

2R - 53

**REPORTS**

**DATE:**

**MAR. 2006**

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**PLAINS  
ALL AMERICAN**

2006 MAR 13 PM 12 04

March 8, 2006

Mr. Ed Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Plains All American – Annual Monitoring Report  
1 Site in Eddy County, New Mexico

2R-53

Dear Mr. Martin:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring report for the following site:

Ballard Grayburg 5"                      Section 10, Township 18 South, Range 29 East, Eddy County

Basin prepared this document and has vouched for its accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the document and interviewed Basin in order to verify the accuracy and completeness of this document. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Report for the above facility.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds  
Remediation Coordinator  
Plains All American

CC: Mike Bratcher, NMOCD, Artesia, NM

Enclosures

# *Basin Environmental Service Technologies, LLC*

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## **2005 ANNUAL MONITORING REPORT**

**BALLARD-GRAYBURG 5" GATHERING**  
SW ¼ SW ¼ SECTION 10, TOWNSHIP 18 SOUTH, RANGE 29 EAST  
LATITUDE 32° 45' 27.1" NORTH, LONGITUDE 104° 04' 12.0" WEST  
EDDY COUNTY, NEW MEXICO  
PLAINS EMS NUMBER: 2004-00192

PREPARED FOR:

**PLAINS MARKETING, L.P.**  
333 CLAY STEET, SUITE 1600  
HOUSTON, TEXAS 77002

*ENTIRE REPORT  
IS ON THE L-DRIVE*

PREPARED BY:

**BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES, LLC**  
P. O. Box 301  
Lovington, New Mexico 88260

**March 2006**

  
\_\_\_\_\_  
Ken Dutton  
Project Manager

## TABLE OF CONTENTS

INTRODUCTION.....	1
SITE DESCRIPTION AND BACKGROUND INFORMATION.....	1
FIELD ACTIVITIES.....	2
LABORATORY RESULTS.....	2
SUMMARY.....	3
ANTICIPATED ACTIONS.....	3
LIMITATIONS.....	4
DISTRIBUTION.....	5

### FIGURES

Figure 1 – Site Location Map

Figure 2A – Inferred Groundwater Elevation Map – 29 March 2005

Figure 2B – Inferred Groundwater Elevation Map – 26 May 2005

Figure 2C – Inferred Groundwater Elevation Map – 11 August 2005

Figure 2D – Inferred Groundwater Elevation Map – 27 December 2005

Figure 3A – Groundwater Concentration and Inferred PSH Extent Map – 29 March 2005

Figure 3B – Groundwater Concentration and Inferred PSH Extent Map – 26 May 2005

Figure 3C – Groundwater Concentration and Inferred PSH Extent Map – 11 August 2005

Figure 3D – Groundwater Concentration and Inferred PSH Extent Map – 27 December 2005

### TABLES

Table 1 – Groundwater Elevation Data (2005)

Table 2 – Concentrations of Benzene and BTEX in Groundwater (2005)

### APPENDICES

Appendix A – Laboratory Reports

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

## INTRODUCTION

Basin Environmental Service Technologies, LLC, (Basin) on behalf of Plains Marketing, L.P., (Plains), prepared this annual report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2005 only. Additional site activities and remedial work is summarized in several letters and reports previously submitted to the NMOCD. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during the four (4) consecutive quarters of 2005 to assess the levels and extent of dissolved phase constituents and presence of phase-separated hydrocarbons (PSH) constituents. The groundwater monitoring event consisted of measuring static water levels in the monitoring wells, checking for the presence of PSH atop the water column, and purging and sampling of each well exhibiting sufficient recharge. Monitoring or recovery wells containing a thickness of PSH greater than 0.01 foot were not sampled.

## SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site is SW ¼ SW ¼ Section 10, Township 18 South, Range 29 East. The site latitude is 32° 45' 27.1" North and the site longitude is 104° 04' 12.0" West. On 02 September 2004, Allstate Environmental Services, LLC (Allstate) responded to the pipeline release on behalf of Plains to repair the pipeline and excavate the impacted soil. Beginning on 18 October 2004, Basin assumed project responsibilities for the Ballard Grayburg 5" site. The site is characterized by a right-of-way for the pipeline in a pasture utilized for cattle grazing. The initial visibly surface stained area includes the release point covering an area approximately 22 feet long by 23 feet wide and approximately 14 feet below ground surface (bgs). Subsequent excavation activities covered an area approximately 225 feet long by 60 feet wide and 10 to 18 feet (bgs), respectively. All excavated soil was placed on a poly-liner for future remedial action. Approximately 80 barrels of crude oil were released from the Plains Pipeline and 0 barrels were recovered.

Currently, there are two (2) monitoring wells (MW-2 and MW-3) and one (1) recovery well (RW-1) on site. Two (2) attempts to install an up gradient monitoring well proved futile due to drilling into subsurface limestone caverns. A hydrocarbon absorbent sock was installed in the recovery well to absorb the limited amount of crude oil on the groundwater and is replaced on a monthly basis. Recovery Well (RW-1) is located approximately twenty-one (21) feet to the southwest of a plugged and abandoned Yates Petroleum Company wellhead and caliche pad with abundant surface asphaltenes and historical impacted soils. The drilling pit, which is still displaying signs of distressed vegetation growth; utilized for the initial drilling activities, is located approximately 60 feet to the northwest of RW-1.

## FIELD ACTIVITIES

The site monitoring wells were gauged and sampled on 29 March 2005, 26 May 2005, 11 August 2005 and 27 December 2005. During the groundwater sampling events, the monitoring wells, designated to be sampled, were purged of approximately 3 well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in polystyrene fifty-five gallon drums which remain on-site.

Locations of the monitoring wells, recovery well and the inferred groundwater elevations, which were constructed from the measurements collected during the quarterly groundwater monitoring events, are depicted on Figure 2, Inferred Groundwater Elevation Map. The groundwater elevation data are provided as Table 1. Research of the New Mexico State Engineers Office reflected a general south to southwest groundwater gradient in this area of Eddy County, New Mexico. The depth to groundwater, as measured from the top of the well casing, was 186.59 feet.

