

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

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**

IRP-2654

**OPERATOR**

Initial Report  Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 - Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	Lea Federal 4-inch Poly	Facility Type	Pipeline
Surface Owner	NMSLO	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
L	12	20S	34E					Lea

Latitude N 32.58411 Longitude W 103.51914

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	10 bbls	Volume Recovered	1 bbl
Source of Release	4" Poly Pipeline	Date and Hour of Occurrence	11/10/2010 @ 10:00	Date and Hour of Discovery	11/10/2010 @ 10:00
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Jason Henry	Date and Hour	11/10/2010 @ 1500		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

**HOBBS OCD**  
AUG 03 2011

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

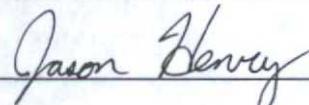
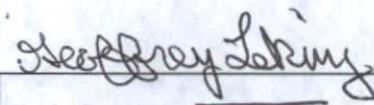
**RECEIVED**

A 4-inch poly pipeline belonging to Plains Pipeline was struck by a backhoe causing a release of crude oil. Throughput for the subject line is approximately 133 bbls/day and the operating pressure is 60 psi. The depth of the pipeline at the release point is approximately 4' bgs. The H2S concentration in the crude is less than 10 ppm.

Describe Area Affected and Cleanup Action Taken.\*

Please see the attached Basin Environmental Remediation Summary and Site Closure Request for details of remedial activities conducted at the site.

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:		<b>OIL CONSERVATION DIVISION</b>	
Printed Name:	Jason Henry	Approved by District Supervisor:	
Title:	Remediation Coordinator	Approval Date:	08/03/11
E-mail Address:	jhenry@paalp.com	Expiration Date:	
Date:	08/03/2011	Conditions of Approval:	-
Phone:	(575) 441-1099	Attached	<input type="checkbox"/>
		IRP-11-10-2654	

\* Attach Additional Sheets If Necessary

DEC 15 2015

PLWJ 1032156895

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**OPERATOR**  Initial Report  Final Report

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Address	2530 Hwy 214 - Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	Lea Federal 4-inch Poly	Facility Type	Pipeline

Surface Owner	NMSLO	Mineral Owner		Lease No.	
---------------	-------	---------------	--	-----------	--

**LOCATION OF RELEASE** RPI 30.025.12803

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	12	20S	34E					Lea

Latitude N 32.58411 Longitude W 103.51914

L 100' WTR

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	10 bbls	Volume Recovered	1 bbl
Source of Release	4" Poly Pipeline	Date and Hour of Occurrence	11/10/2010 @ 10:00	Date and Hour of Discovery	11/10/2010 @ 10:00

Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson
-----------------------------	---	------------------	---------------

By Whom?	Jason Henry	Date and Hour	11/17/2010 @ 1500
----------	-------------	---------------	-------------------

Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
----------------------------	---	---	--

If a Watercourse was Impacted, Describe Fully.\*

HOBBSD  
NOV 17 2010

Describe Cause of Problem and Remedial Action Taken \*

**RECEIVED**

A 4-inch poly pipeline belonging to Plains Pipeline was struck by a backhoe causing a release of crude oil. Throughput for the subject line is approximately 133 bbls/day and the operating pressure is 60 psi. The depth of the pipeline at the release point is approximately 4' bgs. The H2S concentration in the crude is less than 10 ppm.

Describe Area Affected and Cleanup Action Taken.\*

The released crude pooled in an open ditch line and a vac truck was utilized to recover approximately 1 bbl from the ditch. The impacted 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:	<i>Jason Henry</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name:	Jason Henry	<i>Larry Johnson</i> Approved by District Supervisor: ENVIRONMENTAL ENGINEER	
Title:	Remediation Coordinator	Approval Date:	11.17.10
E-mail Address:	jhenry@paalp.com	Expiration Date:	2.17.2011
Date:	11/17/2010	Conditions of Approval:	Attached <input type="checkbox"/>
Phone:	(575) 441-1099	SUBMIT FINAL C-141 w/Docs BH IRP# 11.0.2654	

\* Attach Additional Sheets If Necessary

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Surface Owner	NMSLO	Mineral Owner		Lease No.	
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By Whom?	Jason Henry	Date and Hour	11/10/2010 @ 1500
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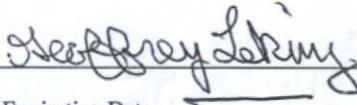
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**AUG 03 2011**

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Please see the attached Basin Environmental Remediation Summary and Site Closure Request for details of remedial activities conducted at the site.

