1R - 85

Annual GW Mon. Report

Year: 2011

Basin Environmental Service Technologies, LLC

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Effective Solutions

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APR 2 2012

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

2011
ANNUAL MONITORING REPORT

RED BYRD #1
Unit Letter "H" (SENE), Section 1, Township 20 South, Range 36 East
Latitude 32° 36' 10.15" North, Longitude 103° 18' 00.35" West
Lea County, New Mexico
Plains SRS Number: TNM Red Byrd #1
NMOCD Reference Number: 1RP-0085

Prepared for:

PLAINS

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

Prepared By:

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

March 2012

Ben J. Arguijo
Project Manager

PLAINS
ALL AMERICAN

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APR 2 2012

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

March 29, 2012

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

Re: Plains All American – 2011 Annual Monitoring Reports
5 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	AP-96 (1R-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
14" Vac to Jal Legacy	1R-2162	Section 25, T22S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053	Section 10, T18S, R29E, Eddy County

Basin Environmental Service Technologies, 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
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM
Enclosures

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FIGURES

TABLES

APPENDICES

INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Pipeline, LP (Plains), is pleased to submit 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 1st of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2011 only. For reference, a "Site Location Map" is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2011 to assess the levels and extent of dissolved phase constituents and Phase-Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 feet were not sampled.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located approximately four (4) miles southwest of the town of Monument, New Mexico. The legal description of the site is Unit Letter "H" (SENE), Section 1, Township 20 South, Range 36 East. The geographic coordinates of the site are 32° 36' 10.15" North latitude and 103° 18' 00.35" West longitude.

In January 2000, evidence of a historical release was discovered by the landowner, Mr. Red Byrd, and brought to the attention of Enron Oil Trading and Transportation (EOTT), who acquired the pipeline from Texas New Mexico Pipeline Company in 1999. On January 1, 2009, Basin assumed oversight of groundwater daily operations, sampling, and reporting at the release site.

Approximately 8,900 cubic yards (cy) of impacted soil was excavated, shredded, and blended with nutrients. Approximately 3,700 cy of the impacted soil was transported to Plains Lea Station Landfarm (Discharge Permit #GW-351) to be used as berm material. On completion of excavation activities, confirmation soil samples were collected from the excavation and stockpiles. Review of laboratory analytical results indicated soil samples collected from the excavation were less than NMOCD regulatory standards. The excavation was backfilled with the blended soil, approximately 3,500 cubic yards of topsoil was transported to the site, and the area was contoured to topographic grade.

At the Red Byrd #1 site, two areas of hydrocarbon impact related to the Plains pipeline have been identified as Red Byrd #1 and Red Byrd Ranch Historical. The first area of impact (Red Byrd #1) is the subject of this Annual Monitoring Report and is centered on and around monitor well MW-1. The second area of impact (Red Byrd Ranch Historical – 1R 1299) related to the Plains pipeline is centered on monitor well MW-12. The soil issues at the Red Byrd #1 and Red Byrd Ranch Historical sites have been have been remediated, and groundwater monitoring and sampling are ongoing. For the purpose of groundwater monitoring, the remaining activities at the site are conducted at Red Byrd #1.

On November 17, 2008, Plains assigned excavation oversight of the Red Byrd Ranch Historical release site to Basin. On December 10, 2008, Basin resumed excavation activities at the release site, and on September 9, 2009, backfilling and restoration activities at the Red Byrd Ranch Historical release site were completed.

During sampling conducted in the first quarter of 2009, additional groundwater samples were collected from each of the nineteen (19) on-site monitor wells and analyzed for concentrations of chloride and total dissolved solids (TDS). The analytical results indicated elevated TDS concentrations, in excess of 10,000 mg/L, were present in fifteen (15) monitor wells. Monitor wells located up-gradient of the Red Byrd #1 and Red Byrd Ranch Historical releases exhibited elevated TDS concentrations, as well as the monitor wells associated with the release(s). Based on the up-gradient position of the monitor wells containing elevated TDS and the presence of numerous (20-plus) pipelines in the area, abandoned pits located northwest and south of the releases, numerous facility and drilling pads, production wells, a refinery and a chemical plant all within one half mile of the release site, there are multiple potential responsible parties contributing to the contaminant plume. The New Mexico Water Quality Control Commission (NMWQCC) regulations state groundwater exhibiting TDS concentrations in excess of 10,000 mg/L is not abatable.

On September 9, 2009, Plains requested NMOCD approval to plug and abandon monitor wells exhibiting TDS concentrations exceeding 10,000 mg/L (MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, MW-15, MW-16, and MW-19). Plains requested monitor wells associated with the ongoing groundwater issues at the Red Byrd Ranch Historical release (MW-6, MW-7, MW-11, MW-12, MW-17, and MW-18) be placed on a semi-annual sampling schedule to monitor the Red Byrd Ranch Historical PSH plume.

On October 2, 2009, Plains received NMOCD approval to reduce the sampling frequency for monitor wells MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19 to a semi-annual schedule, and plug and abandon monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15.

In October 2009, a *Red Byrd Ranch Historical Remediation Summary and Soil Closure Request* was submitted to the NMOCD Santa Fe Office. On December 9, 2009, Plains received correspondence from the NMOCD Santa Fe Office, indicating the report was accepted and no further soil remediation was required at the site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Following the plugging activities, plugging reports were submitted to the NMOCD Santa Fe Office.

Currently, eight (8) monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19) are located on the Red Byrd #1 site. Monitor wells MW-6, MW-7, MW-11, MW-16, MW-17, MW-18, and MW-19 are gauged quarterly and sampled on a semi-annual schedule. Monitor well MW-12 is gauged weekly but not sampled due to the presence of PSH.

FIELD ACTIVITIES

Product Recovery Efforts

A measurable thickness of PSH was detected in monitor well MW-12 during the initial site investigation. Basin began manual, weekly gauging and recovery of PSH from MW-12 in January 2009. Approximately 221 gallons (5.3 barrels) of PSH has been recovered from MW-12 since recovery operations began in 2009, and approximately 66.5 gallons (1.6 barrels) of PSH was recovered from MW-12 during the 2011 reporting period. The average PSH thickness measured in MW-12 during the reporting period was 0.77 feet, and the maximum PSH thickness was 2.10 feet on November 22, 2011. All recovered fluids are disposed of at an NMOCD-approved disposal facility near Monument, New Mexico.

A Mobile Dual-Phase Extraction (MDPE) event was conducted on July 19 - 20, 2011, by Talon LPE. Approximately 11.19 equivalent gallons (0.3 barrels) of PSH were removed during the event.

Groundwater Monitoring

The on-site monitor wells were gauged and sampled on May 11 and November 10, 2011. During these semi-annual sampling events, the monitoring wells were purged of a minimum of 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 bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer-mounted polystyrene tank and disposed of at an NMOCD-approved disposal facility near Monument, New Mexico.

Yearly monitoring events for polyaromatic hydrocarbons (PAH) were conducted on December 16 and December 21, 2011. Based on sampling criteria provided by the NMOCD, only monitor wells MW-16, MW-18, and MW-19 were subject to PAH monitoring during the 2011 calendar year.

Locations of the groundwater monitoring wells and the inferred groundwater elevations, which were constructed from measurements collected during each quarter of 2011, are depicted in Figures 2A through 2D. The "Groundwater Gradient Map" from the most recent gauging event (Figure 2D, November 10, 2011) indicates a general gradient of approximately 0.0024 feet/foot to the southeast as measured between groundwater monitor wells MW-18 and MW-19.

On November 10, 2011, the corrected groundwater elevation ranged between 3,530.66 and 3,534.27 feet above mean sea level in monitor wells MW-11 and MW-18, respectively. The "2011 Groundwater Elevation Data" is provided as Table 1.

LABORATORY RESULTS

Groundwater samples collected from the monitor wells during the semi-annual sampling events (May and November 2011) were delivered to Xenco Laboratories in Odessa, Texas, for

determination of benzene, toluene, ethylbenzene, and total xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. A summary of benzene and BTEX constituent concentrations is presented in Table 2, "2011 Concentrations of Benzene & BTEX in Groundwater". Laboratory analytical reports are provided as Appendix A. "Groundwater Concentration & Inferred PSH Extent" maps are provided as Figures 2A and 2B.

