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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**

JUL 29 2009

**HOBBSOCD**

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	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	(432) 557-5865
Facility Name	DCP Plant to Lea Station 6"	Facility Type	Pipeline

Surface Owner	NM SLO	Mineral Owner		Lease No.	
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	30	20S	37E					Lea

Latitude N 32.542461° Longitude W 103.288617°

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	10 bbls	Volume Recovered	0 bbls
Source of Release	6" steel pipeline	Date and Hour of Occurrence	10/8/2008	Date and Hour of Discovery	10/8/2008 15:00
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?	Daniel Bryant	Date and Hour	10/9/2008 08:20		
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.\*

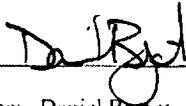
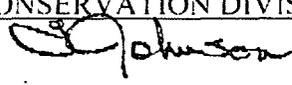
Describe Cause of Problem and Remedial Action Taken.\*

Internal corrosion of a 6" pipeline caused a release of crude oil. Clamp was installed on the pipeline to mitigate the release. Throughput on the line is 660 bbls per day. Operating pressure of the pipeline is 45 psi. Depth of the pipeline at the release location is approximately 3' bgs. H2S content of the crude is less than 10 ppm. The gravity of the crude is 65.

Describe Area Affected and Cleanup Action Taken \* .

Please refer to the Remediation Summary and Site Closure Request for closure data

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: Daniel Bryant	 Approved by District Supervisor <b>ENVIRONMENTAL ENGINEER</b>	
Title: Environmental RC Specialist	Approval Date: 7.30.09	Expiration Date: —
E-mail Address: dmbryant@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7/29/09	Phone: (432) 557-5865	

\* Attach Additional Sheets If Necessary

1RP-1971

# *Basin Environmental Consulting, LLC*

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
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Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDICATION SUMMARY AND SITE CLOSURE REQUEST**

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**PLAINS PIPELINE, L.P. (231735)  
DCP Plant to Lea Station 6-Inch  
Lea County, New Mexico  
Plains SRS # 2008-275**

**UNIT J (NW/SE), Section 30, Township 20 South, Range 37 East  
Latitude 32° 32' 32.4" North, Longitude 103° 17' 17.2" West  
NMOCD Reference # 1RP-1971**

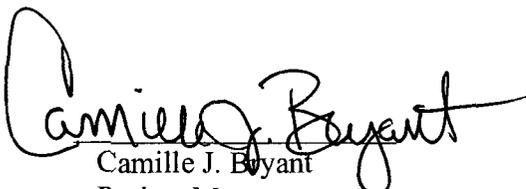
Prepared For:

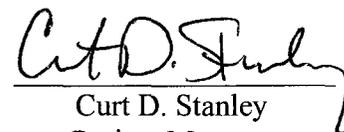
Plains Pipeline, L.P.  
333 Clay Street  
Suite 1600  
Houston, Texas 77002

Prepared By:

Basin Environmental Consulting, LLC

July 2009

  
Camille J. Bryant  
Project Manager

  
Curt D. Stanley  
Project Manager

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## 1.0 INTRODUCTION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as DCP Plant to Lea Station 6-Inch (SRS# 2008-275). The site is located in Unit Letter J (NW ¼ SE ¼), Section 30, Township 20 South, Range 37 East, in Lea County, New Mexico. The property is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO). A request for a Right-of-Entry permit was submitted and subsequently approved by the NMSLO, Santa Fe Office, to perform remediation activities at the release site (SLO ROE-1760). The site latitude is 32° 32' 32.4" North, and the longitude is 103° 17' 17.2" West. The Site Location and Site and Sample Location Maps are provided as Figure 1 and Figure 2, respectively. The Release Notification and Corrective Action (NMOCD Form C-141) indicated approximately ten (10) barrels of crude oil were released from the Plains pipeline and zero (0) barrels were recovered during the initial response activities. The Release Notification and Corrective Action is provided as Appendix D.

On October 9, 2008, Basin on behalf of Plains, responded to a pipeline release located on the DCP Plant to Lea Station 6-Inch pipeline. Plains operations personnel mitigated the crude oil release by installing a temporary 6-inch pipeline clamp on the pipeline. The impacted soil excavated during initial response activities was stockpiled on a 6-mil poly liner adjacent to the excavation. The initial visually stained area covered an area measuring approximately 95 feet in length by 30 feet in width.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database did not identify the average depth to groundwater information for Section 30, Township 20 South, Range 37 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) indicated depth to groundwater at the release site is approximately 100 feet below ground surface (bgs). The depth to groundwater at the DCP Plant to Lea Station 6-Inch release site results in a score of ten (10) points being assigned to the site, based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells within 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

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

Based on the above ranking criteria, the NMOCD guidelines indicate the DCP Plant to Lea Station 6-Inch release site has an initial ranking score of ten (10) points.

On February 25, 2009, during a meeting between NMOCD and Plains representatives, the NMOCD Hobbs District Office approved the following modified remediation goals:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 mg/Kg (ppm)

### 3.0 SUMMARY OF FIELD ACTIVITIES

During October and November 2008, hydrocarbon impacted soil was excavated at the release site. Approximately 2,300 cubic yards (cy) of impacted soil was stockpiled adjacent to the excavation pending final disposition. The final dimensions of the excavation were approximately 100 feet in length and 52 feet in width and approximately 15 feet in depth.

On October 24, 2008, a soil boring (SB-1) was advanced to the west of the release point to determine the vertical extent of the crude oil impacted soil. The soil boring was advanced to a total depth of approximately 72 feet bgs and terminated in red clay (red bed). No groundwater was encountered during the advancement of this soil boring. Soil samples were collected at five (5) foot drilling intervals and were field screened using a Photo-Ionization Detector (PID). Selected soil samples were submitted to the laboratory and analyzed for concentrations of benzene, toluene, ethyl-benzene, and xylene (BTEX) using method EPA 8021b and total petroleum hydrocarbons (TPH) using method SW8015M. A summary of the analytical results are included in Table 1, Concentrations of BTEX and TPH in Soil. Laboratory analytical reports are included in Appendix A. Soil boring logs are provided as Appendix B. Photographs are provided as Appendix C.

Laboratory analytical results indicated benzene concentrations ranged from less than the method detection limit (MDL) for soil samples SB-1 20', SB-1 30' and SB-1 72' to 0.5007 mg/Kg for soil sample SB-1 50'. The analytical results indicated BTEX concentrations ranged from less than the laboratory MDL for soil samples SB-1 20' and SB-1 30' to 38.1627 mg/Kg for soil sample SB-1 50'. The laboratory analytical results indicated the TPH concentrations ranged from less than the laboratory MDL for soil samples SB-1 30' and SB-1 72' to 7,082 mg/Kg for soil sample SB-1 50'.

On January 9, 2009, a soil boring (SB-2) was advanced to the north of the excavation to evaluate the presence of groundwater at the site. The soil boring was advanced to a total depth of approximately 66 feet bgs and terminated in red clay (red bed). Temporary casing was installed in the bore hole as requested by the NMOCD Hobbs District Office. Field measurements indicated a trace amount of water in the bore hole. Soil samples were collected at five (5) foot drilling intervals. Each sample was field screened using a PID and selected soil samples were submitted for laboratory analysis for concentration of BTEX and TPH. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL for all the soil samples submitted.

A groundwater sample was collected from the temporary casing and submitted to the laboratory for analysis of BTEX concentrations using EPA Method SW846-8021b. A summary of the analytical results are included in Table 2, Concentrations of Benzene and BTEX in Groundwater. The laboratory analytical results indicated benzene and BTEX concentrations were below the laboratory MDL for the groundwater sample submitted.

On January 21, 2009, six (6) soil samples (ESW @ 14.5', NESW @ 14.5', NWSW @ 14.5', SESW @ 14.5', SWSW @ 14.5' and WSW @ 14.5') were collected from the sidewalls of the excavation at approximately 14.5 feet bgs. Three (3) soil samples (E Floor @ 15', W Floor @ 15' and C Floor @ 15') were collected from the floor of the excavation at approximately 15 feet bgs. The soil samples were submitted to the laboratory and analyzed for concentrations of BTEX

and TPH. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL for soil samples SWSW @ 14.5', WSW @ 14.5' and E Floor @ 15' to 0.4157 mg/Kg for soil sample C Floor @ 15'. The analytical results indicated BTEX concentrations ranged from 0.0304 mg/Kg for soil sample WSW @ 14.5' to 55.7617 mg/Kg for soil sample C Floor @ 15'. The laboratory analytical results indicated the TPH concentrations ranged from less than the laboratory MDL for soil samples NESW @ 14.5' and WSW @ 14.5' to 3,261 mg/Kg for soil sample SESW @ 14.5'.

On February 12, 2009, five (5) soil samples (Stockpile #1, Stockpile #2, Stockpile #3, Stockpile #4 and Stockpile #5) were collected from the blended material stockpiled on-site. The soil samples were submitted to the laboratory and analyzed for concentrations of BTEX and TPH. The analytical results indicated benzene concentration ranged from less than the laboratory MDL for soil samples Stockpile #1, Stockpile #4 and Stockpile #5 to 3.013 mg/Kg for soil sample Stockpile #3. The analytical results indicated BTEX concentrations ranged from 6.8964 mg/Kg for soil sample Stockpile #5 to 108.313 mg/Kg for soil sample Stockpile #3. The laboratory analytical results indicated TPH concentrations ranged from 681 mg/Kg for soil sample Stockpile #5 to 3,296 mg/Kg for soil sample Stockpile #3.

On February 25, 2009, during a meeting between NMOCD and Plains representatives, the NMOCD Hobbs District Office approved remediation goals of 5,000 mg/Kg (TPH), 10 mg/Kg (benzene) and 50 mg/Kg (BTEX) for the site.

On April 29, 2009, the DCP Plant to Lea Station 6-Inch *Remediation Summary and Site Closure Proposal* was presented to the NMOCD – Hobbs District Office. In discussions between Plains, Basin and the NMOCD representative, the NMOCD representative approved the proposed site closure strategy, with the exception of the proposed installation of a polyurethane liner. The NMOCD representative indicated the installation of a twenty millimeter polyurethane liner would not be required for NMOCD approved site closure.

In May 2009, Stockpile #3 was reblended as approved by the NMOCD. Stockpiles #1, #2, #4 and #5 were placed in the excavation in twelve (12) inch lifts and compacted as the backfilling activities progressed.

On June 1, 2009, a soil sample (Stockpile #3A) was collected from the 500 cy of reblended soil contained in Stockpile #3 and submitted to the laboratory for analysis. The analytical results indicated the benzene concentration was less than the laboratory MDL of 0.0526 mg/Kg, the BTEX concentration was 1.9409 mg/Kg and the TPH concentration was 1,464 mg/Kg. Based on the analytical results of the soil sample, blended soil contained in Stockpile #3 was deemed suitable for use a backfill material and the backfilling of the excavation was completed. Following the backfilling activities, areas disturbed by the remediation activities were contoured to fit the surrounding topography and will be reseeded with vegetation acceptable to the landowner.

## **4.0 QA/QC PROCEDURES**

### **4.1 Soil Sampling**

Soil samples were delivered to Xenco Laboratories in Odessa, Texas for BTEX and/or TPH analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH within fourteen days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH-GRO/DRO concentrations in accordance with modified EPA Method 8015M GRO/DRO

### **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<sup>®</sup> 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. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

## **5.0 SITE CLOSURE REQUEST**

Based on the analytical results of confirmation soil samples, Basin recommends Plains provide the NMOCD-Hobbs District Office and the NMSLO, a copy of this Remediation Summary and Site Closure Request and request the NMOCD and NMSLO grant site closure to the DCP Plant to Lea Station 6-Inch release site.

