2R - 53

Annual GW Mon. REPORTS

DATE:

2009

PLAINS
ALL AMERICAN

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APR - 1 2010

Environmental Bureau
Oil Conservation Division

March 30, 2010

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

Re: Plains All American – 2009 Annual Monitoring Reports
4 Sites in Lea County, New Mexico
1 Site in Eddy County, New Mexico

Dear Mr. Hansen:

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 reports for the following sites:

Lovington Gathering WTI	1RP-838	Section 06, T17S, R37E, Lea County
Red Byrd #1	1R-0085	Section 01, T20S, R36E, Lea County
DCP Plant to Lea Sta. 6" #2	1R-2136	Section 31, T20S, R37E, Lea County
DCP Plant to Lea Sta. 6" Sec.31	1R-2166	Section 31, T20S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053	Section 10, T18S, R29E, Eddy County

Basin Environmental Consulting, LLC (Basin) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Basin personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (575) 441-1099.

Sincerely,

Jason Henry

Jason Henry
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM
Enclosures

Basin Environmental Consulting, LLC

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

Effective Solutions

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Environmental Bureau
Oil Conservation Division

2009
ANNUAL MONITORING REPORT

BALLARD GRAYBURG 5-INCH
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 SRS NUMBER: 2004-00192
NMOCD REF: 2R-0053

PREPARED FOR:

PLAINS

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

PREPARED BY:

BASIN ENVIRONMENTAL CONSULTING, LLC
2800 Plains Highway
P. O. Box 381
Lovington, New Mexico 88260

March 2010

Camille J. Bryant
Project Manager

TABLE OF CONTENTS

INTRODUCTION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Marketing, L.P., (Plains), has prepared this annual monitoring report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual monitoring 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 the calendar year 2009 only. Additional site activities and remedial activities are summarized in several letters and reports previously submitted to the NMOCD. For reference, the Site Location Map is provided as Figure 1.

At the request of the NMOCD, groundwater monitoring was conducted during the four (4) quarters of 2009 to monitor the groundwater for concentrations of dissolved phase constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of phase-separated hydrocarbons (PSH) on the water column, purging and sampling of each well exhibiting sufficient recharge. Monitor 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 SW¼ SW¼ 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 September 2, 2004, Allstate Environmental Services (Allstate) responded to a pipeline release to place a temporary clamp on the pipeline and excavate the impacted soil. At the request of Plains, Basin performed subsequent remediation at the site. The Ballard Grayburg 5" pipeline was de-oiled, cold cut and capped. Approximately 80 barrels of crude oil were released from the pipeline and 0 (zero) barrels were recovered. The site is located in a pipeline right-of-way in a pasture utilized for cattle grazing. The initial surface stain covered an area approximately 22 feet in length and 23 feet in width. Excavation activities conducted during the initial response and subsequent remediation activities covered an area approximately 225 feet in length and 60 feet in width and ranged from approximately 10 to 20 feet below ground surface (bgs). Excavated soil was placed adjacent to the excavation on a six (6)-mil poly liner for future remedial activities.

A Preliminary Site Investigation Report (PSIR) and Remediation Plan, dated November 14, 2004 was submitted and approved by NMOCD, Artesia District II and the U. S. Department of the Interior, Bureau of Land Management (BLM) Carlsbad District Office. The approved plan required the excavation of the impacted area to approximately 12 to 15 feet bgs, the collection of confirmation soil samples, the installation of a 40-mil poly liner, the on-site blending of non-impacted segregated overburden and impacted soil and the backfilling the excavation with the blended soil. In March 2006, an electronic revision was submitted and subsequently approved by NMOCD (Santa Fe) and BLM. The approved revision required the excavation of the impacted area to a depth of approximately 18 to 20 feet bgs, the installation of a 40-ml poly liner on the floor of the excavation, the blending of the non-impacted segregated overburden and impacted soil, the collection of soil samples at 500 cubic yard (cy) intervals to ensure total petroleum hydrocarbon (TPH) constituent concentrations were less than 1,000 mg/Kg. Following the remediation activities, the plan required reseeding the site with BLM approved grass seed.

Based on initial delineation of the release site, two (2) groundwater monitor wells were installed to evaluate the quality of groundwater and one (1) recovery well was installed due to the presence of PSH detected in soil samples collected during drilling activities. There was no visual evidence of PSH impact in the soil samples collected during the installation of monitor wells MW-2 and MW-3.

Absorbent medium was placed in recovery well RW-1 to absorb the limited quantities of crude oil on the groundwater. The absorbent medium was inspected and replaced on a monthly schedule. During excavation of the release area recovery well RW-1 collapsed. The approved PSIR revision stipulated an additional recovery well located north-northwest of recovery well RW-1 would be attempted once backfilling of the excavation was completed. In July 2006, an attempt to install the additional recovery well was initiated; however subsurface limestone caverns were encountered during drilling activities and the installation of the recovery well was not possible.

Currently, there are two (2) groundwater monitor wells (MW-2 and MW-3) on site.

In a letter dated October 2, 2009, the NMOCD granted Plains approval to modify the groundwater monitoring frequency at the site. Monitor well MW-2 will be sampled on an annual basis and monitor well MW-3 will be sampled on a quarterly basis.

FIELD ACTIVITIES

The site monitor wells were gauged and sampled on February 17, 2009, June 16, 2009, August 25, 2009 and November 5, 2009. During the quarterly sampling events, the monitoring wells were purged of approximately three (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 bailer. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer mounted polystyrene tank and disposed at an NMOCD approved disposal in Monument, New Mexico.

Locations of the groundwater monitoring wells and the inferred groundwater elevations were constructed from the measurements collected during the quarterly monitoring events and are depicted on Figures 2A through 2D. The groundwater elevation data is provided as Table 1. An inferred groundwater gradient map cannot be constructed from the observed groundwater elevation data derived from the two (2) on-site monitor wells. An inferred groundwater gradient map requires a minimum of three (3) monitor wells to calculate an accurate groundwater gradient direction and magnitude. 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 corrected groundwater elevations ranged between 3,354.96 and 3,355.66 feet above mean sea level, in monitor well MW-2 on November 5, 2009 and in monitor well MW-2 on February 17, 2009, respectively. The groundwater elevation data presented above indicates observed groundwater elevations are approximately forty-four (44) feet more shallow than observed groundwater elevations presented in the 2007 and prior Groundwater Monitoring Reports. This

inconsistency in observed groundwater elevation may be related to the karstic nature of the subsurface beneath the release site as depicted in the monitor well and recovery well logs previously submitted to the NMOCD.

LABORATORY RESULTS

Groundwater samples were collected from the groundwater monitor wells (MW-2 and MW-3) during the quarterly monitoring events and were delivered to Xenco Laboratories, Odessa, Texas for determination of BTEX constituent concentrations by EPA Method SW846-8021b. Pursuant to an NMOCD request, the groundwater monitor wells were sampled annually for concentrations of Poly Aromatic Hydrocarbons (PAH) utilizing EPA Method 8270C. A summary of BTEX and PAH constituent concentrations for 2009 is presented in Table 2 and Table 3, respectively. Laboratory analytical reports are provided as Appendix A.

Monitor well MW-2 is sampled on a quarterly schedule and analytical results indicate benzene concentrations were less than the laboratory method detection limit (MDL) of 0.0010 mg/Kg during all four (4) quarters of 2009. Benzene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Toluene concentrations were less than the laboratory MDL of 0.0020 mg/L during all four (4) quarters of 2009. Toluene concentrations were less than the NMOCD regulatory standard during the all four (4) quarters of the reporting period. Ethylbenzene concentrations were less than the laboratory MDL of 0.0010 mg/L during all four (4) quarters of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard during the all four (4) quarters of the reporting period. Total xylene concentrations were less than the laboratory MDL of 0.0020 mg/L during all four (4) quarters of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of 2009.

Monitor well MW-3 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0088 mg/L during the 4th quarter to 0.0141 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 2nd and 3rd quarters of the reporting period. Toluene concentrations ranged from less than the laboratory MDL of 0.0020 mg/L during the 2nd, 3rd and 4th quarters to 0.0024 mg/L during the 1st quarter of 2009. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene and total xylene concentrations were less than the respective laboratory MDL of 0.001 mg/L and 0.002 mg/L during all four (4) quarters of the reporting period. Ethylbenzene and total xylene concentrations were below the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of 2009.

Groundwater concentrations are depicted on Figures 3A through 3D.

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

Based on the depth of the soil impact at this site, the NMOCD requested four (4) quarterly groundwater sampling events to be conducted at this site. This report presents the results of monitoring activities for the 2009 monitoring period. Currently, there are two (2) groundwater monitoring wells (MW-2 and MW-3) on-site. Research of the New Mexico Office of the State Engineer reflected a general groundwater gradient to the south-southwest.

The groundwater elevation data indicates observed groundwater elevations are approximately forty-four (44) feet more shallow than observed groundwater elevations presented in the 2007 and prior Groundwater Monitoring Reports. This inconsistency in observed groundwater elevation may be related to the karstic nature of the subsurface beneath the release site as depicted in the monitor well and recovery well logs previously submitted to the NMOCD.

Laboratory analytical results for the two (2) site groundwater samples, obtained during the four (4) sampling events, indicated benzene and total BTEX constituent concentrations for monitor well MW-2 were less than applicable NMOCD limits during all four (4) quarterly monitoring events. Laboratory results indicated BTEX constituent concentrations for monitor well MW-3 were less than applicable NMOCD limits during all four (4) quarterly monitoring events. Laboratory analytical results indicated benzene concentrations were less than applicable NMOCD limits during the 4th quarter monitoring event and exceeded the limits for the 1st, 2nd and 3rd quarterly monitoring events.