For the purposes of this annual monitoring report, 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 (NMAC). However, it should be noted that, due to the TDS concentrations in the groundwater, the closure criteria for this site is not based on the standards noted above, but on the absence of PSH.

Monitor well MW-2 was plugged on November 9, 2006. Monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15 were plugged and abandoned on October 29, 2009.

Monitor well MW-6

Laboratory analytical results indicated benzene concentrations ranged from 0.0541 mg/L in November 2011 to 0.200 mg/L in May 2011. Toluene concentrations ranged from 0.0197 mg/L in November 2011 to 0.295 mg/L in May 2011. Ethylbenzene concentrations ranged from less than the laboratory method detection limit (MDL) in May 2011 to 0.0110 mg/L in November 2011. Total xylene concentrations ranged from 0.0187 mg/L in November 2011 to 0.108 mg/L in May 2011. Benzene concentrations exceeded NMOCD regulatory standards in both the May and November 2011 sampling events. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

Monitor well MW-7

Laboratory analytical results indicated benzene concentrations ranged less than the laboratory MDL in November 2011 to 0.00165 mg/L in May 2011. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in both the May and November 2011 sampling events. Benzene and BTEX constituent concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

Monitor well MW-11

Laboratory analytical results indicated benzene concentrations ranged from 0.0371 mg/L in May 2011 to 0.0460 mg/L in November 2011. Toluene concentrations ranged from less than the laboratory MDL in May 2011 to 0.0108 mg/L in November 2011. Ethylbenzene concentrations ranged from 0.0159 mg/L in May 2011 to 0.0256 mg/L in November 2011. Total xylene concentrations ranged from 0.00745 mg/L in May 2011 to 0.0381 mg/L in November 2011. Benzene concentrations exceeded NMOCD regulatory standards in both the May and November 2011 sampling events. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

Monitor well MW-12

Monitor well MW-12 was not sampled during the 2011 reporting period due to the presence of PSH in the monitor well.

Monitor well MW-16

Laboratory analytical results indicated benzene concentrations ranged from 0.00159 mg/L in November 2011 to 0.0349 mg/L in May 2011. Toluene concentrations were less than the laboratory MDL in both the May and November 2011 sampling events. Ethylbenzene concentrations ranged from 0.00197 mg/L in November 2011 to 0.0336 mg/L in May 2011. Total xylene concentrations ranged from less than the laboratory MDL in November 2011 to 0.0213 mg/L in May 2011. Benzene concentrations exceeded NMOCD regulatory standards in May 2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

PAH constituent concentrations were both less than the appropriate laboratory MDL and NMOCD regulatory standards in the groundwater sample collected on December 16, 2011.

Monitor well MW-17

Laboratory analytical results indicated benzene concentrations ranged from 0.0189 mg/L in November 2011 to 0.0693 mg/L in May 2011. Toluene concentrations were less than the laboratory MDL in both the May and November 2011 sampling events. Ethylbenzene concentrations ranged from 0.00197 mg/L in November 2011 to 0.0336 mg/L in May 2011. Total xylene concentrations ranged from less than the laboratory MDL in November 2011 to 0.0213 in May 2011. Benzene concentrations exceeded NMOCD regulatory standards in both the May and November 2011 sampling events. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

Monitor well MW-18

Laboratory analytical results indicated benzene concentrations ranged from 0.00431 mg/L in November 2011 to 0.0134 mg/L in May 2011. Toluene concentrations ranged from 0.00985 mg/L in November 2011 to 0.0184 mg/L in May 2011. Ethylbenzene concentrations ranged from 0.0269 mg/L in November 2011 to 0.0541 mg/L in May 2011. Total xylene concentrations ranged 0.0405 mg/L in November 2011 to 0.0417 mg/L in May 2011. Benzene concentrations exceeded NMOCD regulatory standards in May 2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

PAH constituent concentrations were both less than the appropriate laboratory MDL and NMOCD regulatory standards in the groundwater sample collected on December 21, 2011.

Monitor well MW-19

Laboratory analytical results indicated benzene concentrations ranged from 0.00106 mg/L in November 2011 to 0.00359 mg/L in May 2011. Toluene concentrations were less than the appropriate laboratory MDL in both the May and November 2011 sampling events. Ethylbenzene concentrations ranged from less than the laboratory MDL in November 2011 to 0.0100 mg/L in May 2011. Total xylene concentrations ranged from less than the laboratory MDL in November 2011 to 0.00562 mg/L in May 2011. Benzene and BTEX constituent concentrations were less than NMOCD regulatory standards in both the May and November 2011 sampling events.

PAH constituent concentrations were both less than the appropriate laboratory MDL and NMOCD regulatory standards in the groundwater sample collected on December 16, 2011.

SUMMARY

This report presents the results of monitoring activities for the 2011 annual monitoring period. Currently, there are eight (8) groundwater monitor wells (MW-6, MW-7, MW-11, MW-12, MW-16, MW-17, MW-18, and MW-19) on-site.

On October 29, 2009, monitor wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9, MW-10, MW-13, MW-14 and MW-15 were plugged and abandoned by a State of New Mexico licensed water well driller, as approved by the NMOCD. Following the plugging activities, plugging reports were submitted to the NMOCD Santa Fe Office. Monitor well MW-2 had previously been abandoned on November 9, 2006.

The "Groundwater Gradient Map" from the most recent gauging event (Figure 2D, November 12, 2011) indicates a general gradient of approximately 0.01 feet/foot to the southeast as measured between groundwater monitor wells MW-18 and MW-19.

A measurable thickness of PSH was detected in monitor well MW-12 during the initial site investigation and throughout the 2011 reporting period. Basin began manual, weekly gauging and recovery of PSH from MW-12 in January 2009. Approximately 221 gallons (5.3 barrels) of PSH has been recovered from MW-12 since recovery operations began in 2009, and approximately 66.5 gallons (1.6 barrels) of PSH was recovered from MW-12 during the 2011 reporting period. A total of 11.19 equivalent gallons (0.3 barrels) of PSH was recovered by Mobile Dual-Phase Extraction. The average PSH thickness measured in MW-12 during the reporting period was 0.77 feet, and the maximum PSH thickness was 2.10 feet on November 22, 2011.

Review of laboratory analytical results generated from analysis of the groundwater samples collected during the 2011 reporting period indicates benzene concentrations were above NMOCD regulatory standards in three (3) of the eight (8) on-site monitor wells during the November 2011 sampling event.

ANTICIPATED ACTIONS

PSH recovery from monitor well MW-12 will continue on a weekly schedule. All fluids recovered from MW-12 will be disposed of at an NMOCD-permitted disposal facility.

Monitor wells MW-6, MW-7, MW-11, MW-12, and MW-16 through MW-19 will be monitored and sampled semi-annually. A yearly PAH monitoring event will be conducted at monitor wells MW-16, MW-18, and MW-19 during the 2012 calendar year.

Results from the 2012 sampling events will be reported in the 2011 *Annual Monitoring Report*, which will be submitted to the NMOCD by April 1, 2013.

LIMITATIONS

Basin Environmental Service Technologies, LLC, 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 on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