## **6.0 LIMITATIONS**

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also 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, L.P. 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 Consulting, LLC and/or Plains Pipeline, L.P

## 7.0 DISTRIBUTION:

- Copy 1: Larry Johnson  
New Mexico Energy, Minerals and Natural Resources Department  
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# Figures

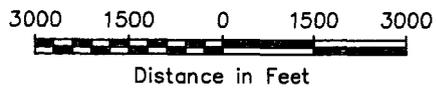
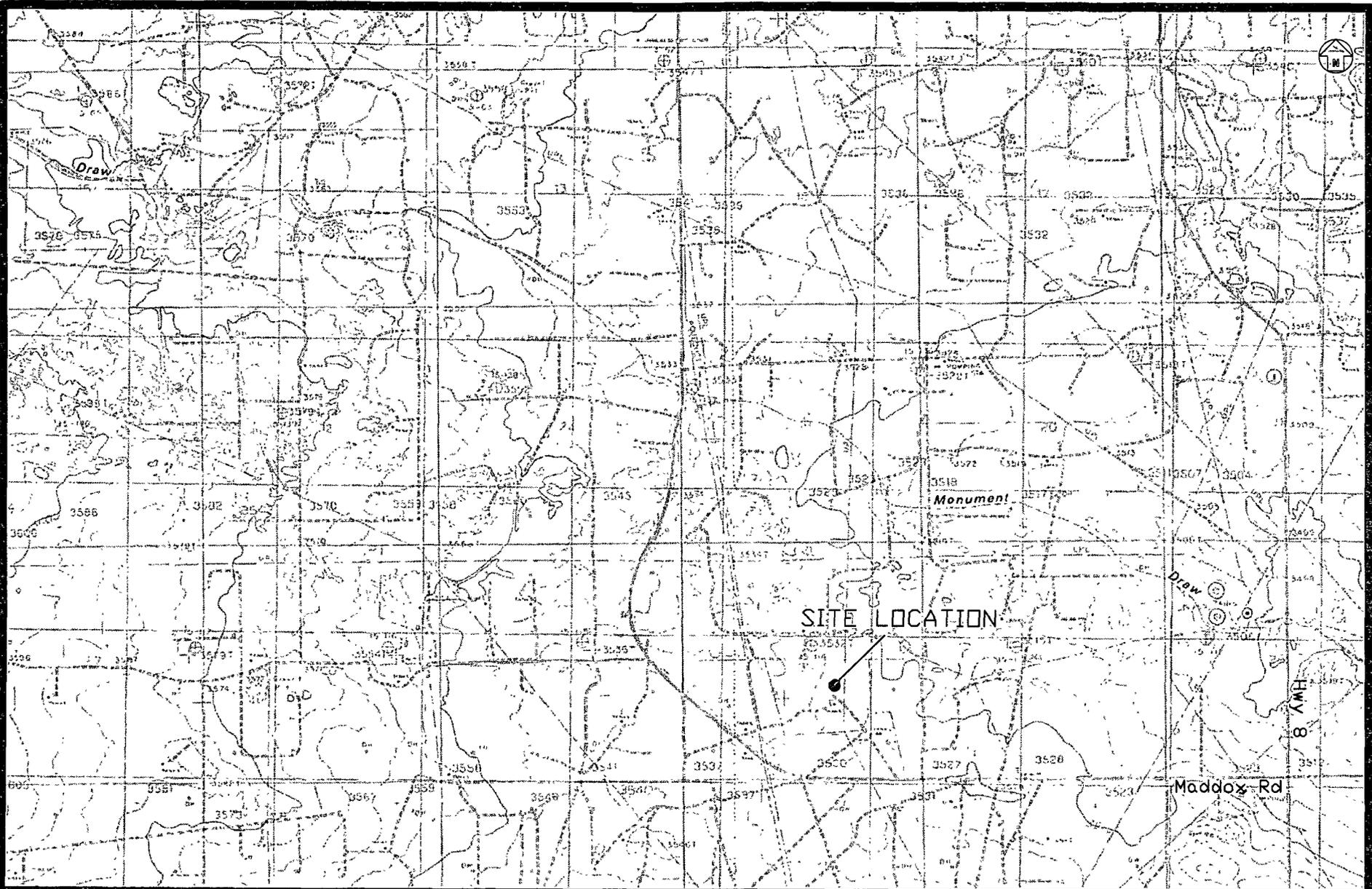
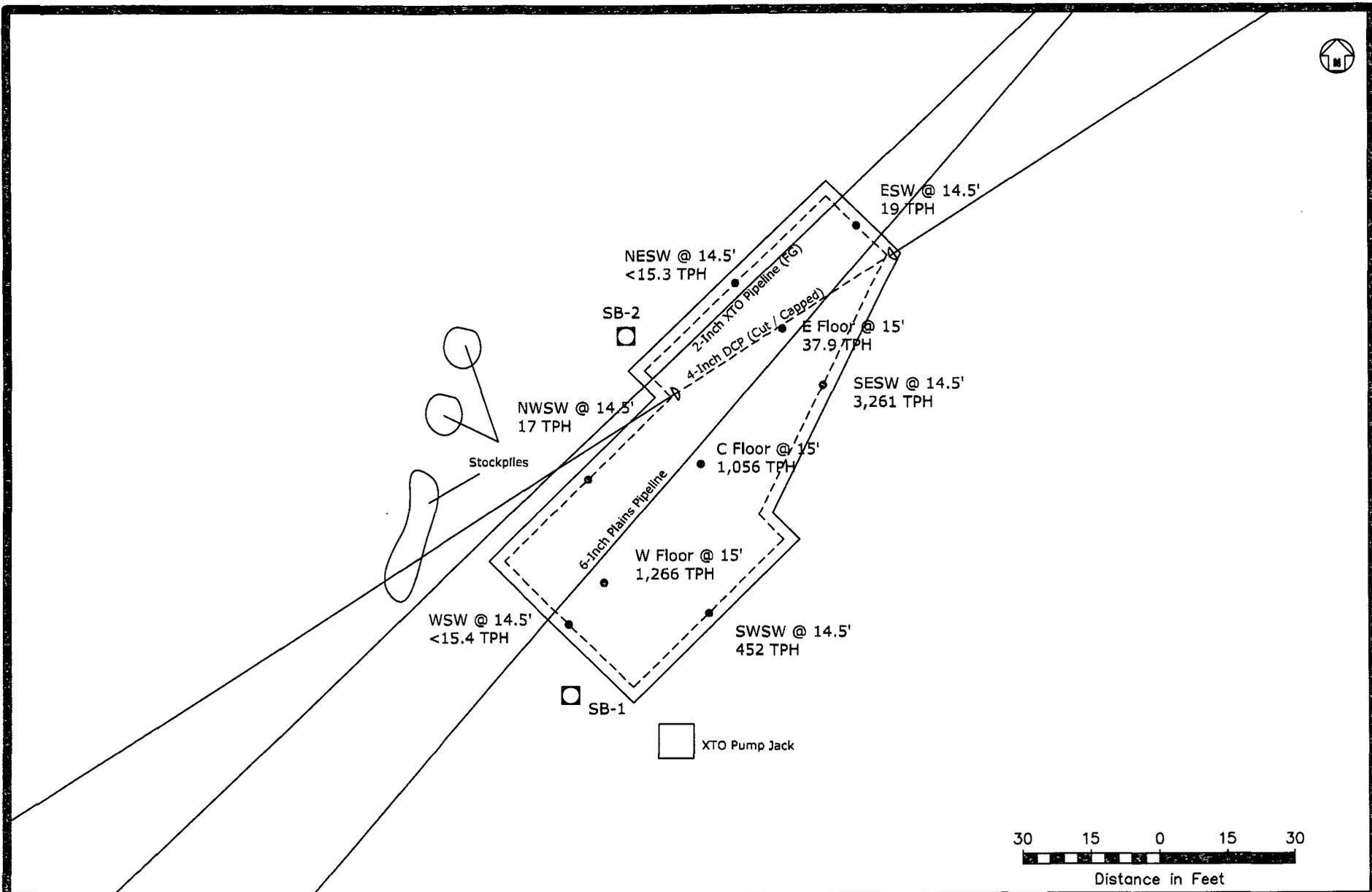


Figure 1  
 Site Location Map  
 Plains Pipeline, L.P.  
 DCP Plant to Lea Station 6-Inch  
 Lea County, New Mexico  
 SRS 2008-275

Basin Environmental Services

Prep By: CDS	Checked By: CDS
March 16, 2009	Scale 1"=3000'



- Legend:**
- Excavation Extents
  - Pipeline
  - <sup>SB-1</sup> Soil Boring
  - Sample Location

**Figure 2**  
 Site and Sample Location Map  
 Plains Pipeline, L.P.  
 DCP to Lea Station 6-Inch  
 Lea County, New Mexico  
 SRS # 2008-275  
 NMOCD Ref # 1RP-1971

**Basin Environmental Services**

Prep By: CDS	Checked By: CJB
December 4, 2008	Scale 1"=30'

# Tables

TABLE 1

## CONCENTRATIONS OF BTEX AND TPH IN SOIL

PLAINS PIPELINE, L.P.  
DCP PLANT TO LEA STATION 6-INCH  
LEA COUNTY, NEW MEXICO  
SRS: 2008-275  
NMOCD REFERENCE NO: 1RP-1971

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			
					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>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)
SB-1 @ 10'	10 feet	10/24/08	10/30/08	In-Situ	0.1062	4.270	3.128	10.98	3.701	22.1852	327	342	125	794
SB-1 @ 20'	20 feet	10/24/08	10/30/08	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	54.0	21.8	75.8
SB-1 @ 30'	30 feet	10/24/08	10/30/08	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3
SB-1 @ 40'	40 feet	10/24/08	10/30/08	In-Situ	0.0011	0.0081	0.0083	0.0325	0.0178	0.0678	20.8	68.1	<15.4	88.9
SB-1 @ 50'	50 feet	10/24/08	10/30/08	In-Situ	0.5007	10.93	5.345	14.10	7.287	38.1627	5,370	1,570	142	7,082
SB-1 @ 60'	60 feet	10/24/08	10/30/08	In-Situ	0.0163	0.1799	0.2564	0.8361	0.3198	1.6085	196	286	70.8	552.8
SB-1 @ 70'	70 feet	10/24/08	10/30/08	In-Situ	0.0114	0.0388	0.0136	0.0457	0.0202	0.1297	24.1	104	30.2	158.3
SB-1 @ 72'	72 feet	10/24/08	10/30/08	In-Situ	<0.0012	<0.0023	0.0012	0.0045	0.0017	0.0074	<17.6	<17.6	<17.6	<17.6
Stockpile (Trace)	N/A	10/31/08	10/31/08	N/A	1.77	42.20	33.60	83.9		161.47	568	4,130		4,698
Stockpile (Xenco)	N/A	10/31/08	11/10/08	N/A	1.64	77.57	49.90	182.2	62.07	373.38	5,050	469	<86.0	5,519
SB-2 @ 10'	10 feet	01/09/09	01/13/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3
SB-2 @ 20'	20 feet	01/09/09	01/13/09	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7
SB-2 @ 30'	30 feet	01/09/09	01/13/09	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3
SB-2 @ 40'	40 feet	01/09/09	01/13/09	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2
SB-2 @ 50'	50 feet	01/09/09	01/13/09	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5
SB-2 @ 60'	60 feet	01/09/09	01/13/09	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0
ESW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	0.0127	0.1879	0.0664	0.1976	0.0375	0.5021	18.6	<15.2	<15.2	19
NESW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	0.0102	0.0758	0.0175	0.0444	0.0099	0.1578	<15.3	<15.3	<15.3	<15.3
NWSW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	0.0146	0.1483	0.0437	0.1075	0.0233	0.3374	17.0	<15.1	<15.1	17
SESW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	0.0186	0.1126	0.012	0.0223	0.007	0.1725	38.8	2,990	232	3,261
SWSW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	<0.0508	0.3422	0.7845	2.674	1.024	4.8247	215.0	207	30	452
WSW @ 14.5'	14.5 feet	01/21/09	01/23/09	In-Situ	<0.0010	0.0099	0.0053	0.0124	0.0028	0.0304	<15.4	<15.4	<15.4	<15.4
E Floor @ 15'	15 feet	01/21/09	01/23/09	In-Situ	<0.0010	0.0126	0.0069	0.0218	0.0049	0.0462	<15.1	38	<15.1	37.9
W Floor @ 15'	15 feet	01/21/09	01/23/09	In-Situ	0.0836	4.161	4.509	11.5	4.017	24.2706	913.0	328	25	1,266
C Floor @ 15'	15 feet	01/21/09	01/23/09	In-Situ	0.4157	11.01	8.918	25.42	9.998	55.7617	404.0	550	102	1,056
Stockpile #1	N/A	02/12/09	02/18/09	N/A	<0.0535	<0.1070	0.9546	4.183	3.278	8.4156	1,380	645	<161	2,025
Stockpile #2	N/A	02/12/09	02/18/09	N/A	0.3828	1.867	2.779	10.72	7.116	22.8648	1,310	593	<80.3	1,903
Stockpile #3	N/A	02/12/09	02/18/09	N/A	3.013	18.01	10.27	64.14	12.88	108.313	2,720	576	<85.1	3,296
Stockpile #4	N/A	02/12/09	02/18/09	N/A	<0.0534	0.1841	1.255	6.117	3.042	10.5981	1,060	518	<80.1	1,578
Stockpile #5	N/A	02/12/09	02/18/09	N/A	<0.0538	0.291	0.9154	3.56	2.13	6.8964	436	245.0	<80.7	681
Stockpile #3A	N/A	06/01/09	06/03/09	N/A	<0.0526	0.1604	0.2298	1.108	0.4427	1.9409	290	917	257	1,464
NMOCD REGULATORY STANDARD					10					50				5,000