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Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jason Henry	Approved by District Supervisor: 	
Title: Remediation Coordinator	Approval Date: 08/03/11	Expiration Date: _____
E-mail Address: jhenry@paalp.com	Conditions of Approval: —	Attached <input type="checkbox"/>
Date: 08/03/2011      Phone: (575) 441-1099		IRP-11-10-2654

\* Attach Additional Sheets If Necessary

# *Basin Environmental Service Technologies, LLC*

3100 Plains Highway  
P. O. Box 301  
Lovington, New Mexico 88260

[bjarguijo@basinenv.com](mailto:bjarguijo@basinenv.com)

Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDICATION SUMMARY & SITE CLOSURE REQUEST**

**PLAINS PIPELINE, LP (231735)**

**Lea Federal 4-Inch Poly**

**Lea County, New Mexico**

**Plains SRS # 2010-206**

**Unit Letter "L" (NW/SW), Section 12, Township 20 South, Range 34 East**

**Latitude 32° 35' 2.80" North, Longitude 103° 31' 8.90" West**

**NMOCD Reference # 1RP-2654**

Prepared For:

Plains Pipeline, LP

333 Clay Street

Suite 1600

Houston, Texas 77002

**HOBBS OCD**

**AUG 03 2011**

Prepared By:

**RECEIVED**

Basin Environmental Service Technologies, LLC

3100 Plains Highway

Lovington, New Mexico 88260

**June 2011**

  
\_\_\_\_\_  
Ben J. Arguijo  
Project Manager

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Table 2 – Field Test Results for Chloride Concentrations

### APPENDICES

Appendix A – Laboratory Analytical Reports

Appendix B – Photographs

Appendix C – Release Notification and Corrective Action (Form C-141)

## 1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Pipeline, LP (Plains), has prepared this *Remediation Summary & Site Closure Request* for the release site known as Lea Federal 4-Inch Poly (SRS #2010-206). The legal description of the release site is Unit Letter "L" (NW/SW), Section 12, Township 20 South, Range 34 East in Lea County, New Mexico. The property affected by the release is owned by the New Mexico State Land Office (NMSLO). The geographic coordinates of the release site are 32° 35' 2.80" North latitude and 103° 31' 8.90" West longitude. A "Site Location Map" is provided as Figure 1.

On November 10, 2010, during repairs of Plains' Scharb 8" pipeline, the Lea Federal 4-inch poly pipeline was struck by a backhoe, resulting in a release of crude oil. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on November 17, 2010. The "Release Notification and Corrective Action" (Form C-141) indicated that approximately ten (10) barrels of crude oil was released. During initial response activities, a vacuum truck was utilized to recover approximately one (1) barrel of free fluids, which had pooled in an adjacent, open ditch line. The release site was excavated, and the area of impact was delineated. General photographs of the site are provided as Appendix B. The Form C-141 is provided as Appendix C.

## 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 information was unavailable for Section 12, Township 20 South, Range 34 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately seventy five feet (75') below ground surface (bgs). Based on the NMOCD ranking system, ten (10) points will be assigned to the site as a result of the depth-to-groundwater criterion.

A search of the NMWRRS database indicated there are no water wells within 1,000 feet 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 1,000 feet 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 Lea Federal 4-Inch Poly release site has an initial ranking score of ten (10). The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/kg (ppm)
- BTEX – 50 mg/kg (ppm)
- 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 November 15, 2010, approximately seventy-two (72) cubic yards (cy) of heavily impacted soil stockpiled on-site during initial response activities was removed and transported to the Lazy Ace Landfarm (NMOCD Permit #NM01-0041) for disposal.

On November 16, 2010, excavation of impacted soil commenced at the site. Hach Quantab Chloride Low Range (30-600 mg/Kg) Titrators were used to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. From November 16 through November 18, 2010, approximately four hundred and fourteen (414) cy of impacted soil was excavated and transported to the Lazy Ace Landfarm for disposal.

On November 17, 2010, nine (9) soil samples (Release Point, North Floor, North Sidewall, South Floor, South Sidewall, East Floor, East Sidewall, West Floor, and West Sidewall) were collected from the floor and sidewalls of the excavation. The soil samples were submitted to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethyl-benzene, and xylenes (BTEX) constituent concentrations using EPA Methods SW 846-8015M and SW 846-8021b, respectively. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory Method Detection Limit (MDL) in soil sample "North Floor" to 130 mg/Kg in soil sample "Release Point". BTEX constituent concentrations were less than the appropriate laboratory MDL in all soil samples submitted. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chlorides in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix A.