DISTRIBUTION

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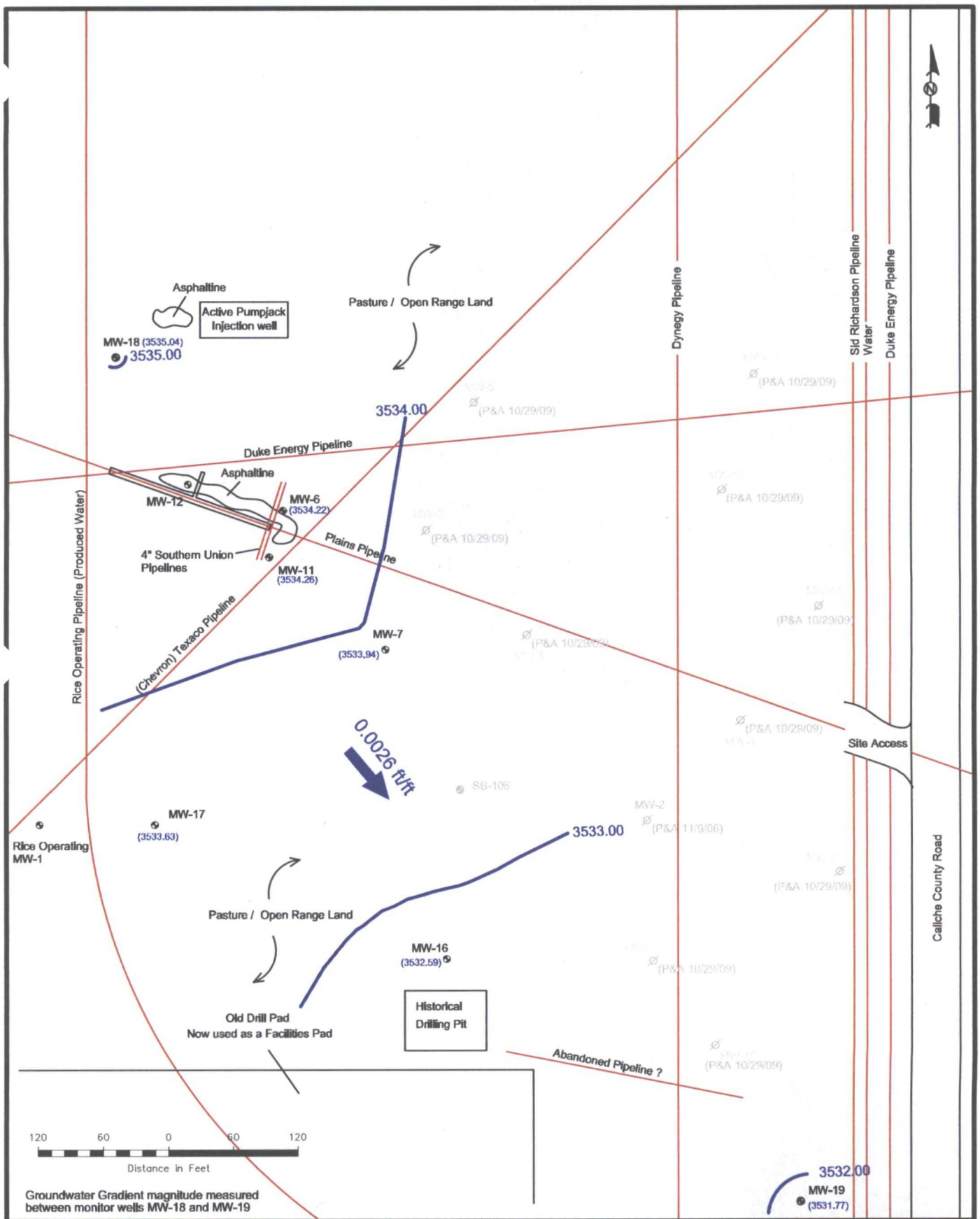
Figures

Figure 1
Site Location Map
Plains Pipeline, LP
Red Byrd #1
Lea County, New Mexico
SRS # TNM Red Byrd #1
1RP-0085

Basin Environmental Service Technologies, LLC

Drawn By: BJA	Checked By: BRB
March 29, 2011	Scale: 1" = 2000'



Legend:

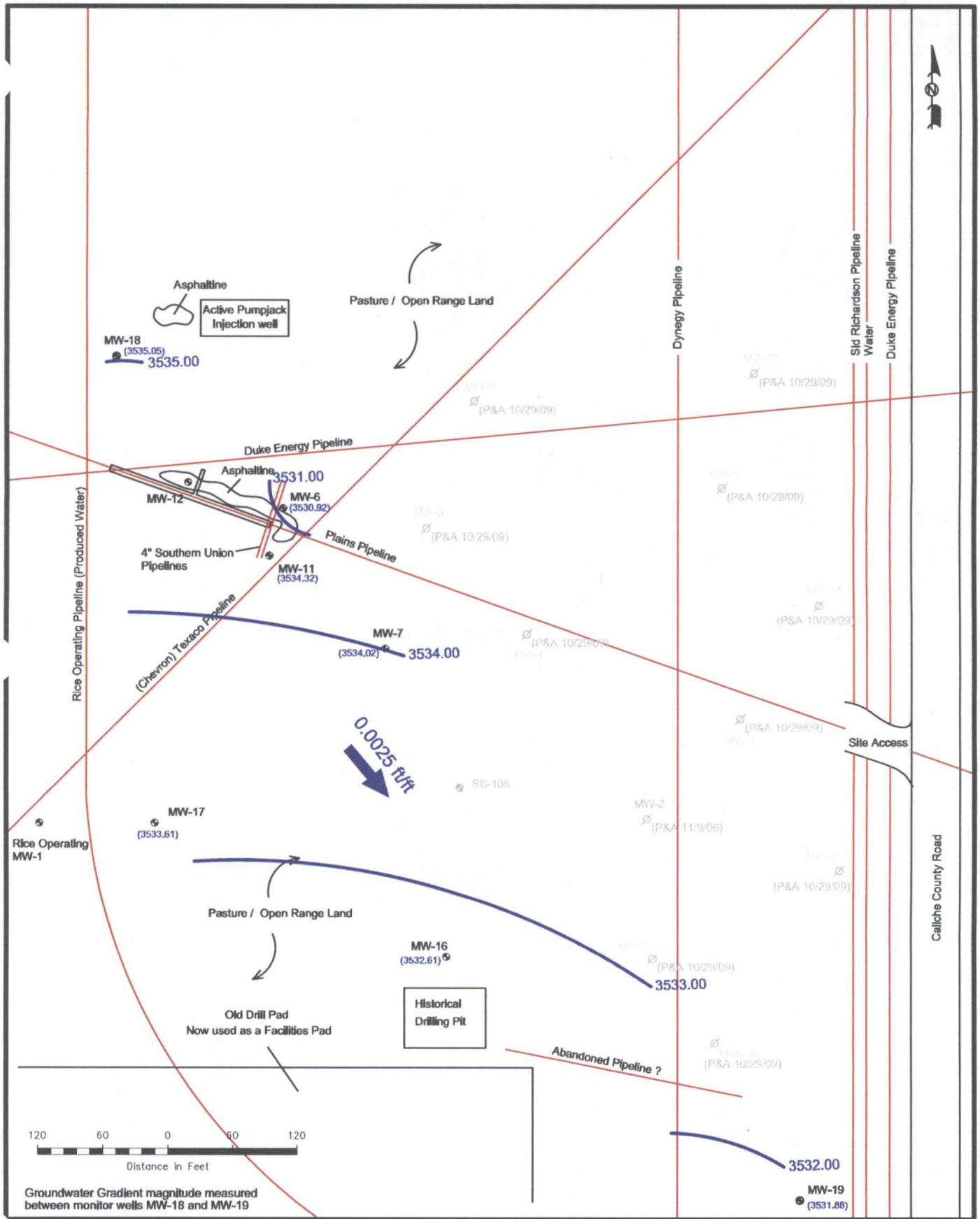
- Monitor Well Location
- Pipeline
- Groundwater Contour Line
- (3473.00) Groundwater Elevation in Feet
- 0.0015 Groundwater Gradient and Magnitude

Figure 2A
Inferred Groundwater Gradient Map (2/25/11)

Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E		32° 36' 09.2"N 103° 17' 56.9"
Scale: 1" = 100'	Prep By: BJA	Checked By: BRB
March 29, 2012		



Legend:

