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

RECEIVED
FEB 07 2014
HOBBS OCD

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 X Final Report

Name of Company Plains Pipeline, LP	Contact Camille Bryant
Address 2530 State Highway 214, Denver City, TX 79323	Telephone No. (575)441-1099
Facility Name Jal Tank Farm Tank 1214	Facility Type Tank Farm

Surface Owner Plains	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	5	26S	37E					Lea

Latitude 32.07884° North **Longitude** 103.17952° West

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 200 bbls	Volume Recovered 190 bbls
Source of Release Tank 1214 at Jal Tank Farm	Date and Hour of Occurrence 9/12/2008	Date and Hour of Discovery 9/12/2008 05:30
Was Immediate Notice Given? X Yes No Not Required	If YES, To Whom? Larry Johnson (left message)	
By Whom? Daniel Bryant	Date and Hour 9/15/2008 09:30	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken:* Heavy rain overwhelmed partially blocked roof drain during extremely heavy rain storm. 2 roof drains were stopped up. Drains were cleared & draining proceeded, but at some point, the roof on Tank 1214 flooded with oil, causing release of approx. 200 bbls on ponded rainwater inside firewall.

Describe Area Affected and Cleanup Action Taken.* All released materials were contained inside the secondary containment. The release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Site Closure Request* for remediation details.

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	OIL CONSERVATION DIVISION	
Printed Name: Camille Bryant	Approved by District Supervisor: Geoffrey Leking Environmental Specialist	
Title: Remediation Coordinator	Approval Date: 3/7/2014	Expiration Date: —
E-mail Address: cjbryant@paalp.com	Conditions of Approval: —	
Date: 3/7/14 Phone: (575)441-1099		

1RP-1961

pGRL0829051554

DEC 15 2015

District I
1625 N. French Dr., Hobbs, NM 88240
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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	Daniel Bryant
Address	P.O. Box 3119 – Midland, Tx 79702	Telephone No.	(432) 557-5865
Facility Name	Jal Tank Farm Tank 1214	Facility Type	Tank Farm

Surface Owner	Mineral Owner	Lease No.
Plains		

LOCATION OF RELEASE

API# 30-025-11955-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	5	26S	37E					Lea

Latitude N 32.07884° **Longitude** W 103.17952°

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 200 bbls	Volume Recovered 190 bbls
Source of Release Tank 1214 at Jal Tank Farm	Date and Hour of Occurrence 09/12/2008	Date and Hour of Discovery 09/12/2008 05:30
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson (left message)	
By Whom? Daniel Bryant	Date and Hour 09/15/2008 09:30	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
OCT 01 2008
HOBBS OCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Heavy rain overwhelmed partially blocked roof drain during extremely heavy rain storm. 2 roof drains were stopped up. Drains were cleared & draining proceeded but at some point the roof on tank 1214 flooded with oil causing release of approx. 200 bbls. on ponded rainwater inside firewall.

Describe Area Affected and Cleanup Action Taken.*

All released materials were contained inside the secondary containment. Area will be remediated per applicable 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: Daniel Bryant

Printed Name: Daniel Bryant

Title: Environmental R/C Specialist

E-mail Address: dmbryant@paalp.com

Date: 9/26/08 Phone: (432) 557-5865

OIL CONSERVATION DIVISION

Approved by District Supervisor: L Johnson
ENVIRONMENTAL ENGINEER

Approval Date: 10.1.08 Expiration Date: 12.1.08

Conditions of Approval:
SUBMIT FINAL C-141 W/ DOCS BY 12.1.08

Attached ☐
RP# 1961

* Attach Additional Sheets If Necessary

fGRL 0828051101

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
bjarguijo@basinenv.com
Office: (575) 396-2378 Fax: (575) 396-1429

Effective Solutions

REMEDIATION SUMMARY &

SITE CLOSURE REQUEST

PLAINS PIPELINE, LP
JAL TANK FARM TANK 1214
Plains SRS #2008-253
Lea County, New Mexico
Unit Letter "A" (NE/NE), Section 5, Township 26 South, Range 37 East
Latitude 32.07884° North, Longitude 103.17952° West
NMOCD Reference #1RP-1961

Prepared For:

Plains Pipeline, LP
333 Clay Street, Suite 1600
Houston, Texas 77002

Prepared By:

Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, New Mexico 88260

December 2013

approved
Jeffrey Lekins
Environmental Specialist
NMOCD - DIST I
3/7/14

Ben J. Arguijo
Project Manager

3/7

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FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of Plains Pipeline, LP (Plains), has prepared this *Remediation Summary & Site Closure Request* for the release site known as Jal Tank Farm Tank 1214. The legal description of the release site is Unit Letter "A" (NE/NE), Section 5, Township 26 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32.07884° North latitude and 103.17952° West longitude. The property affected by the release is owned by Plains. A "Site Location Map" is provided as Figure 1.

On November 12, 2008, Plains discovered a release had occurred at the Jal Station Tank Farm. During a rain storm, two (2) drains on the roof of storage tank #1214 became partially clogged with debris and were subsequently overwhelmed by heavy rainfall, resulting in a flood of crude oil on the roof of the tank. The flooding crude oil breached the sidewalls of the tank and comingled with pooled rainwater inside the earthen containment area surrounding that section of the Jal Tank Farm.

The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on November 15, 2008. The "Release Notification and Corrective Action" (Form C-141) indicated that approximately two hundred barrels (200 bbls) of crude oil were released. During initial response activities, a vacuum truck was utilized to recover approximately one hundred and ninety barrels (190 bbls) of free product from within the containment berm, resulting in a net loss of ten barrels (10 bbls) of crude oil.

The Form C-141 is provided as Appendix A. General photographs of the site are provided as Appendix B.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated depth-to-groundwater information was unavailable for Section 5, Township 26 South, Range 37 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred and twenty feet (120') below ground surface (bgs). However, historical and anecdotal evidence suggests that the depth to groundwater in the area is actually ninety-feet (90') bgs. Based on the NMOCD ranking system, ten (10) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Jal Tank Farm Tank 1214 release site has an initial ranking score of ten (10) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- Benzene, ethylbenzene, toluene, and xylenes (BTEX) – 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) – 1,000 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On September 16, 2008, following initial response activities, remediation activities commenced at the site. From September 19 through September 22, 2008, visibly stained topsoil was scraped up, blended with non-impacted soil, and stockpiled on-site, pending final disposition. Further excavation was precluded by the presence of numerous underground pipes and appurtenances along the flow path of the release.

On September 22, 2008, excavated soil was blended with non-impacted soil and stockpiled on-site, pending final disposition.

On October 3, 2008, the affected area was treated with a water/fertilizer mix, aerated, and placed back into the excavation. The excavation was left undisturbed for the duration of the 2008-2009 winter season to facilitate bioremediation.

On April 2, 2009, three (3) soil samples (South of Tank #1214, East of Tank #1214, and West of Tank #1214) were collected from the backfilled excavation. The soil samples were submitted to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of TPH concentrations using EPA Method SW 846-8015M. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix C.

Laboratory analytical results indicated TPH concentrations ranged from 4,877 mg/Kg in soil sample East of Tank #1214 to 11,310 mg/Kg in soil sample West of Tank #1214.

On April 14, 2009, the impacted area was treated with a water/fertilizer mix, aerated, and left undisturbed for several months to facilitate bioremediation. A subsequent fertilization/bioremediation event was conducted on July 15, 2010.

On November 5, 2010, three (3) soil samples (South of Tank #1214, East of Tank #1214, and West of Tank #1214) were collected from the areas represented by the three (3) soil samples collected on April 2, 2009. The soil samples were submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit (MDL) of 15.4 mg/Kg in soil sample East of Tank #1214 to 110.5 mg/Kg in soil sample West of Tank #1214.