A measurable thickness of PSH was detected in RW-1 during the reporting period, refer to Figure 3, Groundwater Concentration and Inferred PSH Extent Map. A maximum thickness of 0.04 in RW-1 was measured and is shown on Table 1. A hydrocarbon absorbent sock was installed in the recovery well and is replaced on a monthly basis. Approximately five (5) gallons of PSH was recovered from the site during the reporting period, with seven (7) gallons of PSH recovered from the site since project inception.

## LABORATORY RESULTS

Groundwater samples were collected from the monitor wells MW-2 and MW-3 during the quarterly monitoring events and were delivered to Environmental Laboratory of Texas, Odessa, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. A listing of BTEX constituent concentrations for 2005 is summarized in Table 2 and the laboratory reports are provided as Appendix A. Recovery well, RW-1, was not sampled due to the presence of measurable PSH.

Laboratory results for the two (2) site groundwater samples, obtained during the 2005 annual period, indicate that benzene and total BTEX constituent concentrations for monitoring well MW-2 were below applicable NMOCD regulatory standards. Laboratory results indicate monitoring well MW-3 benzene and total BTEX constituent concentrations were below NMOCD regulatory standards for the 3<sup>rd</sup> quarter groundwater sampling event (11 August 2005). Furthermore, monitoring well MW-3 displayed benzene constituent concentrations slightly above NMOCD regulatory standards (ranging from 0.014 mg/L to 0.054 mg/L) for the 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> quarter groundwater sampling events (29 March 2005, 11 August 2005 and 27 December

2005) and below NMOCD regulatory standards for total BTEX constituent concentrations for the three groundwater sampling events.

Laboratory analytical results were compared to NMOCD regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

## **SUMMARY**

This report presents the results of groundwater monitoring activities for the 2005 annual monitoring period. Currently, there are two (2) groundwater monitoring wells (MW-1 and MW-2) and one (1) recovery well (RW-1) on-site. During 2005, hydrocarbon absorbent socks were installed in RW-1 for passive product recovery. A measurable thickness of PSH was detected in RW-1 during the quarterly sampling events. A maximum thickness of 0.04 in RW-1 was measured and is shown on Table 1.

Laboratory results for the two (2) site groundwater samples, obtained during the 2005 annual period, indicate that benzene and total BTEX constituent concentrations for monitoring well MW-2 were below applicable NMOCD regulatory standards. Laboratory results indicate monitoring well MW-3 benzene and total BTEX constituent concentrations were below NMOCD regulatory standards for the 3<sup>rd</sup> quarter groundwater sampling event and slightly above NMOCD regulatory standards for the 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> quarter groundwater sampling events and below NMOCD regulatory standards for total BTEX constituent concentrations for the three groundwater sampling events.

Based on the limited data, groundwater elevations at the site are relatively similar and groundwater gradient appears to be to the south. Research of the New Mexico State Engineers Office reflected a general south to southwest groundwater gradient.

As previously mentioned, several unsuccessful attempts were made to install an up gradient monitoring well. Based on the location of the recovery well RW-1 adjacent to the source area, the limited amount of PSH on the groundwater, the fact that the two (2) attempted up gradient monitor wells did not encounter impacted soils to their respective total depths, and the two (2) down gradient monitor wells did not indicate soil impacts, it appears the groundwater impacted area is very limited in extent and an up gradient monitor well is not warranted at this site.

## **ANTICIPATED ACTIONS**

Groundwater monitoring and annual reporting will continue in 2006. An amended Remediation Work Plan was submitted to NMOCD and approved with stipulations of collecting confirmation soil samples from the walls and floor of the excavation. The required soil sampling was accomplished and furnished to NMOCD, Santa Fe. Once approval of the approved amended Remediation Work Plan is received, further remedial activities will be accomplished. A soil remediation/closure report will be prepared and submitted to the NMOCD upon completion of the proposed remedial activities.

## LIMITATIONS

Basin has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin 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 has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin 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. 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 and/or Plains.

**DISTRIBUTION**

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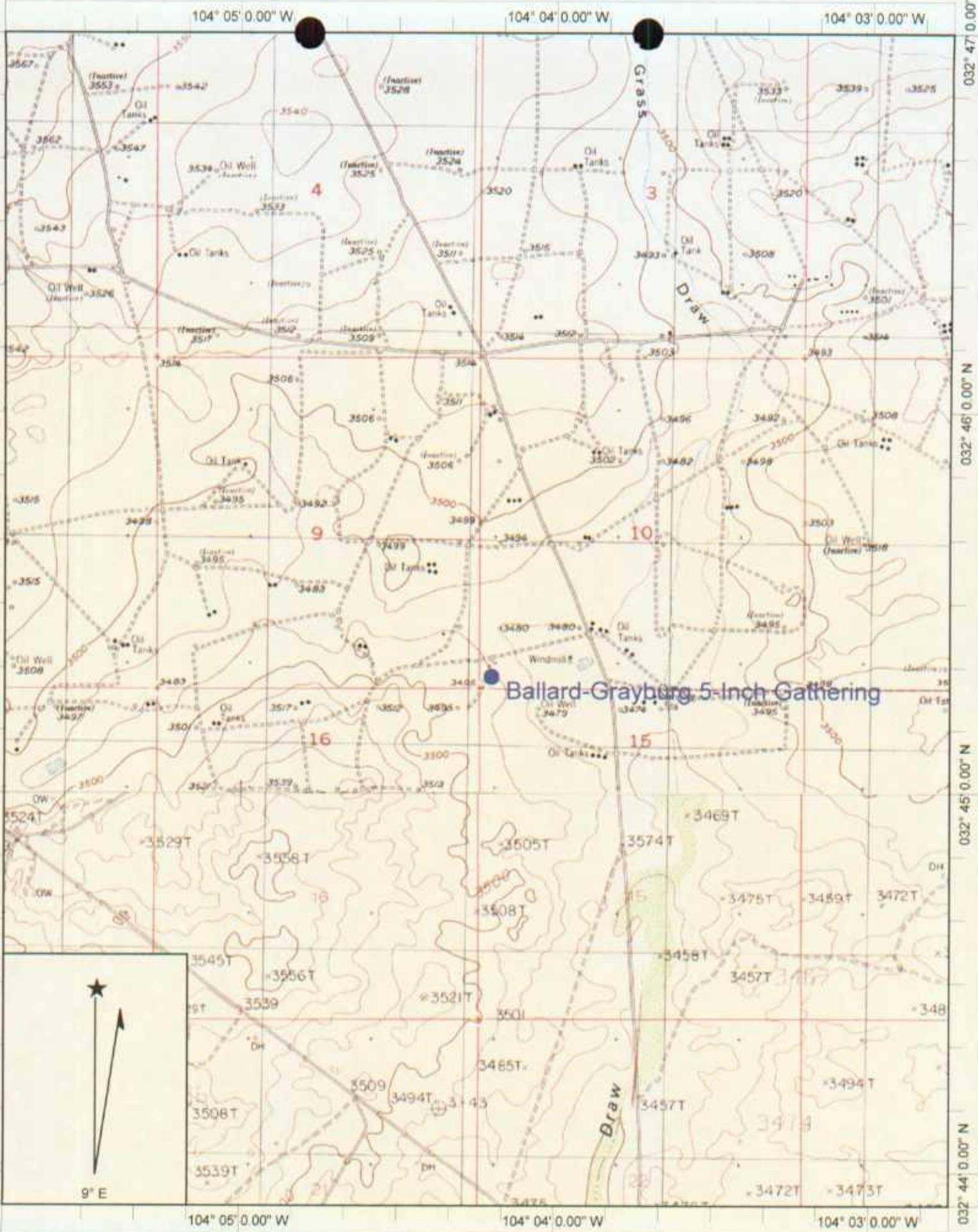
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Copy Number: 1