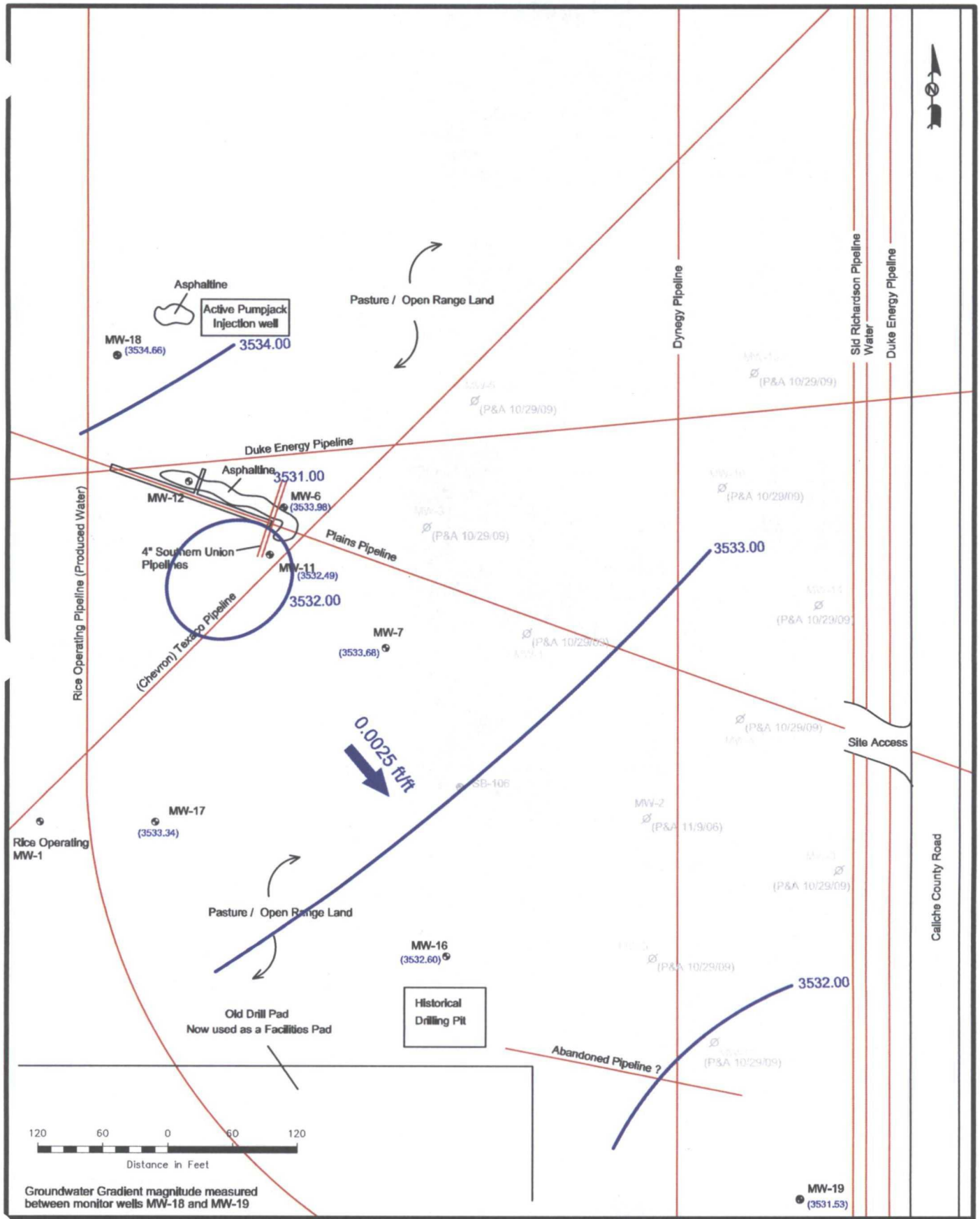
- Monitor Well Location
- Pipeline
- Groundwater Contour Line
- (3473.00) Groundwater Elevation in Feet
- Groundwater Gradient and Magnitude

Figure 2B
Inferred Groundwater Gradient Map (05/11/11)

Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E		32° 36' 09.2"N 103° 17' 56.9"
Scale: 1" = 100'	Prep By: BJA	Checked By: BRB
July 19, 2011		



Legend:

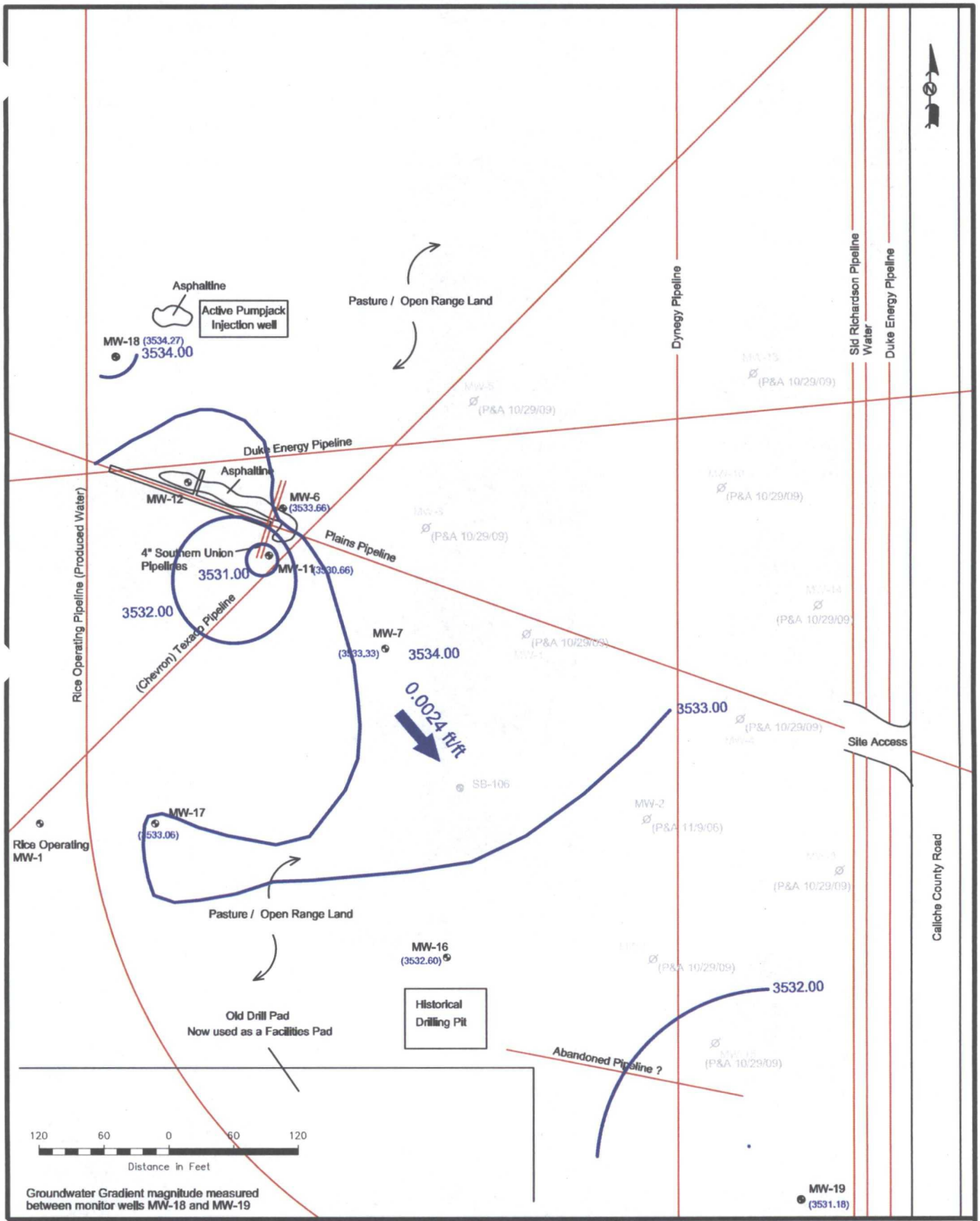
- Monitor Well Location
- (3473.00) Groundwater Elevation in Feet
- Pipeline
- 0.001 ft/ft Groundwater Gradient and Magnitude
- Groundwater Contour Line

Figure 2C
Inferred Groundwater Gradient Map (8/16/11)

Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E	32° 36' 09.2"N 103° 17' 56.9"	
Scale: 1" = 100'	Prep By: BJA	Checked By: BRB
March 29, 2012		



Legend:

