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/16/16 04:04

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-130	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 1000026 **Sample:** 712715-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/17/16 12:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 1000327 **Sample:** 712894-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 14:16

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-130	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 1000403 **Sample:** 712951-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/16 21:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 999978 **Sample:** 534981-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 06:04

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	99.6	97	70-130	
o-Terphenyl	39.5	49.8	79	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999994 **Sample:** 534981-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 16:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 1000026 **Sample:** 535037-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/17/16 13:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 1000327 **Sample:** 534981-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/16 15:36

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-130	
o-Terphenyl	45.2	49.9	91	70-135	

Lab Batch #: 1000403 **Sample:** 535427-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/23/16 13:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 999978 **Sample:** 534981-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 06:29

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.7	123	70-130	
o-Terphenyl	57.5	49.9	115	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 534981,

Project ID:

Lab Batch #: 999994 **Sample:** 534981-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/16/16 15:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 1000026 **Sample:** 535037-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/17/16 13:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 1000327 **Sample:** 534981-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/16 16:02

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-130	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 1000403 **Sample:** 535427-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/23/16 13:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order #: 534981 **Project ID:**

Analyst: PJB **Date Prepared:** 08/15/2016 **Date Analyzed:** 08/15/2016

Lab Batch ID: 999994 **Sample:** 712179-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0950	95	0.100	0.0956	96	1	70-130	35	
Toluene	<0.00200	0.100	0.0975	98	0.100	0.0980	98	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.100	0.0990	99	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.195	98	0.200	0.197	99	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0967	97	0.100	0.0978	98	1	71-133	35	

Analyst: PJB **Date Prepared:** 08/16/2016 **Date Analyzed:** 08/17/2016

Lab Batch ID: 1000026 **Sample:** 712715-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0810	81	0.100	0.0803	80	1	70-130	35	
Toluene	<0.00200	0.100	0.0801	80	0.100	0.0834	83	4	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0820	82	0.100	0.0887	89	8	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.162	81	0.200	0.175	88	8	70-135	35	
o-Xylene	<0.00300	0.100	0.0814	81	0.100	0.0882	88	8	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order #: 534981 **Project ID:**

Analyst: PJB **Date Prepared:** 08/22/2016 **Date Analyzed:** 08/22/2016

Lab Batch ID: 1000403 **Sample:** 712951-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0800	80	0.100	0.0817	82	2	70-130	35	
Toluene	<0.00200	0.100	0.0840	84	0.100	0.0853	85	2	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.100	0.0913	91	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.179	90	0.200	0.181	91	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0907	91	0.100	0.0907	91	0	71-133	35	

Analyst: ARM **Date Prepared:** 08/15/2016 **Date Analyzed:** 08/16/2016

Lab Batch ID: 999978 **Sample:** 712120-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	814	81	1000	897	90	10	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	866	87	1000	881	88	2	75-125	25	
C28-C35 Oil Range Hydrocarbons	<15.0	1000	<15.0	0	1000	<15.0	0	NC	70-135	35	L

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order #: 534981 **Project ID:**

Analyst: ARM **Date Prepared:** 08/22/2016 **Date Analyzed:** 08/22/2016

Lab Batch ID: 1000327 **Sample:** 712894-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	854	85	1000	916	92	7	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	848	85	1000	965	97	13	75-125	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order # : 534981 **Project ID:**

Lab Batch ID: 999994 **QC- Sample ID:** 534981-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/16/2016 **Date Prepared:** 08/15/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00749	0.0998	0.0902	83	0.100	0.0853	78	6	70-130	35	
Toluene	<0.00200	0.0998	0.0906	91	0.100	0.0821	82	10	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0838	84	0.100	0.0710	71	17	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.165	83	0.200	0.141	71	16	70-135	35	
o-Xylene	<0.00299	0.0998	0.0835	84	0.100	0.0705	71	17	71-133	35	

Lab Batch ID: 1000026 **QC- Sample ID:** 535037-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/17/2016 **Date Prepared:** 08/16/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00149	0.0994	0.0698	70	0.0998	0.0732	73	5	70-130	35	
Toluene	<0.00199	0.0994	0.0728	73	0.0998	0.0776	78	6	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0776	78	0.0998	0.0828	83	6	71-129	35	
m_p-Xylenes	<0.00199	0.199	0.154	77	0.200	0.165	83	7	70-135	35	
o-Xylene	<0.00298	0.0994	0.0800	80	0.0998	0.0848	85	6	71-133	35	

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

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

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order # : 534981 **Project ID:**

Lab Batch ID: 1000403 **QC- Sample ID:** 535427-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/23/2016 **Date Prepared:** 08/22/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.0721	72	0.0992	0.0650	66	10	70-130	35	X
Toluene	<0.00200	0.0998	0.0594	60	0.0992	0.0498	50	18	70-130	35	X
Ethylbenzene	<0.00200	0.0998	0.0474	47	0.0992	0.0346	35	31	71-129	35	X
m_p-Xylenes	<0.00200	0.200	0.0912	46	0.198	0.0663	33	32	70-135	35	X
o-Xylene	<0.00299	0.0998	0.0446	45	0.0992	0.0345	35	26	71-133	35	X

Lab Batch ID: 999978 **QC- Sample ID:** 534981-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/16/2016 **Date Prepared:** 08/15/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	15.4	996	894	88	997	993	98	10	75-125	25	
C10-C28 Diesel Range Hydrocarbons	103	996	1010	91	997	1180	108	16	75-125	25	
C28-C35 Oil Range Hydrocarbons	<14.9	996	<14.9	0	997	<15.0	0	NC	70-135	35	X

Lab Batch ID: 1000327 **QC- Sample ID:** 534981-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/22/2016 **Date Prepared:** 08/22/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	998	849	85	1000	859	86	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	79.0	998	913	84	1000	944	87	3	75-125	25	

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

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

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

CHAIN OF CUSTODY RECORD 534981

Terracon

Office Location: Lubbock
Project Manager: Joel Lowry
Sampler's Name: Joel lowry

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave, Midland, TX 79701
Phone: (432)563-1800
Contact: JOEL LOWRY
PO/SO #: 2016-135
Sampler's Signature: Joel Lowry