Due to personnel changes at Plains and Basin Environmental, the soil samples collected on November 5, 2010, were not analyzed for BTEX constituent concentrations, and a *Remediation Summary & Site Closure Request* was never prepared and submitted to the NMOCD.

In October 2012, following consultation with a Plains representative, Basin Environmental resumed remediation activities at the Jal Tank Farm Tank 1214 release site.

On October 26, 2012, four (4) soil samples (South Side 1, South Side 2, East Side, and West Side) were collected from the impacted area and submitted to the laboratory for analysis of TPH concentrations. Soil sample South Side 2 was also analyzed for concentrations of chloride. Laboratory analytical results indicated TPH concentrations ranged from 22.0 mg/kg in soil sample South Side 1 to 93.8 mg/kg in soil sample South Side 2. The chloride concentration in soil sample South Side 2 was 3.83. However, due to a laboratory error, the sample was analyzed out of hold-time, and the result was deemed to be invalid.

On December 6, 2012, the area represented by soil sample South Side 2 was re-sampled, and one (1) soil sample (South Side 2) was submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated the TPH concentration in soil sample South Side 2 was 62.1 mg/kg, and the chloride concentration was 6.29 mg/kg.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil Samples were delivered to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of BTEX, TPH, and/or chloride concentrations using the methods described below. Soil samples were analyzed for BTEX, TPH, and/or chloride concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method SW 846-8021b
- TPH concentrations in accordance with modified EPA Method SW 846-8015M
- Chloride concentrations in accordance with EPA Method 300.1

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Soil samples collected from the Jal Tank Farm Tank 1214 remediation site were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, TPH, and chloride were below the regulatory remediation action levels established for the site. Based on these laboratory analytical results, Basin Environmental recommends Plains provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Jal Tank Farm Tank 1214 release site.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. Basin Environmental has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin Environmental has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains Pipeline, LP. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Plains Pipeline, LP.

7.0 DISTRIBUTION:

Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, NM 88240
geoffreyr.leking@state.nm.us

Copy 2: Jeff Dann
Plains Pipeline, LP
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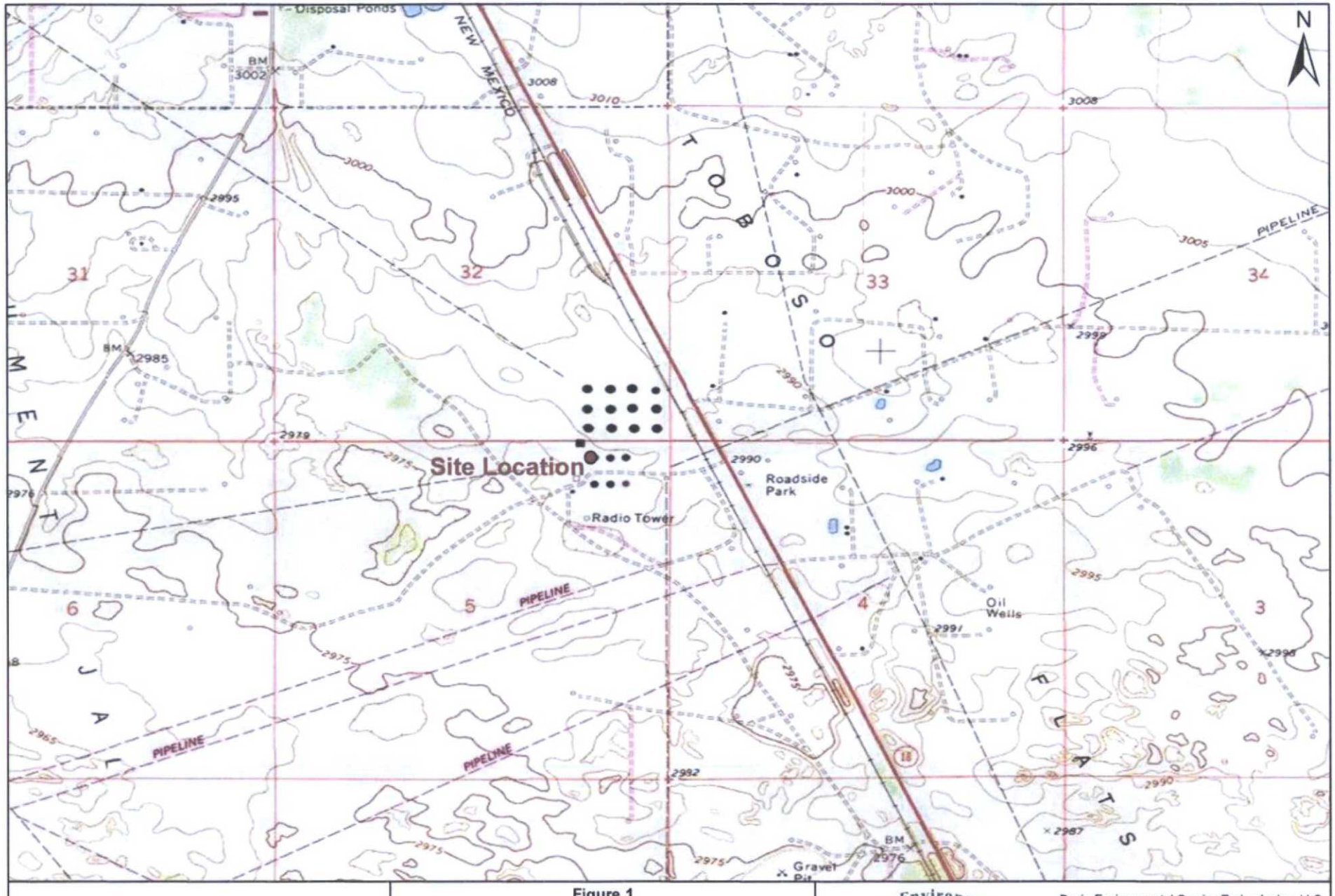
jpdann@paalp.com

Copy 3: Camille Bryant
Plains Pipeline, LP
2530 State Highway 214
Denver City, Texas 79323
cjbryant@paalp.com