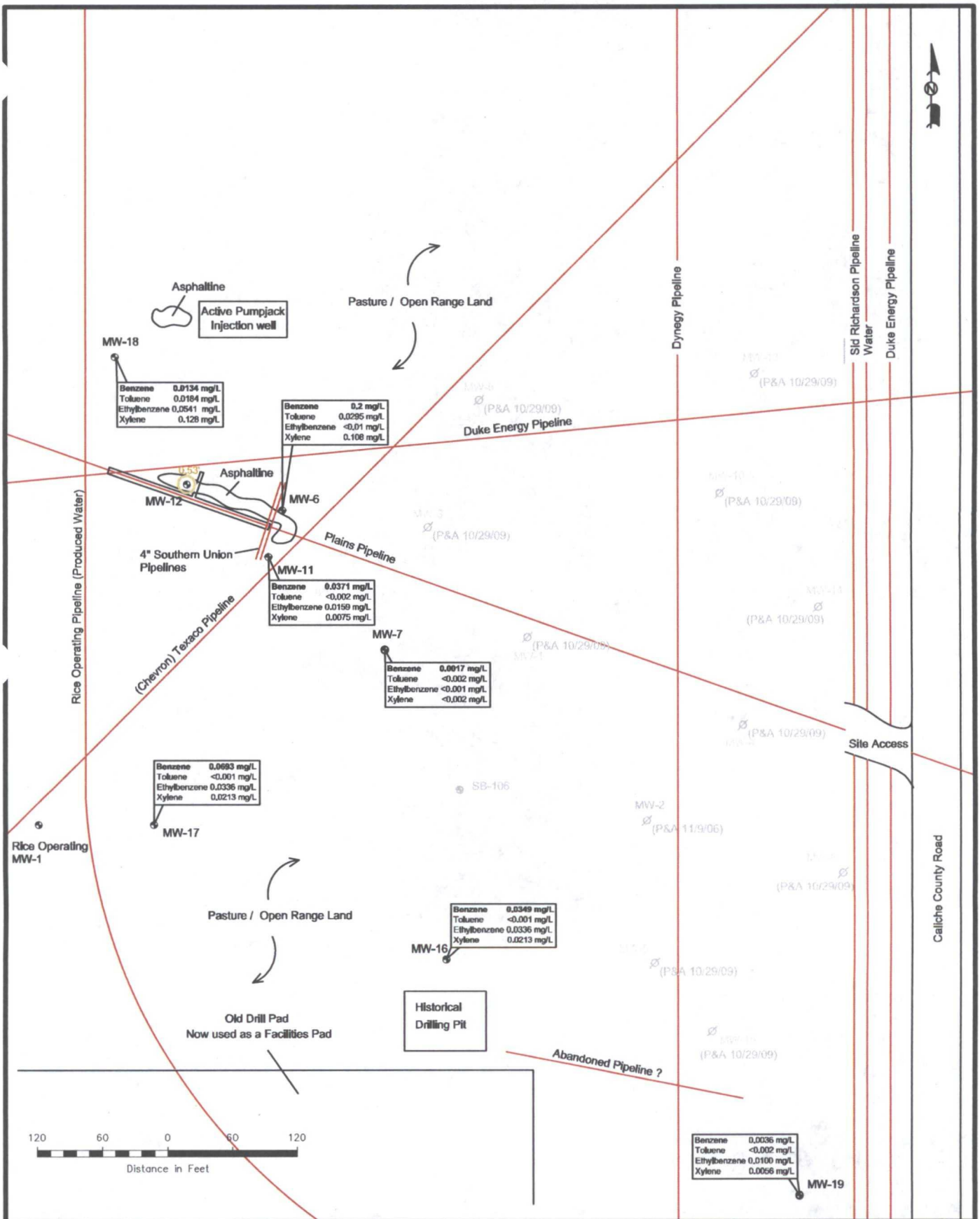
- Monitor Well Location
- (3473.00) Groundwater Elevation in Feet
- Pipeline
- 0.0015 Groundwater Gradient and Magnitude
- Groundwater Contour Line

Figure 2D
Inferred Groundwater Gradient Map (11/10/11)

Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E		32° 36' 09.2"N 103° 17' 56.9"
Scale: 1" = 100'	Prep By: BJA	Checked By: BRB
March 29, 2012		

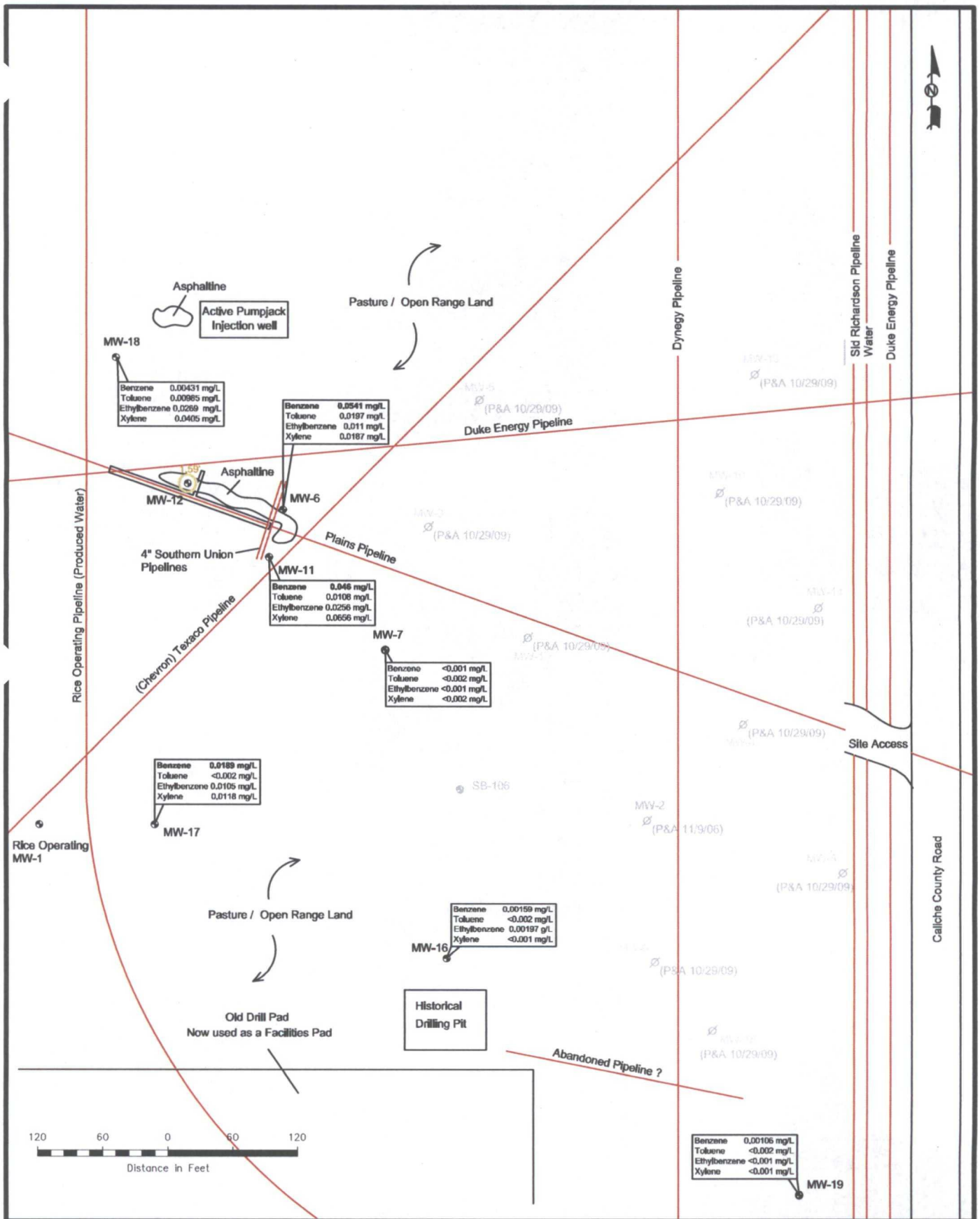


Legend:
- Excavation
- Deep Excavation
- Monitor Well Location
- Pipeline
- Inferred PSH Extent
- 0.53' Thickness of PSH (in feet)

Figure 3A
Groundwater Concentration & Inferred PSH Extent Map (05/11/2011)
Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E		32° 36' 09.2"N 103° 17' 56.9"
Scale: 1" = 100'	Prep By: BJA	Checked By: BJA
July 18, 2011		



Legend:
- Excavation
- Deep Excavation
- Monitor Well Location
- Pipeline
- Inferred PSH Extent
- 0.53' Thickness of PSH (in feet)

Figure 3B
Groundwater Concentration & Inferred PSH Extent
Map (11/10/2011)
Plains Marketing, L.P.
Red Byrd No. 1
Lea County, NM

Basin Environmental Service Technologies, LLC

SE1/4 NE1/4 Sec 1 T20S R36E		32° 36' 09.2"N 103° 17' 56.9"
Scale: 1" = 100'	Prep By: BJA	Checked By: BJA
January 17, 2012		