ANTICIPATED ACTIONS

On October 2, 2009, the NMOCD approved a modified sampling plan at the Ballard Grayburg 5-Inch release site. Plains will sample monitor well MW-2 on an annual basis and monitor well MW-3 on a quarterly basis.

A 2010 Annual Monitoring Report will be submitted to the NMOCD by April 1, 2011.

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 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 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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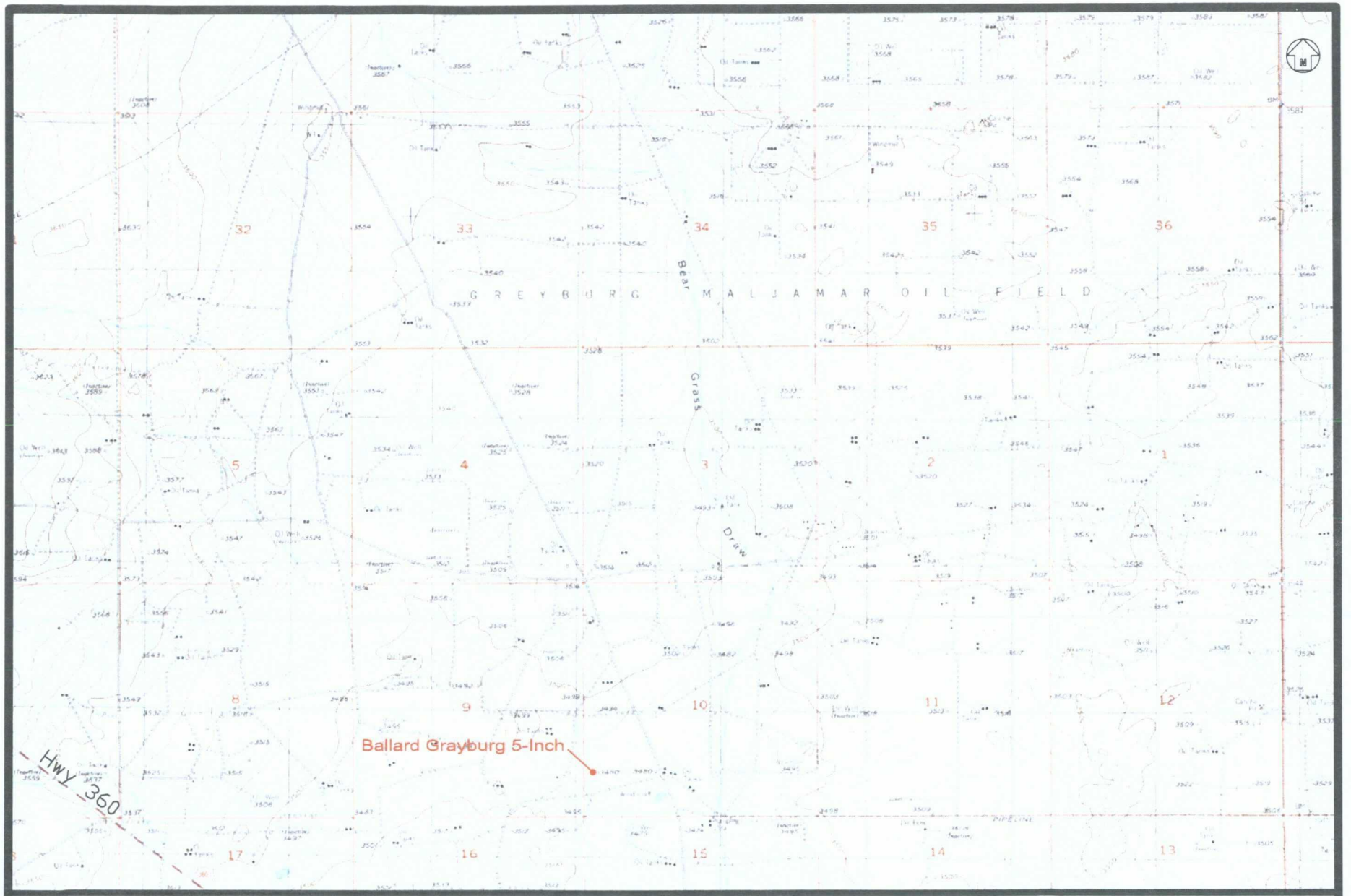
Lovington, New Mexico 88260
cjbryant@basin-consulting.com

Copy Number:_____

Figures



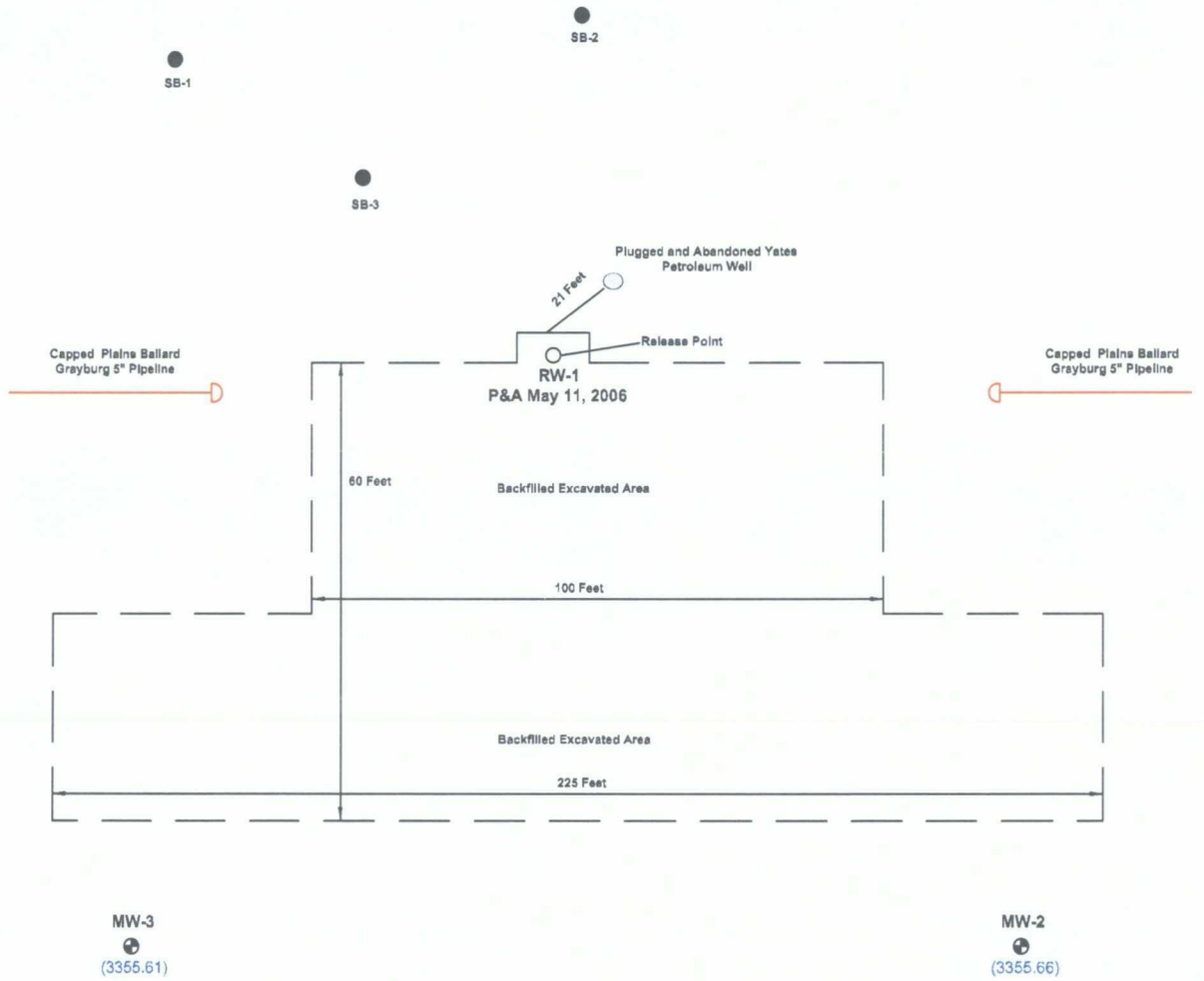
3000 1500 0 1500 3000

Distance in Feet

Figure 1
Site Location Map
Ballard Grayburg 5-Inch
Plains Markering, L.P.
Eddy County, New Mexico
2RP-0053

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
March 17, 2009	Scale 1"=3000'