Copy 4: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, New Mexico 88260



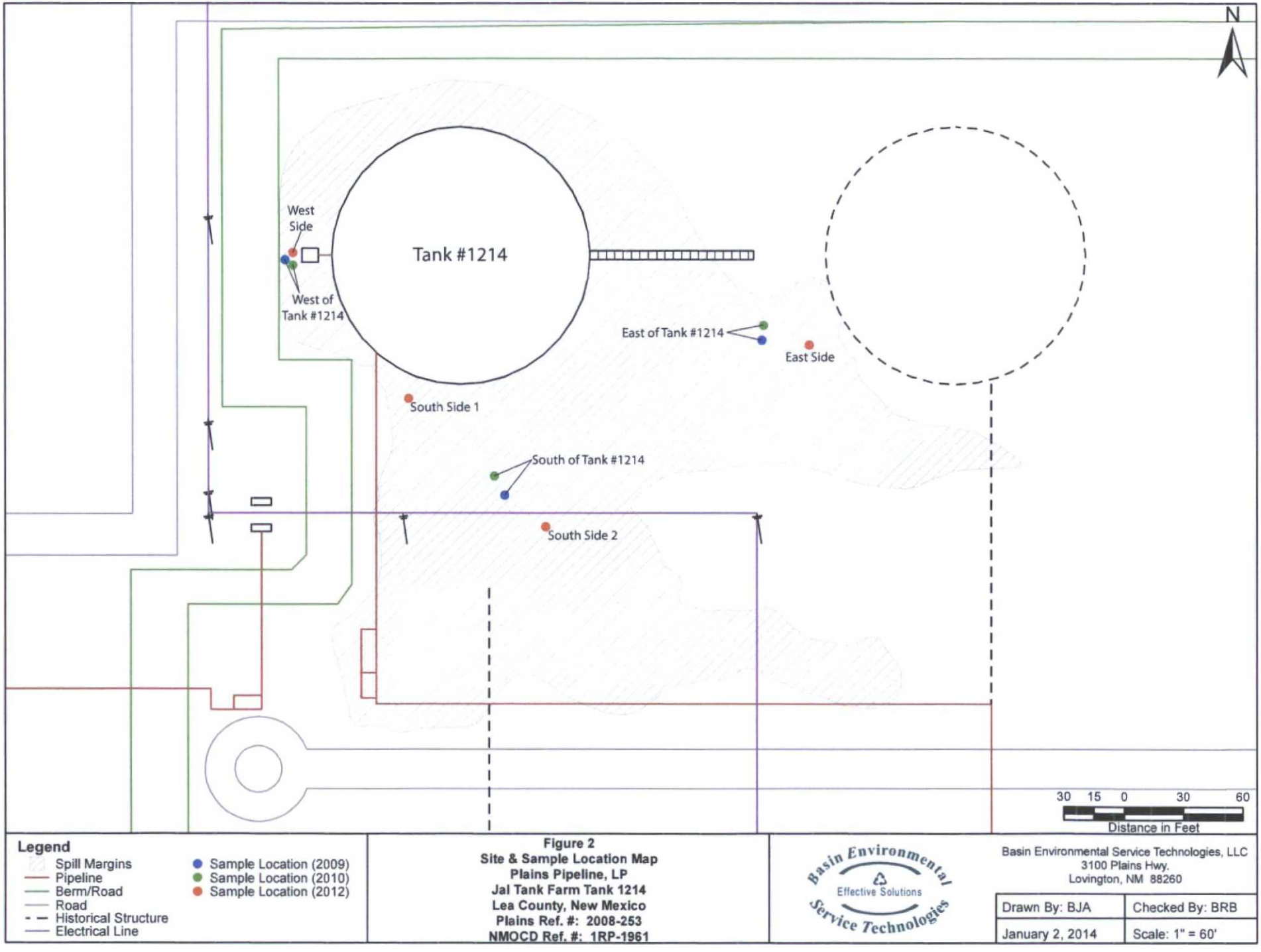
1,000500 0 1,000 2,000

Distance in Feet

Figure 1
Site Location Map
Plains Pipeline, LP
Jal Tank Farm Tank 1214
Lea County, New Mexico
Plains Ref. #: 2008-253

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
November 21, 2012	Scale: 1" = 2000'



Legend

- Spill Margins
- Pipeline
- Berm/Road
- Road
- Historical Structure
- Electrical Line
- Sample Location (2009)
- Sample Location (2010)
- Sample Location (2012)

Figure 2
Site & Sample Location Map
Plains Pipeline, LP
Jal Tank Farm Tank 1214
Lea County, New Mexico
Plains Ref. #: 2008-253
NMOCD Ref. #: 1RP-1961

Basin Environmental Service Technologies
Effective Solutions

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
January 2, 2014	Scale: 1" = 60'

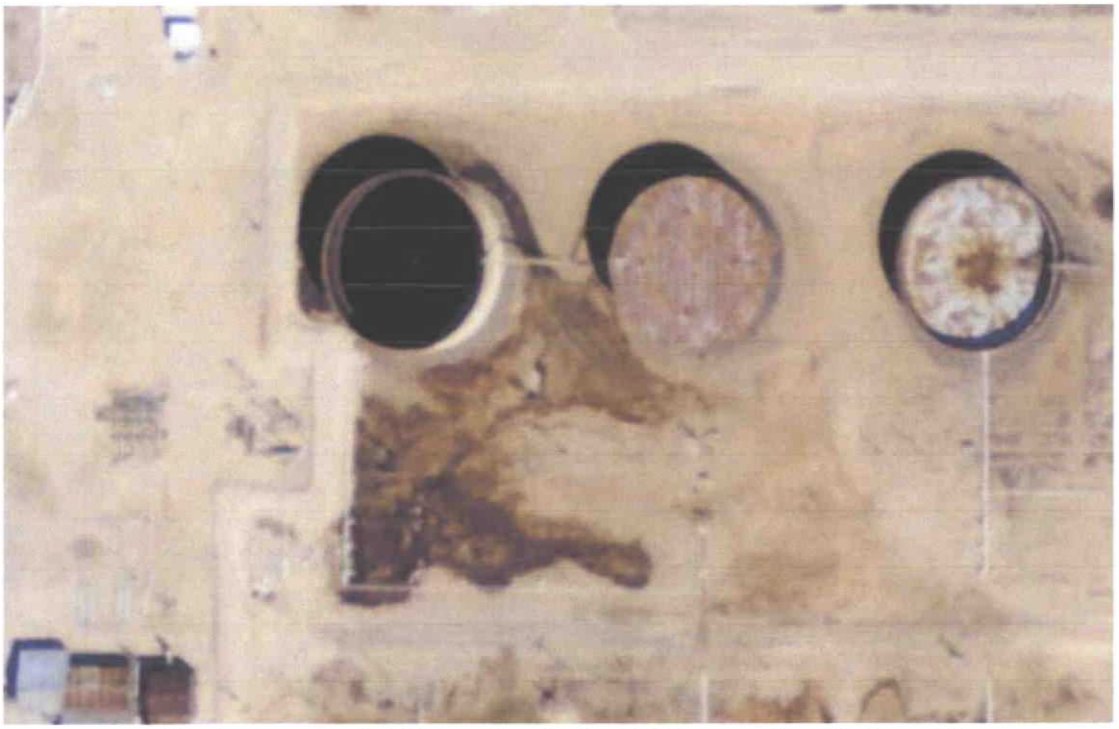
TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

PLAINS PIPELINE, LP
JAL TANK FARM TANK 1214
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2008-253
NMOCD REFERENCE #: 1RP-1961

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P.-XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		CHLORIDE (mg/Kg)
South of Tank #1214	0.5'	4/2/2009	In-Situ	-	-	-	-	-	-	-	27.6	4,970	1,300	6,298	-
East of Tank #1214	0.5'	4/2/2009	In-Situ	-	-	-	-	-	-	-	57.1	3,980	840	4,877	-
West of Tank #1214	0.5'	4/2/2009	In-Situ	-	-	-	-	-	-	-	<75.6	9,060	2,250	11,310	-
South of Tank #1214	0.5'	11/5/2010	In-Situ	-	-	-	-	-	-	-	<15.3	82.8	15.5	98.3	-
East of Tank #1214	0.5'	11/5/2010	In-Situ	-	-	-	-	-	-	-	<15.4	<15.4	<15.4	<15.4	-
West of Tank #1214	0.5'	11/5/2010	In-Situ	-	-	-	-	-	-	-	<15.6	93.3	17.2	110.5	-
South Side 1	0.5'	10/26/2012	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<0.0024	<17.8	22.0	<17.8	22.0	-
South Side 2	0.5'	10/26/2012	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	0.0021	0.0021	0.0021	<16.3	93.8	<16.3	93.8	3.83*
East Side	0.5'	10/26/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<15.1	50.1	<15.1	50.1	-
West Side	0.5'	10/26/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<15.3	53.6	<15.3	53.6	-
South Side 2	0.5'	12/6/2012	In-Situ	-	-	-	-	-	-	-	<15.5	62.1	<15.5	62.1	6.29
NMOCD Regulatory Standard				10						50				1,000	500

- = Not analyzed.