Project Number:
Project Name: Lynch Station

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				TPH 8015 M Ext	BTEX 8021	Hold					Lab Sample ID
S	8/11/2016	15:15		X	TT-1 @ 5'	4.5'	5'	1				X	X	X					
S	8/11/2016	15:20		X	TT-1 @ 7'	6.5'	7'	1				X	X						
S	8/11/2016	15:25		X	TT-1 @ 9'	8.5'	9'	1				X	X	X					
S	8/11/2016	15:30		X	SB-2 @ 2'	1.5'	2'	1				X	X						
S	8/11/206	15:35		X	Floor #3 @ 1'	.5'	1'	1				X	X						
S	8/11/2016	15:40		X	SB-4 @ 3'	2.5'	3'	1				X	X						
S	8/11/2016	15:45		X	SB-5 @ 1.5'	1'	1.5'	1				X	X						
S	8/11/2016	15:50		X	SB-5 @ 2.5'	2'	2.5'	1				X	X	X					
S	8/11/2016	15:55		X	Floor #6 @ 18"	17.5"	18"	1				X	X						
S	8/11/2016	16:00		X	Floor #7 @ 1'	.5'	1'	1				X	X						

TURNAROUND TIME: ■ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Joel Lowry	8/12/16	8:30	Chris	8/12/16	8:30
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature) Chris	Date 8/12/16	Time 12:45	Received by (Signature)	Date 8/12/16	Time 12:45
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

NOTES: email JOEL LOWRY Camille Bryant

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

Temp: IR ID:R-8
C/F:0 5.3°C
Corrected Temp: 5.3°C

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 08/12/2016 12:45:00 PM

Work Order #: 534981

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.3
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 08/15/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 08/15/2016

Analytical Report 537478

for

Plains All American EH&S

Project Manager: Joel Lowry

Lynch Station

AR167190

03-OCT-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

03-OCT-16

Project Manager: **Joel Lowry**
Plains All American EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): **537478**
Lynch Station
Project Address:

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 537478. 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. 537478 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 537478

Plains All American EH&S, Midland, TX

Lynch Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
RP FLOOR #1 @ 7'	S	09-22-16 15:05	7 - 7.5 ft	537478-001
RP SSW #1	S	09-22-16 15:10		537478-002
RP WSW #1	S	09-22-16 15:15		537478-003
RP ESW #1	S	09-22-16 15:20		537478-004
RP FLOOR #2 @10'	S	09-22-16 15:25	10 - 11 ft	537478-005
RP NSW #2	S	09-22-16 15:30		537478-006
RP WSW #2	S	09-22-16 15:35		537478-007
RP ESW #2	S	09-22-16 15:40		537478-008
FLOOR #2 @18"	S	09-22-16 15:45	1.5 - 2 ft	537478-009
WSW #2	S	09-22-16 15:50		537478-010
ESW #2	S	09-22-16 15:55		537478-011
NSW #3	S	09-22-16 16:00		537478-012
WSW #3	S	09-22-16 16:05		537478-013
ESW #3	S	09-22-16 16:10		537478-014
SSW #3	S	09-22-16 16:15		537478-015
FLOOR #4 @18"	S	09-22-16 16:20	1.5 - 2 ft	537478-016
NSW #4	S	09-22-16 16:25		537478-017
SSW #4	S	09-22-16 16:30		537478-018
WSW #4	S	09-22-16 16:35		537478-019
FLOOR #5 @ 2'	S	09-22-16 16:40	2 - 2.5 ft	537478-020
WSW #5	S	09-22-16 16:45		537478-021
ESW #5	S	09-22-16 16:50		537478-022
NSW #6	S	09-22-16 16:55		537478-023
WSW #6	S	09-22-16 17:00		537478-024
ESW #6	S	09-22-16 17:05		537478-025
SSW #6	S	09-22-16 17:10		537478-026
NSW #7	S	09-22-16 17:15		537478-027
WSW # 7	S	09-22-16 17:20		537478-028
SSW #7	S	09-22-16 17:25		537478-029
ESW #7	S	09-22-16 17:30		537478-030

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3000888 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3000891 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 537478

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 03-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested	*Lab Id:*	537478-001		537478-002		537478-003		537478-004		537478-005		537478-006	
	Field Id:	RP FLOOR #1 @ 7'		RP SSW #1		RP WSW #1		RP ESW #1		RP FLOOR #2 @10'		RP NSW #2	
	Depth:	7-7.5 ft								10-11 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-22-16 15:05		Sep-22-16 15:10		Sep-22-16 15:15		Sep-22-16 15:20		Sep-22-16 15:25		Sep-22-16 15:30	
BTEX by EPA 8021B	*Extracted:*	Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30	
	Analyzed:	Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 16:05		Sep-28-16 16:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00149	ND	0.00149	ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00150
Toluene		ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
m_p-Xylenes		ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
o-Xylene		ND	0.00299	ND	0.00298	ND	0.00298	ND	0.00299	ND	0.00299	ND	0.00300
Total Xylenes		ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
Total BTEX		ND	0.00149	ND	0.00149	ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00150
Inorganic Anions by EPA 300/300.1	*Extracted:*									Sep-30-16 09:00			
	Analyzed:									Sep-30-16 12:43			
	Units/RL:									mg/kg	RL		
Chloride										13.6	5.00		
TPH By SW8015B Mod	*Extracted:*	Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00	
	Analyzed:	Sep-26-16 23:01		Sep-27-16 00:17		Sep-27-16 00:42		Sep-27-16 01:08		Sep-27-16 01:34		Sep-27-16 01:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	14.9
C10-C28 Diesel Range Hydrocarbons		16.0	15.0	ND	15.0	279	15.0	ND	15.0	18.4	15.0	ND	14.9
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	14.9
Total TPH		16.0	15.0	ND	15.0	279	15.0	ND	15.0	18.4	15.0	ND	14.9