**TABLE 2**

**CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER**

**PLAINS PIPELINE, L.P.  
DCP PLANT TO LEA STATION 6-INCH  
LEA COUNTY, NEW MEXICO  
PLAINS SRS NO. 2008-275  
NMOCD REF # 1RP-1971**

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030					
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-Xylene (mg/L)	O-XYLENES (mg/L)	TOTAL BTEX (mg/L)
Prelim GW	01/09/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
NMOCD REGULATORY STANDARD		0.01	0.75	0.75	0.62		

# **Appendices**

**Appendix A**  
**Laboratory Reports**

# **Analytical Report 315763**

**for**

## **PLAINS ALL AMERICAN EH&S**

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6 Inch**

**SRS 2008-275**

**30-OCT-08**



**E84880**

**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:

Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675  
Norcross(Atlanta), GA E87429

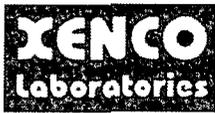
South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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



30-OCT-08

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

Reference: XENCO Report No: **315763**  
**DCP Plant to Lea Station 6 Inch**  
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 315763. 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. 315763 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 315763**



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

DCP Plant to Lea Station 6 Inch

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SB-1 @10'	S	Oct-24-08 09:50		315763-001
SB-1 @20'	S	Oct-24-08 10:00		315763-002
SB-1 @30'	S	Oct-24-08 10:05		315763-003
SB-1 @40'	S	Oct-24-08 10:10		315763-004
SB-1 @50'	S	Oct-24-08 10:15		315763-005
SB-1 @60'	S	Oct-24-08 10:20		315763-006
SB-1 @70'	S	Oct-24-08 10:30		315763-007
SB-1 @72'	S	Oct-24-08 10:50		315763-008



# Certificate of Analysis Summary 315763

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6 Inch



Project Id: SRS 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Fri Oct-24-08 05:27 pm

Report Date: 30-OCT-08

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	315763-001	315763-002	315763-003	315763-004	315763-005	315763-006
	<i>Field Id:</i>	SB-1 @10'	SB-1 @20'	SB-1 @30'	SB-1 @40'	SB-1 @50'	SB-1 @60'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-24-08 09 50	Oct-24-08 10 00	Oct-24-08 10 05	Oct-24-08 10 10	Oct-24-08 10 15	Oct-24-08 10 20
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-29-08 16 50					
	<i>Analyzed:</i>	Oct-30-08 12 42	Oct-30-08 06 37	Oct-30-08 06 59	Oct-30-08 07 20	Oct-30-08 12 20	Oct-30-08 07 42
	<i>Units/RL:</i>	mg/kg RL					
Benzene		0 1062 0 0515	ND 0 0010	ND 0 0010	0 0011 0 0010	0 5007 0 0537	0 0163 0 0011
Toluene		4 270 0 1031	ND 0 0021	ND 0 0020	0 0081 0 0020	10 93 0 1073	0 1799 0 0022
Ethylbenzene		3 128 0 0515	ND 0 0010	ND 0 0010	0 0083 0 0010	5 345 0 0537	0 2564 0 0011
m,p-Xylenes		10 98 0 1031	ND 0 0021	ND 0 0020	0 0325 0 0020	14 10 0 1073	0 8361 0 0022
o-Xylene		3 701 0 0515	ND 0 0010	ND 0 0010	0 0178 0 0010	7 287 0 0537	0 3198 0 0011
Total Xylenes		14 681	ND	ND	0 0503	21 387	1 1559
Total BTEX		22 1852	ND	ND	0 0678	38 1627	1 6085
<b>Percent Moisture</b>	<i>Extracted:</i>	Oct-27-08 17 00					
	<i>Analyzed:</i>	Oct-27-08 17 00					
	<i>Units/RL:</i>	% RL					
Percent Moisture		2 99 1 00	3 35 1 00	2 12 1 00	2 38 1 00	6 83 1 00	8 29 1 00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Oct-27-08 14 30					
	<i>Analyzed:</i>	Oct-28-08 10 43	Oct-28-08 11 08	Oct-28-08 11 59	Oct-28-08 12 25	Oct-28-08 12 50	Oct-28-08 13 14
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		327 15 5	ND 15 5	ND 15 3	20 8 15 4	5370 16 1	196 16 4
C12-C28 Diesel Range Hydrocarbons		342 15 5	54 0 15 5	ND 15 3	68 1 15 4	1570 16 1	286 16 4
C28-C35 Oil Range Hydrocarbons		125 15 5	21 8 15 5	ND 15 3	ND 15 4	142 16 1	70 8 16 4
Total TPH		794	75 8	ND	88 9	7082	552 8

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

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 Brent Barron  
 Odessa Laboratory Director



# Certificate of Analysis Summary 315763

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6 Inch



Project Id: SRS 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Fri Oct-24-08 05:27 pm

Report Date: 30-OCT-08

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	315763-007	315763-008				
	<i>Field Id:</i>	SB-1 @70'	SB-1 @72'				
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	Oct-24-08 10 30	Oct-24-08 10 50				
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-29-08 16 50	Oct-29-08 16 50				
	<i>Analyzed:</i>	Oct-30-08 08 03	Oct-30-08 08 24				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Benzene		0 0114 0 0011	ND 0 0012				
Toluene		0 0388 0 0023	ND 0 0023				
Ethylbenzene		0 0136 0 0011	0 0012 0 0012				
m,p-Xylenes		0 0457 0 0023	0 0045 0 0023				
o-Xylene		0 0202 0 0011	0 0017 0 0012				
Total Xylenes		0 0659	0 0062				
Total BTEX		0 1297	0 0074				
<b>Percent Moisture</b>	<i>Extracted:</i>	Oct-27-08 17 00	Oct-27-08 17 00				
	<i>Analyzed:</i>						
	<i>Units/RL:</i>	% RL	% RL				
Percent Moisture		11 97 1 00	14 56 1 00				
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Oct-27-08 14 30	Oct-27-08 14 30				
	<i>Analyzed:</i>	Oct-28-08 13 39	Oct-28-08 14 03				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		24 1 17 0	ND 17 6				
C12-C28 Diesel Range Hydrocarbons		104 17 0	ND 17 6				
C28-C35 Oil Range Hydrocarbons		30 2 17 0	ND 17 6				
Total TPH		158 3	ND				

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  
 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(PQL) and above the SQL(MDL).
  - 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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 2505 N. Falkenburg Rd., Tampa, FL 33619  
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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6 Inch

Work Orders : 315763,

Project ID: SRS 2008-275

Lab Batch #: 738649

Sample: 315763-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0390	0.0300	130	80-120	**
4-Bromofluorobenzene	0.0818	0.0300	273	80-120	**

Lab Batch #: 738649

Sample: 315763-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0361	0.0300	120	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 738649

Sample: 315763-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0348	0.0300	116	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 738649

Sample: 315763-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0408	0.0300	136	80-120	**
4-Bromofluorobenzene	0.0681	0.0300	227	80-120	**

Lab Batch #: 738649

Sample: 315763-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.2280	0.0300	760	80-120	**
4-Bromofluorobenzene	0.0455	0.0300	152	80-120	**

\*\* 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: DCP Plant to Lea Station 6 Inch

Work Orders : 315763,

Project ID: SRS 2008-275

Lab Batch #: 738649

Sample: 315763-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0491	0.0300	164	80-120	**
4-Bromofluorobenzene	0.2357	0.0300	786	80-120	**

Lab Batch #: 738649

Sample: 315763-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0676	0.0300	225	80-120	**

Lab Batch #: 738649

Sample: 315763-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0366	0.0300	122	80-120	**
4-Bromofluorobenzene	0.0369	0.0300	123	80-120	**

Lab Batch #: 738649

Sample: 518324-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 738649

Sample: 518324-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0221	0.0300	74	80-120	**

\*\* 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: DCP Plant to Lea Station 6 Inch

Work Orders : 315763,

Project ID: SRS 2008-275

Lab Batch #: 738649

Sample: 518324-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 738479

Sample: 315760-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	59.5	50.0	119	70-135	

Lab Batch #: 738479

Sample: 315760-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 738479

Sample: 315763-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	54.8	50.0	110	70-135	

Lab Batch #: 738479

Sample: 315763-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	54.4	50.0	109	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: DCP Plant to Lea Station 6 Inch

Work Orders : 315763,

Project ID: SRS 2008-275

Lab Batch #: 738479

Sample: 315763-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 738479

Sample: 315763-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 738479

Sample: 315763-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	176	100	176	70-135	**
o-Terphenyl	68.2	50.0	136	70-135	**

Lab Batch #: 738479

Sample: 315763-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 738479

Sample: 315763-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	56.8	50.0	114	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: DCP Plant to Lea Station 6 Inch

Work Orders : 315763,

Project ID: SRS 2008-275

Lab Batch #: 738479

Sample: 315763-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 738479

Sample: 518217-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 738479

Sample: 518217-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 738479

Sample: 518217-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	65.0	50.0	130	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: DCP Plant to Lea Station 6 Inch**

**Work Order #: 315763**

**Project ID: SRS 2008-275**

**Analyst: ASA**

**Date Prepared: 10/29/2008**

**Date Analyzed: 10/30/2008**

**Lab Batch ID: 738649**

**Sample: 518324-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>BTEX by EPA 8021B</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.0880	88	0.1	0.0913	91	4	70-130	35	
Toluene	ND	0.1000	0.0951	95	0.1	0.0934	93	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0970	97	0.1	0.0925	93	5	71-129	35	
m,p-Xylenes	ND	0.2000	0.2233	112	0.2	0.2074	104	7	70-135	35	
o-Xylene	ND	0.1000	0.1049	105	0.1	0.0970	97	8	71-133	35	

**Analyst: ASA**

**Date Prepared: 10/27/2008**

**Date Analyzed: 10/28/2008**

**Lab Batch ID: 738479**

**Sample: 518217-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>TPH By SW8015 Mod</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	849	85	1000	839	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	897	90	1000	881	88	2	70-135	35	

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

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

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

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: DCP Plant to Lea Station 6 Inch

Work Order #: 315763

Project ID: SRS 2008-275

Lab Batch ID: 738479

QC- Sample ID: 315760-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/28/2008

Date Prepared: 10/27/2008

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1020	813	80	1020	809	79	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1020	889	87	1020	885	87	0	70-135	35	

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

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

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



# Sample Duplicate Recovery



**Project Name: DCP Plant to Lea Station 6 Inch**

**Work Order #: 315763**

**Lab Batch #: 738311**

**Project ID: SRS 2008-275**

**Date Analyzed: 10/27/2008**

**Date Prepared: 10/27/2008**

**Analyst: BEV**

**QC- Sample ID: 738311-1 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	7.28	7.28	NC	20		

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



## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client Plains Basin Env.  
 Date/ Time 10-24-08 1727  
 Lab ID # 315763  
 Initials at

### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	4 °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 316338**

**for**

## **PLAINS ALL AMERICAN EH&S**

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6"**

**2008-275**

**12-NOV-08**



**E84880**

**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:

Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675  
Norcross(Atlanta), GA E87429

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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



12-NOV-08

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

Reference: XENCO Report No: **316338**  
**DCP Plant to Lea Station 6"**  
Project Address: South of Monument

**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 316338. 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. 316338 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 316338**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6"

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Stockpile	S	Oct-31-08 10:52		316338-001



**Certificate of Analysis Summary 316338**  
**PLAINS ALL AMERICAN EH&S, Midland, TX**



**Project Id:** 2008-275

**Contact:** Daniel Bryant

**Project Location:** South of Monument

**Project Name:** DCP Plant to Lea Station 6"

**Date Received in Lab:** Fri Oct-31-08 04:05 pm

**Report Date:** 12-NOV-08

**Project Manager:** Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	316338-001				
	<i>Field Id:</i>	Stockpile				
	<i>Depth:</i>					
	<i>Matrix:</i>	SOIL				
	<i>Sampled:</i>	Oct-31-08 10 52				
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Nov-10-08 10 00				
	<i>Analyzed:</i>	Nov-10-08 16 06				
	<i>Units/RL:</i>	mg/kg      RL				
		1 640    1 147				
Benzene						
Toluene						
Ethylbenzene						
m,p-Xylenes						
o-Xylene						
Total Xylenes						
Total BTEX						
<b>Percent Moisture</b>	<i>Extracted:</i>	Oct-31-08 17 00				
	<i>Analyzed:</i>					
	<i>Units/RL:</i>	%              RL				
Percent Moisture						
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Oct-31-08 17 00				
	<i>Analyzed:</i>	Nov-02-08 00 16				
	<i>Units/RL:</i>	mg/kg      RL				
		5050    86 0				
		469     86 0				
C6-C12 Gasoline Range Hydrocarbons						
C12-C28 Diesel Range Hydrocarbons						
C28-C35 Oil Range Hydrocarbons						
Total TPH						