On December 3, 2010, two (2) soil samples (Release Point and Release Point #2) were collected from the floor of the excavation. Field test results indicated chloride concentrations were less than that measurable by the Hach Quantab Chloride Low Range (30-600 mg/Kg) Titrators utilized to perform the field analyses. A two-point composite soil sample, "Release Point", was submitted to Xenco Laboratories for confirmatory analysis of chlorides using EPA Method 300.1. Laboratory analytical results indicated the chloride concentration was less than the laboratory MDL. Field-test results are provided in Table 2, "Chloride Field-Test Results".

Based on laboratory analytical results, the excavation was backfilled in eighteen-inch (18") lifts, compacted, and contoured to fit the surrounding topography. Prior to backfilling, the final dimensions of the excavation were approximately forty-two feet (42') in length, eighteen feet (18') feet in width, and ranging in depth from four feet (4') to eleven feet (11').

### **4.0 QA/QC PROCEDURES**

#### **4.1 Soil Sampling**

Soil Samples were delivered to Xenco Laboratories, Inc., in Odessa, Texas, for BTEX, TPH, and/or chloride analyses 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 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO
- 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 reports or are on file at the laboratory.

#### **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the floors and sidewalls of the Lea Federal 4-Inch Poly excavation were analyzed by an NMOCD-approved laboratory, and concentrations of Benzene, BTEX, TPH, and chlorides were below the remediation action levels established for the site. Based on these analytical results, Basin recommends Plains provide the NMOCD Hobbs District Office a copy of this "Remediation Summary and Site Closure Request" and request the NMOCD grant site closure to the Lea Federal 4-Inch Poly release site.