Tables

TABLE 1
GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0085

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-1	10/29/2009	Plugged and Abandoned				
MW-2	11/9/2006	Plugged and Abandoned				
MW-3	10/29/2009	Plugged and Abandoned				
MW-4	10/29/2009	Plugged and Abandoned				
MW-5	10/29/2009	Plugged and Abandoned				
MW-6	2/25/2011	3,570.91	-	36.69	0.00	3,534.22
	5/11/2011	3,570.91	-	36.61	0.00	3,534.30
	8/16/2011	3,570.91	-	36.93	0.00	3,533.98
	11/10/2011	3,570.91	-	37.25	0.00	3,533.66
MW-7	2/25/2011	3,567.53	-	33.59	0.00	3,533.94
	5/11/2011	3,567.53	-	33.51	0.00	3,534.02
	8/16/2011	3,567.53	-	33.86	0.00	3,533.68
	11/10/2011	3,567.53	-	34.20	0.00	3,533.33
MW-8	10/29/2009	Plugged and Abandoned				
MW-9	10/29/2009	Plugged and Abandoned				
MW-10	10/29/2009	Plugged and Abandoned				
MW-11	2/25/2011	3,567.96	-	33.70	0.00	3,534.26
	5/11/2011	3,567.96	-	33.64	0.00	3,534.32
	8/16/2011	3,567.96	-	35.47	0.00	3,532.49
	11/10/2011	3,567.96	-	37.30	0.00	3,530.66
MW-12	2/25/2011	3,570.95	36.48	37.17	0.69	3,534.37
	5/11/2011	3,570.95	36.41	36.98	0.57	3,534.45
	8/16/2011	3,570.95	36.65	36.70	0.05	3,534.29
	11/10/2011	3,570.95	36.86	38.45	1.59	3,533.85

TABLE 1
GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0085

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW-13	10/29/2009	Plugged and Abandoned				
MW-14	10/29/2009	Plugged and Abandoned				
MW-15	10/29/2009	Plugged and Abandoned				
MW-16	2/25/2011	3,568.89	-	36.30	0.00	3,532.59
	5/11/2011	3,568.89	-	36.28	0.00	3,532.61
	8/16/2011	3,568.89	-	36.29	0.00	3,532.60
	11/10/2011	3,568.89	-	36.30	0.00	3,532.60
MW-17	2/25/2011	3,569.66	-	36.03	0.00	3,533.63
	5/11/2011	3,569.66	-	36.05	0.00	3,533.61
	8/16/2011	3,569.66	-	36.33	0.00	3,533.34
	11/10/2011	3,569.66	-	36.60	0.00	3,533.06
MW-18	2/25/2011	3,571.17	-	36.13	0.00	3,535.04
	5/11/2011	3,571.17	-	36.12	0.00	3,535.05
	8/16/2011	3,571.17	-	36.51	0.00	3,534.66
	11/10/2011	3,571.17	-	36.90	0.00	3,534.27
MW-19	2/25/2011	3,569.78	-	38.01	0.00	3,531.77
	5/11/2011	3,569.78	-	37.90	0.00	3,531.88
	8/16/2011	3,569.78	-	38.25	0.00	3,531.53
	11/10/2011	3,569.78	-	38.60	0.00	3,531.18

Elevations based on the North American Vertical Datum of 1929.

TABLE 2

2011 CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER
PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: TNM-RED BYRD #1
NMOCD REF NO: 1RP-0085

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030						
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)
MW-1	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-2	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-3	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-4	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-5	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-6	05/11/11	**0.200**	0.295	<0.100	<0.200	0.108	0.108	0.603
	11/10/11	**0.0541**	0.0197	0.0110	0.0128	0.00594	0.0187	0.104
MW-7	05/11/11	0.00165	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00165
	11/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020
MW-8	05/11/11	Plugged and Abandoned						
	11/10/11							

TABLE 2

2011 CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER
PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: TNM-RED BYRD #1
NMOCD REF NO: 1RP-0085

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030						
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)
MW-9	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-10	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-11	05/11/11	**0.0371**	<0.0020	0.0159	0.00745	<0.0010	0.00745	0.0605
	11/10/11	**0.0460**	0.0108	0.0256	0.0381	0.0275	0.0656	0.148
MW-12	05/11/11	Not Sampled Due to Presence of PSH						
	11/10/11							
MW-13	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-14	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-15	05/11/11	Plugged and Abandoned						
	11/10/11							
MW-16	05/11/11	**0.0349**	<0.0010	0.0336	0.0213	<0.0050	0.0213	0.0898
	11/11/11	0.00159	<0.0020	0.00197	<0.0020	<0.0010	<0.0020	0.00356
MW-17	05/11/11	**0.0693**	<0.0100	0.0313	0.0319	<0.0050	0.0319	0.133
	11/10/11	**0.0189**	<0.0020	0.0105	0.00969	0.00214	0.0118	0.0412

TABLE 2

2011 CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER
PLAINS MARKETING, L.P.
RED BYRD #1
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: TNM-RED BYRD #1
NMOCD REF NO: 1RP-0085

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030						
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)
MW-18	05/11/11	**0.0134**	0.0184	0.0541	0.0417	<0.0050	0.0417	0.128
	11/10/11	0.00431	0.00985	0.0269	0.0282	0.0123	0.0405	0.0816
MW-19	05/11/11	0.00359	<0.0020	0.0100	0.00316	0.00246	0.00562	0.0192
	11/10/11	0.00106	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00106
NMOCD CRITERIA		**0.01**	**0.75**	**0.75**	**TOTAL XYLENES 0.62**			

TABLE 3

CONCENTRATIONS OF SEMI-VOLATILE COMPOUNDS IN GROUNDWATER

PLAINS PIPELINE, L.P.

RED BYRD #1

LEA COUNTY, NEW MEXICO

PLAINS SRS NO: TNM-RED BYRD #1

NMOCD REF NO: 1RP-0085

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-16	12/16/2011	<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-19	12/16/2011	<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-18	12/21/2011	<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

Analytical Report 416380

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1

TNM Red Byrd # 1

19-MAY-11

XENCO Laboratories

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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

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

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

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

19-MAY-11

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

Reference: XENCO Report No: **416380**
Red Byrd # 1
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 416380. 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. 416380 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

XENCO Laboratories

Sample Cross Reference 416380

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-6	W	May-11-11 15:00		416380-001
MW-7	W	May-11-11 15:20		416380-002
MW-11	W	May-11-11 14:50		416380-003
MW-16	W	May-11-11 14:20		416380-004
MW-17	W	May-11-11 14:40		416380-005
MW-18	W	May-11-11 15:10		416380-006
MW-19	W	May-11-11 14:10		416380-007
Travel Blank	W	May-11-11.15:15		416380-008

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Red Byrd # 1

Project ID:	*TNM Red Byrd # 1*	*Report Date:*	*19-MAY-11*
Work Order Number:	*416380*	*Date Received:*	*05/12/2011*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-856663 BTEX by EPA 8021
SW8021BM

Batch 856663, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 416380-002.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 856663, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 416510-006 S,416510-006 SD.
1,4-Difluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 416510-006 S,416510-006 SD.

Batch: LBA-856745 BTEX by EPA 8021
SW8021BM

Batch 856745, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 416380-003.

Certificate of Analysis Summary 416380

PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Red Byrd # 1

Project Id: TNM Red Byrd # 1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Thu May-12-11 02:10 pm
Report Date: 19-MAY-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	416380-001		416380-002		416380-003		416380-004		416380-005		416380-006	
	Field Id:	MW-6		MW-7		MW-11		MW-16		MW-17		MW-18	
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	Sampled:	May-11-11 15:00		May-11-11 15:20		May-11-11 14:50		May-11-11 14:20		May-11-11 14:40		May-11-11 15:10	
BTEX by EPA 8021	***Extracted:***	May-17-11 14:30		May-18-11 15:15		May-18-11 08:18		May-18-11 08:18		May-17-11 14:30		May-18-11 08:18	
	Analyzed:	May-18-11 14:02		May-18-11 23:06		May-19-11 13:02		May-19-11 13:47		May-18-11 15:32		May-19-11 14:09	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.200	0.100	0.00165	0.0010	0.0371	0.0010	0.0349	0.0050	0.0693	0.0050	0.0134	0.0050
Toluene		0.295	0.200	ND	0.0020	ND	0.0020	ND	0.0100	ND	0.0100	0.0184	0.0100
Ethylbenzene		ND	0.100	ND	0.0010	0.0159	0.0010	0.0336	0.0050	0.0313	0.0050	0.0541	0.0050
m_p-Xylenes		ND	0.200	ND	0.0020	0.00745	0.0020	0.0213	0.0100	0.0319	0.0100	0.0417	0.0100
o-Xylene		0.108	0.100	ND	0.0010	ND	0.0010	ND	0.0050	ND	0.0050	ND	0.0050
Xylenes, Total		0.108	0.100	ND	0.0010	0.00745	0.0010	0.0213	0.0050	0.0319	0.0050	0.0417	0.0050
Total BTEX		0.603	0.100	0.00165	0.0010	0.0605	0.0010	0.0898	0.0050	0.133	0.0050	0.128	0.0050