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  
 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(PQL) and above the SQL(MDL).
  - 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6"

Work Orders : 316338,

Project ID: 2008-275

Lab Batch #: 739751

Sample: 316338-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0361	0.0300	120	80-120	
4-Bromofluorobenzene	0.0621	0.0300	207	80-120	**

Lab Batch #: 739751

Sample: 316870-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 739751

Sample: 316870-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0198	0.0300	66	80-120	**

Lab Batch #: 739751

Sample: 518991-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0362	0.0300	121	80-120	**

Lab Batch #: 739751

Sample: 518991-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene	0.0358	0.0300	119	80-120	

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 316338,

Project ID: 2008-275

Lab Batch #: 739751

Sample: 518991-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 739074

Sample: 316212-008 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.4	50.0	123	70-135	

Lab Batch #: 739074

Sample: 316212-008 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.8	50.0	126	70-135	

Lab Batch #: 739074

Sample: 316338-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	131	100	131	70-135	
o-Terphenyl	69.6	50.0	139	70-135	**

Lab Batch #: 739074

Sample: 518572-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	62.8	50.0	126	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: DCP Plant to Lea Station 6"

Work Orders : 316338,

Project ID: 2008-275

Lab Batch #: 739074

Sample: 518572-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	121	100	121	70-135	
o-Terphenyl	61.8	50.0	124	70-135	

Lab Batch #: 739074

Sample: 518572-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.1	50.0	124	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: DCP Plant to Lea Station 6"**

**Work Order #: 316338**

**Analyst: ASA**

**Lab Batch ID: 739751**

**Sample: 518991-1-BKS**

**Batch #: 1**

**Project ID: 2008-275**

**Date Analyzed: 11/10/2008**

**Matrix: Solid**

**Units: mg/kg**

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

<b>BTEX by EPA 8021B</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.5000	0.5045	101	0.5	0.5103	102	1	70-130	35	
Toluene	ND	0.5000	0.5373	107	0.5	0.5332	107	1	70-130	35	
Ethylbenzene	ND	0.5000	0.5337	107	0.5	0.5139	103	4	71-129	35	
m,p-Xylenes	ND	1.000	1.188	119	1	1.143	114	4	70-135	35	
o-Xylene	ND	0.5000	0.5671	113	0.5	0.5421	108	5	71-133	35	

**Analyst: ASA**

**Date Prepared: 10/31/2008**

**Date Analyzed: 11/02/2008**

**Lab Batch ID: 739074**

**Sample: 518572-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>TPH by SW8015 Mod</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	879	88	1000	866	87	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	934	93	1000	912	91	2	70-135	35	

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

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

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

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: DCP Plant to Lea Station 6"

Work Order #: 316338

Project ID: 2008-275

Lab Batch ID: 739751

QC- Sample ID: 316870-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/10/2008

Date Prepared: 11/10/2008

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.5116	0.2317	45	0.5116	0.2437	48	6	70-130	35
Toluene	0.0163	0.5116	0.2894	53	0.5116	0.2656	49	8	70-130	35	X
Ethylbenzene	0.0063	0.5116	0.1434	27	0.5116	0.1111	20	30	71-129	35	X
m,p-Xylenes	0.0270	1.023	0.7032	66	1.023	0.4388	40	49	70-135	35	XF
o-Xylene	0.0123	0.5116	0.2534	47	0.5116	0.1596	29	47	71-133	35	XF

Lab Batch ID: 739074

QC- Sample ID: 316212-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/03/2008

Date Prepared: 10/31/2008

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1070	878	82	1070	901	84	2	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1070	937	88	1070	961	90	2	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: DCP Plant to Lea Station 6"

Work Order #: 316338

Lab Batch #: 738813

Project ID: 2008-275

Date Analyzed: 10/31/2008

Date Prepared: 10/31/2008

Analyst: ASA

QC- Sample ID: 316265-001 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	10.7	9.86	8	20	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains  
 Date/ Time: 10 31 08 10 05  
 Lab ID #: 316338  
 Initials: AL

**Sample Receipt Checklist**

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	50 °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<del>Not Present</del>
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#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	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<del>Not Applicable</del>
#20	VOC samples have zero headspace?	<u>Yes</u>	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



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296  
 209 East Sunset Road, Suite E El Paso, Texas 79922 808•588•3443 915•585•3443 FAX 915•585•4944  
 5002 Basin Street Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6413  
 9015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•261•5260  
 E-Mail: [lab@traceanalysis.com](mailto:lab@traceanalysis.com)

### Certifications

**WBENC:** 237019      **HUB:** 1752439743100-86536      **DBE:** VN 20657  
**NCTRCA** WFWB38444Y0909

### NELAP Certifications

**Lubbock:** T104704219-08-TX      **El Paso:** T104704221-08-TX      **Midland:** T104704392-08-TX  
 LELAP-02003      LELAP-02002  
 Kansas E-10317

## Analytical and Quality Control Report

Camille Bryant  
 Basin Environmental Service Tech LLC  
 2800 Plains Hwy.  
 P.O. Box 301  
 Lovington, NM, 88260

Report Date: November 4, 2005

Work Order: 8103141



Project Location: South of Monument, NM  
 Project Name: DCP Plant to Lea Station 6 in.  
 Project Number: DCP Plant to Lea Station 6 in.  
 SRS#: 2008-275

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
177899	Stockpile	soil	2008-10-31	10:52	2008-10-31

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

*Blair Leftwich*

---

Dr. Blair Leftwich, Director

**Standard Flags**

**B** - *The sample contains less than ten times the concentration found in the method blank.*

## Case Narrative

Samples for project DCP Plant to Lea Station 6 in. were received by TraceAnalysis, Inc. on 2008-10-31 and assigned to work order 8103141. Samples for work order 8103141 were received intact without headspace and at a temperature of 3.2 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8103141 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

### Sample: 177899 - Stockpile

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 53836  
Prep Batch: 46075

Analytical Method: S 8021B  
Date Analyzed: 2008-11-01  
Sample Preparation: 2008-10-31

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.77	mg/Kg	20	0.0100
Toluene		42.2	mg/Kg	20	0.0100
Ethylbenzene		33.6	mg/Kg	20	0.0100
Xylene		83.9	mg/Kg	20	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	<sup>1</sup>	14.1	mg/Kg	20	20.0	70	70.9 - 125.1
4-Bromofluorobenzene (4-BFB)		19.8	mg/Kg	20	20.0	99	48.9 - 160.4

### Sample: 177899 - Stockpile

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 53798  
Prep Batch: 46048

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-10-31  
Sample Preparation: 2008-10-31

Prep Method: N/A  
Analyzed By: LD  
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		568	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>2</sup>	333	mg/Kg	5	100	333	10 - 250.4

### Sample: 177899 - Stockpile

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 53838  
Prep Batch: 46075

Analytical Method: S 8015B  
Date Analyzed: 2008-11-01  
Sample Preparation: 2008-10-31

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

*continued ...*

<sup>1</sup>Surrogate out due to peak interference.

<sup>2</sup>High surrogate recovery due to peak interference.



**Method Blank (1)**      QC Batch: 53838

QC Batch: 53838                                      Date Analyzed: 2008-11-01                                      Analyzed By: AG  
 Prep Batch: 46075                                      QC Preparation: 2008-10-31                                      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		0.817	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.860	mg/Kg	1	1.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)		0.875	mg/Kg	1	1.00	88	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 53798                                      Date Analyzed: 2008-10-31                                      Analyzed By: LD  
 Prep Batch: 46048                                      QC Preparation: 2008-10-31                                      Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	232	mg/Kg	1	250	<15.8	93	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	254	mg/Kg	1	250	<15.8	102	27.8 - 152.1	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	95.3	93.5	mg/Kg	1	100	95	94	38 - 130.4

**Laboratory Control Spike (LCS-1)**

QC Batch: 53836                                      Date Analyzed: 2008-11-01                                      Analyzed By: AG  
 Prep Batch: 46075                                      QC Preparation: 2008-10-31                                      Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.884	mg/Kg	1	1.00	<0.00800	88	72.7 - 129.8
Toluene	0.900	mg/Kg	1	1.00	<0.00800	90	71.6 - 129.6
Ethylbenzene	0.902	mg/Kg	1	1.00	<0.00820	90	70.8 - 129.7
Xylene	2.56	mg/Kg	1	3.00	<0.00960	85	70.9 - 129.4



Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	248	mg/Kg	1	250	75.1	69	18 - 179.5	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	108	106	mg/Kg	1	100	108	106	34.1 - 158

**Matrix Spike (MS-1)** Spiked Sample: 177751

QC Batch: 53836  
Prep Batch: 46075

Date Analyzed: 2008-11-01  
QC Preparation: 2008-10-31

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.895	mg/Kg	1	1.00	<0.00800	90	58.6 - 165.2
Toluene	0.921	mg/Kg	1	1.00	0.0293	89	64.2 - 153.8
Ethylbenzene	0.946	mg/Kg	1	1.00	<0.00820	95	61.6 - 159.4
Xylene	2.69	mg/Kg	1	3.00	<0.00960	90	64.4 - 155.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.958	mg/Kg	1	1.00	<0.00800	96	58.6 - 165.2	7	20
Toluene	0.989	mg/Kg	1	1.00	0.0293	96	64.2 - 153.8	7	20
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00820	102	61.6 - 159.4	8	20
Xylene	2.90	mg/Kg	1	3.00	<0.00960	97	64.4 - 155.3	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	<sup>4</sup> 0.718	0.730	mg/Kg	1	1	72	73	76.5 - 127.9
4-Bromofluorobenzene (4-BFB)	<sup>5</sup> 0.749	0.756	mg/Kg	1	1	75	76	72 - 127.8

**Matrix Spike (MS-1)** Spiked Sample: 177751

QC Batch: 53838  
Prep Batch: 46075

Date Analyzed: 2008-11-01  
QC Preparation: 2008-10-31

Analyzed By: AG  
Prepared By: AG

*continued ...*

<sup>4</sup>Surrogate out due to peak interference.

<sup>5</sup>Surrogate out due to peak interference.







# **Analytical Report 322296**

**for**

## **PLAINS ALL AMERICAN EH&S**

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6"**

**2008-275**

**15-JAN-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  
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



15-JAN-09

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

Reference: XENCO Report No: **322296**  
**DCP Plant to Lea Station 6"**  
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 322296. 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. 322296 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 322296**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6"

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SB-2 10'	S	Jan-09-09 10:00		322296-001
SB-2 20'	S	Jan-09-09 10:10		322296-002
SB-2 30'	S	Jan-09-09 10:20		322296-003
SB-2 40'	S	Jan-09-09 10:30		322296-004
SB-2 50'	S	Jan-09-09 10:45		322296-005
SB-2 60'	S	Jan-09-09 10:55		322296-006



# Certificate of Analysis Summary 322296

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Project Name: DCP Plant to Lea Station 6"

Date Received in Lab: Tue Jan-13-09 10:36 am

Report Date: 15-JAN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	322296-001	322296-002	322296-003	322296-004	322296-005	322296-006
	Field Id:	SB-2 10'	SB-2 20'	SB-2 30'	SB-2 40'	SB-2 50'	SB-2 60'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-09-09 10 00	Jan-09-09 10 10	Jan-09-09 10 20	Jan-09-09 10 30	Jan-09-09 10 45	Jan-09-09 10 55
<b>BTEX by EPA 8021B</b>	Extracted:	Jan-13-09 13 00					
	Analyzed:	Jan-13-09 18 57	Jan-13-09 19 18	Jan-13-09 19 39	Jan-13-09 20 01	Jan-13-09 20 22	Jan-13-09 20 43
	Units/RL:	mg/kg RL					
Benzene		ND 0 0011	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0011
Toluene		ND 0 0022	ND 0 0021	ND 0 0020	ND 0 0020	ND 0 0021	ND 0 0021
Ethylbenzene		ND 0 0011	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0011
m,p-Xylenes		ND 0 0022	ND 0 0021	ND 0 0020	ND 0 0020	ND 0 0021	ND 0 0021
o-Xylene		ND 0 0011	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0011
Total Xylenes		ND 0 0022	ND 0 0021	ND 0 0020	ND 0 0020	ND 0 0021	ND 0 0021
Total BTEX		ND 0 0011	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0010	ND 0 0011
<b>Percent Moisture</b>	Extracted:	Jan-13-09 17 00					
	Analyzed:	Jan-13-09 17 00					
	Units/RL:	% RL					
Percent Moisture		8 07 1 00	4 54 1 00	2 08 1 00	1 03 1 00	3 11 1 00	6 19 1 00
<b>TPH By SW8015 Mod</b>	Extracted:	Jan-13-09 13 30					
	Analyzed:	Jan-13-09 18 54	Jan-13-09 19 19	Jan-13-09 19 44	Jan-13-09 20 34	Jan-13-09 20 59	Jan-13-09 21 25
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16 3	ND 15 7	ND 15 3	ND 15 2	ND 15 5	ND 16 0
C12-C28 Diesel Range Hydrocarbons		ND 16 3	ND 15 7	ND 15 3	ND 15 2	ND 15 5	ND 16 0
C28-C35 Oil Range Hydrocarbons		ND 16 3	ND 15 7	ND 15 3	ND 15 2	ND 15 5	ND 16 0
Total TPH		ND 16 3	ND 15 7	ND 15 3	ND 15 2	ND 15 5	ND 16 0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end user 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  
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.