** Analyzed out of hold-time*



Jal Tank Farm Tank 1214 - Historic Aerial Photograph of Release Site

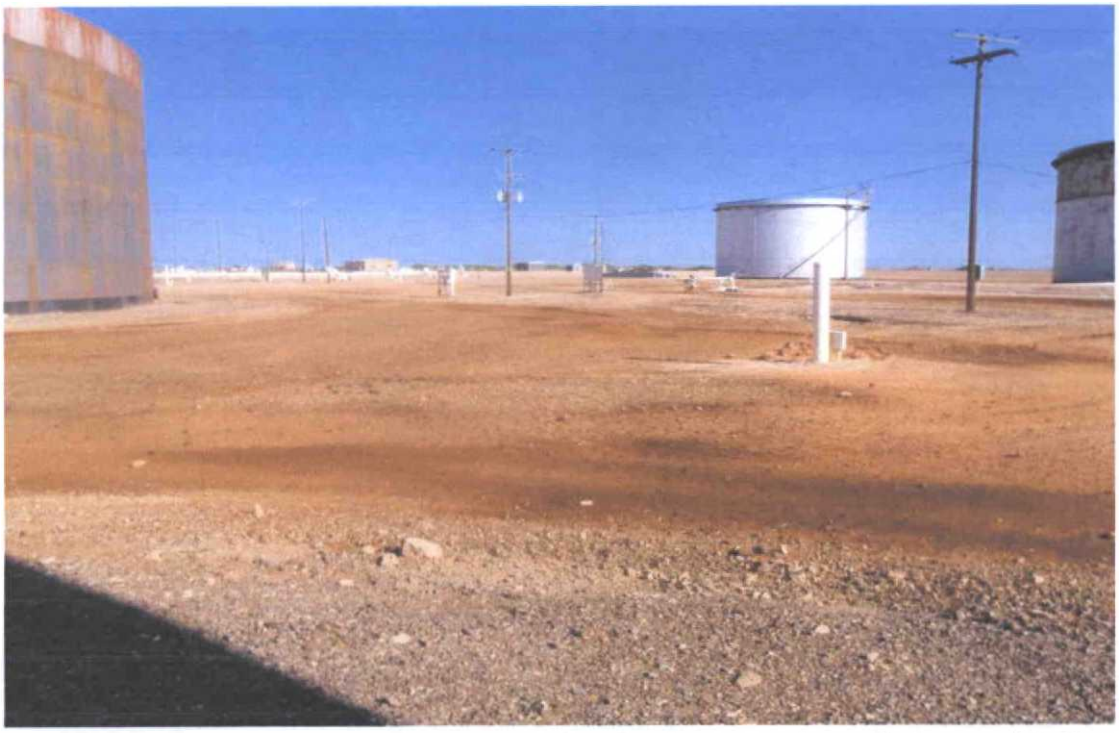
Jal Tank Farm Tank 1214 - Release Site (Looking North)

Jal Tank Farm Tank 1214 - Release Site (Looking Northeast)

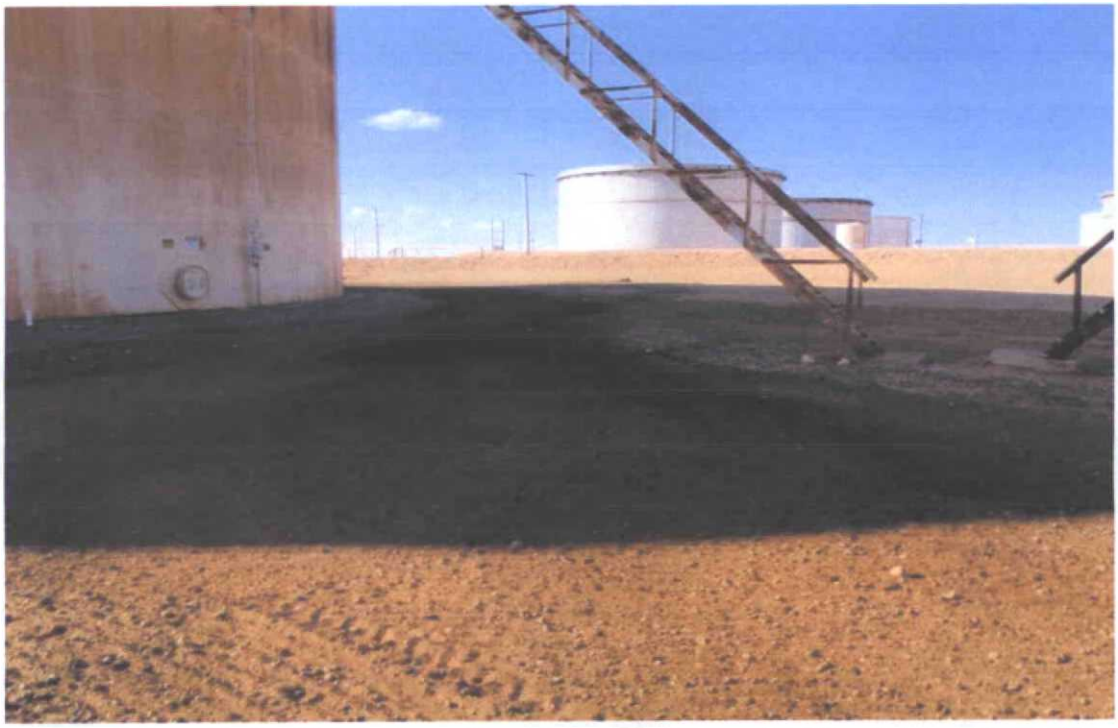
Jal Tank Farm Tank 1214 - Release Site (Looking East)

Jal Tank Farm Tank 1214 - Release Site (Looking West)

Jal Tank Farm Tank 1214 - Release Site (Following Removal of Heavily Impacted Soil)



Jal Tank Farm Tank 1214 - Release Site (Following Removal of Heavily Impacted Soil)



Jal Tank Farm Tank 1214 - Release Site (Following Removal of Heavily Impacted Soil)

Jal Tank Farm Tank 1214 - Release Site (Following Removal of Heavily Impacted Soil)

Jal Tank Farm Tank 1214 - Soil Sample Location, "South of Tank #1214"

Jal Tank Farm Tank 1214 - Soil Sample Location, "East of Tank #1214"

Jal Tank Farm Tank 1214 - Soil Sample Location, "West of Tank #1214"

Jal Tank Farm Tank 1214 - Current Aerial Photograph of Release Site

Analytical Report 329164

for

PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Jal Tank Farm Tank# 1214

2008-253

07-APR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

07-APR-09

Project Manager: **Daniel Bryant**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **329164**
Jal Tank Farm Tank# 1214
Project Address: Jal, NM

Daniel Bryant:

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 329164. 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. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. 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. 329164 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,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 329164

PLAINS ALL AMERICAN EH&S, Midland, TX

Jal Tank Farm Tank# 1214

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East of Tank # 1214	S	Apr-02-09 15:00		329164-001
South of Tank # 1214	S	Apr-02-09 15:10		329164-002
West of Tank # 1214	S	Apr-02-09 15:20		329164-003

Certificate of Analysis Summary 329164

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jal Tank Farm Tank# 1214

Project Id: 2008-253
Contact: Daniel Bryant
Project Location: Jal, NM

Date Received in Lab: Thu Apr-02-09 05:00 pm
Report Date: 07-APR-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	329164-001		329164-002		329164-003					
	Field Id:	East of Tank # 1214		South of Tank # 1214		West of Tank # 1214					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Apr-02-09 15:00		Apr-02-09 15:10		Apr-02-09 15:20					
Percent Moisture	*Extracted:*										
	Analyzed:	Apr-03-09 17:00		Apr-03-09 17:00		Apr-03-09 17:00					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		ND	1.00	ND	1.00	ND	1.00				
TPH By SW8015 Mod	*Extracted:*	Apr-06-09 14:11		Apr-06-09 14:11		Apr-06-09 14:11					
	Analyzed:	Apr-06-09 18:35		Apr-06-09 18:59		Apr-06-09 19:24					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		57.1	15.1	27.6	15.1	ND	75.6				
C12-C28 Diesel Range Hydrocarbons		3980	15.1	4970	15.1	9060	75.6				
C28-C35 Oil Range Hydrocarbons		840	15.1	1300	15.1	2250	75.6				
Total TPH		4877.1	15.1	6297.6	15.1	11310	75.6				

Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect 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 MQL and above the SQL.