# FIGURES

**FIGURE 1**

**SITE LOCATION MAP**



Name: RED LAKE SE  
 Date: 2/26/2006  
 Scale: 1 inch equals 2000 feet

Location: 032° 45' 27.39" N 104° 04' 14.91" W  
 Caption: Plains Marketing, L. P.  
 Ballard-Grayburg 5-Inch  
 SW/SW S10, T18S, R29E  
 FMS: 2004.00102

**FIGURE 2A, 2B, 2C, 2D**

**INFERRED GROUNDWATER  
ELEVATION MAPS**



Plains Marketing, L.P.  
Ballard Grayburg 5"  
SW/1/4 S10, T18S, R29E  
Eddy County, New Mexico  
EMS: 2004-00192

Stockpiled  
Material

SB-2

SB-1

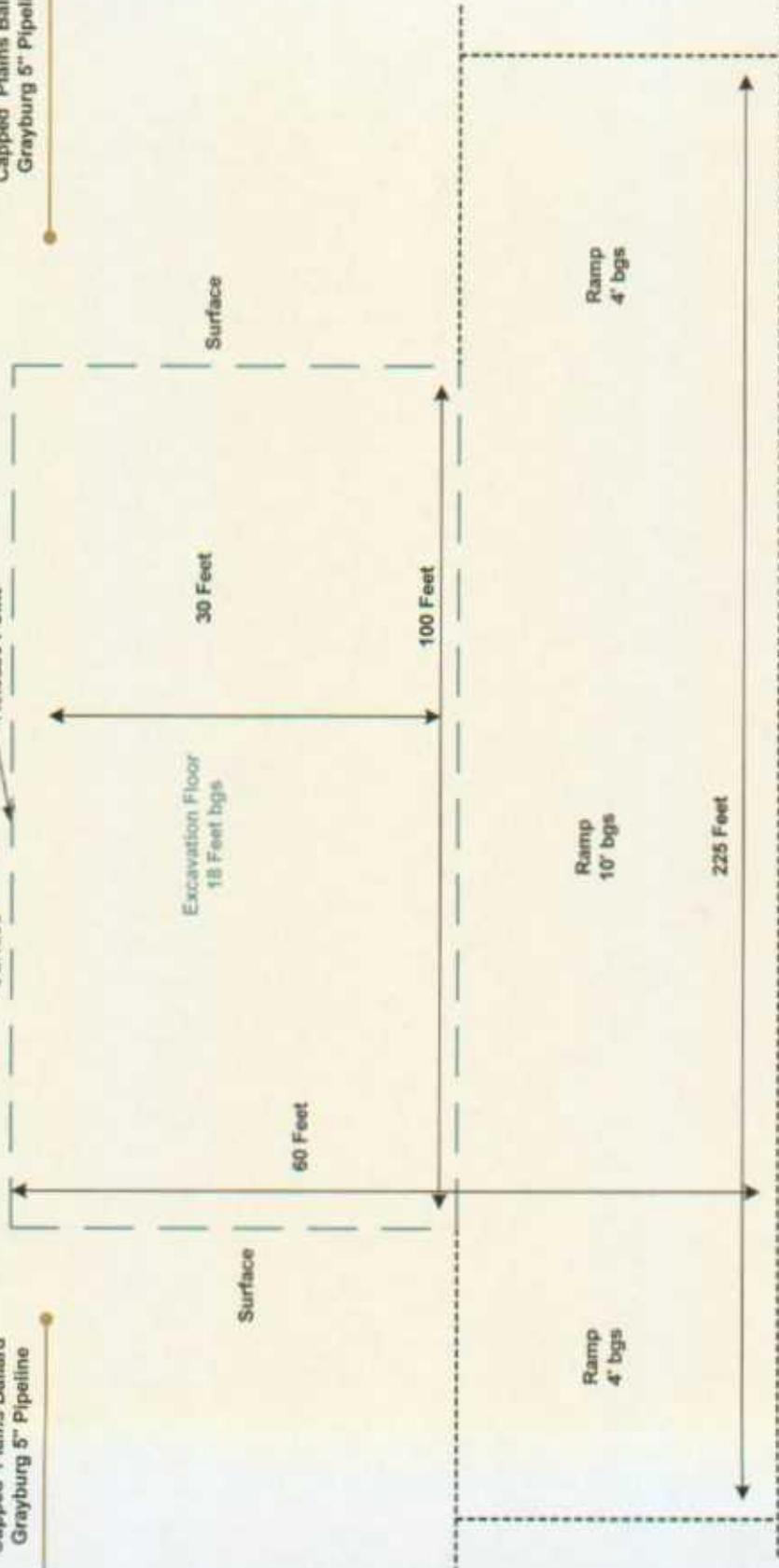
Plugged and Abandoned  
Yates Petroleum Well

RW-1  
(3311.37)