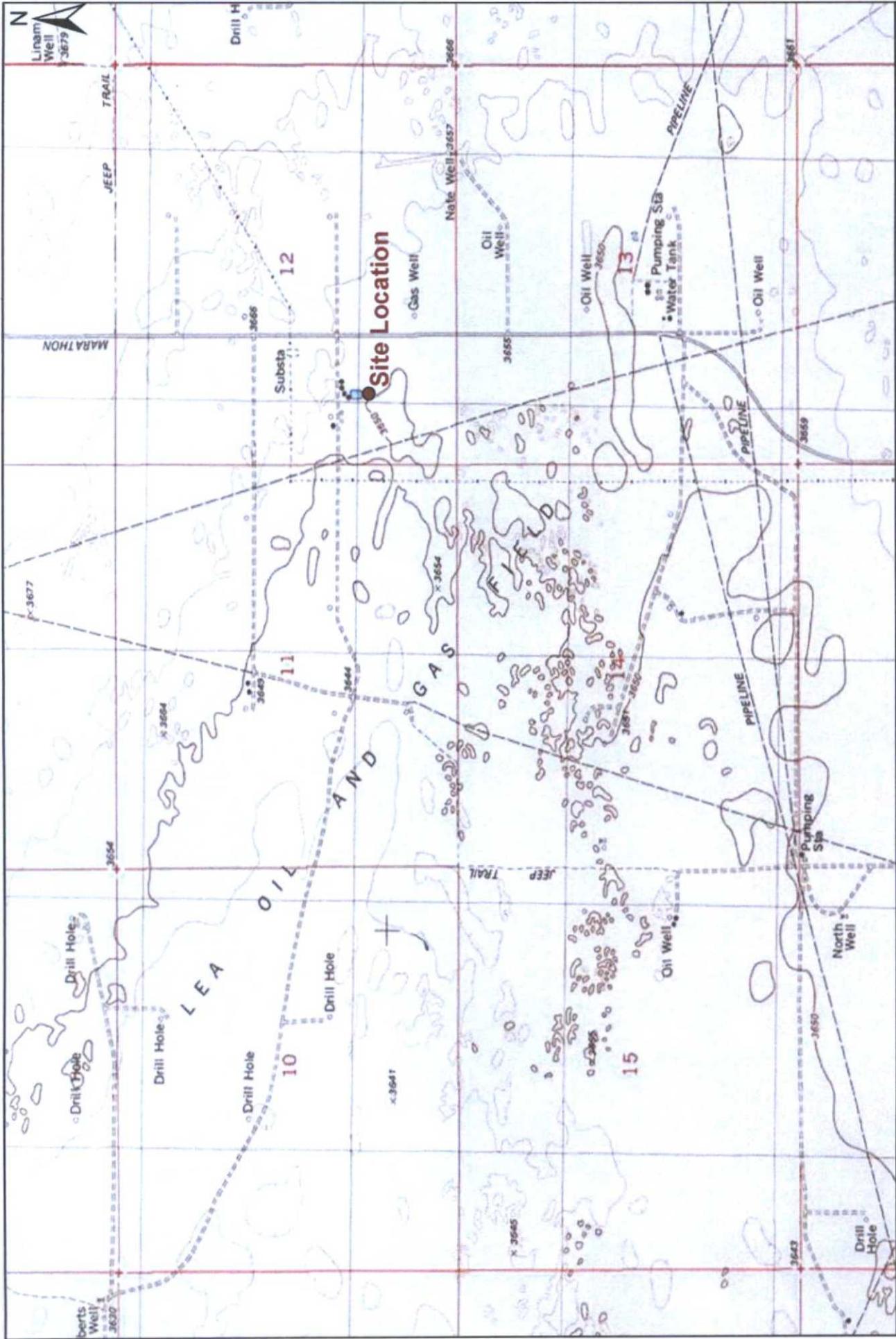
#### **6.0 LIMITATIONS**

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 has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin 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 Marketing, 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 Marketing, 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: Myra Harrison  
New Mexico State Land Office  
2702 N Grimes St # D  
Hobbs, NM 88240-1817  
mharrison@slo.state.nm.us
- Copy 3: Jeff Dann  
Plains Pipeline, LP  
333 Clay Street, Suite 1600  
Houston, Texas 77002  
jpdann@paalp.com
- Copy 4: Jason Henry  
Plains Pipeline, LP  
2530 State Highway 214  
Denver City, Texas 79323  
jhenry@paalp.com
- Copy 5: Basin Environmental Service Technologies, LLC  
P.O. Box 301  
Lovington, New Mexico 88260



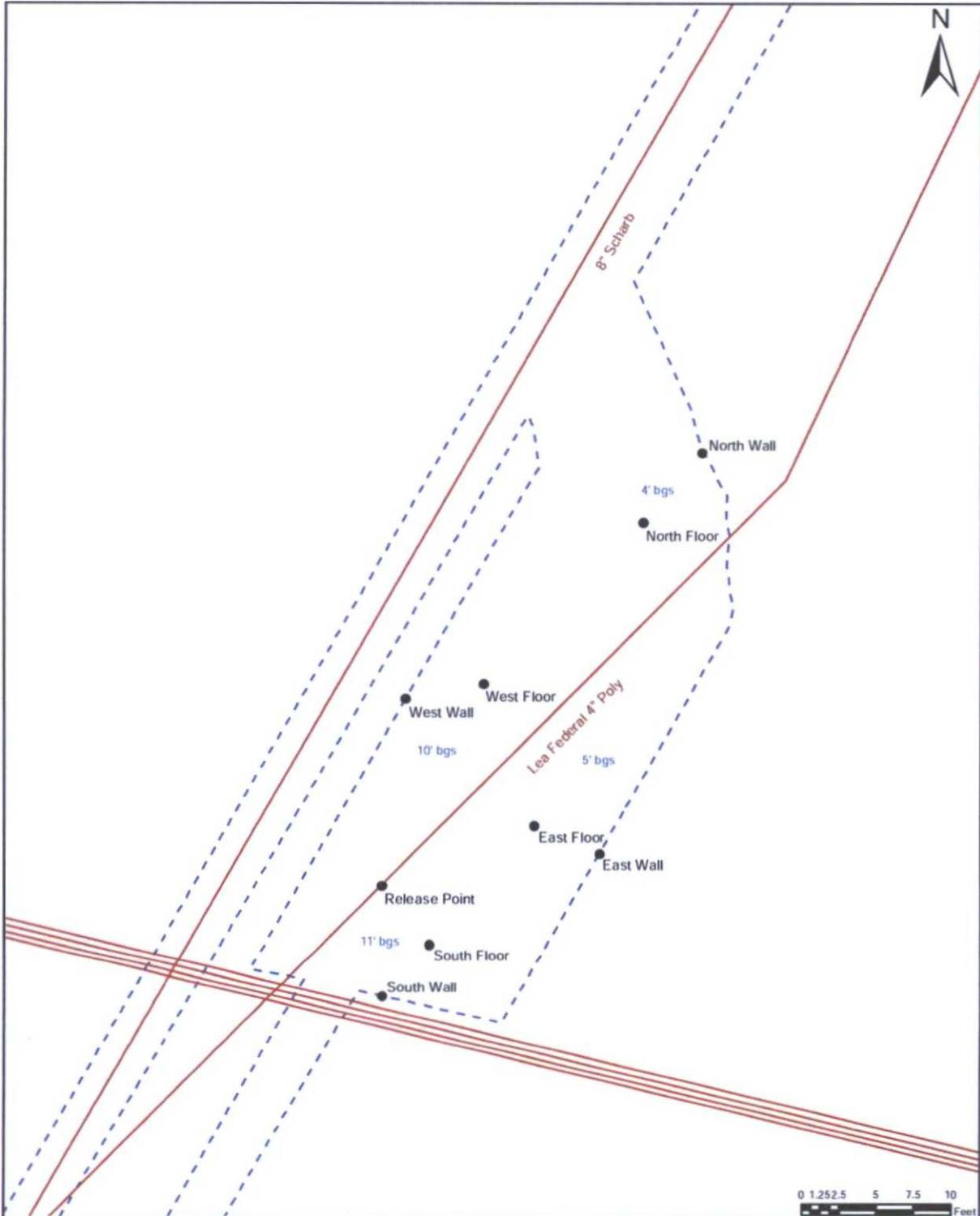
Basin Environmental Service Technologies, LLC  
 3100 Plains Hwy.  
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
January 13, 2011	Scale: 1" = 2000'