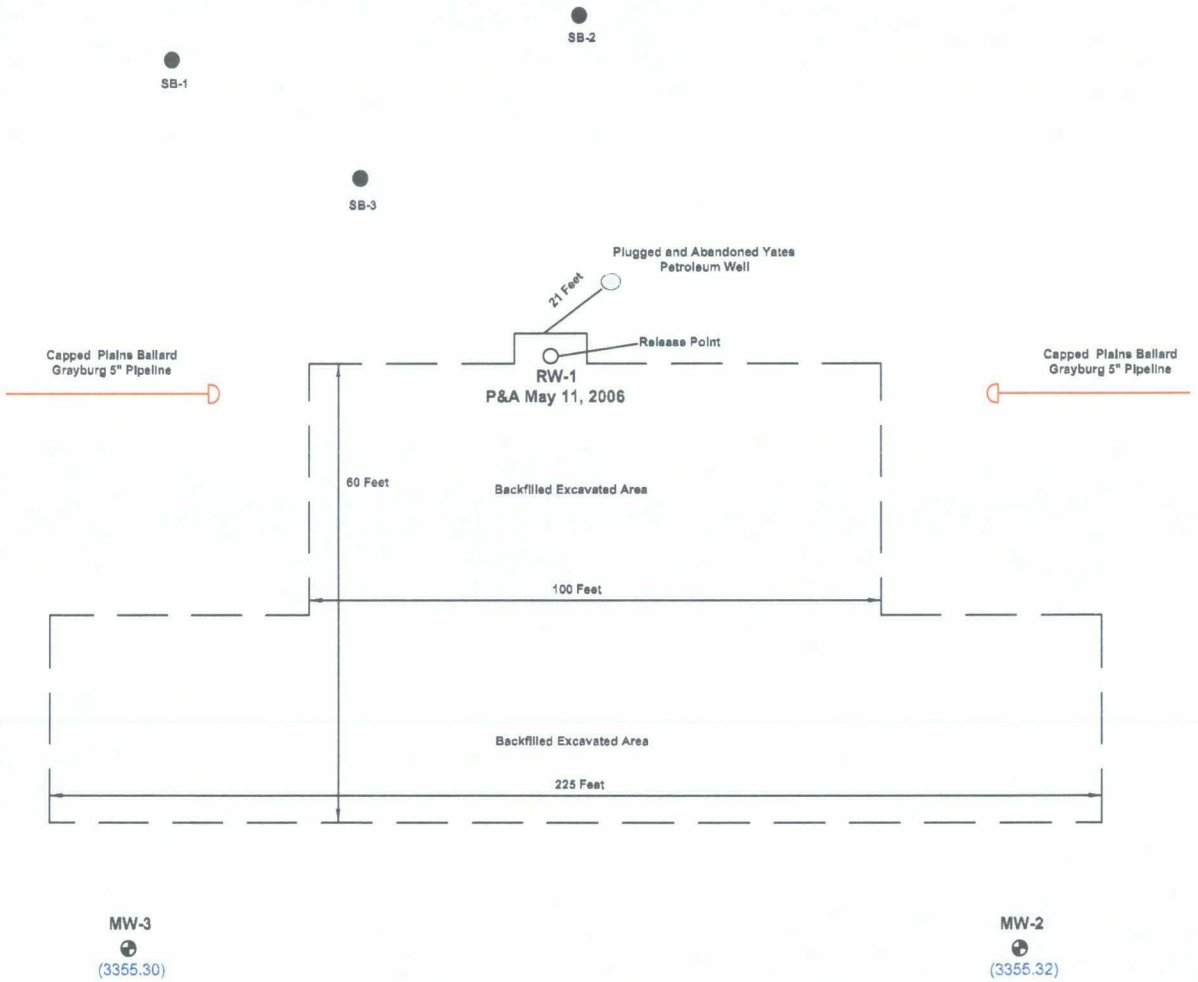
LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- SB-1 Soil Boring Location

Figure 2A
Inferred Groundwater Gradient Map
(02/17/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	



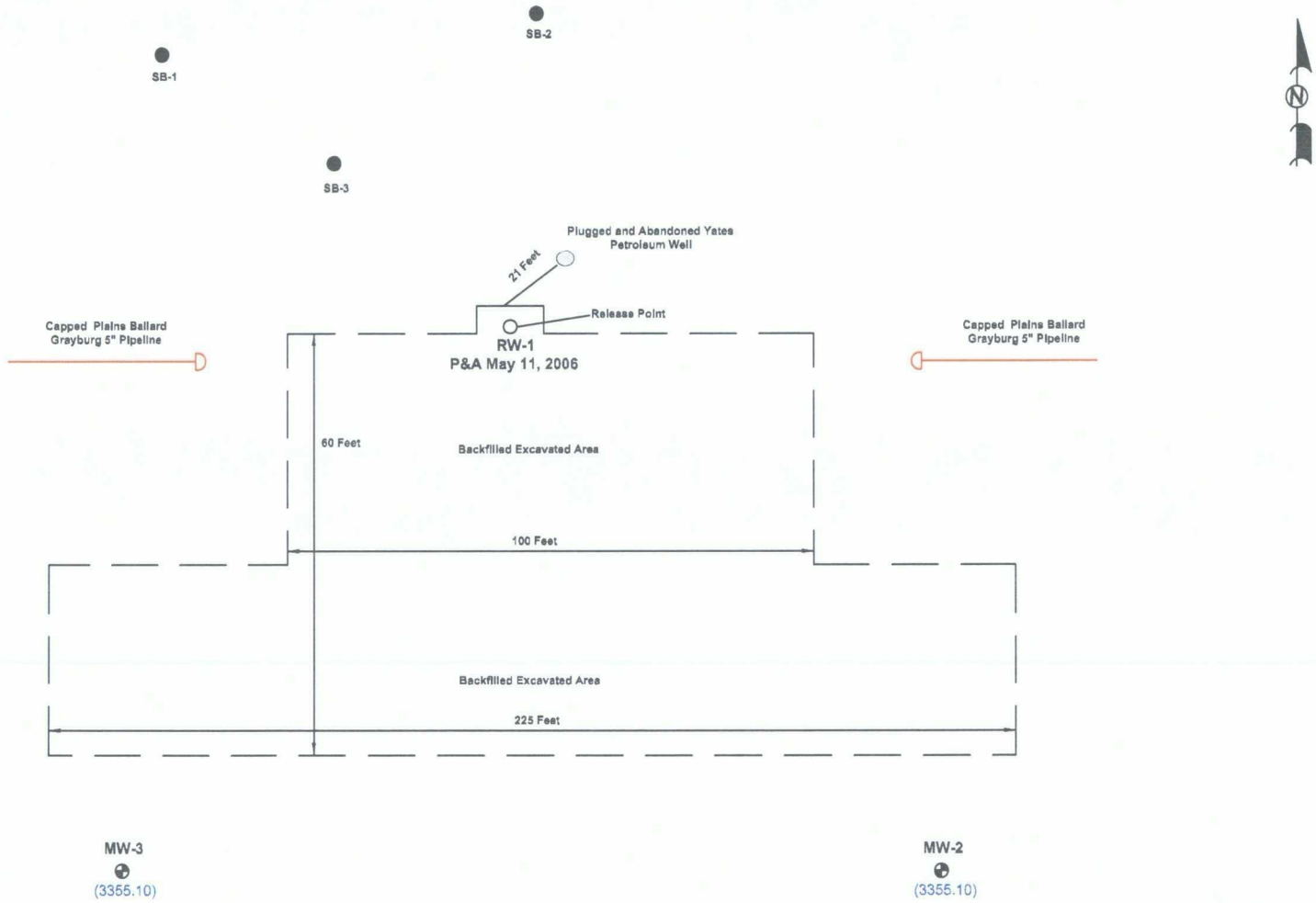
LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- Groundwater Gradient Contour Line
- (3851.45) Groundwater Elevation (feet)
- SB-1 Soil Boring Location

Figure 2B
Inferred Groundwater Gradient Map
(06/16/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	



LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- Groundwater Gradient Contour Line
- (3801.45) Groundwater Elevation (feet)
- SB-1 Soil Boring Location

Figure 2C
Inferred Groundwater Gradient Map
(08/25/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
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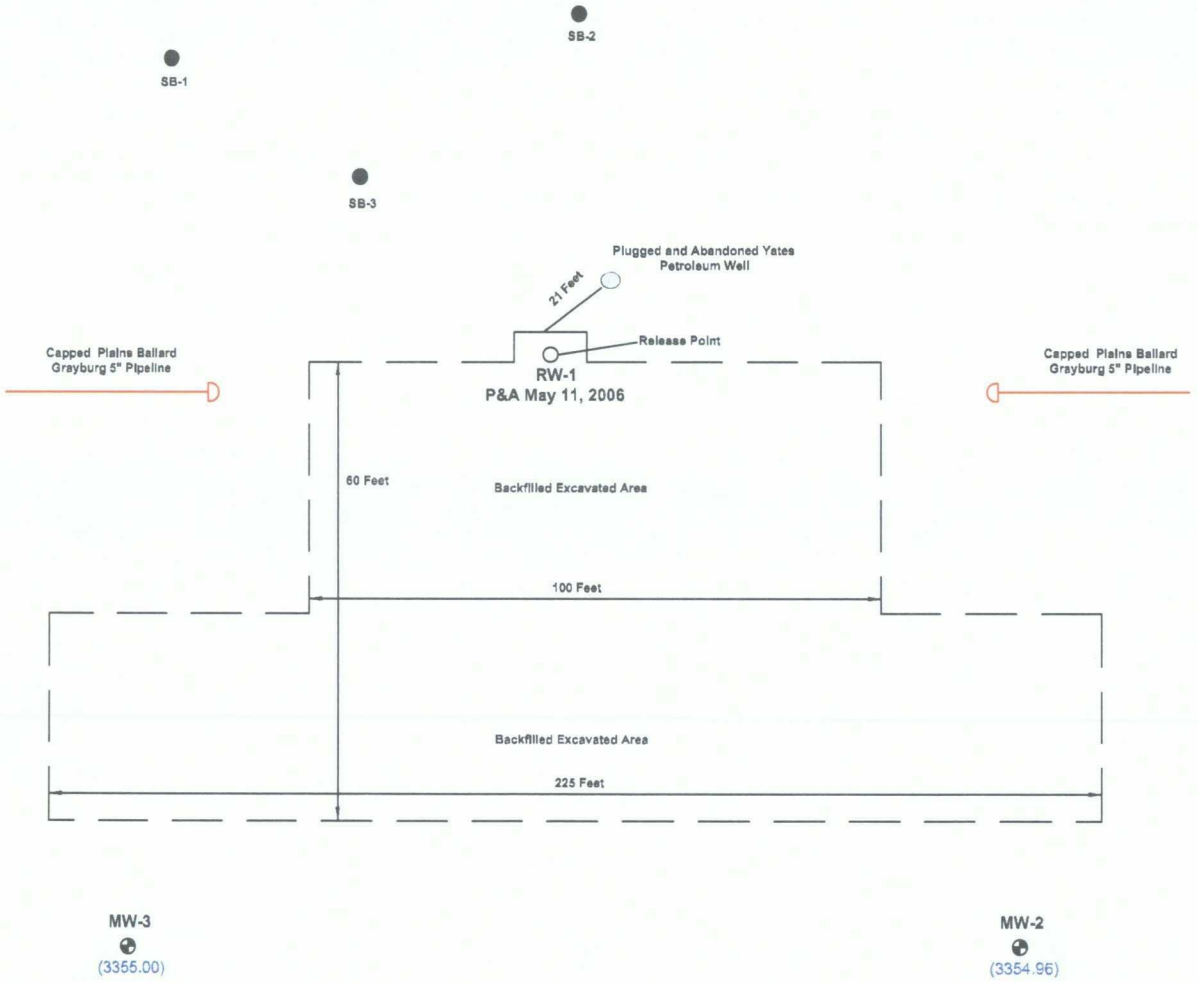

LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- SB-1 Soil Boring Location

Figure 2D
Inferred Groundwater Gradient Map
(11/05/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
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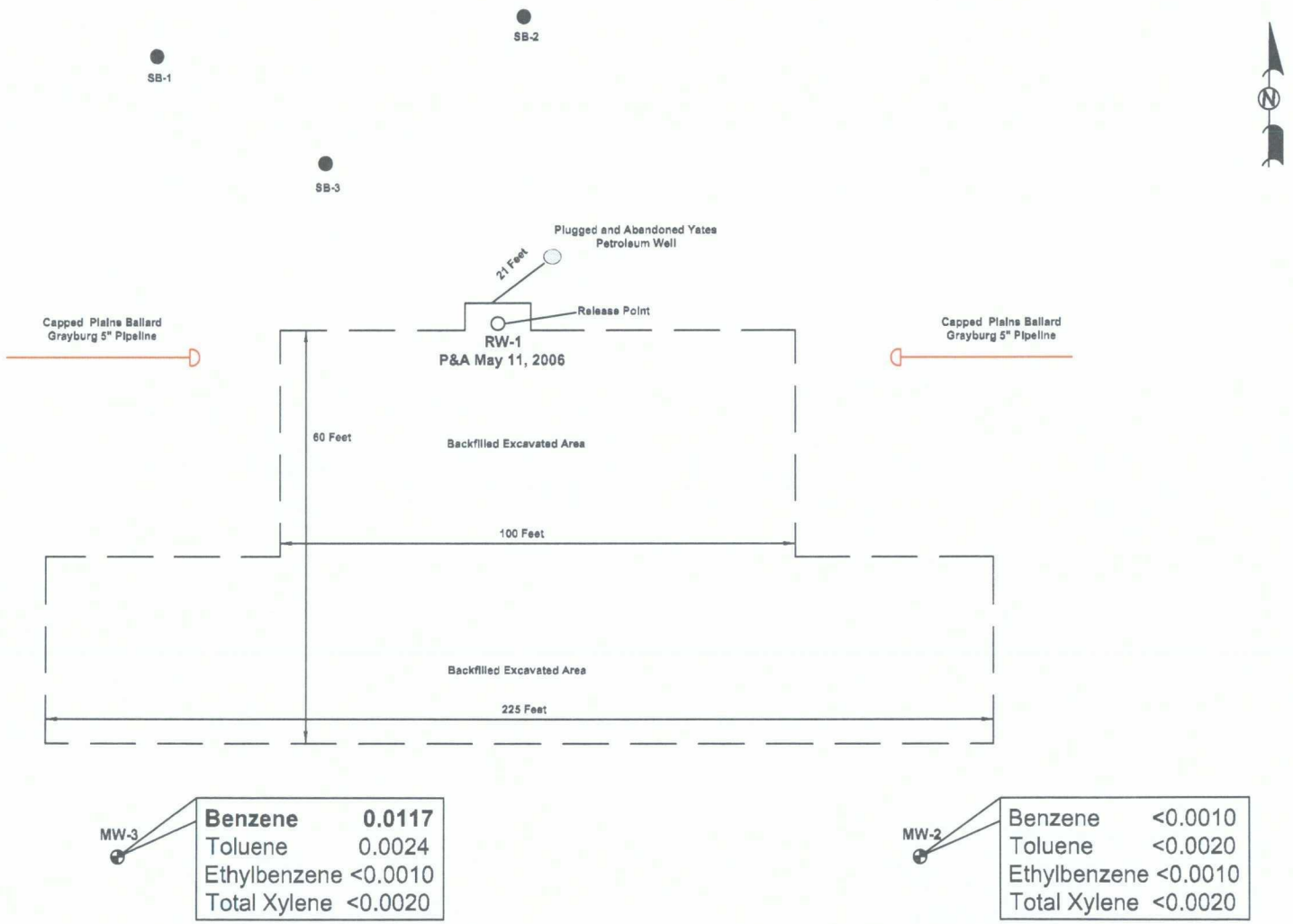


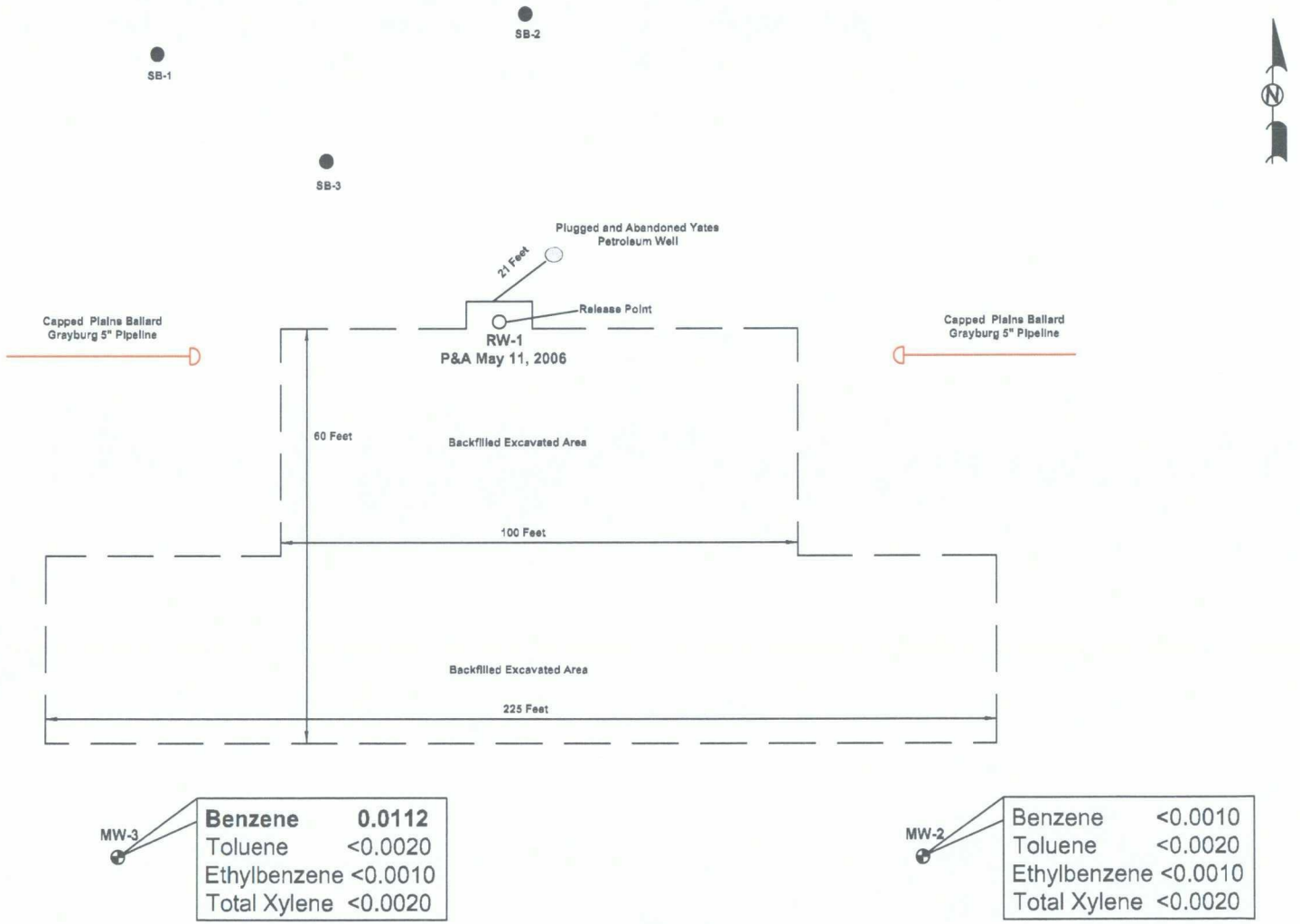
LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- SB-1 Soil Boring Location
- <0.001 Constituent Concentartion (mg/L)

Figure 3A
Groundwater Concentration Map
(02/17/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	