Release Point

Capped Plains Ballard  
Grayburg 5" Pipeline

Capped Plains Ballard  
Grayburg 5" Pipeline



LEGEND

- Recovery Well
- Soil Boring
- Monitor Well
- (3411) Groundwater Elevation in Feet

TITLE  
Plains Marketing, L. P.  
Ballard Grayburg 5"  
Eddy County, New Mexico  
EMS: 2004-00192

DESCRIPTION  
Figure 2A  
Inferred Groundwater  
Elevation Map  
28 March 2005

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Basin Environmental Service  
Technologies  
kad



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

SB-2

Plugged and Abandoned  
 Yates Petroleum Well

RW-1  
 (3311.37)

Release Point

Capped Plains Ballard  
 Grayburg 5" Pipeline

Stockpiled  
 Material

Capped Plains Ballard  
 Grayburg 5" Pipeline

Excavation Floor  
 18 Feet bgs

Surface

30 Feet

100 Feet

60 Feet

Surface

Ramp  
 4' bgs

Ramp  
 10' bgs

225 Feet

Surface

MW-3  
 (3311.33)

MW-2  
 (3311.32)

LEGEND

-  Recovery Well
-  Soil Boring
-  Monitor Well
-  (3411) Groundwater Elevation in Feet

TITLE  
 Plains Marketing, L. P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 2B  
 Inferred Groundwater  
 Elevation Map  
 26 May 2005

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 Technologies  
 kad



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

SB-2

Plugged and Abandoned  
 Yates Petroleum Well

RW-1  
 (3311.37)

Release Point

Excavation Floor  
 18 Feet bgs

30 Feet

100 Feet

Surface

Capped Plains Ballard  
 Grayburg 5" Pipeline

SB-1

Surface

60 Feet

Surface

Capped Plains Ballard  
 Grayburg 5" Pipeline

Stockpiled  
 Material

Ramp  
 10' bgs

225 Feet

Surface

Ramp  
 4' bgs

MW-2

(3311.33)

MW-3

(3311.33)

LEGEND

-  Recovery Well
-  Soil Boring
-  Monitor Well  
 (3411) Groundwater  
 Elevation in  
 Feet

TITLE  
 Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 2C  
 Inferred Groundwater  
 Elevation Map  
 11 August 2006

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 Basin Environmental Service  
 Technologies  
 kad



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

Stockpiled  
 Material

SB-1

SB-2

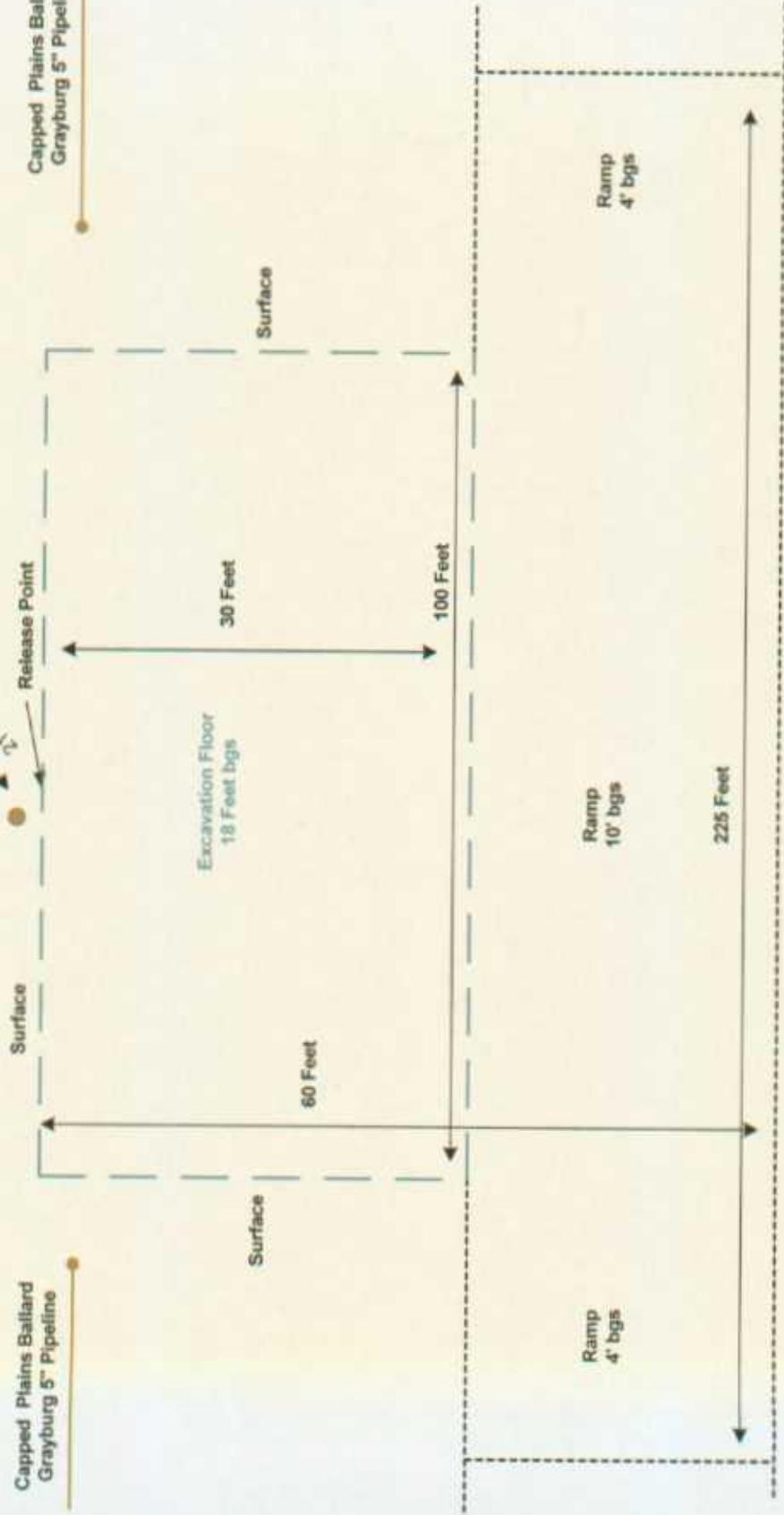
Plugged and Abandoned  
 Yates Petroleum Well

RW-1  
 (3311.38)