**Figure 1**  
 Site Location Map  
 Plains Marketing, LP  
 Lea Federal 4-Inch Poly  
 SRS # 2010-206  
 Lea County, New Mexico





**Legend:**

- - - Excavation Extent
- Pipeline
- Sample Location

**Figure 2**  
**Site & Sample Location Map**  
 Plains Marketing, LP  
 Lea Federal 4-Inch Poly  
 SRS # 2010-206  
 Lea County, New Mexico

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

Drawn By: BJA	Checked By: BRB
June 20, 2011	Scale: 1" = 10'

TABLE 1  
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.  
LEA FEDERAL 4-INCH POLY  
LEA COUNTY, NEW MEXICO  
PLAINS SRS #: 2010-206  
NMOCD REFERENCE #: 1RP-2654

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-6021B, 5030						METHOD: SW 846-8015M				TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	E 300.1 CHLORIDE (mg/Kg)	
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>13</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>29</sub> -C <sub>35</sub> (mg/Kg)				
Release Point	11'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	21.9	108	<15.6	130	-
North Floor	7'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<15.6	<15.6	<15.6	<15.6	-
North Sidewall	4.5'	11/17/10	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<15.3	<15.3	<15.3	<15.3	-
South Floor	11'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<15.5	23.4	<15.5	23.4	-
South Sidewall	8'	11/17/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0011	<0.0011	<0.0011	<15.8	<15.8	<15.8	<15.8	-
East Floor	7'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<15.4	<15.4	<15.4	<15.4	-
East Sidewall	4'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<15.4	<15.4	<15.4	<15.4	-
West Floor	10'	11/17/10	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<15.3	17.4	<15.3	17.4	-
West Sidewall	6.5'	11/17/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<15.6	<15.6	<15.6	<15.6	-
Release Point	11'	12/03/10	In-Situ	-	-	-	-	-	-	-	-	-	-	-	-	<5.12

**TABLE 2  
CHLORIDE FIELD-TEST RESULTS**

**PLAINS PIPELINE, L.P.  
LEA FEDERAL 4-INCH POLY  
LEA COUNTY, NEW MEXICO  
PLAINS SRS#: 2010-206  
NMOCD REFERENCE #: 1RP-2654**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	Hach Quantab
				CHLORIDE (PPM)
Release Point	11'	12/3/2010	In-Situ	ND
Release Point #2	11'	12/3/2010	In-Situ	ND
<b>NMOCD Regulatory Standard</b>				<b>500</b>

ND = "Non-detectable"; chloride concentration less than that measurable by Hach Quantab Chloride Low Range (30-600 mg/Kg) Titrator.

**Analytical Report 397821**  
**for**  
**PLAINS ALL AMERICAN EH&S**

**Project Manager: Jason Henry**

**Lea Federal 4" Poly**

**2010-206**

**29-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 (AAL11), 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)

29-NOV-10

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

Reference: XENCO Report No: **397821**  
**Lea Federal 4" Poly**  
Project Address: Lea County, NM

**Jason Henry:**

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 397821. 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. 397821 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

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## Sample Cross Reference 397821



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Federal 4" Poly

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Release Point	S	Nov-18-10 13:35		397821-001
South Sidewall	S	Nov-18-10 13:40		397821-002
South Floor	S	Nov-18-10 13:45		397821-003
East Floor	S	Nov-18-10 13:50		397821-004
East Sidewall	S	Nov-18-10 14:00		397821-005
North Sidewall	S	Nov-18-10 14:05		397821-006
North Floor	S	Nov-18-10 14:10		397821-007
West Sidewall	S	Nov-18-10 14:15		397821-008
West Floor	S	Nov-18-10 14:20		397821-009



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Lea Federal 4" Poly*



*Project ID: 2010-206*

*Work Order Number: 397821*

*Report Date: 29-NOV-10*

*Date Received: 11/18/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-833642 BTEX by EPA 8021

SW8021BM

Batch 833642, Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike. m\_p-Xylenes recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 397821-003, -009, -002, -006, -004, -005, -007, -008, -001.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m\_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 833642, m\_p-Xylenes RPD was outside QC limits.