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Certificate of Analysis Summary 416380

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Red Byrd # 1

Project Id: TNM Red Byrd # 1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Thu May-12-11 02:10 pm
Report Date: 19-MAY-11
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	416380-007		416380-008					
	Field Id:	MW-19		Travel Blank					
	Depth:								
	Matrix:	WATER		WATER					
	Sampled:	May-11-11 14:10		May-11-11 15:15					
BTEX by EPA 8021	***Extracted:***	May-17-11 14:30		May-17-11 14:30					
	Analyzed:	May-18-11 17:28		May-18-11 08:48					
	Units/RL:	mg/L	RL	mg/L	RL				
Benzene		0.00359	0.0010	ND	0.0010				
Toluene		ND	0.0020	ND	0.0020				
Ethylbenzene		0.0100	0.0010	ND	0.0010				
m_p-Xylenes		0.00316	0.0020	ND	0.0020				
o-Xylene		0.00246	0.0010	ND	0.0010				
Xylenes, Total		0.00562	0.0010	ND	0.0010				
Total BTEX		0.0192	0.0010	ND	0.0010				

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

*** Outside XENCO's scope of NELAC Accreditation.**

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 416380,

Project ID: TNM Red Byrd # 1

Lab Batch #: 856647 **Sample:** 603135-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 06:49

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 856647 **Sample:** 603135-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 07:12

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 856647 **Sample:** 603135-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 08:19

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 856647 **Sample:** 416380-008 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 08:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 856647 **Sample:** 416354-004 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 12:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	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.

Final 1.000

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

rk Orders : 416380,

Project ID: TNM Red Byrd # 1

Lab Batch #: 856647 **Sample:** 416354-004 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 12:55

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	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	0.0325	0.0300	108	80-120	

Lab Batch #: 856647 **Sample:** 416380-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 14:02

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	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	0.0283	0.0300	94	80-120	

Lab Batch #: 856647 **Sample:** 416380-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 15:32

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 856647 **Sample:** 416380-007 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 17:28

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 856663 **Sample:** 603143-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 18:35

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	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	0.0318	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

Results are based on MDL and validated for QC purposes.

Final 1.000

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 416380,

Project ID: TNM Red Byrd # 1

Lab Batch #: 856663 **Sample:** 603143-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 18:58

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 856663 **Sample:** 603143-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 20:05

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 856663 **Sample:** 416380-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/18/11 23:06

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 856663 **Sample:** 416510-006 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 00:14

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0362	0.0300	121	80-120	*
4-Bromofluorobenzene	0.0228	0.0300	76	80-120	*

Lab Batch #: 856663 **Sample:** 416510-006 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 00:36

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0377	0.0300	126	80-120	*
4-Bromofluorobenzene	0.0236	0.0300	79	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

rk Orders : 416380,

Project ID: TNM Red Byrd # 1

Lab Batch #: 856745 **Sample:** 603190-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 08:53

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 856745 **Sample:** 603190-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 09:15

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 856745 **Sample:** 603190-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 10:23

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 856745 **Sample:** 416380-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 13:02

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 856745 **Sample:** 416380-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 13:47

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	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

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

Final 1.000

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

Work Orders : 416380,

Project ID: TNM Red Byrd # 1

Lab Batch #: 856745 **Sample:** 416380-006 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/11 14:09

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	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: Red Byrd # 1

Work Order #: 416380 **Project ID:** TNM Red Byrd # 1

Analyst: ASA **Date Prepared:** 05/17/2011 **Date Analyzed:** 05/18/2011

Lab Batch ID: 856647 **Sample:** 603135-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

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	<0.00100	0.100	0.0851	85	0.100	0.0904	90	6	70-125	25	
Toluene	<0.00200	0.100	0.0865	87	0.100	0.0931	93	7	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0824	82	0.100	0.0881	88	7	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.168	84	0.200	0.179	90	6	70-131	25	
o-Xylene	<0.00100	0.100	0.0887	89	0.100	0.0935	94	5	71-133	25	

Analyst: ASA **Date Prepared:** 05/18/2011 **Date Analyzed:** 05/18/2011

Lab Batch ID: 856663 **Sample:** 603143-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

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	<0.00100	0.100	0.0882	88	0.100	0.106	106	18	70-125	25	
Toluene	<0.00200	0.100	0.0898	90	0.100	0.109	109	19	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0841	84	0.100	0.103	103	20	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.171	86	0.200	0.209	105	20	70-131	25	
o-Xylene	<0.00100	0.100	0.0887	89	0.100	0.108	108	20	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

BS / BSD Recoveries

Project Name: Red Byrd # 1

Work Order #: 416380 **Project ID:** TNM Red Byrd # 1

Analyst: ASA **Date Prepared:** 05/18/2011 **Date Analyzed:** 05/19/2011

Lab Batch ID: 856745 **Sample:** 603190-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

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	<0.00100	0.100	0.0891	89	0.100	0.0911	91	2	70-125	25	
Toluene	<0.00200	0.100	0.0909	91	0.100	0.0939	94	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0873	87	0.100	0.0897	90	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.179	90	0.200	0.183	92	2	70-131	25	
o-Xylene	<0.00100	0.100	0.0912	91	0.100	0.0932	93	2	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: Red Byrd # 1

Work Order # : 416380 **Project ID:** TNM Red Byrd # 1

Lab Batch ID: 856647 **QC- Sample ID:** 416354-004 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 05/18/2011 **Date Prepared:** 05/17/2011 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021 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	<0.00100	0.100	0.0814	81	0.100	0.0910	91	11	70-125	25	
Toluene	<0.00200	0.100	0.0812	81	0.100	0.0913	91	12	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0762	76	0.100	0.0866	87	13	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.152	76	0.200	0.172	86	12	70-131	25	
o-Xylene	<0.00100	0.100	0.0801	80	0.100	0.0938	94	16	71-133	25	

Lab Batch ID: 856663 **QC- Sample ID:** 416510-006 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 05/19/2011 **Date Prepared:** 05/18/2011 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021 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	1.29	0.100	1.21	0	0.100	1.29	0	6	70-125	25	X
Toluene	0.680	0.100	0.678	0	0.100	0.723	43	6	70-125	25	X
Ethylbenzene	0.201	0.100	0.244	43	0.100	0.259	58	6	71-129	25	X
m_p-Xylenes	1.02	0.200	1.06	20	0.200	1.13	55	6	70-131	25	X
o-Xylene	0.491	0.100	0.505	14	0.100	0.543	52	7	71-133	25	X

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

Final 1.000

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P. O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575)396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Red Byrd #1

Project #: TNM Red Byrd #1

Project Loc: Lea County, NM

PO #: PAA - J. Henry

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

(lab use only)
ORDER #: 416380

Analyze For:

TCLP:
TOTAL:

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 40ml VOA	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	(BTEX 8021B/5030) or BTEX 8260	RCI	N.O.R.M.	Chloride E 300		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	MW-6			5/11/2011	1500		3	X		X						GW									X						X
02	MW-7			5/11/2011	1520		3	X		X						GW									X						X
03	MW-11			5/11/2011	1450		3	X		X						GW									X						X
04	MW-16			5/11/2011	1420		3	X		X						GW									X						X
05	MW-17			5/11/2011	1440		3	X		X						GW									X						X
06	MW-18			5/11/2011	1510		3	X		X						GW									X						X
07	MW-19			5/11/2011	1410		3	X		X						GW									X						X
08	Travel Blank			5/11/2011	1515		3	X		X						GW									X						X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	5/12/11	0715	Dalcotah Ward	05/12/11	0715
Dalcotah Ward	05/12/11	1410	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Ernst	5.12.11	14:10

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.6 °C

Final 1.000

XENCO Laboratories

XENCO Laboratories
Atlanta, Boca Raton, Corpus Christi, Dallas
Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains
Date/Time: 5.12.11 14.10
Lab ID #: 416380
Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	1.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431400

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd #1

TNM Red Byrd #1

22-NOV-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

22-NOV-11

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

Reference: XENCO Report No: **431400**
Red Byrd #1
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 431400. 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. 431400 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,

Odessa Laboratory Manager

Sample Cross Reference 431400

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-6	W	11-10-11 13:15		431400-001
MW-7	W	11-10-11 13:35		431400-002
MW-11	W	11-10-11 13:10		431400-003
MW-17	W	11-10-11 15:05		431400-004
MW-18	W	11-10-11 14:25		431400-005
MW-19	W	11-10-11 15:40		431400-006

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Red Byrd #1

Project ID:	*TNM Red Byrd #1*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431400*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875271 BTEX by EPA 8021
SW8021BM

Batch 875271, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431400-003.