Release Point

Capped Plains Ballard  
 Grayburg 5" Pipeline

Capped Plains Ballard  
 Grayburg 5" Pipeline



LEGEND

- Recovery Well
- Soil Boring
- Monitor Well
- (3411) Groundwater Elevation in Feet

TITLE  
 Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 2D  
 Inferred Groundwater  
 Elevation Map  
 27 December 2005

DRAWN BY  
 Basin Environmental Service  
 Technologies  
 kad

**FIGURE 3A, 3B, 3C, 3D**

**GROUNDWATER CONCENTRATION  
AND INFERRED PSH EXTENT MAPS**



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

Stockpiled  
 Material

SB-1

Plugged and Abandoned  
 Yates Petroleum Well

PSH  
 0.04'

RW-1

Surface

Release Point

Capped Plains Ballard  
 Grayburg 5" Pipeline

Capped Plains Ballard  
 Grayburg 5" Pipeline

Excavation Floor  
 18 Feet bgs

Surface

Surface

60 Feet

30 Feet

100 Feet

Ramp  
 4' bgs

Ramp  
 10' bgs

Ramp  
 4' bgs

MW-3

Benzene: 0.054 mg/L  
 BTEX: 0.004 mg/L

Surface

MW-2

Benzene: 0.006 mg/L  
 BTEX: 0.001 mg/L

LEGEND

- Recovery Well
- Soil Boring
- Monitor Well

TITLE  
 Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 3A  
 Groundwater Concentration  
 and Inferred PSH Extent Map  
 29 March 2005

DRAWN BY  
 Basin Environmental Service  
 Technologies  
 kad



Plains Marketing, L.P.  
Ballard Grayburg 5"  
SW/SW S10, T18S, R29E  
Eddy County, New Mexico  
EMS: 2004-00192

SB-2

Plugged and Abandoned  
Yates Petroleum Well

RW-1

Release Point

PSH  
0.03'

Surface

Excavation Floor  
18 Feet bgs

30 Feet

Surface

100 Feet

Stockpiled  
Material

Capped Plains Ballard  
Grayburg 5" Pipeline

60 Feet

Surface

Ramp  
4' bgs

Ramp  
10' bgs

225 Feet

MW-3

Benzene: 0.014 mg/L  
BTEX: 0.003 mg/L

Surface

MW-2

Benzene: 0.002 mg/L  
BTEX: 0.001 mg/L

LEGEND

-  Recovery Well
-  Soil Boring
-  Monitor Well

TITLE

Plains Marketing, L. P.  
Ballard Grayburg 5"  
Eddy County, New Mexico  
EMS: 2004-00192

DESCRIPTION

Figure 3B  
Groundwater Concentration  
and Inferred PSH Extent Map  
26 May 2005

DRAWN BY

Basin Environmental Service  
Technologies  
kad



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

SB-2

Plugged and Abandoned  
 Yates Petroleum Well

PSH  
 0.03'

RW-1

21 Feet

Release Point

Excavation Floor  
 18 Feet bgs

30 Feet

100 Feet

Stockpiled  
 Material

SB-1

Capped Plains Ballard  
 Grayburg 5" Pipeline

Surface

60 Feet

Surface

Ramp  
 4' bgs

Ramp  
 10' bgs

Ramp  
 4' bgs

MW-3

Benzene: 0.002 mg/L  
 BTEX: <0.001 mg/L

Surface

225 Feet

MW-2

Benzene: 0.001 mg/L  
 BTEX: 0.001 mg/L

LEGEND

-  Recovery Well
-  Soil Boring
-  Monitor Well

TITLE  
 Plains Marketing, L. P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 3C  
 Groundwater Concentration  
 and Inferred PSH Extent Map  
 11 August 2005

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 Basin Environmental Service  
 Technologies  
 kad



Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 SW/SW S10, T18S, R29E  
 Eddy County, New Mexico  
 EMS: 2004-00192

Stockpiled  
 Material

SB-1

SB-2

Plugged and Abandoned  
 Yates Petroleum Well

PSH  
 0.02'

RW-1

Release Point

Capped Plains Ballard  
 Grayburg 5" Pipeline

Capped Plains Ballard  
 Grayburg 5" Pipeline

Surface

Surface

Excavation Floor  
 18 Feet bgs

30 Feet

60 Feet

Surface

100 Feet

Ramp  
 4' bgs

Ramp  
 10' bgs

Ramp  
 4' bgs

MW-3

Benzene: 0.024 mg/L  
 BTEX: 0.002 mg/L

Surface

MW-2

Benzene: 0.008 mg/L  
 BTEX: 0.003 mg/L

LEGEND

- Recovery Well
- Soil Boring
- Monitor Well

TITLE  
 Plains Marketing, L. P.  
 Ballard Grayburg 5"  
 Eddy County, New Mexico  
 EMS: 2004-00192

DESCRIPTION  
 Figure 3D  
 Groundwater Concentration  
 and Inferred PSH Extent Map  
 27 December 2005

DRAWN BY  
 Basin Environmental Service  
 Technologies  
 kad



# TABLES

**TABLE 1**

**GROUNDWATER ELEVATION DATA**  
**(2005)**

TABLE 1

GROUNDWATER ELEVATION DATA (2005)

PLAINS MARKETING, L.P.  
 BALLARD-GRAYBURG 5"  
 EDDY COUNTY, NEW MEXICO  
 PLAINS EMS NO. 2004-00192

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 2	11/10/04	3,497.90	-	186.58	0.00	3,311.32
	03/29/05	3,497.90		186.58	0.00	3,311.32
	05/26/05	3,497.90	-	186.58	0.00	3,311.32
	08/11/05	3,497.90	-	186.57	0.00	3,311.33
	12/27/05	3,497.90	-	186.58	0.00	3,311.32
MW - 3	11/10/04	3,497.91	-	186.59	0.00	3,311.32
	03/29/05	3,497.91	-	186.59	0.00	3,311.32
	05/26/05	3,497.91		186.58	0.00	3,311.33
	08/11/05	3,497.91	-	186.58	0.00	3,311.33
	12/27/05	3,497.91	-	186.59	0.00	3,311.32
RW-1	11/10/04	3,497.94	186.56	186.60	0.04	3,311.37
	03/29/05	3,497.94	186.56	186.60	0.04	3,311.37
	05/26/05	3,497.94	186.57	186.60	0.03	3,311.37
	08/11/05	3,497.94	186.57	186.60	0.03	3,311.37
	12/27/05	3,497.94	186.56	186.58	0.02	3,311.38