Samples affected are: 397821-003, -009, -002, -006, -004, -005, -007, -008, -001

**Project Id:** 2010-206  
**Contact:** Jason Henry  
**Project Location:** Lea County, NM  
**Date Received in Lab:** Thu Nov-18-10 04:00 pm  
**Report Date:** 29-NOV-10  
**Project Manager:** Brent Barron, II

Analysis Requested		Lab Id:	397821-001	397821-002	397821-003	397821-004	397821-005	397821-006
		Field Id:	Release Point	South Sidewall	South Floor	East Floor	East Sidewall	North Sidewall
BTEX by EPA 8021		Depth:						
		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Percent Moisture		Sampled:	Nov-18-10 13:35	Nov-18-10 13:40	Nov-18-10 13:45	Nov-18-10 13:50	Nov-18-10 14:00	Nov-18-10 14:05
		Extracted:	Nov-24-10 15:45					
TPH by SW8015 Mod		Analyzed:	Nov-25-10 06:16	Nov-25-10 02:53	Nov-25-10 03:16	Nov-25-10 03:38	Nov-25-10 04:01	Nov-25-10 04:23
		Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		Units/RL:	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
		Extracted:	Nov-20-10 09:30					
C12-C28 Diesel Range Hydrocarbons		Analyzed:	Nov-19-10 09:30					
		Units/RL:	3.79 1.00	4.91 1.00	3.63 1.00	2.53 1.00	2.70 1.00	1.80 1.00
C28-C35 Oil Range Hydrocarbons		Extracted:	Nov-19-10 13:14	Nov-19-10 13:33	Nov-19-10 13:53	Nov-19-10 14:12	Nov-19-10 14:30	Nov-19-10 14:50
		Units/RL:	mg/kg RL					
Total TPH		Units/RL:	21.9 15.6	ND 15.8	ND 15.5	ND 15.4	ND 15.4	ND 15.3
		Extracted:	108 15.6	ND 15.8	23.4 15.5	ND 15.4	ND 15.4	ND 15.3
Total TPH		Units/RL:	130 15.6	ND 15.8	23.4 15.5	ND 15.4	ND 15.4	ND 15.3
		Extracted:	130 15.6	ND 15.8	23.4 15.5	ND 15.4	ND 15.4	ND 15.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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**Brent Barron, II**  
 Odessa Laboratory Manager



# Certificate of Analysis Summary 397821

## PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lea Federal 4" Poly

Project Id: 2010-206

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Nov-18-10 04:00 pm

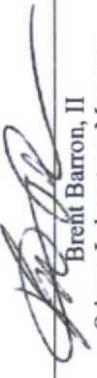
Report Date: 29-NOV-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	397821-007	397821-008	397821-009
									North Floor	West Sidewall	West Floor
BTEX by EPA 8021				SOIL	Nov-18-10 14:10	Nov-24-10 15:45	Nov-24-10 15:45	RL	Nov-18-10 14:10	Nov-24-10 15:45	Nov-24-10 15:45
								mg/kg	Nov-25-10 05:53	Nov-25-10 08:32	Nov-25-10 08:54
								RL			
									ND 0.0010	ND 0.0010	ND 0.0010
Percent Moisture									ND 0.0021	ND 0.0021	ND 0.0020
									ND 0.0010	ND 0.0010	ND 0.0010
									ND 0.0021	ND 0.0021	ND 0.0020
									ND 0.0010	ND 0.0010	ND 0.0010
TPH by SW8015 Mod									ND 0.0010	ND 0.0010	ND 0.0010
									Nov-20-10 09:30	Nov-20-10 09:30	Nov-20-10 09:30
								%	%	%	%
								RL	RL	RL	RL
C6-C12 Gasoline Range Hydrocarbons									3.95	3.69	2.14
									1.00	1.00	1.00
									Nov-19-10 09:30	Nov-19-10 09:30	Nov-19-10 09:30
									Nov-19-10 15:09	Nov-19-10 15:47	Nov-19-10 16:07
C12-C28 Diesel Range Hydrocarbons									mg/kg	mg/kg	mg/kg
									ND 15.6	ND 15.6	ND 15.3
									ND 15.6	ND 15.6	17.4
									ND 15.6	ND 15.6	ND 15.3
Total TPH									ND 15.6	ND 15.6	17.4
											15.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager

## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 833642

Sample: 589805-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/10 01:00

### SURROGATE RECOVERY STUDY

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

Lab Batch #: 833642

Sample: 589805-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/10 01:23

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 833642

Sample: 589805-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/25/10 02:31

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 833642

Sample: 397821-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 02:53

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 833642

Sample: 397821-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 03:16

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0305	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.