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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: DCP Plant to Lea Station 6"

Work Orders : 322296,

Project ID: 2008-275

Lab Batch #: 746367

Sample: 322296-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 746367

Sample: 322296-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 746367

Sample: 322296-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 746367

Sample: 322296-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 746367

Sample: 322296-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 322296,

Project ID: 2008-275

Lab Batch #: 746367

Sample: 322296-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 746367

Sample: 322296-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

Lab Batch #: 746367

Sample: 322296-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 746367

Sample: 522852-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 746367

Sample: 522852-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 322296,

Project ID: 2008-275

Lab Batch #: 746367

Sample: 522852-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 746422

Sample: 322296-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 746422

Sample: 322296-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 746422

Sample: 322296-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 746422

Sample: 322296-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.6	100	99	70-135	
o-Terphenyl	53.0	50.0	106	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: DCP Plant to Lea Station 6"

Work Orders : 322296,

Project ID: 2008-275

Lab Batch #: 746422

Sample: 322296-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	100	98	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 746422

Sample: 322296-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 746422

Sample: 322296-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 746422

Sample: 322296-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	100	99	70-135	
o-Terphenyl	53.9	50.0	108	70-135	

Lab Batch #: 746422

Sample: 522884-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	51.6	50.0	103	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: DCP Plant to Lea Station 6"

Work Orders : 322296,

Project ID: 2008-275

Lab Batch #: 746422

Sample: 522884-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	100	98	70-135	
o-Terphenyl	54.6	50.0	109	70-135	

Lab Batch #: 746422

Sample: 522884-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	52.5	50.0	105	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: DCP Plant to Lea Station 6"

Work Order #: 322296

Project ID: 2008-275

Analyst: ASA

Date Prepared: 01/13/2009

Date Analyzed: 01/13/2009

Lab Batch ID: 746367

Sample: 522852-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.0988	99	0.1	0.0978	98	1	70-130	35	
Toluene	ND	0.1000	0.0965	97	0.1	0.0958	96	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1028	103	0.1	0.1022	102	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2038	102	0.2	0.2025	101	1	70-135	35	
o-Xylene	ND	0.1000	0.0985	99	0.1	0.0978	98	1	71-133	35	

Analyst: BHW

Date Prepared: 01/13/2009

Date Analyzed: 01/13/2009

Lab Batch ID: 746422

Sample: 522884-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1110	111	1000	1110	111	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1090	109	1000	1070	107	2	70-135	35	

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

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

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

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: DCP Plant to Lea Station 6"

Work Order #: 322296

Project ID: 2008-275

Lab Batch ID: 746367

QC- Sample ID: 322296-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/14/2009

Date Prepared: 01/13/2009

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1088	0.0666	61	0.1088	0.0689	63	3	70-130	35	X
Toluene	ND	0.1088	0.0647	59	0.1088	0.0665	61	3	70-130	35	X
Ethylbenzene	ND	0.1088	0.0674	62	0.1088	0.0690	63	2	71-129	35	X
m,p-Xylenes	ND	0.2176	0.1332	61	0.2176	0.1359	62	2	70-135	35	X
o-Xylene	ND	0.1088	0.0612	56	0.1088	0.0629	58	4	71-133	35	X

Lab Batch ID: 746422

QC- Sample ID: 322296-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/14/2009

Date Prepared: 01/13/2009

Analyst: BHW

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1090	1160	106	1090	1180	108	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1090	1120	103	1090	1140	105	2	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: DCP Plant to Lea Station 6"

Work Order #: 322296

Lab Batch #: 746380

Project ID: 2008-275

Date Analyzed: 01/13/2009

Date Prepared: 01/13/2009

Analyst: BEV

QC- Sample ID: 322296-001 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	8.07	10.4	25	20	F

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



**Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

Client Basin Env. / Plains  
 Date/ Time 1/13/09 10:36  
 Lab ID # 32229V  
 Initials AL

**Sample Receipt Checklist**

	Yes	No	Client Initials
1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>		-2.0 °C
2 Shipping container in good condition?	<input checked="" type="checkbox"/>		
3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>		(Not Present)
4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/>		Not Present
5 Chain of Custody present?	<input checked="" type="checkbox"/>		
6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>		
7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>		
8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>		ID written on Cont / Lid
9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>		Not Applicable
10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>		
11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>		
12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>		See Below
13 Samples properly preserved?	<input checked="" type="checkbox"/>		See Below
14 Sample bottles intact?	<input checked="" type="checkbox"/>		
15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>		
16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>		
17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>		See Below
18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>		See Below
19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>		(Not Applicable)
20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>		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 323065**

**for**

## **PLAINS ALL AMERICAN EH&S**

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6"**

**2008-275**

**23-JAN-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**

**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**



23-JAN-09

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

Reference: XENCO Report No: **323065**  
**DCP Plant to Lea Station 6"**  
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 323065. 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. 323065 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,

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**Brent Barron, II**

Odessa Laboratory Manager

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

*Certified and approved by numerous States and Agencies.*

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

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



**Sample Cross Reference 323065**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6"

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
ESW @ 14.5'	S	Jan-21-09 13:30		323065-001
NESW @ 14.5'	S	Jan-21-09 13:40		323065-002
NWSW @ 14.5'	S	Jan-21-09 13:50		323065-003
SESW @ 14.5'	S	Jan-21-09 14:00		323065-004
SWSW @ 14.5'	S	Jan-21-09 14:10		323065-005
WSW @ 14.5'	S	Jan-21-09 14:20		323065-006
E Floor @ 15'	S	Jan-21-09 14:30		323065-007
W Floor @ 15'	S	Jan-21-09 14:40		323065-008
C Floor @ 15'	S	Jan-21-09 14:50		323065-009



# Certificate of Analysis Summary 323065

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



**Project Id:** 2008-275

**Contact:** Daniel Bryant

**Project Location:** Lea County, NM

**Project Name:** DCP Plant to Lea Station 6''

**Date Received in Lab:** Thu Jan-22-09 08:24 am

**Report Date:** 23-JAN-09

**Project Manager:** Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	323065-001	323065-002	323065-003	323065-004	323065-005	323065-006
	<i>Field Id:</i>	ESW @ 14 5'	NESW @ 14 5'	NWSW @ 14 5'	SESW @ 14 5'	SWSW @ 14 5'	WSW @ 14 5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-21-09 13 30	Jan-21-09 13 40	Jan-21-09 13 50	Jan-21-09 14 00	Jan-21-09 14 10	Jan-21-09 14 20
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-22-09 15 30					
	<i>Analyzed:</i>	Jan-22-09 23 40	Jan-23-09 00 00	Jan-23-09 00 21	Jan-23-09 00 43	Jan-23-09 05 38	Jan-23-09 01 04
	<i>Units/RL:</i>	mg/kg RL					
Benzene		0 0127 0 0010	0 0102 0 0010	0 0146 0 0010	0 0186 0 0010	ND 0 0508	ND 0 0010
Toluene		0 1879 0 0020	0 0758 0 0020	0 1483 0 0020	0 1126 0 0020	0 3422 0 1016	0 0099 0 0020
Ethylbenzene		0 0664 0 0010	0 0175 0 0010	0 0437 0 0010	0 0120 0 0010	0 7845 0 0508	0 0053 0 0010
m,p-Xylenes		0 1976 0 0020	0 0444 0 0020	0 1075 0 0020	0 0223 0 0020	2 674 0 1016	0 0124 0 0020
o-Xylene		0 0375 0 0010	0 0099 0 0010	0 0233 0 0010	0 0070 0 0010	1 024 0 0508	0 0028 0 0010
Total Xylenes		0 2351 0 0020	0 0543 0 0020	0 1308 0 0020	0 0293 0 0020	3 698 0 1016	0 0152 0 0020
Total BTEX		0 5021 0 0010	0 1578 0 0010	0 3374 0 0010	0 1725 0 0010	4 8247 0 0508	0 0304 0 0010
<b>Percent Moisture</b>	<i>Extracted:</i>	Jan-22-09 17 00					
	<i>Analyzed:</i>	Jan-22-09 17 00					
	<i>Units/RL:</i>	% RL					
Percent Moisture		1 30 1 00	2 03 1 00	ND 1 00	2 06 1 00	1 53 1 00	2 32 1 00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-22-09 14 25					
	<i>Analyzed:</i>	Jan-22-09 18 00	Jan-22-09 18 25	Jan-22-09 18 49	Jan-22-09 19 14	Jan-22-09 19 38	Jan-22-09 20 03
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		18 6 15 2	ND 15 3	17 0 15 1	38 8 15 3	215 15 2	ND 15 4
C12-C28 Diesel Range Hydrocarbons		ND 15 2	ND 15 3	ND 15 1	2990 15 3	207 15 2	ND 15 4
C28-C35 Oil Range Hydrocarbons		ND 15 2	ND 15 3	ND 15 1	232 15 3	30 0 15 2	ND 15 4
Total TPH		18 6 15 2	ND 15 3	17 15 1	3260 8 15 3	452 15 2	ND 15 4

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  
 Odessa Laboratory Director



# Certificate of Analysis Summary 323065

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



**Project Id:** 2008-275

**Contact:** Daniel Bryant

**Project Location:** Lea County, NM

**Project Name:** DCP Plant to Lea Station 6''

**Date Received in Lab:** Thu Jan-22-09 08:24 am

**Report Date:** 23-JAN-09

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	323065-007	323065-008	323065-009			
	<i>Field Id:</i>	E Floor @ 15'	W Floor @ 15'	C Floor @ 15'			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jan-21-09 14 30	Jan-21-09 14 40	Jan-21-09 14 50			
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-22-09 15 30	Jan-22-09 15 30	Jan-22-09 15 30			
	<i>Analyzed:</i>	Jan-23-09 01 25	Jan-23-09 05 59	Jan-23-09 06 20			
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL			
Benzene		ND    0 0010	0 0836    0 0507	0 4157    0 0513			
Toluene		0 0126    0 0020	4 161    0 1013	11 01    0 1026			
Ethylbenzene		0 0069    0 0010	4 509    0 0507	8 918    0 0513			
m,p-Xylenes		0 0218    0 0020	11 50    0 1013	25 42    0 1026			
o-Xylene		0 0049    0 0010	4 017    0 0507	9 998    0 0513			
Total Xylenes		0 0267    0 0020	15 517    0 1013	35 418    0 1026			
Total BTEX		0 0462    0 0010	24 2706    0 0507	55 7617    0 0513			
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-22-09 17 00	Jan-22-09 17 00	Jan-22-09 17 00			
	<i>Units/RL:</i>	%    RL	%    RL	%    RL			
Percent Moisture		ND    1 00	1 28    1 00	2 57    1 00			
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-22-09 14 25	Jan-22-09 14 25	Jan-22-09 14 25			
	<i>Analyzed:</i>	Jan-22-09 20 27	Jan-22-09 20 51	Jan-22-09 21 16			
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL			
C6-C12 Gasoline Range Hydrocarbons		ND    15 1	913    15 2	404    15 4			
C12-C28 Diesel Range Hydrocarbons		37 9    15 1	328    15 2	550    15 4			
C28-C35 Oil Range Hydrocarbons		ND    15 1	25 0    15 2	102    15 4			
Total TPH		37 9    15 1	1266    15 2	1056    15 4			

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  
 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.