**TABLE 2**

**CONCENTRATIONS OF BENZENE  
AND BTEX IN GROUNDWATER (2005)**

TABLE 2

CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER (2005)

PLAINS MARKETING, L.P.  
 BALLARD-GRAYBURG 5"  
 EDDY COUNTY, NEW MEXICO  
 PLAINS EMS NO: 2004-00192

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B					
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	
NMOC REGULATORY STANDARD		0.01	0.75	0.75	TOTAL XYLENES	0.62	
MW-2	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	03/29/05	0.006	0.001	<0.001	<0.001	<0.001	<0.001
MW-2	05/26/05	0.002	0.001	<0.001	<0.001	<0.001	<0.001
MW-2	08/11/05	0.001	0.001	<0.001	<0.001	<0.001	<0.001
MW-2	12/27/05	0.008	0.003	<0.001	<0.001	<0.001	<0.001
MW-3	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	03/29/06	0.054	0.004	<0.001	<0.001	<0.001	<0.001
MW-3	05/26/05	0.014	0.003	<0.001	<0.001	<0.001	<0.001
MW-3	08/11/05	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	12/27/05	0.024	0.002	<0.001	<0.001	<0.001	<0.001

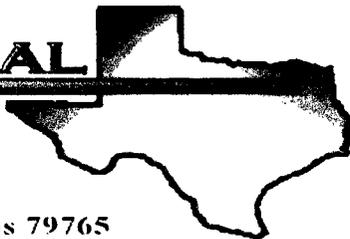


# **APPENDICES**

**APPENDIX A**

**ENVIRONMENTAL LABORATORY  
OF TEXAS ANALYTICAL RESULTS**

**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch

Project Number: EMS: 2004-00192

Location: Eddy County, NM

Lab Order Number: 5C30017

Report Date: 04/05/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
04/05/05 10:19

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	5C30017-01	Water	03/29/05 12:30	03/30/05 15:53
MW-3	5C30017-02	Water	03/29/05 16:30	03/30/05 15:53

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 04/05/05 10:19

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (5C30017-01) Water</b>									
Benzene	0.00672	0.00100	mg/L	1	ED50404	04/01/05	04/02/05	EPA 8021B	
Toluene	0.00182	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		130 %	80-120	"	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		83.5 %	80-120	"	"	"	"	"	
<b>MW-3 (5C30017-02) Water</b>									
Benzene	0.0547	0.00100	mg/L	1	ED50404	04/01/05	04/02/05	EPA 8021B	
Toluene	0.00412	0.00100	"	"	"	"	"	"	
Ethylbenzene	I [0.000547]	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	I [0.000830]	0.00100	"	"	"	"	"	"	J
Xylene (o)	I [0.000692]	0.00100	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		535 %	80-120	"	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		87.0 %	80-120	"	"	"	"	"	

Plains All American EH & S  
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Fax: (432) 687-4914

Reported:  
 04/05/05 10:19

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED50404 - EPA 5030C (GC)**

**Blank (ED50404-BLK1)**

Prepared & Analyzed: 04/01/05

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	21.6		ug/l	20.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	18.5		"	20.0		92.5	80-120			

**LCS (ED50404-BS1)**

Prepared & Analyzed: 04/01/05

Benzene	96.6		ug/l	100		96.6	80-120			
Toluene	96.1		"	100		96.1	80-120			
Ethylbenzene	95.2		"	100		95.2	80-120			
Xylene (p/m)	195		"	200		97.5	80-120			
Xylene (o)	93.5		"	100		93.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.5		"	20.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	17.5		"	20.0		87.5	80-120			

**Calibration Check (ED50404-CCV1)**

Prepared: 04/01/05 Analyzed: 04/02/05

Benzene	95.2		ug/l	100		95.2	80-120			
Toluene	95.1		"	100		95.1	80-120			
Ethylbenzene	96.9		"	100		96.9	80-120			
Xylene (p/m)	193		"	200		96.5	80-120			
Xylene (o)	95.6		"	100		95.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.7		"	20.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	20.7		"	20.0		104	80-120			

**Matrix Spike (ED50404-MS1)**

Source: 5C28003-07

Prepared: 04/01/05 Analyzed: 04/04/05

Benzene	93.8		ug/l	100	ND	93.8	80-120			
Toluene	95.1		"	100	ND	95.1	80-120			
Ethylbenzene	102		"	100	ND	102	80-120			
Xylene (p/m)	204		"	200	ND	102	80-120			
Xylene (o)	99.7		"	100	ND	99.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	23.9		"	20.0		120	80-120			
Surrogate: 4-Bromofluorobenzene	19.9		"	20.0		99.5	80-120			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 3 of 5

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
04/05/05 10:19

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED50404 - EPA 5030C (GC)**

**Matrix Spike Dup (ED50404-MSD1)**

Source: 5C28003-07

Prepared: 04/01/05 Analyzed: 04/04/05

Benzene	91.9		ug/l	100	ND	91.9	80-120	2.05	20	
Toluene	93.5		"	100	ND	93.5	80-120	1.70	20	
Ethylbenzene	93.0		"	100	ND	93.0	80-120	9.23	20	
Xylene (p/m)	189		"	200	ND	94.5	80-120	7.63	20	
Xylene (o)	93.6		"	100	ND	93.6	80-120	6.31	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	22.0		"	20.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	16.3		"	20.0		81.5	80-120			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
04/05/05 10:19

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date: 4/5/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Page 5 of 5



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

Client: BASIN ENV.  
 Date/Time: 8/30/05 4:00  
 Order #: 5C30017  
 Initials: CK

**Sample Receipt Checklist**

Temperature of container/cooler?	Yes	No	<u>DB</u>	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	No		
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	No	Not present	
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	No	Not present	
Chain of custody present?	<input checked="" type="checkbox"/>	No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	No		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	No		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	No		
Container labels legible and intact?	<input checked="" type="checkbox"/>	No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	No		
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	No		
Samples properly preserved?	<input checked="" type="checkbox"/>	No		
Sample bottles intact?	<input checked="" type="checkbox"/>	No		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	No		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	No		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	No		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	No		
VOC samples have zero headspace?	<input checked="" type="checkbox"/>	No	Not Applicable	