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 833642

Sample: 397821-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 03:38

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 833642

Sample: 397821-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 04:01

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 833642

Sample: 397821-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 04:23

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 833642

Sample: 397821-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 05:53

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 833642

Sample: 397821-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 06:16

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 833642

Sample: 397821-007 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 06:39

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 833642

Sample: 397821-007 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 07:02

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 833642

Sample: 397821-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 08:32

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 833642

Sample: 397821-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/25/10 08:54

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 832797

Sample: 589262-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/19/10 11:20

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.7	99.6	73	70-135	
o-Terphenyl	46.8	49.8	94	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 832797

Sample: 589262-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/19/10 11:40

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.7	100	74	70-135	
o-Terphenyl	40.0	50.1	80	70-135	

Lab Batch #: 832797

Sample: 589262-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/19/10 11:59

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.3	100	73	70-135	
o-Terphenyl	37.3	50.0	75	70-135	

Lab Batch #: 832797

Sample: 397821-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 13:14

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.5	100	74	70-135	
o-Terphenyl	36.6	50.0	73	70-135	

Lab Batch #: 832797

Sample: 397821-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 13:33

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.0	100	75	70-135	
o-Terphenyl	37.0	50.1	74	70-135	

Lab Batch #: 832797

Sample: 397821-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 13:53

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.9	99.5	71	70-135	
o-Terphenyl	35.8	49.8	72	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 832797

Sample: 397821-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 14:12

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	36.6	50.0	73	70-135	

Lab Batch #: 832797

Sample: 397821-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 14:30

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.5	99.9	73	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 832797

Sample: 397821-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 14:50

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.1	100	72	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 832797

Sample: 397821-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 15:09

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.6	99.9	78	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

Lab Batch #: 832797

Sample: 397821-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 15:47

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.8	100	73	70-135	
o-Terphenyl	36.0	50.0	72	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: Lea Federal 4" Poly

Work Orders : 397821,

Project ID: 2010-206

Lab Batch #: 832797

Sample: 397821-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 16:07

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.6	100	78	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 832797

Sample: 397821-009 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 18:41

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.7	100	77	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 832797

Sample: 397821-009 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/19/10 19:00

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.5	100	74	70-135	
o-Terphenyl	48.7	50.0	97	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# BS / BSD Recoveries



Project Name: Lea Federal 4" Poly

Work Order #: 397821

Project ID: 2010-206

Analyst: SEE

Date Prepared: 11/24/2010

Date Analyzed: 11/25/2010

Lab Batch ID: 833642

Batch #: 1

Sample: 589805-1-BKS

Matrix: Solid

Units: mg/kg

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
BTEX by EPA 8021											
Benzene	ND	0.0998	0.1062	106	0.0998	0.1022	102	4	70-130	35	
Toluene	ND	0.0998	0.0977	98	0.0998	0.0940	94	4	70-130	35	
Ethylbenzene	ND	0.0998	0.0963	96	0.0998	0.0932	93	3	71-129	35	
m_p-Xylenes	ND	0.1996	0.1898	95	0.1996	0.1863	93	2	70-135	35	
o-Xylene	ND	0.0998	0.0910	91	0.0998	0.0884	89	3	71-133	35	

Analyst: BEV

Date Prepared: 11/19/2010

Date Analyzed: 11/19/2010

Lab Batch ID: 832797

Batch #: 1

Sample: 589262-1-BKS

Matrix: Solid

Units: mg/kg

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
TPH by SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	ND	996	965	97	1000	983	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	996	875	88	1000	914	91	4	70-135	35	

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

**Project Name: Lea Federal 4" Poly**

Work Order #: 397821

Project ID: 2010-206

Lab Batch ID: 833642

QC- Sample ID: 397821-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/25/2010

Date Prepared: 11/24/2010 Analyst: SEE

Reporting Units: mg/kg

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

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	ND	0.1039	0.0676	65	0.1039	0.0844	81	22	70-130	35	X
Toluene	ND	0.1039	0.0619	60	0.1039	0.0779	75	23	70-130	35	X
Ethylbenzene	ND	0.1039	0.0601	58	0.1039	0.0755	73	23	71-129	35	X
m,p-Xylenes	ND	0.2078	0.1243	60	0.2078	0.0615	30	68	70-135	35	XF
o-Xylene	ND	0.1039	0.0597	57	0.1039	0.0745	72	22	71-133	35	X

Lab Batch ID: 832797

QC- Sample ID: 397821-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/19/2010

Date Prepared: 11/19/2010 Analyst: BEV

Reporting Units: mg/kg

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

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	1030	1010	98	1030	980	95	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	17.4	1030	938	89	1030	882	84	6	70-135	35	