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 537478

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 03-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537478-007		537478-008		537478-009		537478-010		537478-011		537478-012	
	Field Id:	RP WSW #2		RP ESW #2		FLOOR #2 @18"		WSW #2		ESW #2		NSW #3	
	Depth:					1.5-2 ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-22-16 15:35		Sep-22-16 15:40		Sep-22-16 15:45		Sep-22-16 15:50		Sep-22-16 15:55		Sep-22-16 16:00	
BTEX by EPA 8021B	***Extracted:***	Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30	
	Analyzed:	Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00149	ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00150	0.305	0.00149
Toluene		ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199
Ethylbenzene		ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199
m_p-Xylenes		ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199
o-Xylene		ND	0.00298	ND	0.00298	ND	0.00299	ND	0.00300	ND	0.00300	ND	0.00298
Total Xylenes		ND	0.00198	ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199
Total BTEX		ND	0.00149	ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00150	0.305	0.00149
TPH By SW8015B Mod	***Extracted:***	Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00	
	Analyzed:	Sep-27-16 02:24		Sep-27-16 02:49		Sep-27-16 03:15		Sep-27-16 03:41		Sep-27-16 04:33		Sep-27-16 04:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	14.9	23.3	15.0	15.4	15.0	ND	15.0	ND	15.0
C10-C28 Diesel Range Hydrocarbons		ND	15.0	ND	14.9	3800	15.0	1290	15.0	49.5	15.0	250	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0
Total TPH		ND	15.0	ND	14.9	3820	15.0	1310	15.0	49.5	15.0	250	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 537478

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 03-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537478-013		537478-014		537478-015		537478-016		537478-017		537478-018	
	Field Id:	WSW #3		ESW #3		SSW #3		FLOOR #4 @18"		NSW #4		SSW #4	
	Depth:							1.5-2 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-22-16 16:05		Sep-22-16 16:10		Sep-22-16 16:15		Sep-22-16 16:20		Sep-22-16 16:25		Sep-22-16 16:30	
BTEX by EPA 8021B	***Extracted:***	Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30		Sep-27-16 15:30	
	Analyzed:	Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18		Sep-28-16 14:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00149
Toluene		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00198
Ethylbenzene		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00198
m_p-Xylenes		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00198
o-Xylene		ND	0.00299	ND	0.00299	ND	0.00300	ND	0.00299	ND	0.00298	ND	0.00298
Total Xylenes		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00198
Total BTEX		ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00149
TPH By SW8015B Mod	***Extracted:***	Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00	
	Analyzed:	Sep-27-16 05:23		Sep-27-16 05:46		Sep-27-16 06:11		Sep-27-16 06:36		Sep-27-16 06:59		Sep-27-16 07:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	14.9	ND	14.9	ND	15.0	ND	15.0
C10-C28 Diesel Range Hydrocarbons		547	15.0	ND	15.0	164	14.9	82.3	14.9	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	14.9	ND	14.9	ND	15.0	ND	15.0
Total TPH		547	15.0	ND	15.0	164	14.9	82.3	14.9	ND	15.0	ND	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 537478

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 03-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537478-019		537478-020		537478-021		537478-022		537478-023		537478-024	
	Field Id:	WSW #4		FLOOR #5 @ 2'		WSW #5		ESW #5		NSW #6		WSW #6	
	Depth:			2-2.5 ft									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-22-16 16:35		Sep-22-16 16:40		Sep-22-16 16:45		Sep-22-16 16:50		Sep-22-16 16:55		Sep-22-16 17:00	
BTEX by EPA 8021B	***Extracted:***	Sep-27-16 15:30		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00	
	Analyzed:	Sep-28-16 14:18		Sep-28-16 16:15		Sep-28-16 00:58		Sep-28-16 01:14		Sep-28-16 01:30		Sep-28-16 02:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00150	ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00150
Toluene		ND	0.00200	ND	0.00198	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.00200	ND	0.00198	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00200
m_p-Xylenes		ND	0.00200	ND	0.00198	ND	0.00200	ND	0.00200	ND	0.00199	0.00447	0.00200
o-Xylene		ND	0.00299	ND	0.00298	ND	0.00300	ND	0.00300	ND	0.00299	ND	0.00299
Total Xylenes		ND	0.00200	ND	0.00198	ND	0.00200	ND	0.00200	ND	0.00199	0.00447	0.00200
Total BTEX		ND	0.00150	ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00149	0.00447	0.00150
TPH By SW8015B Mod	***Extracted:***	Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00	
	Analyzed:	Sep-27-16 07:49		Sep-27-16 08:12		Sep-26-16 15:20		Sep-26-16 16:36		Sep-27-16 08:36		Sep-26-16 17:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	16.2	14.9
C10-C28 Diesel Range Hydrocarbons		ND	15.0	226	15.0	110	15.0	ND	15.0	36.2	15.0	280	14.9
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	14.9
Total TPH		ND	15.0	226	15.0	110	15.0	ND	15.0	36.2	15.0	296	14.9

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 537478

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 03-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537478-025		537478-026		537478-027		537478-028		537478-029		537478-030	
	Field Id:	ESW #6		SSW #6		NSW #7		WSW # 7		SSW #7		ESW #7	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-22-16 17:05		Sep-22-16 17:10		Sep-22-16 17:15		Sep-22-16 17:20		Sep-22-16 17:25		Sep-22-16 17:30	
BTEX by EPA 8021B	***Extracted:***	Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00		Sep-27-16 20:00	
	Analyzed:	Sep-28-16 02:35		Sep-28-16 02:52		Sep-28-16 03:08		Sep-28-16 03:24		Sep-28-16 03:40		Sep-28-16 03:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00149	ND	0.00150
Toluene		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00198	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00198	ND	0.00199	ND	0.00200
m_p-Xylenes		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00198	ND	0.00199	ND	0.00200
o-Xylene		ND	0.00298	ND	0.00299	ND	0.00299	ND	0.00298	ND	0.00298	ND	0.00299
Total Xylenes		ND	0.00199	ND	0.00200	ND	0.00200	ND	0.00198	ND	0.00199	ND	0.00200
Total BTEX		ND	0.00149	ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00149	ND	0.00150
TPH By SW8015B Mod	***Extracted:***	Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00		Sep-26-16 13:00	
	Analyzed:	Sep-26-16 17:54		Sep-26-16 18:21		Sep-26-16 18:46		Sep-26-16 19:09		Sep-26-16 19:32		Sep-26-16 19:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0
C10-C28 Diesel Range Hydrocarbons		31.3	14.9	ND	15.0	90.0	15.0	177	15.0	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0
Total TPH		31.3	14.9	ND	15.0	90.0	15.0	177	15.0	ND	15.0	ND	15.0

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000792 **Sample:** 537478-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 15:20

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	99.7	95	70-130	
o-Terphenyl	46.9	49.9	94	70-135	

Lab Batch #: 3000792 **Sample:** 537478-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 16:36

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.2	99.7	78	70-130	
o-Terphenyl	37.5	49.9	75	70-135	

Lab Batch #: 3000792 **Sample:** 537478-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 17:28