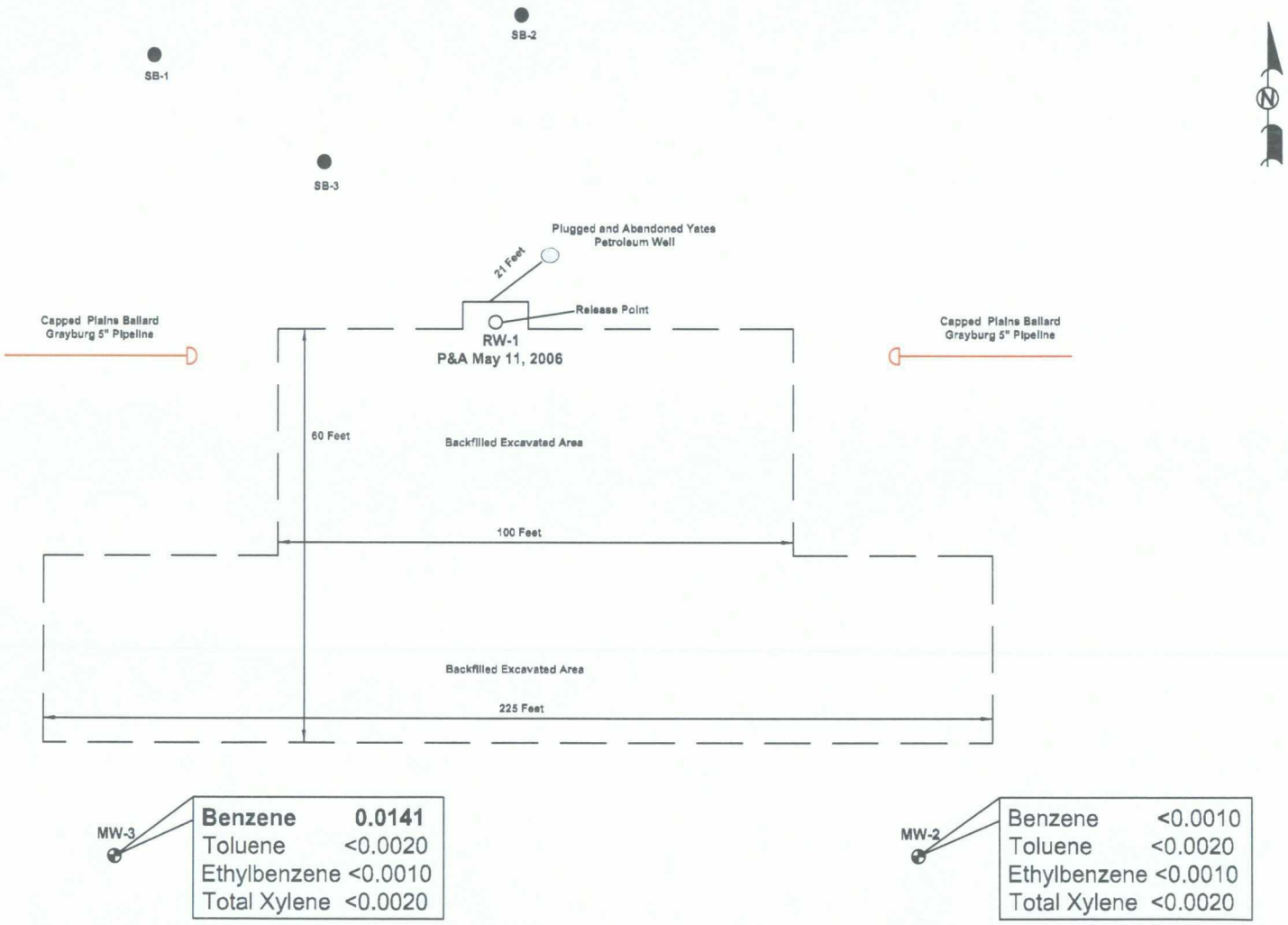
LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- SB-1 Soil Boring Location
- <0.001 Constituent Concentartion (mg/L)

Figure 3B
Groundwater Concentration Map
(06/16/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	



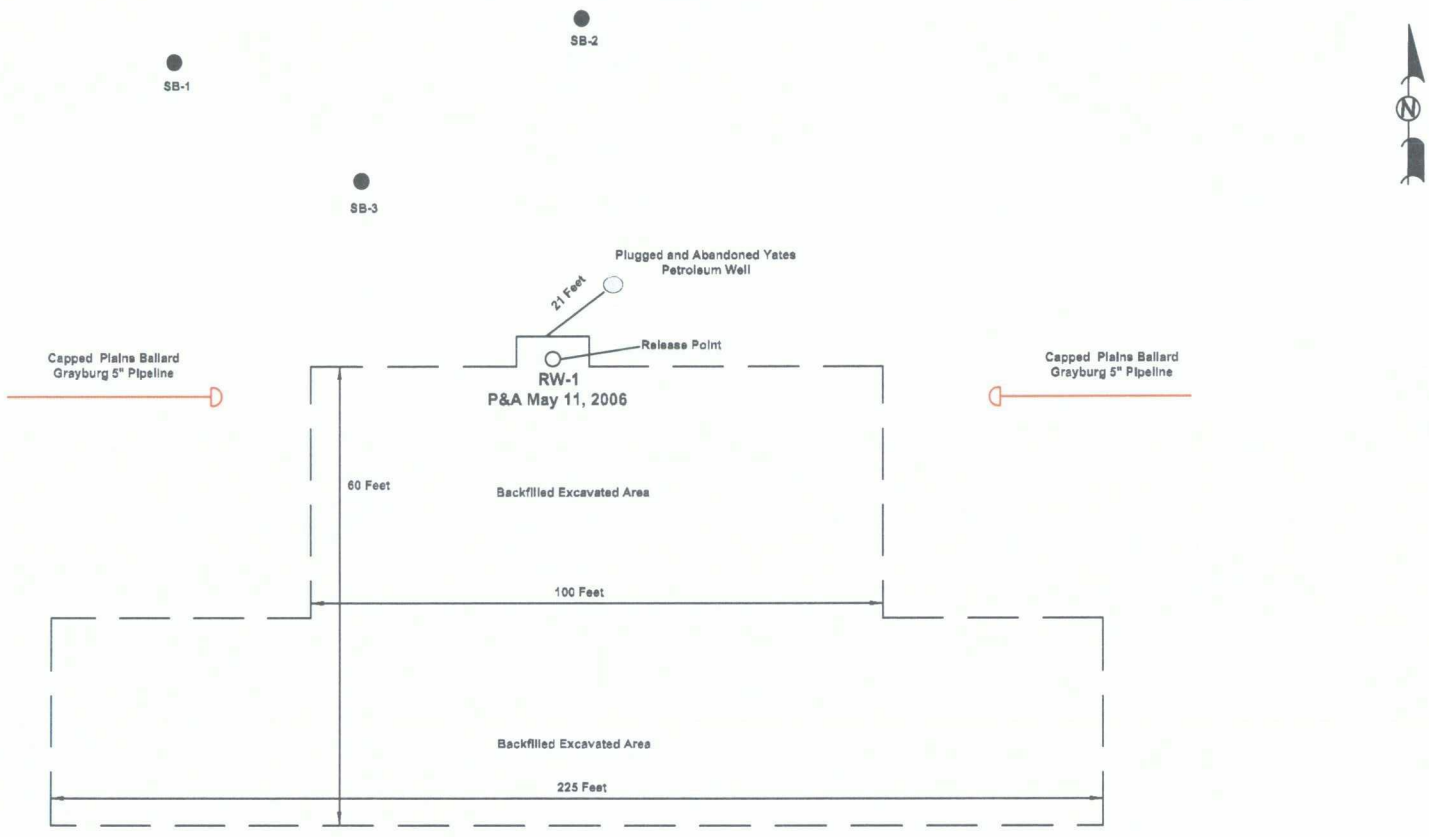
LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- SB-1 Soil Boring Location
- <0.001 Constituent Concentartion (mg/L)

Figure 3C
Groundwater Concentration Map
(08/26/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	



LEGEND:

- MW-1 Monitor Well Location
- Excavation Extents
- Pipeline
- SB-1 Soil Boring Location
- <0.001 Constituent Concentartion (mg/L)

Figure 3D
Groundwater Concentration Map
(11/05/09)
Plains Marketing, L.P.
Ballard Grayburg 5-Inch
Eddy County, NM
2RP-0053

Basin Environmental Consulting

Scale: Not to Scale	Drawn By: CDS	Prepared By: CDS
February 20, 2010	SW1/4 SW1/4 Sec 10 T18S R29E	
	Lat. N32° 45' 27.1" Long. W104° 04' 12.0"	

Tables

TABLE 1

GROUNDWATER ELEVATION DATA

PLAINS PIPELINE, L.P.
BALLARD GRAYBURG 5-INCH
EDDY COUNTY, NEW MEXICO
PLAINS SRS NO: 2004-192
NMOCD REFERENCE NO: 2RP-0053

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 2	02/17/09	3,497.90	-	142.24	0.00	3,355.66
	06/16/09	3,497.90	-	142.58	0.00	3,355.32
	08/25/09	3,497.90	-	142.8	0.00	3,355.10
	11/05/09	3,497.90	-	142.94	0.00	3,354.96
MW-3	02/17/09	3,497.91	-	142.3	0.00	3,355.61
	06/16/09	3,497.91	-	142.61	0.00	3,355.30
	08/25/09	3,497.91	-	142.81	0.00	3,355.10
	11/05/09	3,497.91	-	142.91	0.00	3,355.00
NOTE: RW-1 Plugged & Abandoned May 11, 2006						

TABLE 2

CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
BALLARD GRAYBURG 5-INCH
EDDY COUNTY, NEW MEXICO
PLAINS SRS NO. 2004-00192
NMOCD REFERENCE NO: 2RP-0053

SAMPLE LOCATION	SAMPLE DATE	DATE ANALYZED	METHODS: EPA SW 846-8021B, 5030				
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)
MW-2	2/17/2009	02/19/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	6/16/2009	06/23/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	8/25/2009	08/26/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	11/5/2009	11/12/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
MW-3	2/17/2009	02/19/09	**0.0117**	0.0024	<0.0010	<0.0020	<0.0010
	6/16/2009	06/23/09	**0.0112**	<0.0020	<0.0010	<0.0020	<0.0010
	8/25/2009	08/26/09	**0.0141**	<0.0020	<0.0010	<0.0020	<0.0010
	11/5/2009	11/12/09	0.0088	<0.0020	<0.0010	<0.0020	<0.0010
NMOCD CRITERIA			0.01	0.75	0.75	TOTAL XYLENES 0.62	

TABLE 3

CONCENTRATIONS OF POLY AROMATIC HYDROCARBONS IN GROUNDWATER

PLAINS MARKETING, L.P.