Other observations:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

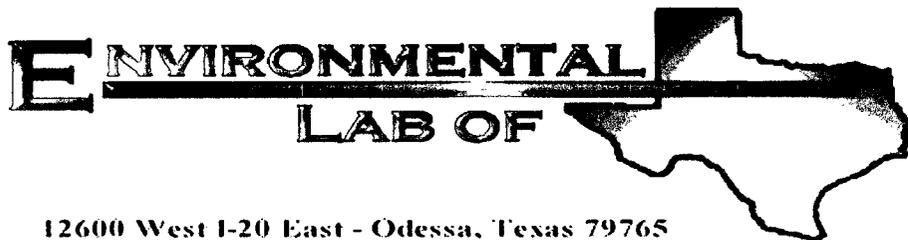
**Variance Documentation:**

Contact Person: - \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
 Regarding: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

Corrective Action Taken:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch

Project Number: EMS: 2004-00192

Location: Ballard Grayburg

Lab Order Number: 5E27006

Report Date: 06/06/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914  
**Reported:**  
06/06/05 11:21

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #2	5E27006-01	Water	05/26/05 14:23	05/27/05 11:30
Monitor Well #3	5E27006-02	Water	05/26/05 16:20	05/27/05 11:30

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 06/06/05 11:21

**Organics by GC  
 Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #2 (5E27006-01) Water</b>									
Benzene	0.00199	0.00100	mg/L	1	EF50210	06/02/05	06/02/05	EPA 8021B	
Toluene	I [0.000713]	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	80-120		"	"	"	"	
<b>Monitor Well #3 (5E27006-02) Water</b>									
Benzene	0.0144	0.00100	mg/L	1	EF50210	06/02/05	06/02/05	EPA 8021B	
Toluene	0.00283	0.00100	"	"	"	"	"	"	
Ethylbenzene	I [0.000252]	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	I [0.000332]	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		158 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		84.0 %	80-120		"	"	"	"	

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 06/06/05 11:21

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF50210 - EPA 5030C (GC)**

**Blank (EF50210-BLK1)**

Prepared & Analyzed: 06/02/05

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	18.9		ug/l	20.0		94.5	80-120			
Surrogate: 4-Bromofluorobenzene	16.4		"	20.0		82.0	80-120			

**LCS (EF50210-BS1)**

Prepared & Analyzed: 06/02/05

Benzene	105		ug/l	100		105	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	206		"	200		103	80-120			
Xylene (o)	98.1		"	100		98.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	22.2		"	20.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	21.3		"	20.0		106	80-120			

**LCS Dup (EF50210-BSD1)**

Prepared & Analyzed: 06/02/05

Benzene	105		ug/l	100		105	80-120	0.00	20	
Toluene	107		"	100		107	80-120	0.00	20	
Ethylbenzene	101		"	100		101	80-120	0.00	20	
Xylene (p/m)	209		"	200		104	80-120	0.966	20	
Xylene (o)	95.2		"	100		95.2	80-120	3.00	20	
Surrogate: a,a,a-Trifluorotoluene	21.2		"	20.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	19.3		"	20.0		96.5	80-120			

**Calibration Check (EF50210-CCV1)**

Prepared & Analyzed: 06/02/05

Benzene	105		ug/l	100		105	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	207		"	200		104	80-120			
Xylene (o)	97.2		"	100		97.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	20.7		"	20.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	21.2		"	20.0		106	80-120			

Environmental Lab of Texas

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Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914  
Reported:  
06/06/05 11:21

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF50210 - EPA 5030C (GC)**

**Matrix Spike (EF50210-MS1)**

Source: 5E27005-01

Prepared & Analyzed: 06/02/05

Benzene	105		ug/l	100	ND	105	80-120			
Toluene	109		"	100	ND	109	80-120			
Ethylbenzene	103		"	100	ND	103	80-120			
Xylene (p/m)	204		"	200	ND	102	80-120			
Xylene (o)	96.0		"	100	ND	96.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.8		"	20.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	20.6		"	20.0		103	80-120			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
06/06/05 11:21

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date:

6/6/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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Environmental Lab of Texas

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Page 5 of 5



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

Client: Basin Env.  
 Date/Time: 5/27/05 11:30  
 Order #: 5E27006  
 Initials: CR

**Sample Receipt Checklist**

	Yes	No	
Temperature of container/cooler?			30 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not present
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not present
Chain of custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Container labels legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable

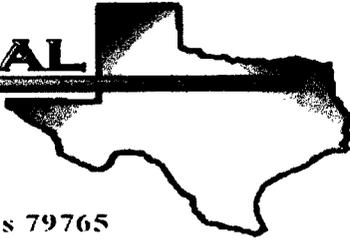
Other observations:  
 \_\_\_\_\_  
 \_\_\_\_\_

**Variance Documentation:**

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

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

**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch

Project Number: EMS: 2004-00192

Location: Eddy County, NM

Lab Order Number: 5H12004

Report Date: 08/18/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

**Reported:**  
08/18/05 14:40

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #2	5H12004-01	Water	08/11/05 12:00	08/12/05 11:10
Monitor Well #3	5H12004-02	Water	08/11/05 15:00	08/12/05 11:10

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 08/18/05 14:40

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #2 (5H12004-01) Water</b>									
<b>Benzene</b>	<b>0.00191</b>	0.00100	mg/L	1	EH51609	08/16/05	08/16/05	EPA 8021B	
<b>Toluene</b>	<b>0.00106</b>	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	80-120		"	"	"	"	
<b>Monitor Well #3 (5H12004-02) Water</b>									
<b>Benzene</b>	<b>0.00239</b>	0.00100	mg/L	1	EH51609	08/16/05	08/16/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94.1 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		89.6 %	80-120		"	"	"	"	

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 08/18/05 14:40

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EH51609 - EPA 5030C (GC)**

**Blank (EH51609-BLK1)**

Prepared & Analyzed: 08/16/05

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	97.9		ug/l	100		97.9	80-120			
Surrogate: 4-Bromofluorobenzene	81.4		"	100		81.4	80-120			

**LCS (EH51609-BS1)**

Prepared & Analyzed: 08/16/05

Benzene	98.4		ug/l	100		98.4	80-120			
Toluene	97.0		"	100		97.0	80-120			
Ethylbenzene	106		"	100		106	80-120			
Xylene (p/m)	204		"	200		102	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	95.4		"	100		95.4	80-120			