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.7	99.6	82	70-130	
o-Terphenyl	40.1	49.8	81	70-135	

Lab Batch #: 3000792 **Sample:** 537478-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 17:54

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.6	85	70-130	
o-Terphenyl	40.8	49.8	82	70-135	

Lab Batch #: 3000792 **Sample:** 537478-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 18:21

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.6	99.8	77	70-130	
o-Terphenyl	36.0	49.9	72	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000792 **Sample:** 537478-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 18:46

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.8	95	70-130	
o-Terphenyl	47.3	49.9	95	70-135	

Lab Batch #: 3000792 **Sample:** 537478-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 19:09

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-130	
o-Terphenyl	52.4	50.0	105	70-135	

Lab Batch #: 3000792 **Sample:** 537478-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 19:32

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-130	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 3000792 **Sample:** 537478-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 19:55

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.7	104	70-130	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 3000789 **Sample:** 537478-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 23:01

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-130	
o-Terphenyl	50.7	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000789 **Sample:** 537478-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 00:17

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.8	98	70-130	
o-Terphenyl	47.4	49.9	95	70-135	

Lab Batch #: 3000789 **Sample:** 537478-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 00:42

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	99.8	96	70-130	
o-Terphenyl	48.4	49.9	97	70-135	

Lab Batch #: 3000789 **Sample:** 537478-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 01:08

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-130	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 3000789 **Sample:** 537478-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 01:34

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	100	97	70-130	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 3000789 **Sample:** 537478-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 01:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.6	98	70-130	
o-Terphenyl	47.1	49.8	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000789 **Sample:** 537478-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 02:24

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-130	
o-Terphenyl	48.1	49.9	96	70-135	

Lab Batch #: 3000789 **Sample:** 537478-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 02:49

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	99.6	100	70-130	
o-Terphenyl	47.2	49.8	95	70-135	

Lab Batch #: 3000789 **Sample:** 537478-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 03:15

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-130	
o-Terphenyl	52.7	49.9	106	70-135	

Lab Batch #: 3000789 **Sample:** 537478-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 03:41

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	99.8	98	70-130	
o-Terphenyl	48.6	49.9	97	70-135	

Lab Batch #: 3000789 **Sample:** 537478-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 04:33

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.9	99	70-130	
o-Terphenyl	48.4	50.0	97	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000789 **Sample:** 537478-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 04:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.7	99	70-130	
o-Terphenyl	48.8	49.9	98	70-135	

Lab Batch #: 3000789 **Sample:** 537478-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 05:23

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	99.8	97	70-130	
o-Terphenyl	48.4	49.9	97	70-135	

Lab Batch #: 3000789 **Sample:** 537478-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 05:46

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-130	
o-Terphenyl	49.0	49.9	98	70-135	

Lab Batch #: 3000789 **Sample:** 537478-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 06:11

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-130	
o-Terphenyl	49.7	49.8	100	70-135	

Lab Batch #: 3000789 **Sample:** 537478-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 06:36

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.6	99	70-130	
o-Terphenyl	47.7	49.8	96	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000789 **Sample:** 537478-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 06:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.8	99	70-130	
o-Terphenyl	48.0	49.9	96	70-135	

Lab Batch #: 3000789 **Sample:** 537478-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 07:24

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-130	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 3000789 **Sample:** 537478-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 07:49

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	99.8	100	70-130	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 3000789 **Sample:** 537478-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 08:12

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.7	99	70-130	
o-Terphenyl	51.3	49.9	103	70-135	

Lab Batch #: 3000792 **Sample:** 537478-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 08:36

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-130	
o-Terphenyl	52.1	50.0	104	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000888 **Sample:** 537478-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 00:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 3000888 **Sample:** 537478-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 01:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 3000888 **Sample:** 537478-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 01:30

SURROGATE RECOVERY STUDY

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

Lab Batch #: 3000888 **Sample:** 537478-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 02:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 3000888 **Sample:** 537478-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 02:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000888 **Sample:** 537478-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 02:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 3000888 **Sample:** 537478-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 03:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 3000888 **Sample:** 537478-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 03:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 3000888 **Sample:** 537478-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 03:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 3000888 **Sample:** 537478-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 03:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000891 **Sample:** 537478-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 3000891 **Sample:** 537478-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 3000891 **Sample:** 537478-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 3000891 **Sample:** 537478-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 3000891 **Sample:** 537478-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000891 **Sample:** 537478-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 3000891 **Sample:** 537478-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0358	0.0300	119	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 3000891 **Sample:** 537478-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 3000891 **Sample:** 537478-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 3000891 **Sample:** 537478-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000891 **Sample:** 537478-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 3000891 **Sample:** 537478-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 3000891 **Sample:** 537478-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	

Lab Batch #: 3000891 **Sample:** 537478-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 3000891 **Sample:** 537478-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000891 **Sample:** 537478-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 3000891 **Sample:** 537478-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0348	0.0300	116	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 3000891 **Sample:** 537478-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 16:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 3000891 **Sample:** 537478-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 16:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 3000888 **Sample:** 537478-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 16:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000792 **Sample:** 714224-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:01

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	100	95	70-130	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 3000789 **Sample:** 714222-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 21:50

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-130	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 3000888 **Sample:** 714288-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/16 00:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 3000891 **Sample:** 714290-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

Lab Batch #: 3000792 **Sample:** 714224-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:26

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	54.5	50.0	109	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000789 **Sample:** 714222-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 22:13

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-130	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 3000888 **Sample:** 714288-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/27/16 22:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 3000891 **Sample:** 714290-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 3000792 **Sample:** 714224-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:51

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 3000789 **Sample:** 714222-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 22:37

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-130	
o-Terphenyl	54.3	50.0	109	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000888 **Sample:** 714288-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/27/16 23:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 3000891 **Sample:** 714290-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 3000792 **Sample:** 537478-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 15:46

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-130	
o-Terphenyl	55.6	49.9	111	70-135	

Lab Batch #: 3000789 **Sample:** 537478-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 23:26

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-130	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 3000888 **Sample:** 537478-020 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 12:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537478, 537478 **Project ID:** AR167190

Lab Batch #: 3000891 **Sample:** 537478-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 3000792 **Sample:** 537478-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 16:11

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-130	
o-Terphenyl	54.5	49.9	109	70-135	