BALLARD GRAYBURG 5-INCH

EDDY COUNTY, NEW MEXICO

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510															
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
MW-2	11/05/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-3	11/05/09	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Appendices

Appendix A
Laboratory Reports

Analytical Report 325239

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Ballard Grayburg 5"

2004-00192

19-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

19-FEB-09

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

Reference: XENCO Report No: **325239**
Ballard Grayburg 5"
Project Address: Eddy County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 325239. 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. 325239 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 325239

PLAINS ALL AMERICAN EH&S, Midland, TX

Ballard Grayburg 5"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	Feb-17-09 11:00		325239-001
MW-3	W	Feb-17-09 12:00		325239-002

Certificate of Analysis Summary 325239

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Ballard Grayburg 5"

Project Id: 2004-00192
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Tue Feb-17-09 05:00 pm
Report Date: 19-FEB-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	325239-001		325239-002					
	Field Id:	MW-2		MW-3					
	Depth:								
	Matrix:	WATER		WATER					
	Sampled:	Feb-17-09 11:00		Feb-17-09 12:00					
BTEX by EPA 8021B	*Extracted:*	Feb-18-09 15:45		Feb-18-09 15:45					
	Analyzed:	Feb-19-09 06:47		Feb-19-09 07:09					
	Units/RL:	mg/L	RL	mg/L	RL				
Benzene		ND	0.0010	0.0117	0.0010				
Toluene		ND	0.0020	0.0024	0.0020				
Ethylbenzene		ND	0.0010	ND	0.0010				
m,p-Xylenes		ND	0.0020	ND	0.0020				
o-Xylene		ND	0.0010	ND	0.0010				
Total Xylenes		ND	0.0010	ND	0.0010				
Total BTEX		ND	0.0010	0.0141	0.0010				

Brent Barron
Odessa Laboratory Director

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg 5"

Work Orders : 325239,

Project ID: 2004-00192

Lab Batch #: 750115 **Sample:** 324842-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0205	0.0300	68	80-120	**

Lab Batch #: 750115 **Sample:** 324842-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0223	0.0300	74	80-120	**
4-Bromofluorobenzene	0.0201	0.0300	67	80-120	**

Lab Batch #: 750115 **Sample:** 325239-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 750115 **Sample:** 325239-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 750115 **Sample:** 525028-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0230	0.0300	77	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: Ballard Grayburg 5"

Work Orders : 325239,

Project ID: 2004-00192

Lab Batch #: 750115 **Sample:** 525028-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 750115 **Sample:** 525028-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0240	0.0300	80	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: Ballard Grayburg 5"

Work Order #: 325239 **Project ID:** 2004-00192

Analyst: ASA **Date Prepared:** 02/18/2009 **Date Analyzed:** 02/19/2009

Lab Batch ID: 750115 **Sample:** 525028-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0972	97	0.1	0.1046	105	7	70-125	25	
Toluene	ND	0.1000	0.0958	96	0.1	0.1044	104	9	70-125	25	
Ethylbenzene	ND	0.1000	0.0934	93	0.1	0.1041	104	11	71-129	25	
m,p-Xylenes	ND	0.2000	0.1935	97	0.2	0.2123	106	9	70-131	25	
o-Xylene	ND	0.1000	0.0955	96	0.1	0.1046	105	9	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: Ballard Grayburg 5"

Work Order # : 325239 **Project ID:** 2004-00192

Lab Batch ID: 750115 **QC- Sample ID:** 324842-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/19/2009 **Date Prepared:** 02/18/2009 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0029	0.1000	0.0896	87	0.1000	0.0785	76	13	70-125	25	
Toluene	0.0026	0.1000	0.0838	81	0.1000	0.0759	73	10	70-125	25	
Ethylbenzene	0.8421	0.1000	0.9089	67	0.1000	0.8140	0	11	71-129	25	XF
m,p-Xylenes	0.0125	0.2000	0.1899	89	0.2000	0.1833	85	4	70-131	25	
o-Xylene	0.0030	0.1000	0.0859	83	0.1000	0.0779	75	10	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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Curt Stanley PAGE 01 OF 01 Project Name: BALLARD GRAYBURG 5"

Company Name: Basin Environmental Service Technologies, LLC Project #: 2004-00192

Company Address: P. O. Box 301 Project Loc: Eddy County, NM

City/State/Zip: Lovington, NM 88260 PO #: PAA - J. Henry

Telephone No: (575) 441-2264 Fax No: (575) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: for L. Raynor E-mail: cstanley@basinenv.com

(lab use only)
ORDER #: 329239

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW – Drinking Water SL – Sludge; GW – Groundwater S – Soil/Solid; NP – Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	NORM	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	MW-2			2/17/2009	1100		3	X		X						GW									X				X
02	MW-3			2/17/2009	1200		3	X		X						GW									X				X

TCLP:
TOTAL: X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	2/17/09	1760			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Faz	2/17/09	17:20

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N

by Sampler/Client Rep ? by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. Plains

Date/ Time: 7 17 09 17:00

Lab ID #: 325239

Initials: AR

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	5.0 °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 335809

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Ballard Grayburg 5"

2004-00192

23-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

23-JUN-09

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

Reference: XENCO Report No: **335809**
Ballard Grayburg 5"
Project Address: Eddy County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 335809. 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. 335809 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 335809

PLAINS ALL AMERICAN EH&S, Midland, TX

Ballard Grayburg 5"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	Jun-16-09 10:00		335809-001
MW-3	W	Jun-16-09 10:50		335809-002

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Ballard Grayburg 5"

Project ID:	*2004-00192*	*Report Date:*	*23-JUN-09*
Work Order Number:	*335809*	*Date Received:*	*06/18/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763190 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763190, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532354-1-BLK,335809-002,335809-001. Matrix Interference is suspected in sample surrogate failures.

Certificate of Analysis Summary 335809

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Ballard Grayburg 5"

Project Id: 2004-00192
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Thu Jun-18-09 08:34 am
Report Date: 23-JUN-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	335809-001	335809-002				
	Field Id:	MW-2	MW-3				
	Depth:						
	Matrix:	WATER	WATER				
	Sampled:	Jun-16-09 10:00	Jun-16-09 10:50				
BTEX by EPA 8021B	*Extracted:*	Jun-22-09 11:00	Jun-22-09 11:00				
	Analyzed:	Jun-23-09 01:03	Jun-23-09 03:33				
	Units/RL:	mg/L RL	mg/L RL				
Benzene		ND 0.0010	0.0112 0.0010				
Toluene		ND 0.0020	ND 0.0020				
Ethylbenzene		ND 0.0010	ND 0.0010				
m,p-Xylenes		ND 0.0020	ND 0.0020				
o-Xylene		ND 0.0010	ND 0.0010				
Total Xylenes		ND 0.0010	ND 0.0010				
Total BTEX		ND 0.0010	0.0112 0.0010				

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.

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg 5"

Work Orders : 335809,

Project ID: 2004-00192

Lab Batch #: 763190 **Sample:** 532354-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/22/09 10:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

Lab Batch #: 763190 **Sample:** 532354-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/22/09 10:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 763190 **Sample:** 532354-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/22/09 11:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0172	0.0300	57	80-120	*

Lab Batch #: 763190 **Sample:** 335809-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/23/09 01:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0217	0.0300	72	80-120	*

Lab Batch #: 763190 **Sample:** 335809-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/23/09 03:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0212	0.0300	71	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: Ballard Grayburg 5"

Work Orders : 335809,

Project ID: 2004-00192

Lab Batch #: 763190 **Sample:** 335811-009 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/23/09 07:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 763190 **Sample:** 335811-009 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 06/23/09 07:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

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

BS / BSD Recoveries

Project Name: Ballard Grayburg 5"

Work Order #: 335809 **Project ID:** 2004-00192

Analyst: ASA **Date Prepared:** 06/22/2009 **Date Analyzed:** 06/22/2009

Lab Batch ID: 763190 **Sample:** 532354-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1089	109	0.1	0.1086	109	0	70-125	25	
Toluene	ND	0.1000	0.1053	105	0.1	0.1051	105	0	70-125	25	
Ethylbenzene	ND	0.1000	0.1106	111	0.1	0.1101	110	0	71-129	25	
m,p-Xylenes	ND	0.2000	0.2223	111	0.2	0.2219	111	0	70-131	25	
o-Xylene	ND	0.1000	0.1057	106	0.1	0.1050	105	1	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: Ballard Grayburg 5"

Work Order # : 335809 **Project ID:** 2004-00192

Lab Batch ID: 763190 **QC- Sample ID:** 335811-009 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 06/23/2009 **Date Prepared:** 06/22/2009 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0982	98	0.1000	0.1007	101	3	70-125	25	
Toluene	ND	0.1000	0.0952	95	0.1000	0.0979	98	3	70-125	25	
Ethylbenzene	ND	0.1000	0.1009	101	0.1000	0.1042	104	3	71-129	25	
m,p-Xylenes	ND	0.2000	0.2024	101	0.2000	0.2080	104	3	70-131	25	
o-Xylene	ND	0.1000	0.0967	97	0.1000	0.0990	99	2	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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Curt Stanley PAGE 01 OF 01 Project Name: BALLARD GRAYBURG 5"