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# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747356

Sample: 323065-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 747356

Sample: 323065-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0390	0.0300	130	80-120	*
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 747356

Sample: 323065-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 747356

Sample: 323065-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 747356

Sample: 323065-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0521	0.0300	174	80-120	*

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747356

Sample: 323065-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 747356

Sample: 323065-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 747356

Sample: 323065-007 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 747356

Sample: 323065-007 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

**SURROGATE RECOVERY STUDY**

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

Lab Batch #: 747356

Sample: 323065-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0422	0.0300	141	80-120	*
4-Bromofluorobenzene	0.0833	0.0300	278	80-120	*

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747356

Sample: 323065-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzene	0.0423	0.0300	141	80-120	*
4-Bromofluorobenzene	0.2230	0.0300	743	80-120	*

Lab Batch #: 747356

Sample: 523469-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

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

Lab Batch #: 747356

Sample: 523469-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 747356

Sample: 523469-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 747358

Sample: 322999-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	53.3	50.0	107	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: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747358

Sample: 322999-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 747358

Sample: 323065-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

Lab Batch #: 747358

Sample: 323065-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Lab Batch #: 747358

Sample: 323065-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	54.3	50.0	109	70-135	

Lab Batch #: 747358

Sample: 323065-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	57.3	50.0	115	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: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747358

Sample: 323065-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	57.1	50.0	114	70-135	

Lab Batch #: 747358

Sample: 323065-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 747358

Sample: 323065-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 747358

Sample: 323065-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 747358

Sample: 323065-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	27.1	100	27	70-135	**
o-Terphenyl	11.0	50.0	22	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: DCP Plant to Lea Station 6"

Work Orders : 323065,

Project ID: 2008-275

Lab Batch #: 747358

Sample: 523479-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	53.1	50.0	106	70-135	

Lab Batch #: 747358

Sample: 523479-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

Lab Batch #: 747358

Sample: 523479-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	53.9	50.0	108	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: DCP Plant to Lea Station 6"**

**Work Order #: 323065**

**Project ID: 2008-275**

**Analyst: ASA**

**Date Prepared: 01/22/2009**

**Date Analyzed: 01/22/2009**

**Lab Batch ID: 747356**

**Sample: 523469-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>BTEX by EPA 8021B</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.1002	100	0.1	0.1035	104	3	70-130	35	
Toluene	ND	0.1000	0.0952	95	0.1	0.0983	98	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0987	99	0.1	0.1039	104	5	71-129	35	
m,p-Xylenes	ND	0.2000	0.1947	97	0.2	0.2059	103	6	70-135	35	
o-Xylene	ND	0.1000	0.0946	95	0.1	0.0981	98	4	71-133	35	

**Analyst: BHW**

**Date Prepared: 01/22/2009**

**Date Analyzed: 01/22/2009**

**Lab Batch ID: 747358**

**Sample: 523479-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>TPH By SW8015 Mod</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1110	111	1000	1100	110	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1080	108	1000	1080	108	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: DCP Plant to Lea Station 6"

Work Order #: 323065

Project ID: 2008-275

Lab Batch ID: 747356

QC- Sample ID: 323065-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/23/2009

Date Prepared: 01/22/2009

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1007	0.0827	82	0.1007	0.0875	87	6	70-130	35	
Toluene	0.0126	0.1007	0.1042	91	0.1007	0.1071	94	3	70-130	35	
Ethylbenzene	0.0069	0.1007	0.0805	73	0.1007	0.0809	73	0	71-129	35	
m,p-Xylenes	0.0218	0.2014	0.1711	74	0.2014	0.1807	79	7	70-135	35	
o-Xylene	0.0049	0.1007	0.0781	73	0.1007	0.0816	76	4	71-133	35	

Lab Batch ID: 747358

QC- Sample ID: 322999-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/22/2009

Date Prepared: 01/22/2009

Analyst: BHW

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1090	1190	109	1090	1190	109	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1090	1140	105	1090	1120	103	2	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: DCP Plant to Lea Station 6"**

**Work Order #: 323065**

**Lab Batch #: 747304**

**Project ID: 2008-275**

**Date Analyzed: 01/22/2009**

**Date Prepared: 01/22/2009**

**Analyst: BEV**

**QC- Sample ID: 322999-005 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	9.59	8.90	7	20	

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client Basin/Plains  
 Date/ Time 11/22/09 @ 4:24  
 Lab ID # 3230001  
 Initials YWA

**Sample Receipt Checklist**

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.0 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 325004

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6-Inch**

**2008-275**

**20-FEB-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

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



20-FEB-09

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

Reference: XENCO Report No: **325004**  
**DCP Plant to Lea Station 6-Inch**  
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 325004. 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. 325004 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 325004**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6-Inch

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Stockpile # 1	S	Feb-12-09 13:30		325004-001
Stockpile # 2	S	Feb-12-09 13:35		325004-002
Stockpile # 3	S	Feb-12-09 13:40		325004-003
Stockpile # 4	S	Feb-12-09 13:45		325004-004
Stockpile # 5	S	Feb-12-09 13:50		325004-005



# Certificate of Analysis Summary 325004

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6-Inch



Project Id: 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Fri Feb-13-09 04:09 pm

Report Date: 20-FEB-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	325004-001	325004-002	325004-003	325004-004	325004-005	
	Field Id:	Stockpile # 1	Stockpile # 2	Stockpile # 3	Stockpile # 4	Stockpile # 5	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Feb-12-09 13 30	Feb-12-09 13 35	Feb-12-09 13 40	Feb-12-09 13 45	Feb-12-09 13 50	
BTEX by EPA 8021B	Extracted:	Feb-17-09 10 15	Feb-17-09 10 15	Feb-19-09 16 45	Feb-17-09 10 15	Feb-17-09 10 15	
	Analyzed:	Feb-18-09 08 18	Feb-18-09 08 39	Feb-20-09 02 02	Feb-18-09 09 20	Feb-18-09 09 40	
	Units/RL:	mg/kg RL					
Benzene		ND 0.0535	0.3828 0.0535	3.013 0.2837	ND 0.0534	ND 0.0538	
Toluene		ND 0.1070	1.867 0.1071	18.01 0.5673	0.1841 0.1067	0.2910 0.1076	
Ethylbenzene		0.9546 0.0535	2.779 0.0535	10.27 0.2837	1.255 0.0534	0.9154 0.0538	
m,p-Xylenes		4.183 0.1070	10.72 0.1071	64.14 0.5673	6.117 0.1067	3.560 0.1076	
o-Xylene		3.278 0.0535	7.116 0.0535	12.88 0.2837	3.042 0.0534	2.130 0.0538	
Total Xylenes		7.461 0.0535	17.836 0.0535	77.02 0.2837	9.159 0.0534	5.69 0.0538	
Total BTEX		8.4156 0.0535	22.8648 0.0535	108.313 0.2837	10.5981 0.0534	6.8964 0.0538	
Percent Moisture	Extracted:						
	Analyzed:	Feb-13-09 17 00					
	Units/RL:	% RL					
Percent Moisture		6.56 1.00	6.62 1.00	11.87 1.00	6.32 1.00	7.04 1.00	
TPH By SW8015 Mod	Extracted:	Feb-17-09 22 26					
	Analyzed:	Feb-18-09 18 52	Feb-18-09 19 15	Feb-18-09 19 38	Feb-18-09 20 01	Feb-18-09 20 24	
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		1380 161	1310 80.3	2720 85.1	1060 80.1	436 80.7	
C12-C28 Diesel Range Hydrocarbons		645 161	593 80.3	576 85.1	518 80.1	245 80.7	
C28-C35 Oil Range Hydrocarbons		ND 161	ND 80.3	ND 85.1	ND 80.1	ND 80.7	
Total TPH		2025 161	1903 80.3	3296 85.1	1578 80.1	681 80.7	

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  
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.

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch

Work Orders : 325004,

Project ID: 2008-275

Lab Batch #: 749952

Sample: 324701-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 749952

Sample: 324701-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 749952

Sample: 325004-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.1213	0.0300	404	80-120	**

Lab Batch #: 749952

Sample: 325004-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.1413	0.0300	471	80-120	**

Lab Batch #: 749952

Sample: 325004-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0352	0.0300	117	80-120	
4-Bromofluorobenzene	0.1259	0.0300	420	80-120	**

\*\* 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: DCP Plant to Lea Station 6-Inch

Work Orders : 325004,

Project ID: 2008-275

Lab Batch #: 749952

Sample: 325004-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0357	0.0300	119	80-120	
4-Bromofluorobenzene	0.0918	0.0300	306	80-120	**

Lab Batch #: 749952

Sample: 524960-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 749952

Sample: 524960-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 749952

Sample: 524960-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

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

Lab Batch #: 750237

Sample: 325004-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0657	0.0300	219	80-120	**

\*\* 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: DCP Plant to Lea Station 6-Inch

Work Orders : 325004,

Project ID: 2008-275

Lab Batch #: 750237

Sample: 525080-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0241	0.0300	80	80-120	

Lab Batch #: 750237

Sample: 525080-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 750237

Sample: 525080-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0240	0.0300	80	80-120	

Lab Batch #: 750044

Sample: 325004-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

Lab Batch #: 750044

Sample: 325004-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	53.4	50.0	107	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: DCP Plant to Lea Station 6-Inch

Work Orders : 325004,

Project ID: 2008-275

Lab Batch #: 750044

Sample: 325004-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	51.4	50.0	103	70-135	

Lab Batch #: 750044

Sample: 325004-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 750044

Sample: 325004-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 750044

Sample: 325090-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 750044

Sample: 325090-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	58.6	50.0	117	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: DCP Plant to Lea Station 6-Inch**

Work Orders : 325004,

Project ID: 2008-275

Lab Batch #: 750044

Sample: 524995-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

Lab Batch #: 750044

Sample: 524995-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 750044

Sample: 524995-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	51.3	50.0	103	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: DCP Plant to Lea Station 6-Inch

Work Order #: 325004

Analyst: ASA

Date Prepared: 02/17/2009

Project ID: 2008-275

Date Analyzed: 02/18/2009

Lab Batch ID: 749952

Sample: 524960-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.1007	101	0.1	0.1078	108	7	70-130	35	
Toluene		ND	0.1000	0.0997	100	0.1	0.1076	108	8	70-130	35	
Ethylbenzene		ND	0.1000	0.0976	98	0.1	0.1055	106	8	71-129	35	
m,p-Xylenes		ND	0.2000	0.2020	101	0.2	0.2186	109	8	70-135	35	
o-Xylene		ND	0.1000	0.0997	100	0.1	0.1074	107	7	71-133	35	

Analyst: ASA

Date Prepared: 02/19/2009

Date Analyzed: 02/20/2009

Lab Batch ID: 750237

Sample: 525080-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.1050	105	0.1	0.1043	104	1	70-130	35	
Toluene		ND	0.1000	0.1059	106	0.1	0.1051	105	1	70-130	35	
Ethylbenzene		0.0010	0.1000	0.1059	106	0.1	0.1048	105	1	71-129	35	
m,p-Xylenes		ND	0.2000	0.2198	110	0.2	0.2179	109	1	70-135	35	
o-Xylene		0.0010	0.1000	0.1081	108	0.1	0.1073	107	1	71-133	35	

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

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

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

All results are based on MDL and Validated for QC Purposes



# BS / BSD Recoveries



**Project Name: DCP Plant to Lea Station 6-Inch**

**Work Order #: 325004**

**Analyst: BHW**

**Lab Batch ID: 750044**

**Sample: 524995-1-BKS**

**Date Prepared: 02/17/2009**

**Batch #: 1**

**Project ID: 2008-275**

**Date Analyzed: 02/18/2009**

**Matrix: Solid**

**Units: mg/kg**

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

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	963	96	1000	959	96	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	979	98	1000	976	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: DCP Plant to Lea Station 6-Inch

Work Order #: 325004

Project ID: 2008-275

Lab Batch ID: 749952

QC- Sample ID: 324701-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/18/2009

Date Prepared: 02/17/2009

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1103	0.0881	80	0.1103	0.0871	79	1	70-130	35	
Toluene	ND	0.1103	0.0828	75	0.1103	0.0807	73	3	70-130	35	
Ethylbenzene	ND	0.1103	0.0714	65	0.1103	0.0696	63	3	71-129	35	X
m,p-Xylenes	ND	0.2206	0.1435	65	0.2206	0.1405	64	2	70-135	35	X
o-Xylene	ND	0.1103	0.0720	65	0.1103	0.0713	65	1	71-133	35	X

Lab Batch ID: 750044

QC- Sample ID: 325090-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/19/2009

Date Prepared: 02/17/2009

Analyst: BHW

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1150	1130	98	1150	1140	99	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1150	1160	101	1150	1160	101	0	70-135	35	

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

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

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



# Sample Duplicate Recovery



Project Name: DCP Plant to Lea Station 6-Inch

Work Order #: 325004

Lab Batch #: 749606

Project ID: 2008-275

Date Analyzed: 02/13/2009

Date Prepared: 02/13/2009

Analyst: BEV

QC- Sample ID: 325004-001 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	6.56	7.02	7	20	

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



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client Frederick Williams  
Date/ Time 2/20/01 11:00  
Lab ID # 20000-1  
Initials IL

**Sample Receipt Checklist**

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	Yes	No	20.0 °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 334309

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6 Inch**

**2008-275**

**04-JUN-09**



**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX  
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-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



04-JUN-09

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

Reference: XENCO Report No: **334309**  
**DCP Plant to Lea Station 6 Inch**  
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 334309. 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. 334309 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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*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 334309**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6 Inch

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Stockpile # 3 A	S	Jun-01-09 09:00		334309-001



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: DCP Plant to Lea Station 6 Inch*

*Project ID: 2008-275*

*Report Date: 04-JUN-09*

*Work Order Number: 334309*

*Date Received: 06/02/2009*

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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-761042 BTEX-MTBE EPA 8021B  
SW8021BM

Batch 761042, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 334309-001 D.