Lab Batch #: 3000789 **Sample:** 537478-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 23:51

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.7	114	70-130	
o-Terphenyl	53.1	49.9	106	70-135	

Lab Batch #: 3000888 **Sample:** 537478-020 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/16 23:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 3000891 **Sample:** 537478-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/28/16 14:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lynch Station

Work Order #: 537478, 537478 **Project ID:** AR167190

Analyst: PJB **Date Prepared:** 09/27/2016 **Date Analyzed:** 09/27/2016

Lab Batch ID: 3000888 **Sample:** 714288-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.107	107	0.100	0.0961	96	11	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.0970	97	8	70-130	35	
Ethylbenzene	<0.00200	0.100	0.109	109	0.100	0.101	101	8	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.204	102	8	70-135	35	
o-Xylene	<0.00300	0.100	0.107	107	0.100	0.101	101	6	71-133	35	

Analyst: PJB **Date Prepared:** 09/27/2016 **Date Analyzed:** 09/28/2016

Lab Batch ID: 3000891 **Sample:** 714290-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.108	108	0.100	0.104	104	4	70-130	35	
Toluene	<0.00200	0.100	0.115	115	0.100	0.108	108	6	70-130	35	
Ethylbenzene	<0.00200	0.100	0.118	118	0.100	0.111	111	6	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.236	118	0.200	0.222	111	6	70-135	35	
o-Xylene	<0.00300	0.100	0.115	115	0.100	0.108	108	6	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Lynch Station

Work Order #: 537478, 537478 **Project ID:** AR167190

Analyst: MNR **Date Prepared:** 09/30/2016 **Date Analyzed:** 09/30/2016

Lab Batch ID: 3001120 **Sample:** 714399-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	233	93	250	234	94	0	90-110	20	

Analyst: ARM **Date Prepared:** 09/26/2016 **Date Analyzed:** 09/26/2016

Lab Batch ID: 3000789 **Sample:** 714222-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	926	93	1000	939	94	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	930	93	1000	947	95	2	75-125	25	

Analyst: ARM **Date Prepared:** 09/26/2016 **Date Analyzed:** 09/26/2016

Lab Batch ID: 3000792 **Sample:** 714224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	909	91	1000	904	90	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	915	92	1000	915	92	0	75-125	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station

Work Order # : 537478 **Project ID:** AR167190

Lab Batch ID: 3000888 **QC- Sample ID:** 537478-020 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/28/2016 **Date Prepared:** 09/27/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.0858	86	0.0994	0.0757	76	13	70-130	35	
Toluene	<0.00200	0.0998	0.0844	85	0.0994	0.0750	75	12	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0841	84	0.0994	0.0737	74	13	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.177	89	0.199	0.150	75	17	70-135	35	
o-Xylene	<0.00299	0.0998	0.0949	95	0.0994	0.0755	76	23	71-133	35	

Lab Batch ID: 3000891 **QC- Sample ID:** 537478-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/28/2016 **Date Prepared:** 09/27/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.102	102	0.100	0.0828	83	21	70-130	35	
Toluene	<0.00200	0.0998	0.102	102	0.100	0.0881	88	15	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.100	0.0884	88	17	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.221	111	0.200	0.186	93	17	70-135	35	
o-Xylene	<0.00299	0.0998	0.106	106	0.100	0.0899	90	16	71-133	35	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station

Work Order # : 537478 **Project ID:** AR167190

Lab Batch ID: 3001120 **QC- Sample ID:** 536657-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/30/2016 **Date Prepared:** 09/30/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	920	250	1160	96	250	1150	92	1	90-110	20	

Lab Batch ID: 3001120 **QC- Sample ID:** 537439-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/30/2016 **Date Prepared:** 09/30/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	4120	2500	6760	106	2500	6650	101	2	90-110	20	

Lab Batch ID: 3000789 **QC- Sample ID:** 537478-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/26/2016 **Date Prepared:** 09/26/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	869	87	997	839	84	4	75-125	25	
C10-C28 Diesel Range Hydrocarbons	16.0	999	876	86	997	844	83	4	75-125	25	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station

Work Order # : 537478 **Project ID:** AR167190

Lab Batch ID: 3000792 **QC- Sample ID:** 537478-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/26/2016 **Date Prepared:** 09/26/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	998	912	91	998	844	85	8	75-125	25	
C10-C28 Diesel Range Hydrocarbons	110	998	926	82	998	868	76	6	75-125	25	

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

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

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

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

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

1 of 3

CHAIN OF CUSTODY RECORD 537478

Terracon

Office Location: Lubbock

Project Manager: Joel Lowry

Sampler's Name: Joel Lowry

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave.
Midland, TX 79701
432-563-1800

Phone:

Contact: Joel Lowry

PO/SO #: Plains SRS No. 2016-135

Sampler's Signature: Joel Lowry

Project Number: AR167190

Project Name: Lynch Station

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 4.9-C

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	TPH 8015 M. Ext.	BTEX/MTBE (EPA Method 8021B)	Chloride (EPA Method 300)	Lab Sample ID
S	9/22/2016	15:05		x	RP Floor # 1 @ 7'	7	7.5	1	x	x		
	9/22/2016	15:10		x	RP SSW #1			1	x	x		
	9/22/2016	15:15		x	RP WSW #1			1	x	x		
	9/22/2016	15:20		x	RP ESW #1			1	x	x		
	9/22/2016	15:25		x	RP Floor #2 @ 10'	10	11	1	x	x	x	
	9/22/2016	15:30		x	RP NSW #2			1	x	x		
	9/22/2016	15:35		x	RP WSW #2			1	x	x		
	9/22/2016	15:40		x	RP ESW #2			1	x	x		
	9/22/2016	15:45		x	Floor #2 @ 18"	1.5	2	1	x	x		
	9/22/2016	15:50		x	WSW #2			1	x	x		

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Joel Lowry	9/23/16	9:06		9-23-16	9:00
	9-23-16	1457		9/23/16	1475

NOTES:

Please Email Results to
erin.loyd@terracon.com
joel.lowry@terracon.com

cjbryant@paapl.com

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge

Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

537478

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave.
Midland, TX 79701
432-563-1800

Office Location: Lubbock
Phone:
Project Manager: Joel Lowry
Contact: Joel Lowry
Sampler's Name: Joel Lowry
PO/SO #: Plains SRS No. 2016-135
Sampler's Signature: Joel Lowry