Company Name: Basin Environmental Service Technologies, LLC Project #: 2004-00192

Company Address: P.O. Box 301 Project Loc: Eddy County, NM

City/State/Zip: Lovington, NM 88260 PO #: PAA - J. Henry

Telephone No: (575) 441-2244 Fax No: (505) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: e-mail: cstanley@basinenv.com

(lab use only)
ORDER #: 335809

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW - Drinking Water SL = Sludge	GW - Groundwater S = Soil/Solid	NP - Non-Potable Specify Other	Analyze For: TCLP: TPH 418.1 / 8015M (8015B)	TPH TX 1005	TX 1005	TOTAL: Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N O R M			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	MW-2			6/16/2009	1000		3	X		X						GW												X						X
02	MW-3			6/16/2009	1050		3	X		X						GW												X						X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	6/18/09	0834	Received by:		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by	Date	Time	Received by ELOT: Jeanne Fitch	Date 06-18-09	Time 0852

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains Basin

Date/ Time: 06-18-09 @ 0834

Lab ID # : 335809

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °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 342300

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant

Ballard Grayburg 5"

2004-00192

27-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

27-AUG-09

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

Reference: XENCO Report No: **342300**
Ballard Grayburg 5"
Project Address: Eddy County, NM

Camille 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 342300. 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. 342300 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 342300

PLAINS ALL AMERICAN EH&S, Midland, TX

Ballard Grayburg 5"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	Aug-25-09 11:50		342300-001
MW-3	W	Aug-25-09 12:10		342300-002

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Ballard Grayburg 5"

Project ID:	*2004-00192*	*Report Date:*	*27-AUG-09*
Work Order Number:	*342300*	*Date Received:*	*08/26/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-769870 BTEX-MTBE EPA 8021B
SW8021BM

Batch 769870, Benzene recovered above QC limits in the Matrix Spike Duplicate.
Samples affected are: 342300-001, -002.
The Laboratory Control Sample for Benzene is within laboratory Control Limits

SW8021BM

Batch 769870, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536269-1-BLK,342300-001,342300-002.
4-Bromofluorobenzene recovered above QC limits Sample Data not confirmed by re-analysis. Samples affected are: 342265-001 S and 342265-001 SD

Certificate of Analysis Summary 342300

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Ballard Grayburg 5"

Project Id: 2004-00192
Contact: *Camille Bryant*
Project Location: Eddy County, NM

Date Received in Lab: Wed Aug-26-09 08:23 am
Report Date: 27-AUG-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	342300-001		342300-002					
	Field Id:	MW-2		MW-3					
	Depth:								
	Matrix:	WATER		WATER					
	Sampled:	Aug-25-09 11:50		Aug-25-09 12:10					
BTEX by EPA 8021B	*Extracted:*	Aug-26-09 09:00		Aug-26-09 09:00					
	Analyzed:	Aug-26-09 13:33		Aug-26-09 13:52					
	Units/RL:	mg/L	RL	mg/L	RL				
Benzene		ND	0.0010	0.0141	0.0010				
Toluene		ND	0.0020	ND	0.0020				
Ethylbenzene		ND	0.0010	ND	0.0010				
m,p-Xylenes		ND	0.0020	ND	0.0020				
o-Xylene		ND	0.0010	ND	0.0010				
Total Xylenes		ND	0.0010	ND	0.0010				
Total BTEX		ND	0.0010	0.0141	0.0010				

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg 5"

Work Orders : 342300, **Project ID:** 2004-00192

Lab Batch #: 769870 **Sample:** 536269-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 09:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
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	0.0358	0.0300	119	80-120	

Lab Batch #: 769870 **Sample:** 536269-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 09:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 769870 **Sample:** 536269-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 10:11

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
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	0.0185	0.0300	62	80-120	*

Lab Batch #: 769870 **Sample:** 342300-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 13:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
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	0.0207	0.0300	69	80-120	*

Lab Batch #: 769870 **Sample:** 342300-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 13:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0197	0.0300	66	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: Ballard Grayburg 5"

Work Orders : 342300,

Project ID: 2004-00192

Lab Batch #: 769870 **Sample:** 342265-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 15:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0372	0.0300	124	80-120	*

Lab Batch #: 769870 **Sample:** 342265-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/26/09 16:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0366	0.0300	122	80-120	*

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

BS / BSD Recoveries

Project Name: Ballard Grayburg 5"

Work Order #: 342300 **Project ID:** 2004-00192

Analyst: ASA **Date Prepared:** 08/26/2009 **Date Analyzed:** 08/26/2009

Lab Batch ID: 769870 **Sample:** 536269-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1055	106	0.1	0.1031	103	2	70-125	25	
Toluene	ND	0.1000	0.1012	101	0.1	0.0987	99	3	70-125	25	
Ethylbenzene	ND	0.1000	0.1117	112	0.1	0.1097	110	2	71-129	25	
m,p-Xylenes	ND	0.2000	0.2283	114	0.2	0.2241	112	2	70-131	25	
o-Xylene	ND	0.1000	0.1087	109	0.1	0.1071	107	1	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: Ballard Grayburg 5"

Work Order # : 342300 **Project ID:** 2004-00192

Lab Batch ID: 769870 **QC- Sample ID:** 342265-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 08/26/2009 **Date Prepared:** 08/26/2009 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.1431	0.1000	0.2524	109	0.1000	0.2722	129	8	70-125	25	X
Toluene	ND	0.1000	0.0921	92	0.1000	0.1001	100	8	70-125	25	
Ethylbenzene	ND	0.1000	0.1068	107	0.1000	0.1159	116	8	71-129	25	
m,p-Xylenes	ND	0.2000	0.2186	109	0.2000	0.2377	119	8	70-131	25	
o-Xylene	0.0012	0.1000	0.1065	105	0.1000	0.1148	114	8	71-133	25	

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

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

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

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Curt Stanley PAGE 01 OF 01 Project Name: BALLARD GRAYBURG 5"

Company Name: Basin Environmental Service Technologies, LLC Project #: 2004-00192

Company Address: P. O. Box 301 Project Loc: Eddy County, NM

City/State/Zip: Levington, NM 88260 PO #: PAA - C. J. Bryant

Telephone No: (505) 441-2124 Fax No. (505) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: e-mail: cstanley@basinenv.com

(lab use only) ORDER #: 342300

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW - Drinking Water S = Soil/Solid GW - Groundwater I = Ice/Frozen SW - Surface Water NP - Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/602 or TPH TEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
																	TCLP:													
																	TOTAL:								X				
01	MW-2			8/25/2009	1150		3	X		X						GW													X
02	MW-3			8/25/2009	1210		3	X		X						GW													X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	8-25	15:26		8/25/09	1526
Relinquished by:	Date	Time	Received by:	Date	Time
	8/26/09	0823			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				8/26/09	08:23

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s) N/A	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental

Date/ Time: 8/26/09 08:23

Lab ID #: 342300

Initials: AS

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °C	
#2	Shipping container in good condition?	(Yes)	No	N/A	
#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 351530

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Ballard Grayburg

2004-192

13-NOV-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

13-NOV-09

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

Reference: XENCO Report No: **351530**
Ballard Grayburg
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 351530. 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. 351530 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 351530

PLAINS ALL AMERICAN EH&S, Midland, TX

Ballard Grayburg

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	Nov-05-09 11:05		351530-001
MW-3	W	Nov-05-09 11:30		351530-002

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Ballard Grayburg

Project ID:	*2004-192*	*Report Date:*	*13-NOV-09*
Work Order Number:	*351530*	*Date Received:*	*11/06/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-781318 BTEX by EPA 8021
None

Batch: LBA-781602 SVOAs TCL List by SW-846 8270C
SVOC-LCS/LCSD imported in a different analytical batch (781568). These were analyzed under different tune times.

Certificate of Analysis Summary 351530

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Ballard Grayburg

Project Id: 2004-192
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-06-09 04:45 pm
Report Date: 13-NOV-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	351530-001	351530-002				
	Field Id:	MW-2	MW-3				
	Depth:						
	Matrix:	WATER	WATER				
	Sampled:	Nov-05-09 11:05	Nov-05-09 11:30				
BTEX by EPA 8021	*Extracted:*	Nov-11-09 16:45	Nov-11-09 16:45				
	Analyzed:	Nov-12-09 00:35	Nov-12-09 00:56				
	Units/RL:	mg/L RL	mg/L RL				
Benzene		ND 0.0010	0.0088 0.0010				
Toluene		ND 0.0020	ND 0.0020				
Ethylbenzene		ND 0.0010	ND 0.0010				
m,p-Xylenes		ND 0.0020	ND 0.0020				
o-Xylene		ND 0.0010	ND 0.0010				
Xylenes, Total		ND 0.0010	ND 0.0010				
Total BTEX		ND 0.0010	0.0088 0.0010				

Certificate of Analysis Summary 351530

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Ballard Grayburg

Project Id: 2004-192
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-06-09 04:45 pm
Report Date: 13-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	351530-001		351530-002					
	Field Id:	MW-2		MW-3					
	Depth:								
	Matrix:	WATER		WATER					
	Sampled:	Nov-05-09 11:05		Nov-05-09 11:30					
SVOA PAHs List	*Extracted:*	Nov-11-09 09:42		Nov-11-09 09:45					
SUB: T104704215-08B-TX	*Analyzed:*	Nov-13-09 13:02		Nov-13-09 13:40					
	Units/RL:	mg/L	RL	mg/L	RL				
Acenaphthene		ND	0.005	ND	0.005				
Acenaphthylene		ND	0.005	ND	0.005				
Anthracene		ND	0.005	ND	0.005				
Benzo(a)anthracene		ND	0.005	ND	0.005				
Benzo(a)pyrene		ND	0.005	ND	0.005				
Benzo(b)fluoranthene		ND	0.005	ND	0.005				
Benzo(k)fluoranthene		ND	0.005	ND	0.005				
Benzo(g,h,i)perylene		ND	0.005	ND	0.005				
Chrysene		ND	0.005	ND	0.005				
Dibenz(a,h)anthracene		ND	0.005	ND	0.005				
Fluoranthene		ND	0.005	ND	0.005				
Fluorene		ND	0.005	ND	0.005				
Indeno(1,2,3-c,d)Pyrene		ND	0.005	ND	0.005				
1-Methylnaphthalene		ND	0.005	ND	0.005				
2-Methylnaphthalene		ND	0.005	ND	0.005				
Naphthalene		ND	0.005	ND	0.005				
Phenanthrene		ND	0.005	ND	0.005				
Pyrene		ND	0.005	ND	0.005				

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.