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.

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank# 1214

Work Orders : 329164,

Project ID: 2008-253

Lab Batch #: 755046 **Sample:** 527839-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/06/09 15:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 755046 **Sample:** 527839-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/06/09 15:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Lab Batch #: 755046 **Sample:** 527839-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/06/09 15:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 755046 **Sample:** 329164-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/06/09 18:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 755046 **Sample:** 329164-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/06/09 18:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

** 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: Jal Tank Farm Tank# 1214

Work Orders : 329164,

Project ID: 2008-253

Lab Batch #: 755046 **Sample:** 329164-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/06/09 19:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	53.7	50.0	107	70-135	

Lab Batch #: 755046 **Sample:** 329162-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/07/09 01:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	57.1	50.0	114	70-135	

Lab Batch #: 755046 **Sample:** 329162-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/07/09 01:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	59.6	50.0	119	70-135	

** 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: Jal Tank Farm Tank# 1214

Work Order #: 329164
Analyst: BHW
Lab Batch ID: 755046
Sample: 527839-1-BKS
Units: mg/kg

Date Prepared: 04/06/2009
Batch #: 1

Project ID: 2008-253
Date Analyzed: 04/06/2009
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	910	91	1000	905	91	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	974	97	1000	975	98	0	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: Jal Tank Farm Tank# 1214

Work Order # : 329164 **Project ID:** 2008-253

Lab Batch ID: 755046 **QC- Sample ID:** 329162-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/07/2009 **Date Prepared:** 04/06/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	32.9	1060	959	87	1060	978	89	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	514	1060	1420	85	1060	1470	90	3	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Jal Tank Farm Tank# 1214

Work Order #: 329164

Lab Batch #: 754848 **Project ID:** 2008-253

Date Analyzed: 04/03/2009 **Date Prepared:** 04/03/2009 **Analyst:** BEV

QC- Sample ID: 329147-041 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.72	4.50	19	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: CURT STANLEY
Company Name: BASIN ENVIRONMENTAL
Company Address: 2800 PLAINS HWY
City/State/Zip: LOVINGTON, NM 88260
Telephone No: 575-441-2244 Fax No:
Sampler Signature: C.T. Stanley e-mail:

Project Name: JAL TANK FARM TANK # 1214
Project #: 2008-253
Project Loc: JAL, NM
PO #: PAA - D. BRYANT
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 32904

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: Drk=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 8015B	TOTAL: TPH: 8015M	TPH: TX 1005	TPH: TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	EAST OF TANK #1214			4/2/2009	1500		X	X								SOIL	X														X
02	SOUTH OF TANK #1214				1510																										
03	WEST OF TANK #1214				1520																										

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
C.T. Stanley	4/2/09	1700			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Fenn	4-2-09	17:00

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star
4029455
Temperature Upon Receipt: 3.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. | Plains

Date/ Time: 4.2.09 17:00

Lab ID #: 329164

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	3.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

_____

Corrective Action Taken:

_____

_____

_____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 396289

for

PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Jal Tank Farm #1214

SRS# 2008-253

09-NOV-10

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

09-NOV-10

Project Manager: **Daniel Bryant**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **396289**
Jal Tank Farm #1214
Project Address: Lea County, NM

Daniel Bryant:

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 396289. 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. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. 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. 396289 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,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 396289

PLAINS ALL AMERICAN EH&S, Midland, TX

Jal Tank Farm #1214

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South of Tank #1214	S	Nov-05-10 10:50		396289-001
East of Tank #1214	S	Nov-05-10 10:55		396289-002
West of Tank #1214	S	Nov-05-10 11:00		396289-003

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jal Tank Farm #1214

Project ID:	*SRS# 2008-253*	*Report Date:*	*09-NOV-10*
Work Order Number:	*396289*	*Date Received:*	*11/05/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Certificate of Analysis Summary 396289

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jal Tank Farm #1214

Project Id: SRS# 2008-253
Contact: Daniel Bryant
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-05-10 03:15 pm
Report Date: 09-NOV-10
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	396289-001		396289-002		396289-003					
	Field Id:	South of Tank #1214		East of Tank #1214		West of Tank #1214					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Nov-05-10 10:50		Nov-05-10 10:55		Nov-05-10 11:00					
Percent Moisture	*Extracted:*										
	Analyzed:	Nov-09-10 08:15		Nov-09-10 08:15		Nov-09-10 08:15					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		2.01	1.00	2.50	1.00	3.29	1.00				
TPH By SW8015 Mod	*Extracted:*	Nov-08-10 10:45		Nov-08-10 10:45		Nov-08-10 10:45					
	Analyzed:	Nov-08-10 15:59		Nov-08-10 16:18		Nov-08-10 16:37					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.3	ND	15.4	ND	15.6				
C12-C28 Diesel Range Hydrocarbons		82.8	15.3	ND	15.4	93.3	15.6				
C28-C35 Oil Range Hydrocarbons		15.5	15.3	ND	15.4	17.2	15.6				
Total TPH		98.3	15.3	ND	15.4	110.5	15.6				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

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 effect the recovery of the spike concentration. This condition could also effect 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 MQL and above the SQL.

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.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm #1214

Work Orders : 396289,

Project ID: SRS# 2008-253

Lab Batch #: 831048 **Sample:** 578160-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/10 14:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	53.0	50.1	106	70-135	

Lab Batch #: 831048 **Sample:** 578160-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/10 15:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.6	94	70-135	
o-Terphenyl	60.0	49.8	120	70-135	

Lab Batch #: 831048 **Sample:** 578160-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/10 15:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	100	97	70-135	
o-Terphenyl	52.5	50.1	105	70-135	

Lab Batch #: 831048 **Sample:** 396289-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/10 15:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	54.5	50.1	109	70-135	

Lab Batch #: 831048 **Sample:** 396289-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/10 16:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.3	100	99	70-135	
o-Terphenyl	52.4	50.1	105	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.