Project Number: AR167190
Project Name: Lynch Station

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.9 °C

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				TPH 8015 M. Ext.	BTEX/MTBE (EPA Method 8021B)						Lab Sample ID
S	9/22/2016	15:55		x	ESW #2			1				x	x						
	9/22/2016	16:00		x	NSW #3			1				x	x						
	9/22/2016	16:05		x	WSW #3			1				x	x						
	9/22/2016	16:10		x	ESW #3			1				x	x						
	9/22/2016	16:15		x	SSW #3			1				x	x						
	9/22/2016	16:20		x	Floor #4 @ 18"	1.5	2	1				x	x						
	9/22/2016	16:25		x	NSW #4			1				x	x						
	9/22/2016	16:30		x	SSW #4			1				x	x						
	9/22/2016	16:35		x	WSW #4			1				x	x						
	9/22/2016	16:40		x	Floor # 5 @ 2'	2	2.5	1				x	x						

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Joel Lowry	9/23/16	9:00		9-23-16	0900
	9-23-16	1457			1457

NOTES: Please Email Results to
erin.loyd@terracon.com
joel.lowry@terracon.com

cjbryant@paapl.com

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

CHAIN OF CUSTODY RECORD 537478

Terracon

Office Location: Lubbock
Project Manager: Joel Lowry
Sampler's Name: Joel Lowry

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave. Midland, TX 79701 432-563-1800
Phone:
Contact: Joel Lowry
PO/SO #: Plains SRS No. 2016-135
Sampler's Signature: Joel Lowry

Project Number: AR167190
Project Name: Lynch Station

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.9°C

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				TPH 8015 M. Ext.	BTEX/MTBE (EPA Method 8021B)						Lab Sample ID
S	9/22/2016	16:45		x	WSW #5			1				x	x						
	9/22/2016	16:50		x	ESW #5			1				x	x						
	9/22/2016	16:55		x	NSW #6			1				x	x						
	9/22/2016	17:00		x	WSW #6			1				x	x						
	9/22/2016	17:05		x	ESW #6			1				x	x						
	9/22/2016	17:10		x	SSW #6			1				x	x						
	9/22/2016	17:15		x	NSW #7			1				x	x						
	9/22/2016	17:20		x	WSW #7			1				x	x						
	9/22/2016	17:25		x	SSW #7			1				x	x						
	9/22/2016	17:30		x	ESW #7			1				x	x						

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature): Joel Lowry	9/23/16	4:06	Received by (Signature): Brad Ryle	9-23-16	9:00
Relinquished by (Signature): Joel Lowry	9-23-16	1457	Received by (Signature): J KRAMER		1457
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:

Please Email Results to
erin.loyd@terracon.com
joel.lowry@terracon.com

cjbryant@paapl.com

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 09/23/2016 02:57:00 PM

Work Order #: 537478

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.9
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 09/26/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 09/26/2016

Analytical Report 537480

for

Plains All American EH&S

Project Manager: Joel Lowry

Lynch Station

AR167190

28-SEP-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Table of Contents

28-SEP-16

Project Manager: **Joel Lowry**
Plains All American EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): **537480**
Lynch Station
Project Address:

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 537480. 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. 537480 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 537480

Plains All American EH&S, Midland, TX

Lynch Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
9/22 N. Stockpile	S	09-22-16 16:45		537480-001
9/22 S. Stockpile	S	09-22-16 16:50		537480-002

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3000792 TPH By SW8015B Mod

C28-C35 Oil Range Hydrocarbons recovered below QC limits in the Blank Spike and Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 537480-001, -002.

Certificate of Analysis Summary 537480

Plains All American EH&S, Midland, TX

Project Name: Lynch Station

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Fri Sep-23-16 02:57 pm
Report Date: 28-SEP-16
Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	537480-001		537480-002				
	Field Id:	9/22 N. Stockpile		9/22 S. Stockpile				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	Sep-22-16 16:45		Sep-22-16 16:50				
TPH By SW8015B Mod	***Extracted:***	Sep-26-16 13:00		Sep-26-16 13:00				
	Analyzed:	Sep-26-16 20:40		Sep-26-16 21:03				
	Units/RL:	mg/kg	RL	mg/kg	RL			
C6-C10 Gasoline Range Hydrocarbons		862	15.0	281	74.9			
C10-C28 Diesel Range Hydrocarbons		2840	15.0	6510	74.9			
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	74.9			
Total TPH		3700	15.0	6790	74.9			

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537480,

Project ID: AR167190

Lab Batch #: 3000792 **Sample:** 537480-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 20:40

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.7	128	70-130	
o-Terphenyl	54.1	49.9	108	70-135	

Lab Batch #: 3000792 **Sample:** 537480-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 21:03

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-130	
o-Terphenyl	54.6	50.0	109	70-135	

Lab Batch #: 3000792 **Sample:** 714224-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:01

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	100	95	70-130	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 3000792 **Sample:** 714224-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:26

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 3000792 **Sample:** 714224-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/26/16 12:51

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	54.5	50.0	109	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Lynch Station

Work Orders : 537480,

Project ID: AR167190

Lab Batch #: 3000792 **Sample:** 537478-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 15:46

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-130	
o-Terphenyl	55.6	49.9	111	70-135	

Lab Batch #: 3000792 **Sample:** 537478-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/26/16 16:11

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-130	
o-Terphenyl	54.5	49.9	109	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lynch Station

Work Order #: 537480 **Project ID:** AR167190

Analyst: ARM **Date Prepared:** 09/26/2016 **Date Analyzed:** 09/26/2016

Lab Batch ID: 3000792 **Sample:** 714224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	909	91	1000	904	90	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	915	92	1000	915	92	0	75-125	25	
C28-C35 Oil Range Hydrocarbons	<15.0	1000	<15.0	0	1000	<15.0	0	NC	70-135	35	L

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station

Work Order # : 537480 **Project ID:** AR167190

Lab Batch ID: 3000792 **QC- Sample ID:** 537478-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/26/2016 **Date Prepared:** 09/26/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	998	912	91	998	844	85	8	75-125	25	
C10-C28 Diesel Range Hydrocarbons	110	998	926	82	998	868	76	6	75-125	25	
C28-C35 Oil Range Hydrocarbons	<15.0	998	<15.0	0	998	<15.0	0	NC	70-135	35	X