4-Bromofluorobenzene recovered below QC limits QC Data not confirmed by re-analysis.

Samples affected are: 531177-1-BLK.

Batch: LBA-761108 TPH by SW8015 Mod

None

Batch: LBA-761116 Percent Moisture

None



# Certificate of Analysis Summary 334309

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6 Inch



Project Id: 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Tue Jun-02-09 04:20 pm

Report Date: 04-JUN-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	334309-001					
	<i>Field Id:</i>	Stockpile # 3 A					
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Jun-01-09 09 00					
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jun-03-09 10 00					
	<i>Analyzed:</i>	Jun-03-09 12 25					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		ND	0 0526				
Toluene		0 1604	0 1052				
Ethylbenzene		0 2298	0 0526				
m,p-Xylenes		1 108	0 1052				
o-Xylene		0 4427	0 0526				
Total Xylenes		1 5507	0 0526				
Total BTEX		1 9409	0 0526				
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jun-04-09 08 37					
	<i>Units/RL:</i>	% RL					
Percent Moisture		5 09	1 00				
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jun-03-09 13 10					
	<i>Analyzed:</i>	Jun-03-09 15 43					
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		290	158				
C12-C28 Diesel Range Hydrocarbons		917	158				
C28-C35 Oil Range Hydrocarbons		257	158				
Total TPH		1464	158				

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 user 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  
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.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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 5757 NW 158th St, Miami Lakes, FL 33014  
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



## Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6 Inch

Work Orders : 334309,

Project ID: 2008-275

Lab Batch #: 761042

Sample: 531177-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 10:51

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 761042

Sample: 531177-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 11:13

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 761042

Sample: 531177-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 11:55

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0179	0.0300	60	80-120	**

Lab Batch #: 761042

Sample: 334309-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/03/09 12:25

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	

Lab Batch #: 761042

Sample: 334309-001 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/03/09 13:08

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6 Inch

Work Orders : 334309,

Project ID: 2008-275

Lab Batch #: 761108

Sample: 531196-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 14:33

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane	111	100	111	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 761108

Sample: 531196-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 14:57

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane	112	100	112	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 761108

Sample: 531196-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/03/09 15:20

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane	101	100	101	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 761108

Sample: 334309-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/03/09 15:43

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 761108

Sample: 334309-001 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/03/09 16:06

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
l-Chlorooctane	106	100	106	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# BS / BSD Recoveries



Project Name: DCP Plant to Lea Station 6 Inch

Work Order #: 334309

Analyst: ASA

Date Prepared: 06/03/2009

Project ID: 2008-275

Date Analyzed: 06/03/2009

Lab Batch ID: 761042

Sample: 531177-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Benzene	ND	0.1000	0.1092	109	0.1	0.1099	110	1	70-130	35	
Toluene	ND	0.1000	0.1050	105	0.1	0.1059	106	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1091	109	0.1	0.1104	110	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2205	110	0.2	0.2228	111	1	70-135	35	
o-Xylene	ND	0.1000	0.1041	104	0.1	0.1051	105	1	71-133	35	

Analyst: BHW

Date Prepared: 06/03/2009

Date Analyzed: 06/03/2009

Lab Batch ID: 761108

Sample: 531196-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	798	80	1000	792	79	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	972	97	1000	968	97	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



# Sample Duplicate Recovery



Project Name: DCP Plant to Lea Station 6 Inch

Work Order #: 334309

Lab Batch #: 761042

Project ID: 2008-275

Date Analyzed: 06/03/2009

Date Prepared: 06/03/2009

Analyst: ASA

QC- Sample ID: 334309-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## SAMPLE / SAMPLE DUPLICATE RECOVERY

BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	0.1604	0.1677	4	35	
Ethylbenzene	0.2298	0.2355	2	35	
m,p-Xylenes	1.108	1.171	6	35	
o-Xylene	0.4427	0.4821	9	35	

Lab Batch #: 761116

Date Analyzed: 06/04/2009

Date Prepared: 06/04/2009

Analyst: BEV

QC- Sample ID: 334305-001 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	ND	ND	NC	20	

Lab Batch #: 761108

Date Analyzed: 06/03/2009

Date Prepared: 06/03/2009

Analyst: BHW

QC- Sample ID: 334309-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## SAMPLE / SAMPLE DUPLICATE RECOVERY

TPH By SW8015 Mod	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
C6-C12 Gasoline Range Hydrocarbons	290	294	1	35	
C12-C28 Diesel Range Hydrocarbons	917	963	5	35	
C28-C35 Oil Range Hydrocarbons	257	273	6	35	

Spike Relative Difference RPD 200 \* |(B-A)/(B+A)|

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

BRL - Below Reporting Limit



Environmental Lab of Texas  
Variance/ Corrective Action Report- Sample Log-In

Client Basin / Plains  
 Date/ Time 6-2-09 16:20  
 Lab ID # 334309  
 Initials al

**Sample Receipt Checklist**

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	Yes	No	6.0 °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 322295

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**DCP Plant to Lea Station 6"**

**2008-275**

**14-JAN-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

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



14-JAN-09

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

Reference: XENCO Report No: **322295**  
**DCP Plant to Lea Station 6"**  
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 322295. 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. 322295 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

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

*Certified and approved by numerous States and Agencies.*

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

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**Sample Cross Reference 322295**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
DCP Plant to Lea Station 6"

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Prelim GW	W	Jan-09-09 12:35		322295-001



# Certificate of Analysis Summary 322295

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6"



Project ID: 2008-275

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Tue Jan-13-09 10:36 am

Report Date: 14-JAN-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	322295-001					
	<i>Field Id:</i>	Prelim GW					
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER					
	<i>Sampled:</i>	Jan-09-09 12 35					
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-13-09 11 00					
	<i>Analyzed:</i>	Jan-13-09 13 39					
	<i>Units/RL:</i>	mg/L RL					
	Benzene	ND 0 0010					
Toluene	ND 0 0020						
Ethylbenzene	ND 0 0010						
m,p-Xylenes	ND 0 0020						
o-Xylene	ND 0 0010						
Total Xylenes	ND 0 0010						
Total BTEX	ND 0 0010						

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.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
 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.

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**Houston - Dallas - San Antonio - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America**

4143 Greenbriar Dr, Stafford, Tx 77477  
 9701 Harry Hines Blvd , Dallas, TX 75220  
 5332 Blackberry Drive, San Antonio TX 78238  
 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6"

Work Orders : 322295,

Project ID: 2008-275

Lab Batch #: 746326

Sample: 322082-005 S / MS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 746326

Sample: 322082-005 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 746326

Sample: 322295-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 746326

Sample: 522824-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 746326

Sample: 522824-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

\*\* 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: DCP Plant to Lea Station 6"

Work Orders : 322295,

Project ID: 2008-275

Lab Batch #: 746326

Sample: 522824-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

\*\* 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: DCP Plant to Lea Station 6"

Work Order #: 322295

Analyst: ASA

Date Prepared: 01/13/2009

Project ID: 2008-275

Date Analyzed: 01/13/2009

Lab Batch ID: 746326

Sample: 522824-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.0919	92	0.1	0.0874	87	5	70-125	25	
Toluene	ND	0.1000	0.0867	87	0.1	0.0825	83	5	70-125	25	
Ethylbenzene	ND	0.1000	0.0883	88	0.1	0.0848	85	4	71-129	25	
m,p-Xylenes	ND	0.2000	0.1734	87	0.2	0.1666	83	4	70-131	25	
o-Xylene	ND	0.1000	0.0843	84	0.1	0.0812	81	4	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: DCP Plant to Lea Station 6"

Work Order #: 322295

Project ID: 2008-275

Lab Batch ID: 746326

QC- Sample ID: 322082-005 S

Batch #: 1 Matrix: Water

Date Analyzed: 01/13/2009

Date Prepared: 01/13/2009

Analyst: ASA

Reporting Units: mg/L

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0952	95	0.1000	0.0984	98	3	70-125	25
Toluene	ND	0.1000	0.0935	94	0.1000	0.0962	96	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0996	100	0.1000	0.1028	103	3	71-129	25	
m,p-Xylenes	ND	0.2000	0.1977	99	0.2000	0.2036	102	3	70-131	25	
o-Xylene	ND	0.1000	0.0960	96	0.1000	0.0989	99	3	71-133	25	

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

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

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



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client Burton Env. / Platts  
 Date/ Time 11/30/09 10:36  
 Lab ID # 322295  
 initials CL

**Sample Receipt Checklist**

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	Yes	No	<u>not frozen</u> <u>-2.0 °C</u>
#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

**Appendix B**  
**Soil Boring Logs**

# Soil Boring SB-1

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0				
0 - 5'			Heavy	Slight
5		435	Heavy	Slight
5 - 10'		(1,100)	Moderate	None
10		1,015	Slight	None
10' - 15'		(395)	Slight	None
15		458	None	None
15 - 35'		(181)	None	None
35		137	None	None
35 - 40'		(813)	None	None
40		212	Heavy	None
40 - 45'		(886)	Slight	None
45		1,003	Slight	None
45 - 50'		(1,024)	Slight	None
50		955	Slight	None
50 - 60'		(622)	Slight	None
60		(106)	Slight	None
60 - 70'			Slight	None
70				
70 - 72'				

## Soil Description

0 - 5' - Clay, medium brown, sandy, fine grained with caliche nodules

5 - 10' - Gravel, medium brown, well rounded, sandy

10' - 15' - Sand, light brown, well-rounded, fine grained with some gravel.

15 - 35' - Sand, light brown, very fine grained.

35 - 40' - Sand, light brown, very fine grained, damp

40 - 45' - Sand, light brown, very fine grained, with gravel, moist

45 - 50' - Sand, reddish brown, very fine grained with gravel, moist

50 - 60' - Sand, reddish brown, very fine grained with gravel, dry

60 - 70' - Clay, dark red with some caliche nodules

70 - 72' - Clay, dark red "Red Bed"

## Soil Boring Details

Date Drilled October 24, 2008  
 Thickness of Bentonite Seal 72 Ft  
 Depth of Exploratory Boring 72 Ft  
 Depth to Groundwater N/A  
 Ground Water Elevation N/A

- ▼ Indicates the PSH level measured on \_\_\_\_\_
- ▼ Indicates the groundwater level measured on \_\_\_\_\_
- Indicates samples selected for Laboratory Analysis
- PID Head-space reading in ppm obtained with a photo-ionization detector

## Notes

- The soil boring was advanced on date using air rotary drilling techniques
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual
- The depths indicated are referenced from below ground surface. (bgs)

### Boring Log Details Soil Boring SB-1

DCP Plant to Lea Station 6-Inch Lea County, New Mexico  
Plains Marketing, L.P.