Final 1.000

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm #1214

Work Orders : 396289,

Project ID: SRS# 2008-253

Lab Batch #: 831048 **Sample:** 396289-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/10 16:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	101	99	70-135	
o-Terphenyl	53.1	50.3	106	70-135	

Lab Batch #: 831048 **Sample:** 396348-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/10 23:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	60.6	50.0	121	70-135	

Lab Batch #: 831048 **Sample:** 396348-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/10 23:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	50.2	50.2	100	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: Jal Tank Farm #1214

Work Order #: 396289
Analyst: BEV
Lab Batch ID: 831048
Sample: 578160-1-BKS
Units: mg/kg

Date Prepared: 11/08/2010
Batch #: 1

Project ID: SRS# 2008-253
Date Analyzed: 11/08/2010
Matrix: Solid

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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-C12 Gasoline Range Hydrocarbons	ND	1000	931	93	996	974	98	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	977	98	996	911	91	7	70-135	35	

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

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Jal Tank Farm #1214

Work Order # : 396289 **Project ID:** SRS# 2008-253

Lab Batch ID: 831048 **QC- Sample ID:** 396348-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/08/2010 **Date Prepared:** 11/08/2010 **Analyst:** BEV

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	ND	1100	1090	99	1100	981	89	11	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1100	843	77	1100	770	70	9	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Jal Tank Farm #1214

Work Order #: 396289

Lab Batch #: 831044 **Project ID:** SRS# 2008-253

Date Analyzed: 11/09/2010 **Date Prepared:** 11/09/2010 **Analyst:** JLG

QC- Sample ID: 396373-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.82	1.99	9	20	

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Jal Tank Farm #1214
Project #: SRS# 2008-253
Project Loc: Lea County, NM
PO #: PAA-D. Bryant
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 396789

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	South of Tank #1214			11/5/2010	1050		1	X								Soil			X												X
	East of Tank #1214			11/5/2010	1055		1	X								Soil			X												X
	West of Tank #1214			11/5/2010	1100		1	X								Soil			X												X

TCLP: X
TOTAL:

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date 11/5/10	Time 15:5	Received by ELOT: Lisa Murdock	Date 11-5-10	Time 15:15

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N/A
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 2.6 °C

XENCO Laboratories

XENCO Laboratories
Atlanta, Boca Raton, Corpus, Dallas
Houston, Midland, Orlando, Tampa
Phoenix, San Antonio, Tampa

Document Title:	Sample Receipt Checklist
Document No.:	SYS-SRC
Revision/Date:	No. 01, 5/27/2010
Effective Date:	6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Environmental
Date/Time: 11-5-10 15.15
Lab ID # : 396289
Initials: KM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottle?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within holding time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero headspace?	Yes	No	(N/A)	

18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.		Cooler 5 No.	
lbs 2.6 °C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contacted: Contacted by: Date/Time:

Regarding:

Corrective Action Taken:

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature
☐ Client understands and would like to proceed with analysis

Final 1.000

Analytical Report 451637

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Jal Tank Farm Tank 1214

SRS# 2008-253

09-NOV-12

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

09-NOV-12

Project Manager: **Ben Arguijo**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **451637**
Jal Tank Farm Tank 1214
Project Address: Lea County, NM

Ben Arguijo:

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 451637. 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. 451637 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 451637

PLAINS ALL AMERICAN EH&S, Midland, TX

Jal Tank Farm Tank 1214

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Side 1	S	10-26-12 13:30		451637-001
South Side 2	S	10-26-12 13:40		451637-002
West Side	S	10-26-12 13:50		451637-003
East Side	S	10-26-12 14:00		451637-004

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jal Tank Farm Tank 1214

Project ID:	SRS# 2008-253	Report Date:	09-NOV-12
Work Order Number:	451637	Date Received:	10/31/2012

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-900484 BTEX by EPA 8021B
SW8021BM

Batch 900484, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.
Samples affected are: 451637-003, -004, -001, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 900484, o-Xylene RPD was outside QC limits.
Samples affected are: 451637-003, -004, -001, -002

Certificate of Analysis Summary 451637

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jal Tank Farm Tank 1214

Project Id: SRS# 2008-253
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Wed Oct-31-12 01:52 pm
Report Date: 09-NOV-12
Project Manager: Nicholas Straccione

Analysis Requested															
	Lab Id:	451637-001		451637-002		451637-003		451637-004							
	Field Id:	South Side 1		South Side 2		West Side		East Side							
	Depth:														
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Oct-26-12 13:30		Oct-26-12 13:40		Oct-26-12 13:50		Oct-26-12 14:00							
BTEX by EPA 8021B	*Extracted:*	Nov-08-12 09:00		Nov-08-12 09:00		Nov-08-12 09:00		Nov-08-12 09:00							
	Analyzed:	Nov-08-12 10:32		Nov-08-12 10:49		Nov-08-12 11:22		Nov-08-12 11:39							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		ND	0.00118	ND	0.00110	ND	0.00102	ND	0.00102						
Toluene		ND	0.00236	ND	0.00219	ND	0.00205	ND	0.00203						
Ethylbenzene		ND	0.00118	ND	0.00110	ND	0.00102	ND	0.00102						
m_p-Xylenes		ND	0.00236	ND	0.00219	ND	0.00205	ND	0.00203						
o-Xylene		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102						
Total Xylenes		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102						
Total BTEX		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102						
Percent Moisture	*Extracted:*														
	Analyzed:	Oct-31-12 15:30		Oct-31-12 15:30		Oct-31-12 15:30		Oct-31-12 15:30							
	Units/RL:	%	RL	%	RL	%	RL	%	RL						
Percent Moisture		16.0	1.00	8.34	1.00	2.39	1.00	ND	1.00						
TPH By SW8015 Mod	*Extracted:*	Oct-31-12 14:30		Oct-31-12 14:30		Oct-31-12 14:30		Nov-02-12 08:20							
	Analyzed:	Nov-01-12 06:47		Nov-01-12 07:23		Nov-01-12 07:53		Nov-02-12 12:49							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
C6-C12 Gasoline Range Hydrocarbons		ND	17.8	ND	16.3	ND	15.3	ND	15.1						
C12-C28 Diesel Range Hydrocarbons		22.0	17.8	93.8	16.3	53.6	15.3	50.1	15.1						
C28-C35 Oil Range Hydrocarbons		ND	17.8	ND	16.3	ND	15.3	ND	15.1						
Total TPH		22.0	17.8	93.8	16.3	53.6	15.3	50.1	15.1						

Nicholas Straccione
Project Manager

XENCO Laboratories

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 quantiation 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: Jal Tank Farm Tank 1214

Work Orders : 451637, **Project ID:** SRS# 2008-253

Lab Batch #: 899966 **Sample:** 451637-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 06:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	99.6	93	70-135	
o-Terphenyl	44.6	49.8	90	70-135	

Lab Batch #: 899966 **Sample:** 451637-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 07:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	99.9	96	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

Lab Batch #: 899966 **Sample:** 451637-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 07:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.8	98	70-135	
o-Terphenyl	46.8	49.9	94	70-135	

Lab Batch #: 900090 **Sample:** 451637-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 12:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	99.6	98	70-135	
o-Terphenyl	44.6	49.8	90	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 10:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0307	0.0300	102	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637,

Project ID: SRS# 2008-253

Lab Batch #: 900484 **Sample:** 451637-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 10:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 900484 **Sample:** 451637-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 11:22

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 900484 **Sample:** 451637-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 11:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0304	0.0300	101	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 18:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.8	92	70-135	
o-Terphenyl	43.6	49.9	87	70-135	

Lab Batch #: 900090 **Sample:** 629449-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 11:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-135	
o-Terphenyl	47.7	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637, **Project ID:** SRS# 2008-253

Lab Batch #: 900484 **Sample:** 629687-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 11:05

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 17:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.6	100	95	70-135	
o-Terphenyl	49.9	50.0	100	70-135	

Lab Batch #: 900090 **Sample:** 629449-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 10:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.9	98	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 900484 **Sample:** 629687-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 09:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0335	0.0300	112	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 17:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	51.4	50.1	103	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637,

Project ID: SRS# 2008-253

Lab Batch #: 900090 **Sample:** 629449-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 10:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	99.9	96	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 900484 **Sample:** 629687-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 09:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 899966 **Sample:** 451637-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 09:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	100	100	70-135	
o-Terphenyl	53.8	50.1	107	70-135	

Lab Batch #: 900090 **Sample:** 451783-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 11:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	50.2	50.1	100	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 12:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0268	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637,