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

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

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

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

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

1 of 1

CHAIN OF CUSTODY RECORD 537480

Terracon

Office Location: Lubbock

Project Manager: Joel Lowry

Sampler's Name: Joel Lowry

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave.
Midland, TX 79701
432-563-1800

Phone:

Contact: Joel Lowry

PO/SO #: Plains SRS No. 2016-135

Sampler's Signature: Joel Lowry

Project Number: AR167190

Project Name: Lynch Station

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 4.9°C

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	TPH 8015 M. Ext.	BTEX/MTBE (EPA Method 80218)	Lab Sample ID
S	9/22/2016	16:45	x		9/22 N. Stockpile			1	x		
	9/22/2016	16:50	x		9/22 S. Stockpile			1	x		

TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date:	Time:		Date:	Time:
Relinquished by (Signature)	9/23/16	9:06	Received by (Signature)	9-23-16	9:00
Relinquished by (Signature)	9-23-16	1457	Received by (Signature)	9/23/16	1457
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Please Email Results to
erin.loyd@terracon.com
joel.lowry@terracon.com

cjbryant@paapl.com

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge

Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 09/23/2016 02:57:00 PM

Work Order #: 537480

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.9
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 09/26/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 09/26/2016

Analytical Report 538874

for

Plains All American EH&S

Project Manager: Joel Lowry

Lynch Station SRS 2016-135

AR167190

24-OCT-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Table of Contents

24-OCT-16

Project Manager: **Joel Lowry**
Plains All American EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): **538874**
Lynch Station SRS 2016-135
Project Address:

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 538874. 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. 538874 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 538874

Plains All American EH&S, Midland, TX

Lynch Station SRS 2016-135

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor #2b @ 24"	S	10-14-16 09:45	24 In	538874-001
WSW #2b	S	10-14-16 09:40		538874-002

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:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 538874

Plains All American EH&S, Midland, TX

Project Name: Lynch Station SRS 2016-135

Project Id: AR167190
Contact: Joel Lowry
Project Location:

Date Received in Lab: Tue Oct-18-16 01:59 pm
Report Date: 24-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	538874-001		538874-002					
	Field Id:	Floor #2b @ 24"		WSW #2b					
	Depth:	24- In							
	Matrix:	SOIL		SOIL					
	Sampled:	Oct-14-16 09:45		Oct-14-16 09:40					
TPH by SW 8015B	***Extracted:***	Oct-21-16 10:00		Oct-21-16 10:00					
	Analyzed:	Oct-21-16 16:28		Oct-21-16 16:57					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<8.00	15.0	<7.99	15.0				
C10-C28 Diesel Range Hydrocarbons		<8.13	15.0	147	15.0				
C28-C35 Oil Range Hydrocarbons		<9.88	15.0	<9.86	15.0				
Total TPH		<8.00	15.0	147	15.0				

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 538874,

Project ID: AR167190

Lab Batch #: 3002491 **Sample:** 538874-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/21/16 16:28

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 3002491 **Sample:** 538874-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/21/16 16:57

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	54.6	49.9	109	70-135	

Lab Batch #: 3002491 **Sample:** 715247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/21/16 10:45

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	59.3	50.0	119	70-135	

Lab Batch #: 3002491 **Sample:** 715247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/21/16 11:12

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 3002491 **Sample:** 715247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/21/16 11:42

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lynch Station SRS 2016-135

Work Orders : 538874, **Project ID:** AR167190

Lab Batch #: 3002491 **Sample:** 539006-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/22/16 13:15

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	99.9	122	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 3002491 **Sample:** 539006-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/22/16 13:41

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.8	120	70-135	
o-Terphenyl	57.3	49.9	115	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order #: 538874 **Project ID:** AR167190

Analyst: ARM **Date Prepared:** 10/21/2016 **Date Analyzed:** 10/21/2016

Lab Batch ID: 3002491 **Sample:** 715247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<8.00	1000	937	94	1000	981	98	5	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<8.13	1000	944	94	1000	989	99	5	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Lynch Station SRS 2016-135

Work Order # : 538874 **Project ID:** AR167190

Lab Batch ID: 3002491 **QC- Sample ID:** 539006-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/22/2016 **Date Prepared:** 10/21/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<7.99	999	983	98	998	1000	100	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<8.12	999	974	97	998	1000	100	3	70-135	35	

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

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

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

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 10/18/2016 01:59:00 PM

Work Order #: 538874

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.7
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 10/18/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 10/18/2016

5388074

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco Laboratories
Address: 1211 W. Florida Ave.
Midland, TX 79701
432-563-1800
Phone:
Contact: Joel Lowry
PO/SO #: SRS 2016-135

Office Location: Lubbock
Project Manager: Joel Lowry
Sampler's Name:
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 3°C

Page 1 of 1

Project Number: AR167190
Project Name: Lynch Station

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				TPH (8015 M Ext)							Lab Sample ID
S	10/14/2016	9:45		x	Floor #2b @ 24"			1				x							
S	10/14/2016	9:40		x	WSW #2b			1				x							

TURNAROUND TIME: ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Matt Taylor	10/17/16	12:00 PM		10/17/16	12:00PM
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	10/17/16	3:50PM	Jessica Cooper	10/17/16	3:51pm
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
				10/18/16	1359
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

NOTES:
Please Email Results to
erin.loyd@terracon.com
joel.lowry@terracon.com

Temp: IR ID:R-8
CF:+ 0.1 6
Corrected Temp: 5.7

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other

ORIGIN ID:HOBA (575) 392-7550
**
MAIL SERVICES ETC, LLC
4008 N GRIMES

HOBBS, NM 88240
UNITED STATES US

SHIP DATE: 17OCT16
ACTWGT: 4.0 LB MAN
CAD: 0909328/CAFE2915
DIMS: 12x11x10 IN

BILL RECIPIENT

TO XENCO LABORATORIES
XENCO LABORATORIES
1211 W FLORIDA AVE

MIDLAND TX 79701
(432) 563-1800 REF:
INV:
PO: DEPT:

538C3/FB42/329B

FedEx Express

TRK# 0201 6606 3912 7512

TUE - 18 OCT 3:00P
STANDARD OVERNIGHT

41 MAFA

79701
TX-US LBB

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Plains All American EH&S

Date/ Time Received: 10/18/2016 01:59:00 PM

Work Order #: 538874

Acceptable Temperature Range: 0 - 6 degC
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#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 10/18/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 10/18/2016

APPENDIX D

Photographs

Photographic Log

PHOTO 1: View of surface staining from the initial release, facing west.