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

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

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

# Sample Duplicate Recovery

**Project Name: Lea Federal 4" Poly**

**Work Order #: 397821**

**Lab Batch #: 832830**

**Project ID: 2010-206**

**Date Analyzed: 11/20/2010**

**Date Prepared: 11/20/2010**

**Analyst: JLG**

**QC- Sample ID: 397823-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	3.53	3.65	3	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**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 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 Env. / Plains  
 Date/Time: 11-18-10 16:00  
 Lab ID #: 397821  
 Initials: AE

**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 bottles?	(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 sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis

**Analytical Report 400071**  
**for**  
**PLAINS ALL AMERICAN EH&S**

**Project Manager: Jason Henry**

**Lea Federal 4" Poly**

**2010-206**

**14-DEC-10**



**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



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14-DEC-10

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

Reference: XENCO Report No: **400071**  
**Lea Federal 4" Poly**  
Project Address: Lea County, NM

**Jason Henry:**

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 400071. 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. 400071 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

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**Sample Cross Reference 400071**



**PLAINS ALL AMERICAN EH&S, Midland, TX**

Lea Federal 4" Poly

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Release Point	S	Dec-03-10 10:00		400071-001



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Lea Federal 4" Poly*



*Project ID: 2010-206*

*Report Date: 14-DEC-10*

*Work Order Number: 400071*

*Date Received: 12/09/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None



# Certificate of Analysis Summary 400071

## PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lea Federal 4" Poly

Date Received in Lab: Thu Dec-09-10 04:00 pm

Contact: Jason Henry

Report Date: 14-DEC-10

Project Location: Lea County, NM

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> 400071-001			
	<b>Field Id:</b> Release Point			
	<b>Depth:</b>			
	<b>Matrix:</b> SOIL			
	<b>Sampled:</b> Dec-03-10 10:00			
<b>Inorganic Anions In Soil by E300</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Dec-10-10 08:21			
	<b>Units/RL:</b> mg/kg RL			
Chloride	ND	5.12		
<b>Percent Moisture</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Dec-10-10 08:25			
	<b>Units/RL:</b> % RL			
Percent Moisture	2.43	1.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

  
Brent Barron, II  
Odessa Laboratory Manager

## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

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5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# BS / BSD Recoveries



Project Name: Lea Federal 4" Poly

Work Order #: 400071

Analyst: LATCOR

Lab Batch ID: 835486

Sample: 835486-1-BKS

Date Prepared: 12/10/2010

Batch #: 1

Project ID: 2010-206

Date Analyzed: 12/10/2010

Matrix: Solid

Units: mg/kg

## BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike %R [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
ND	10.0	9.04	90	10	9.00	90	0	75-125	20	

Inorganic Anions In Soil by E300

Analytes

Chloride

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: Lea Federal 4" Poly

Work Order #: 400071

Lab Batch #: 835486

Date Analyzed: 12/10/2010

QC- Sample ID: 399968-001 S

Reporting Units: mg/kg

Project ID: 2010-206

Analyst: LATCOR

Date Prepared: 12/10/2010

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	30600	21200	47300	79	75-125	

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

BRL - Below Reporting Limit

# Sample Duplicate Recovery

**Project Name: Lea Federal 4" Poly**

**Work Order #: 400071**

**Lab Batch #: 835486**  
**Date Analyzed: 12/10/2010 08:21**  
**QC- Sample ID: 399968-001 D**

**Date Prepared: 12/10/2010**  
**Batch #: 1**

**Project ID: 2010-206**  
**Analyst: LATCOR**  
**Matrix: Soil**

**Reporting Units: mg/kg**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	30600	27200	12	20	

**Lab Batch #: 835275**  
**Date Analyzed: 12/10/2010 08:25**  
**QC- Sample ID: 399951-001 D**

**Date Prepared: 12/10/2010**  
**Batch #: 1**

**Analyst: JLG**  
**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	3.34	3.80	13	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**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 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 Env. / Plains  
 Date/Time: 12-9-10 16:00  
 Lab ID #: 400071  
 Initials: AE

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container ( <u>cooler</u> ) and ( <u>bottles</u> )?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>4.6</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis



Lea Federal 4-Inch Poly Release Site (looking North)



Lea Federal 4-Inch Poly - Release Point



Lea Federal 4-Inch Poly - Excavation (looking South, sample locations flagged)



Lea Federal 4-Inch Poly - Excavation Floor (looking South, sample locations flagged)



Lea Federal 4-Inch Poly - Excavation (looking North)



Lea Federal 4-Inch Poly - Excavation (following backfill)