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg

Work Orders : 351530,

Project ID: 2004-192

Lab Batch #: 781318 **Sample:** 542954-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/11/09 17:11

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 781318 **Sample:** 542954-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/11/09 17:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY 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	0.0296	0.0300	99	80-120	

Lab Batch #: 781318 **Sample:** 542954-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/11/09 18:35

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 781318 **Sample:** 351530-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 00:35

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 781318 **Sample:** 351530-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 00:56

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Version: 1.002

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg

Work Orders : 351530, **Project ID:** 2004-192

Lab Batch #: 781318 **Sample:** 351230-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 02:42

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 781318 **Sample:** 351230-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 03:04

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 781568 **Sample:** 542899-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 17:56

SVOA PAHs List by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.028	0.050	56	21-100	
Nitrobenzene-d5	0.035	0.050	70	35-114	
Phenol-d6	0.020	0.050	40	10-94	
Terphenyl-D14	0.044	0.050	88	33-141	
2,4,6-Tribromophenol	0.039	0.050	78	10-123	

Lab Batch #: 781568 **Sample:** 542899-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 18:34

SVOA PAHs List by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.028	0.050	56	21-100	
Nitrobenzene-d5	0.037	0.050	74	35-114	
Phenol-d6	0.020	0.050	40	10-94	
Terphenyl-D14	0.043	0.050	86	33-141	
2,4,6-Tribromophenol	0.040	0.050	80	10-123	

* 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.

Version: 1.002

Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg

Work Orders : 351530,

Project ID: 2004-192

Lab Batch #: 781568 **Sample:** 542899-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/09 19:12

SVOA PAHs List by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.027	0.050	54	21-100	
Nitrobenzene-d5	0.037	0.050	74	35-114	
Phenol-d6	0.020	0.050	40	10-94	
Terphenyl-D14	0.044	0.050	88	33-141	
2,4,6-Tribromophenol	0.041	0.050	82	10-123	

Lab Batch #: 781602 **Sample:** 351530-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/13/09 13:02

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.039	0.050	78	43-116	
2-Fluorophenol	0.024	0.050	48	21-100	
Nitrobenzene-d5	0.038	0.050	76	35-114	
Phenol-d6	0.014	0.050	28	10-94	
Terphenyl-D14	0.044	0.050	88	33-141	
2,4,6-Tribromophenol	0.042	0.050	84	10-123	

Lab Batch #: 781602 **Sample:** 351530-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/13/09 13:40

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.024	0.050	48	21-100	
Nitrobenzene-d5	0.037	0.050	74	35-114	
Phenol-d6	0.014	0.050	28	10-94	
Terphenyl-D14	0.043	0.050	86	33-141	
2,4,6-Tribromophenol	0.042	0.050	84	10-123	

* 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.

Version: 1.002

BS / BSD Recoveries

Project Name: Ballard Grayburg

Work Order #: 351530
Analyst: ASA
Lab Batch ID: 781318
Sample: 542954-1-BKS
Units: mg/L

Date Prepared: 11/11/2009
Batch #: 1

Project ID: 2004-192
Date Analyzed: 11/11/2009
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0914	91	0.1	0.0943	94	3	70-125	25	
Toluene	0.0010	0.1000	0.0914	91	0.1	0.0949	95	4	70-125	25	
Ethylbenzene	ND	0.1000	0.0904	90	0.1	0.0946	95	5	71-129	25	
m,p-Xylenes	ND	0.2000	0.1977	99	0.2	0.2066	103	4	70-131	25	
o-Xylene	ND	0.1000	0.0954	95	0.1	0.1019	102	7	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

Version: 1.002

BS / BSD Recoveries

Project Name: Ballard Grayburg

Work Order #: 351530 **Project ID:** 2004-192

Analyst: KAN **Date Prepared:** 11/11/2009 **Date Analyzed:** 11/12/2009

Lab Batch ID: 781568 **Sample:** 542899-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

SVOA PAHs List by SW-846 8270C Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	ND	0.050	0.035	70	0.05	0.036	72	3	27-132	31	
Acenaphthylene	ND	0.050	0.036	72	0.05	0.036	72	0	46-108	25	
Anthracene	ND	0.050	0.036	72	0.05	0.036	72	0	47-145	25	
Benzo(a)anthracene	ND	0.050	0.035	70	0.05	0.036	72	3	33-143	25	
Benzo(a)pyrene	ND	0.050	0.037	74	0.05	0.037	74	0	65-135	25	
Benzo(b)fluoranthene	ND	0.050	0.039	78	0.05	0.039	78	0	24-159	25	
Benzo(k)fluoranthene	ND	0.050	0.036	72	0.05	0.036	72	0	25-125	25	
Benzo(g,h,i)perylene	ND	0.050	0.042	84	0.05	0.043	86	2	65-135	25	
Chrysene	ND	0.050	0.039	78	0.05	0.040	80	3	65-135	25	
Dibenz(a,h)anthracene	ND	0.050	0.040	80	0.05	0.040	80	0	50-125	25	
Fluoranthene	ND	0.050	0.034	68	0.05	0.035	70	3	47-125	25	
Fluorene	ND	0.050	0.037	74	0.05	0.038	76	3	48-139	25	
Indeno(1,2,3-c,d)Pyrene	ND	0.050	0.039	78	0.05	0.039	78	0	27-160	25	
Naphthalene	ND	0.050	0.036	72	0.05	0.036	72	0	26-175	25	
Phenanthrene	ND	0.050	0.035	70	0.05	0.035	70	0	65-135	25	
Pyrene	ND	0.050	0.041	82	0.05	0.042	84	2	23-152	31	

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

Version: 1.002

Form 3 - MS / MSD Recoveries

Project Name: Ballard Grayburg

Work Order # : 351530 **Project ID:** 2004-192

Lab Batch ID: 781318 **QC- Sample ID:** 351230-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/12/2009 **Date Prepared:** 11/11/2009 **Analyst:** ASA

Reporting Units: mg/L

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021 **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	0.0874	87	0.1000	0.0838	84	4	70-125	25	
Toluene	ND	0.1000	0.0890	89	0.1000	0.0850	85	5	70-125	25	
Ethylbenzene	ND	0.1000	0.0859	86	0.1000	0.0830	83	4	71-129	25	
m,p-Xylenes	ND	0.2000	0.1857	93	0.2000	0.1798	90	3	70-131	25	
o-Xylene	ND	0.1000	0.0916	92	0.1000	0.0874	87	6	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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Curt Stanley PAGE 01 OF 01

Project Name: Ballard Grayburg

Company Name: Basin Environmental Service Technologies, LLC

Project #: 2004-192

Company Address: 2800 Plains Hwy

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J Henry

Telephone No: (575) 441-2244 Fax No: (505) 396-1429

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

Sampler Signature:

e-mail: cstanley@basinenv.com

(lab use only)

ORDER #: 351530

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA X 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: DW = Drinking Water SL = Sludge; GW = Groundwater S = Soil/Sol; NP = Non-Potable Specify Oth	Analyze For: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	PAH 8270	EPA Paint Filter Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
																	TCLP:								X							
																	TOTAL:								X							
01	MW-2			11/5/2009	1105		4	X								GW									X			X				X
02	MW-3			11/5/2009	1130		4	X								GW									X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11-6-09	12:15		11/6/09	1212
Relinquished by:	Date	Time	Received by:	Date	Time
	11/6/09	1645			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Fern	11.6.09	16:45

Laboratory Comments:

Sample Containers Intact? Y N

VOCs Free of Headspace? Y N

Labels on container(s) Y N

Custody seals on container(s) Y N

Sample Hand Delivered Y N

by Sampler/Client Rep. ? Y N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains

Date/ Time: 11.6.09 16:45

Lab ID # : 351530

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °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: PAH subbed to Xenco - Houston.

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
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

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.

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? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Van Barton	
By Whom? Ken Dutton	Date and Hour 9-2-04 @ 14:32	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* External corrosion 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_2S 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: Camille Reynolds	OIL CONSERVATION DIVISION
Printed Name: Camille Reynolds	Approved by District Supervisor:
Title: Remediation Coordinator	Approval Date: Expiration Date:
E-mail Address: clreynolds@paalp.com	Conditions of Approval: Attached ☐
Date: 9-7-04 Phone:505-441-0965	

* Attach Additional Sheets If Necessary