PHOTO 2: View of surface staining from the initial release, facing north.

PHOTO 3: View of portion of the excavated area, facing northeast.

PHOTO 4: View of portion of the excavated area, facing south.

PHOTO 5: View of portion of the excavated area, facing southwest.

PHOTO 6: View of the release site after remediation activities, facing north.

PHOTO 7: View of the release site after remediation activities, facing northeast.

PHOTO 8: View of the release site after remediation activities, facing southwest.

APPENDIX E

Release Notification and Corrective Action (NMOCD Form C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

REVIEWED
By Kristen Lynch at 2:57 pm, Aug 19, 2016

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Plains Pipeline LP	Contact	Camille Bryant
Address	2530 State Hwy. 214, Denver City, TX 79323	Telephone No.	(575) 441-1099
Facility Name	Lynch Station Tank Line 1459	Facility Type	Pipeline

Surface Owner	Mineral Owner	Lease No.
Danny Berry and Plains Pipeline, L.P.		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	34	20S	34E					Lea

Latitude N 32.533014° Longitude W 103.545923°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 250 bbls	Volume Recovered: 200 bbls
Source of Release: Pipeline	Date and Hour of Occurrence: 08/08/2016 @ 06:45	Date and Hour of Discovery: 08/08/2016 @ 06:45
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Verbal notification to Jamie Keyes	
By Whom? Camille Bryant	Date and Hour: 08/08/2016@11:53	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* External corrosion on 12-inch pipeline resulted in a release of crude oil.

Describe Area Affected and Cleanup Action Taken. The released crude oil impacted an area of approximately 13,000 square feet inside the facility. The impacted area will be remediated as per applicable NMOCD guidelines.

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

Signature: Camille Bryant

Printed Name: Camille Bryant

Title: Remediation Coordinator

E-mail Address: cjbryant@paalp.com

Date: 8/18/16 Phone: (575) 441-1099

OIL CONSERVATION DIVISION

Approved by District Supervisor: Kristen Lynch

Approval Date: 8/19/2016 Expiration Date: 10/19/2016

Conditions of Approval:
Discrete Samples Only;
Delineate and Remediate per NMOCD Guidelines

Attached ☐
1RP-4406

* Attach Additional Sheets If Necessary

nKL1623253256
pKL1623253570

APPENDIX F

Waste Manifests

Manifest # 4489

Lazy Ace Landfarm

Lease Operator Information:

Name: Plains All American Pipeline LP

Address: 2530 State Hwy 214, Denver city Tx

Phone #:

Originating Localtion of waste material:

Lease Name: Lynch Station

Sec. 34 T 20 R 34E

Transporter Information:

Name: Basin Environmental

Address: 3100 Plains Hwy

Phone #: 575-396-2378

Driver Signature: Matt Taylor

Date: 10-19-16

Non-Hazardous Hydro-Carbons:

of Yards: 240

Waste material placed in cell number: A-11

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:

Danny Berry
(575) 393-6964 - Home
(575) 369-5266 - Cell

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not mixed with non-exempt waste."

Facility Representative: Danny Berry Date: 10-19-16

NOTE TO ALL DRIVERS!

TCP#8239 White- ORIGINAL • Yellow - INVOICE • PINK - DRIVER

Manifest # 4488

Lazy Ace Landfarm

Lease Operator Information:

Name: Plains All American Pipeline, LP

Address: 2530 State Hwy 214 Denver city TX

Phone #:

Originating Localtion of waste material:

Lease Name: Lynch Station

Sec. 34 T 20S R 34E

Transporter Information:

Name: Basin Environmental

Address: 3100 Plains Hwy

Phone #: 396 2378

Driver Signature: Matt Taylor

Date: 10-18-16

Non-Hazardous Hydro-Carbons:

of Yards: 504

Waste material placed in cell number: A-11

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:

Danny Berry
(575) 393-6964 - Home
(575) 369-5266 - Cell

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not mixed with non-exempt waste."

Facility Representative: Danny Berry Date: 10-18-16

NOTE TO ALL DRIVERS!

TCP#8239 White- ORIGINAL • Yellow - INVOICE • PINK - DRIVER

Manifest # 4469

Lazy Ace Landfarm

Lease Operator Information:

Name: Plains All American Pipeline, LP

Address: 2530 State Hwy Denver city Tx 79323

Phone #:

Originating Localtion of waste material:

Lease Name: Lynch Station

Sec. 34 T 20S R 34E

Transporter Information:

Name: Basin Environmental

Address: 3100 Plains Hwy

Phone #: 575-396-2378

Driver Signature: Matt Taylor

Date: 10-14-16

Non-Hazardous Hydro-Carbons:

of Yards: 312

Waste material placed in cell number: A-11

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:

Danny Berry
(575) 393-6964 - Home
(575) 369-5266 - Cell

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not d with non-exempt waste."

Facility Representative: Danny Berry Date: 10-14-16

NOTE TO ALL DRIVERS!

TCP#8239 White- ORIGINAL • Yellow - INVOICE • PINK - DRIVER

Manifest # 4468

Lazy Ace Landfarm

Lease Operator Information:

Name: Plains All American Pipeline, LP

Address: 2530 State Hwy E14, Denver city Tx 79323

Phone #:

Originating Localtion of waste material:

Lease Name: Lynch Station

Sec. 34 T 20S R 34E

Transporter Information:

Name: Basin Environmental

Address: 3100 Plains Hwy

Phone #: 575-396-2378

Driver Signature: Matt Taylor

Date: 10-13-16

Non-Hazardous Hydro-Carbons:

of Yards: 336

Waste material placed in cell number: A-11

Lazy Ace Landfarm, L.L.C.
P.O. Box 130
Eunice, NM 88231

Permit # NM 01-0041
W1/2SW1/4 S22T20SR34E

Contacts:

Danny Berry
(575) 393-6964 - Home
(575) 369-5266 - Cell

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA). The waste are: generated from oil and gas exploration and production operations, exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations: and not d with non-exempt waste."

Facility Representative: Danny Berry Date: 10-13-16

NOTE TO ALL DRIVERS!

TCP#8239 White- ORIGINAL • Yellow - INVOICE • PINK - DRIVER