## Basin Environmental Services

Prep By CDS	Checked By CDS
May 12, 2008	

# Soil Boring SB-2

## Soil Description

### Soil Boring Details

Date Drilled January 9, 2009  
 Thickness of Bentonite Seal 67 Ft  
 Depth of Exploratory Boring 67 Ft  
 Depth to Groundwater \_\_\_\_\_  
 Ground Water Elevation \_\_\_\_\_

- ▼ Indicates the PSH level measured on \_\_\_\_\_
- ▼ Indicates the groundwater level measured on \_\_\_\_\_
- Indicates samples selected for Laboratory Analysis.
- PID Head-space reading in ppm obtained with a photo-ionization detector

### Notes

- 1) The soil boring was advanced on date using air rotary drilling techniques.
- 2) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3) The depths indicated are referenced from below ground surface. (bgs)

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0			None	None	0 - 5' - Clay, tan, sandy with caliche nodules
5		26.1	None	None	5 - 10' - Clay, tan-brown, sandy with caliche nodules
10		(38.1)	None	None	10 - 20' - Sand, light brown fine grained with caliche nodules, damp
15		37.1	None	None	20 - 25' - Sand, light brown, very fine grained with caliche nodules, dry
20		(22.9)	None	None	25' - 30' - Sand, light brown fine grained with caliche nodules, damp
25		25.7	None	None	30 - 40' - Sand, brown, fine grained, dry
30		(35.3)	None	None	40 - 50' - Sand, brown, very fine grained with gravel, damp
35		23.9	None	None	50 - 63' - Sand, reddish brown, with caliche nodules, damp
40		(27.7)	None	None	60 - 72' - Clay, dark red with some caliche nodules
45		28.9	None	None	
50		(39.6)	None	None	
55		47.9	None	None	
60		(46.4)	None	None	
65		26.8	None	None	
72	36.9	None	None		

### Boring Log Details Soil Boring SB-2

DCP Plant to Lea Station 6-Inch      Lea County, New Mexico  
 Plains Marketing, L.P.

### Basin Environmental Services

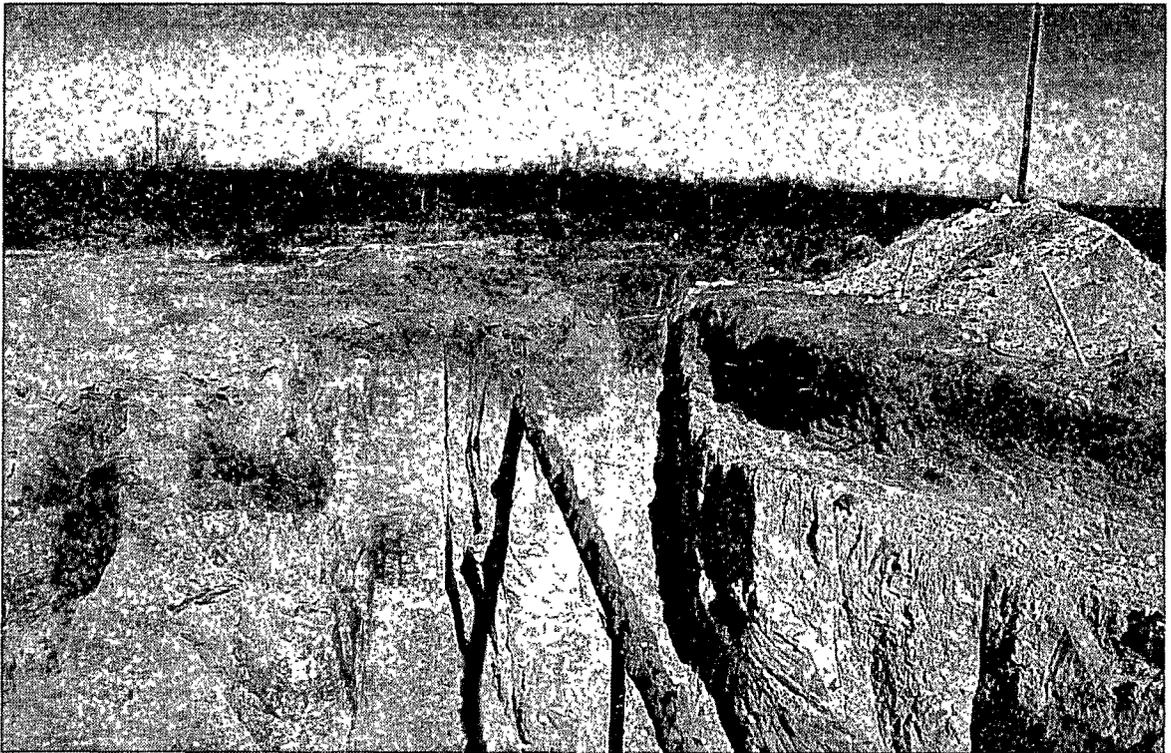
Prep By CDS	Checked By CDS
March 16, 2009	

# **Appendix C**

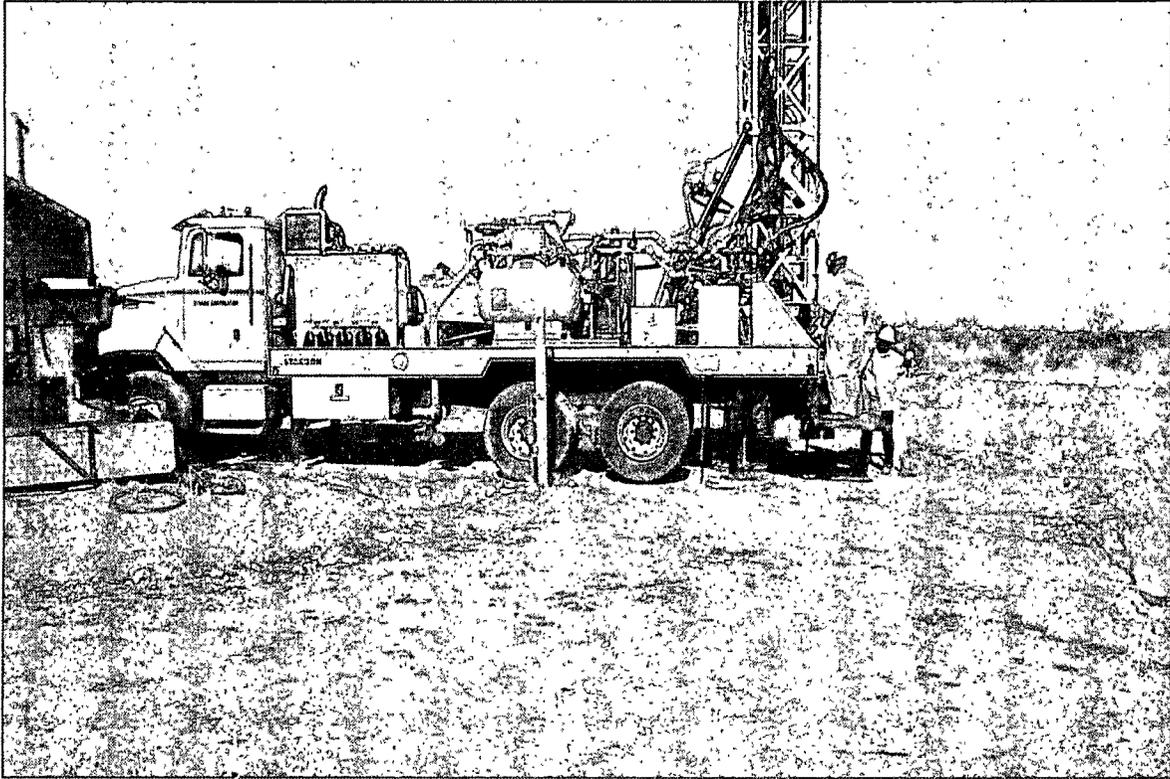
## **Photographs**



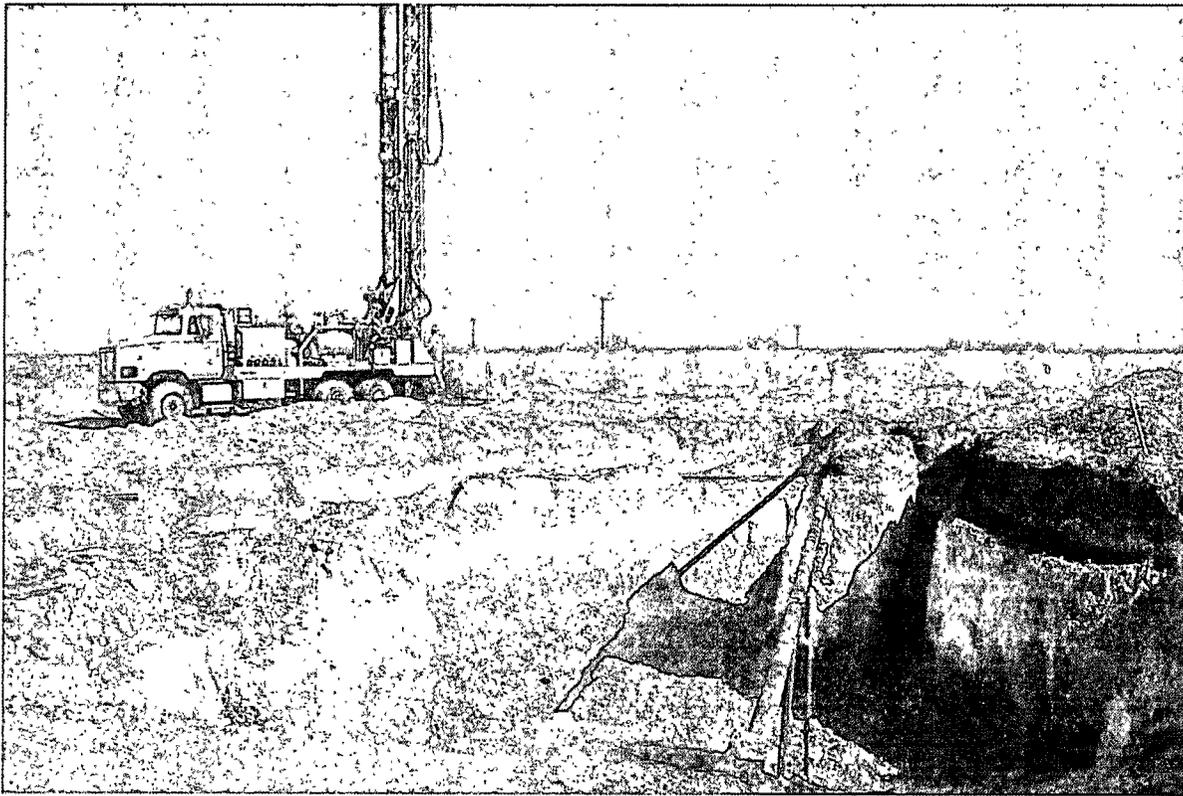
Initial Response at DCP Plant to Lea Station 6-Inch Release Site



DCP Plant to Lea Station 6-Inch Release Site



DCP Plant to Lea Station 6-Inch Release Site Soil Boring SB-1



DCP Plant to Lea Station 6-Inch Release Site Soil Boring SB-2



DCP Plant to Lea Station 6-Inch Release Site Remediation Completed and Backfilled



DCP Plant to Lea Station 6-Inch Release Site Remediation Completed and Backfilled

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

District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised October 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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	DCP Plant to Lea Station 6"	Facility Type	Pipeline

Surface Owner	NM SLO	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
J	30	20S	37E					Lea

Latitude N 32.542461° Longitude W 103.288617°

*WTR 100'*

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	10 bbls	Volume Recovered	0 bbls
Source of Release	6" steel pipeline	Date and Hour of Occurrence	10/8/2008	Date and Hour of Discovery	10/8/2008 15:00
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?	Daniel Bryant	Date and Hour	10/9/2008 08:20		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse			

**OCT 16 2008**

**HOBBS UCD**

If a watercourse was impacted, describe fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Internal corrosion of a 6" pipeline caused a release of crude oil. Clamp was installed on the pipeline to mitigate the release. Throughput on the line is 660 bbls per day. Operating pressure of the pipeline is 45 psi. Depth of the pipeline at the release location is approximately 3' bgs. H2S content of the crude is less than 10 ppm. The gravity of the crude is 65.

Describe Area Affected and Cleanup Action Taken.\*

Impacted area measured an average of 30' X 95'. 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>Daniel Bryant</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Daniel Bryant	<i>L. Johnson</i> <b>ENVIRONMENTAL ENGINEER</b>	
Title: Environmental R/C Specialist	Approval Date: 10.16.08	Expiration Date: 12.16.08
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*W/ DOCUMENTATION BY*

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