Project ID: SRS# 2008-253

Lab Batch #: 899966 **Sample:** 451637-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 10:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	52.8	49.9	106	70-135	

Lab Batch #: 900090 **Sample:** 451783-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 12:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.9	50.1	102	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 12:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	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: Jal Tank Farm Tank 1214

Work Order #: 451637 **Project ID:** SRS# 2008-253

Analyst: KEB **Date Prepared:** 11/08/2012 **Date Analyzed:** 11/08/2012

Lab Batch ID: 900484 **Sample:** 629687-1-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	<0.00100	0.100	0.101	101	0.100	0.0878	88	14	70-130	35	
Toluene	<0.00200	0.100	0.104	104	0.100	0.0886	89	16	70-130	35	
Ethylbenzene	<0.00100	0.100	0.100	100	0.100	0.0866	87	14	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.213	107	0.201	0.183	91	15	70-135	35	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.0866	87	18	71-133	35	

Analyst: KEB **Date Prepared:** 10/31/2012 **Date Analyzed:** 10/31/2012

Lab Batch ID: 899966 **Sample:** 629344-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	960	96	1000	1020	102	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	999	100	3	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

BS / BSD Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637
Analyst: KEB
Lab Batch ID: 900090
Sample: 629449-1-BKS
Units: mg/kg

Date Prepared: 11/02/2012
Batch #: 1

Project ID: SRS# 2008-253
Date Analyzed: 11/02/2012
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	999	870	87	999	863	86	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	922	92	999	924	92	0	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: Jal Tank Farm Tank 1214

Work Order # : 451637 **Project ID:** SRS# 2008-253

Lab Batch ID: 900484 **QC- Sample ID:** 451637-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/08/2012 **Date Prepared:** 11/08/2012 **Analyst:** KEB

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<0.00118	0.118	0.0898	76	0.119	0.122	103	30	70-130	35	
Toluene	<0.00236	0.118	0.0813	69	0.119	0.115	97	34	70-130	35	X
Ethylbenzene	<0.00118	0.118	0.0687	58	0.119	0.0982	83	35	71-129	35	X
m_p-Xylenes	<0.00236	0.236	0.142	60	0.238	0.202	85	35	70-135	35	X
o-Xylene	<0.00118	0.118	0.0717	61	0.119	0.103	87	36	71-133	35	XF

Lab Batch ID: 899966 **QC- Sample ID:** 451637-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/01/2012 **Date Prepared:** 10/31/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	<16.4	1090	1140	105	1090	1140	105	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	93.8	1090	1200	101	1090	1200	101	0	70-135	35	

Lab Batch ID: 900090 **QC- Sample ID:** 451783-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/02/2012 **Date Prepared:** 11/02/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	<15.6	1040	881	85	1040	912	88	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.6	1040	899	86	1040	904	87	1	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637

Lab Batch #: 899921 **Project ID:** SRS# 2008-253

Date Analyzed: 10/31/2012 15:30 **Date Prepared:** 10/31/2012 **Analyst:** WRU

QC- Sample ID: 451636-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture **Analyte**	**Parent Sample Result [A]**	**Sample Duplicate Result [B]**	**RPD**	**Control Limits %RPD**	**Flag**
Percent Moisture	<1.00	<1.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

(2)

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben Arguljo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378

Fax No: (575) 396-1429

Sampler Signature: Joel Lowry

e-mail: pm@basinenv.com

Project Name: Jal Tank Farm Tank 1214

Project #: SRS# 2008-253

Project Loc: Lea County, NM

PO #: PAA-J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 451637

Analyze For: TCLP: / TOTAL: (X under BTEX 8021B/5030 or BTEX 8260)

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	South Side 1			10/26/2012	1:30		1	X								Soil	X												X
	South Side 2			10/26/2012	1:40		1	X								Soil	X												X
	West Side			10/26/2012	1:50		1	X								Soil	X												X
	East Side			10/26/2012	2:00		1	X								Soil	X												X

Special Instructions:
Run TPH. Hold for BTEX.

Relinquished by:	Date	Time	Received by:	Date	Time
Joel Lowry	10/29/12	2:45	[signature]	10.29.12	2:45
[signature]	10-30-12	12:15	[signature]	10/30/12	12:20
			Received by ELOT: [signature]	10/31/12	13:52

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Labels on container(s) Y N
Custody seals on container(s) Y (N)
Custody seals on cooler(s) Y (N)
Sample Hand Delivered (Y) N
by Sampler/Client Rep. ? (Y) N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 5.1 °C

Final 1.001

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 10/31/2012 01:52:00 PM

Work Order #: 451637

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	9.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

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

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 451637

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Jal Tank Farm Tank 1214

SRS# 2008-253

03-DEC-12

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

03-DEC-12

Project Manager: **Ben Arguijo**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **451637**
Jal Tank Farm Tank 1214
Project Address: Lea County, NM

Ben Arguijo:

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 451637. 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. 451637 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 451637

PLAINS ALL AMERICAN EH&S, Midland, TX

Jal Tank Farm Tank 1214

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Side 1	S	10-26-12 13:30		451637-001
South Side 2	S	10-26-12 13:40		451637-002
West Side	S	10-26-12 13:50		451637-003
East Side	S	10-26-12 14:00		451637-004

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jal Tank Farm Tank 1214

Project ID: *SRS# 2008-253*
Work Order Number: *451637*

Report Date: *03-DEC-12*
Date Received: *10/31/2012*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-900484 BTEX by EPA 8021B
SW8021BM

Batch 900484, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.
Samples affected are: 451637-003, -004, -001, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 900484, o-Xylene RPD was outside QC limits.
Samples affected are: 451637-003, -004, -001, -002

Certificate of Analysis Summary 451637

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jal Tank Farm Tank 1214

Project Id: SRS# 2008-253
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Wed Oct-31-12 01:52 pm
Report Date: 03-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	451637-001		451637-002		451637-003		451637-004					
	Field Id:	South Side 1		South Side 2		West Side		East Side					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Oct-26-12 13:30		Oct-26-12 13:40		Oct-26-12 13:50		Oct-26-12 14:00					
BTEX by EPA 8021B	***Extracted:***	Nov-08-12 09:00		Nov-08-12 09:00		Nov-08-12 09:00		Nov-08-12 09:00					
	Analyzed:	Nov-08-12 10:32		Nov-08-12 10:49		Nov-08-12 11:22		Nov-08-12 11:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00118	ND	0.00110	ND	0.00102	ND	0.00102				
Toluene		ND	0.00236	ND	0.00219	ND	0.00205	ND	0.00203				
Ethylbenzene		ND	0.00118	ND	0.00110	ND	0.00102	ND	0.00102				
m_p-Xylenes		ND	0.00236	ND	0.00219	ND	0.00205	ND	0.00203				
o-Xylene		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102				
Total Xylenes		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102				
Total BTEX		ND	0.00118	0.00205	0.00110	ND	0.00102	ND	0.00102				
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***			Dec-02-12 08:22									
	Analyzed:			Dec-02-12 08:22									
	Units/RL:			mg/kg	RL								
Chloride				3.83 K	1.08								
Percent Moisture	***Extracted:***												
	Analyzed:	Oct-31-12 15:30		Oct-31-12 15:30		Oct-31-12 15:30		Oct-31-12 15:30					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		16.0	1.00	8.34	1.00	2.39	1.00	ND	1.00				
TPH By SW8015 Mod	***Extracted:***	Oct-31-12 14:30		Oct-31-12 14:30		Oct-31-12 14:30		Nov-02-12 08:20					
	Analyzed:	Nov-01-12 06:47		Nov-01-12 07:23		Nov-01-12 07:53		Nov-02-12 12:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	17.8	ND	16.3	ND	15.3	ND	15.1				
C12-C28 Diesel Range Hydrocarbons		22.0	17.8	93.8	16.3	53.6	15.3	50.1	15.1				
C28-C35 Oil Range Hydrocarbons		ND	17.8	ND	16.3	ND	15.3	ND	15.1				
Total TPH		22.0	17.8	93.8	16.3	53.6	15.3	50.1	15.1				