**Calibration Check (EH51609-CCV1)**

Prepared: 08/16/05 Analyzed: 08/17/05

Benzene	94.2		ug/l	100		94.2	80-120			
Toluene	94.5		"	100		94.5	80-120			
Ethylbenzene	106		"	100		106	80-120			
Xylene (p/m)	203		"	200		102	80-120			
Xylene (o)	109		"	100		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	94.9		"	100		94.9	0-200			
Surrogate: 4-Bromofluorobenzene	102		"	100		102	0-200			

**Matrix Spike (EH51609-MS1)**

Source: 5H11006-01

Prepared: 08/16/05 Analyzed: 08/17/05

Benzene	91.6		ug/l	100	ND	91.6	80-120			
Toluene	90.2		"	100	ND	90.2	80-120			
Ethylbenzene	101		"	100	ND	101	80-120			
Xylene (p/m)	191		"	200	ND	95.5	80-120			
Xylene (o)	102		"	100	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	91.5		"	100		91.5	80-120			
Surrogate: 4-Bromofluorobenzene	97.9		"	100		97.9	80-120			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914  
Reported:  
08/18/05 14:40

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EH51609 - EPA 5030C (GC)**

**Matrix Spike Dup (EH51609-MSD1)**

Source: 5H11006-01

Prepared: 08/16/05 Analyzed: 08/17/05

Benzene	95.5		ug/l	100	ND	95.5	80-120	4.17	20	
Toluene	94.5		"	100	ND	94.5	80-120	4.66	20	
Ethylbenzene	106		"	100	ND	106	80-120	4.83	20	
Xylene (p/m)	201		"	200	ND	100	80-120	4.60	20	
Xylene (o)	108		"	100	ND	108	80-120	5.71	20	
Surrogate: a,a,a-Trifluorotoluene	82.3		"	100		82.3	80-120			
Surrogate: 4-Bromofluorobenzene	92.9		"	100		92.9	80-120			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
Project Number: EMS: 2004-00192  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
08/18/05 14:40

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date:

8/18/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Page 5 of 5



# Environmental Lab of Texas

## Variance / Corrective Action Report – Sample Log-In

Client: Basin Env.

Date/Time: 8/12/05 11:10

Order #: 5H12004

Initials: CK

### Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	0.5	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Not present
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Not present
Chain of custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Container labels legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Not Applicable

Other observations:

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### Variance Documentation:

Contact Person: - \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
 Regarding: \_\_\_\_\_

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Corrective Action Taken:

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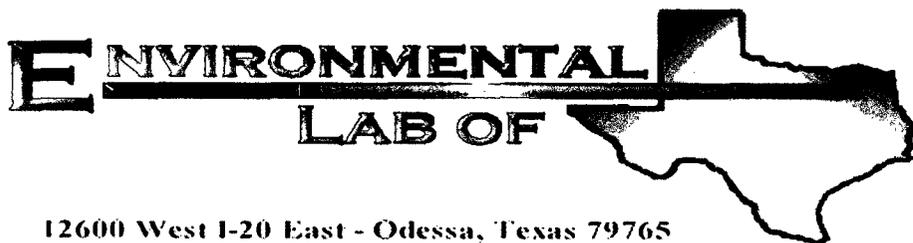
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12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch

Project Number: EMS: 2004-00192

Location: Eddy Co., NM

Lab Order Number: 5L28002

Report Date: 01/04/06

Plains All American EH & S  
 1301 S. County Road 1150  
 Midland TX, 79706-4476

Project: Ballard- Grayburg 5inch  
 Project Number: EMS: 2004-00192  
 Project Manager: Camille Reynolds

Fax: (432) 687-4914  
 Reported:  
 01/04/06 17:11

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ELS2915 - EPA 5030C (GC)**

**Matrix Spike Dup (EL52915-MSD1)**

Source: 5L23009-11

Prepared: 12/29/05 Analyzed: 12/30/05

Benzene	0.0440	0.00100	mg/L	0.0500	ND	88.0	80-120	8.04	20	
Toluene	0.0450	0.00100	"	0.0500	ND	90.0	80-120	0.445	20	
Ethylbenzene	0.0407	0.00100	"	0.0500	ND	81.4	80-120	9.37	20	
Xylene (p/m)	0.0813	0.00100	"	0.100	ND	81.3	80-120	13.0	20	
Xylene (o)	0.0413	0.00100	"	0.0500	ND	82.6	80-120	9.46	20	
Surrogate: a,a,a-Trifluorotoluene	42.3		ug/l	40.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		98.2	80-120			

**APPENDIX B**

**RELEASE NOTIFICATION AND  
CORRECTIVE ACTION  
(NMOCD FORM C-141)**

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

State of New Mexico  
Energy Minerals and Natural Resources

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

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

x Initial Report  Final Report

Name of Company Plains Marketing, LP	Contact Camille Reynolds
Address 5805 East Hwy. 80, Midland, TX 79706	Telephone No. 505-441-0965
Facility Name Ballard Greyburg 5" #2	Facility Type 5" Steel Pipeline

Surface Owner BLM	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
M	10	18S	29E					Eddy

Latitude 32°45'27.1" Longitude 104°04'12.0"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 80 barrels	Volume Recovered 0 barrels
Source of Release 5" Steel Pipeline	Date and Hour of Occurrence 9-2-04 @ 06:00	Date and Hour of Discovery 9-2-04 @ 08:45
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Van Barton	
By Whom? Ken Dutton	Date and Hour 9-2-04 @ 14:32	
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.\* External corrosion of the 5" steel pipeline. A line clamp was installed to mitigate the release. The line is a 5-inch steel gathering line that produces approximately 95 barrels of crude per day. The pressure on the line varies from 50 to 70 psi and the gravity of the sour crude oil is 39. The sour crude has an H<sub>2</sub>S content of 20 ppm

Describe Area Affected and Cleanup Action Taken.\* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was 10 x 6 feet, subsequent excavation of impacted soil resulted in an area of approximately 22 x 23 x 13 feet.

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>Camille Reynolds</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9-7-04	Phone: 505-441-0965	

\* Attach Additional Sheets If Necessary