Nicholas Straccione
Project Manager

XENCO Laboratories

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 quantiation 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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637,

Project ID: SRS# 2008-253

Lab Batch #: 899966 **Sample:** 451637-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 06:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	99.6	93	70-135	
o-Terphenyl	44.6	49.8	90	70-135	

Lab Batch #: 899966 **Sample:** 451637-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 07:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	99.9	96	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

Lab Batch #: 899966 **Sample:** 451637-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 07:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.8	98	70-135	
o-Terphenyl	46.8	49.9	94	70-135	

Lab Batch #: 900090 **Sample:** 451637-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 12:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	99.6	98	70-135	
o-Terphenyl	44.6	49.8	90	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 10:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0307	0.0300	102	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637, **Project ID:** SRS# 2008-253

Lab Batch #: 900484 **Sample:** 451637-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 10:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 900484 **Sample:** 451637-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 11:22

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 900484 **Sample:** 451637-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 11:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0304	0.0300	101	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 18:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.8	92	70-135	
o-Terphenyl	43.6	49.9	87	70-135	

Lab Batch #: 900090 **Sample:** 629449-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 11:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-135	
o-Terphenyl	47.7	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637, **Project ID:** SRS# 2008-253

Lab Batch #: 900484 **Sample:** 629687-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 11:05

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 17:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.6	100	95	70-135	
o-Terphenyl	49.9	50.0	100	70-135	

Lab Batch #: 900090 **Sample:** 629449-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 10:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.9	98	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 900484 **Sample:** 629687-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 09:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0335	0.0300	112	80-120	

Lab Batch #: 899966 **Sample:** 629344-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/31/12 17:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	100	99	70-135	
o-Terphenyl	51.4	50.1	103	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637, **Project ID:** SRS# 2008-253

Lab Batch #: 900090 **Sample:** 629449-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/02/12 10:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	99.9	96	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 900484 **Sample:** 629687-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/08/12 09:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 899966 **Sample:** 451637-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 09:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	100	100	70-135	
o-Terphenyl	53.8	50.1	107	70-135	

Lab Batch #: 900090 **Sample:** 451783-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 11:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	50.2	50.1	100	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 12:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0268	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Orders : 451637,

Project ID: SRS# 2008-253

Lab Batch #: 899966 **Sample:** 451637-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/01/12 10:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	52.8	49.9	106	70-135	

Lab Batch #: 900090 **Sample:** 451783-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/02/12 12:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.9	50.1	102	70-135	

Lab Batch #: 900484 **Sample:** 451637-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/08/12 12:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	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.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637 **Project ID:** SRS# 2008-253

Analyst: KEB **Date Prepared:** 11/08/2012 **Date Analyzed:** 11/08/2012

Lab Batch ID: 900484 **Sample:** 629687-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	<0.00100	0.100	0.101	101	0.100	0.0878	88	14	70-130	35	
Toluene	<0.00200	0.100	0.104	104	0.100	0.0886	89	16	70-130	35	
Ethylbenzene	<0.00100	0.100	0.100	100	0.100	0.0866	87	14	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.213	107	0.201	0.183	91	15	70-135	35	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.0866	87	18	71-133	35	

Analyst: JOL **Date Prepared:** 12/02/2012 **Date Analyzed:** 12/02/2012

Lab Batch ID: 901997 **Sample:** 630651-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions by EPA 300/300.1	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	<1.00	100	104	104	100	103	103	1	80-120	20	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637
Analyst: KEB
Date Prepared: 10/31/2012
Project ID: SRS# 2008-253
Date Analyzed: 10/31/2012
Lab Batch ID: 899966
Sample: 629344-1-BKS
Batch #: 1
Matrix: Solid
Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	960	96	1000	1020	102	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	999	100	3	70-135	35	

Analyst: KEB
Date Prepared: 11/02/2012
Date Analyzed: 11/02/2012
Lab Batch ID: 900090
Sample: 629449-1-BKS
Batch #: 1
Matrix: Solid
Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	999	870	87	999	863	86	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	922	92	999	924	92	0	70-135	35	

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

Form 3 - MS Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637
Lab Batch #: 901997
Project ID: SRS# 2008-253
Date Analyzed: 12/02/2012
Date Prepared: 12/02/2012
Analyst: JOL
QC- Sample ID: 453288-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	21.5	512	532	100	80-120	

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

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Jal Tank Farm Tank 1214

Work Order # : 451637 **Project ID:** SRS# 2008-253

Lab Batch ID: 900484 **QC- Sample ID:** 451637-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/08/2012 **Date Prepared:** 11/08/2012 **Analyst:** KEB

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<0.00118	0.118	0.0898	76	0.119	0.122	103	30	70-130	35	
Toluene	<0.00236	0.118	0.0813	69	0.119	0.115	97	34	70-130	35	X
Ethylbenzene	<0.00118	0.118	0.0687	58	0.119	0.0982	83	35	71-129	35	X
m_p-Xylenes	<0.00236	0.236	0.142	60	0.238	0.202	85	35	70-135	35	X
o-Xylene	<0.00118	0.118	0.0717	61	0.119	0.103	87	36	71-133	35	XF

Lab Batch ID: 899966 **QC- Sample ID:** 451637-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/01/2012 **Date Prepared:** 10/31/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	<16.4	1090	1140	105	1090	1140	105	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	93.8	1090	1200	101	1090	1200	101	0	70-135	35	

Lab Batch ID: 900090 **QC- Sample ID:** 451783-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/02/2012 **Date Prepared:** 11/02/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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-C12 Gasoline Range Hydrocarbons	<15.6	1040	881	85	1040	912	88	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.6	1040	899	86	1040	904	87	1	70-135	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Jal Tank Farm Tank 1214

Work Order #: 451637

Lab Batch #: 899921 **Project ID:** SRS# 2008-253

Date Analyzed: 10/31/2012 15:30 **Date Prepared:** 10/31/2012 **Analyst:** WRU

QC- Sample ID: 451636-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture **Analyte**	**Parent Sample Result [A]**	**Sample Duplicate Result [B]**	**RPD**	**Control Limits %RPD**	**Flag**
Percent Moisture	<1.00	<1.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Joel Lowry e-mail: pm@basinenv.com

Project Name: Jal Tank Farm Tank 1214
Project #: SRS# 2008-253
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 451637

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	South Side 1			10/26/2012	1:30		1	X								Soil	X												X
	South Side 2			10/26/2012	1:40		1	X								Soil	X												X
	West Side			10/26/2012	1:50		1	X								Soil	X												X
	East Side			10/26/2012	2:00		1	X								Soil	X												X

TCLP: TOTAL: X

Special Instructions:
Run TPH. Hold for BTEX.

Relinquished by:	Date	Time	Received by:	Date	Time
Joel Lowry	10/29/12	2:45	Miguel Ramos	10/29/12	2:45
Relinquished by:	Date	Time	Received by:	Date	Time
	10/30/12	12:15	Kim Butler	10/30/12	12:15
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Maurice Smith	10/31/12	13:52

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Labels on container(s) (Y) N
Custody seals on container(s) Y (N)
Custody seals on cooler(s) Y (N)
Sample Hand Delivered by Sampler/Client Rep. ? (Y) N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 5.1 °C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 10/31/2012 01:52:00 PM

Work Order #: 451637

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	9.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

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

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____