SW8021BM

Batch 875271, Benzene recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431400-001, -004, -006, -005, -002, -003.
The Laboratory Control Sample for Benzene is within laboratory Control Limits

Certificate of Analysis Summary 431400

PLAINS ALL AMERICA, H&S, Midland, TX

Project Name: Red Byrd #1

Project Id: TNM Red Byrd #1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested	*Lab Id:*	431400-001		431400-002		431400-003		431400-004		431400-005		431400-006	
	Field Id:	MW-6		MW-7		MW-11		MW-17		MW-18		MW-19	
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	Sampled:	Nov-10-11 13:15		Nov-10-11 13:35		Nov-10-11 13:10		Nov-10-11 15:05		Nov-10-11 14:25		Nov-10-11 15:40	
BTEX by EPA 8021	*Extracted:*	Nov-18-11 15:00		Nov-18-11 15:00		Nov-18-11 15:00		Nov-18-11 15:00		Nov-18-11 15:00		Nov-18-11 15:00	
	Analyzed:	Nov-20-11 21:36		Nov-20-11 21:59		Nov-20-11 22:21		Nov-20-11 22:44		Nov-20-11 23:07		Nov-20-11 23:30	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.0541	0.00100	ND	0.00100	0.0460	0.00100	0.0189	0.00100	0.00431	0.00100	0.00106	0.00100
Toluene		0.0197	0.00200	ND	0.00200	0.0108	0.00200	ND	0.00200	0.00985	0.00200	ND	0.00200
Ethylbenzene		0.0110	0.00100	ND	0.00100	0.0256	0.00100	0.0105	0.00100	0.0269	0.00100	ND	0.00100
m_p-Xylenes		0.0128	0.00200	ND	0.00200	0.0381	0.00200	0.00969	0.00200	0.0282	0.00200	ND	0.00200
o-Xylene		0.00594	0.00100	ND	0.00100	0.0275	0.00100	0.00214	0.00100	0.0123	0.00100	ND	0.00100
Xylenes, Total		0.0187	0.00100	ND	0.00100	0.0656	0.00100	0.0118	0.00100	0.0405	0.00100	ND	0.00100
Total BTEX		0.104	0.00100	ND	0.00100	0.148	0.00100	0.0412	0.00100	0.0816	0.00100	0.00106	0.00100

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

rk Orders : 431400,

Project ID: TNM Red Byrd #1

Lab Batch #: 875271 **Sample:** 431400-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 21:36

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 875271 **Sample:** 431400-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 21:59

BTEX by EPA 8021	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	0.0265	0.0300	88	80-120	

Lab Batch #: 875271 **Sample:** 431400-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 22:21

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0219	0.0300	73	80-120	*
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 875271 **Sample:** 431400-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 22:44

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 875271 **Sample:** 431400-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 23:07

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	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

results are based on MDL and validated for QC purposes.

Version: 1.%

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 431400,

Project ID: TNM Red Byrd #1

Lab Batch #: 875271 **Sample:** 431400-006 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 23:30

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 875271 **Sample:** 614388-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 21:13

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 875271 **Sample:** 614388-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 19:42

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 875271 **Sample:** 614388-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/20/11 20:05

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 875271 **Sample:** 431400-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/21/11 01:23

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	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.%

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

rk Orders : 431400,

Project ID: TNM Red Byrd #1

Lab Batch #: 875271 **Sample:** 431400-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/21/11 01:46

BTEX by EPA 8021	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	0.0286	0.0300	95	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

results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: Red Byrd #1

Work Order #: 431400
Analyst: ASA
Lab Batch ID: 875271
Sample: 614388-1-BKS
Units: mg/L

Date Prepared: 11/18/2011
Batch #: 1

Project ID: TNM Red Byrd #1
Date Analyzed: 11/20/2011
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	<0.00100	0.100	0.104	104	0.100	0.111	111	7	70-125	25	
Toluene	<0.00200	0.100	0.103	103	0.100	0.112	112	8	70-125	25	
Ethylbenzene	<0.00100	0.100	0.106	106	0.100	0.115	115	8	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.204	102	0.200	0.222	111	8	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.114	114	8	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.%

Form 3 - MS / MSD Recoveries

Project Name: Red Byrd #1

Work Order # : 431400 **Project ID:** TNM Red Byrd #1

Lab Batch ID: 875271 **QC- Sample ID:** 431400-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/21/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/L

BTEX by EPA 8021 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	0.0541	0.100	0.190	136	0.100	0.188	134	1	70-125	25	X
Toluene	0.0197	0.100	0.144	124	0.100	0.144	124	0	70-125	25	
Ethylbenzene	0.0110	0.100	0.133	122	0.100	0.136	125	2	71-129	25	
m_p-Xylenes	0.0128	0.200	0.241	114	0.200	0.250	119	4	70-131	25	
o-Xylene	0.00594	0.100	0.126	120	0.100	0.127	121	1	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

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

Project Name: Red Byrd #1
Project #: TNM Red Byrd #1
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431400

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 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	MW-6			11/10/2011	13:15		3	X		X						GW								X					X
002	MW-7			11/10/2011	13:35		3	X		X						GW								X					X
003	MW-11			11/10/2011	13:10		3	X		X						GW								X					X
	~~MW-16~~			~~11/10/2011~~			3	X		X						GW								X					X
004	MW-17			11/10/2011	15:05		3	X		X						GW								X					X
005	MW-18			11/10/2011	14:35		3	X		X						GW								X					X
006	MW-19			11/10/2011	~~15:25~~ PM 15:40		3	X		X						GW								X					X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Dalcotah Ward	11/11/11	0740	Shannon Bro	11/11/11	7:40
Relinquished by: Shannon Bro	11/11/11	1:15	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11-11-11	13:15

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11.11.11 13:15

Lab ID #: 431400

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431838

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd #1

TNM Red Byrd #1

30-NOV-11

Collected By: Client

XENCO Laboratories

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

30-NOV-11

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

Reference: XENCO Report No: **431838**
Red Byrd #1
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 431838. 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. 431838 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

XENCO Laboratories

Sample Cross Reference 431838

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-16	W	11-11-11 09:10		431838-001

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Red Byrd #1

Project ID:	*TNM Red Byrd #1*	*Report Date:*	*30-NOV-11*
Work Order Number:	*431838*	*Date Received:*	*11/18/2011*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analy: ummary 431838

PLAINS ALL AMERIC. .H&S, Midland, TX

Project Name: Red Byrd #1

Project Id: TNM Red Byrd #1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-18-11 11:25 am
Report Date: 30-NOV-11
Project Manager: Brent Barron II

Analysis Requested							
	Lab Id:	431838-001					
	Field Id:	MW-16					
	Depth:						
	Matrix:	WATER					
	Sampled:	Nov-11-11 09:10					
BTEX by EPA 8021B	***Extracted:***	Nov-22-11 15:15					
	Analyzed:	Nov-23-11 12:21					
	Units/RL:	mg/L	RL				
Benzene		0.00159	0.00100				
Toluene		ND	0.00200				
Ethylbenzene		0.00197	0.00100				
m_p-Xylenes		ND	0.00200				
o-Xylene		ND	0.00100				
Total Xylenes		ND	0.00100				
Total BTEX		0.00356	0.00100				

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

rk Orders : 431838,

Project ID: TNM Red Byrd #1

Lab Batch #: 875908 **Sample:** 431838-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/23/11 12:21

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 875908 **Sample:** 614751-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/23/11 01:22

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 875908 **Sample:** 614751-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/22/11 23:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 875908 **Sample:** 614751-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/23/11 00:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 875908 **Sample:** 431711-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/23/11 05:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	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

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

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 431838,

Project ID: TNM Red Byrd #1

Lab Batch #: 875908 **Sample:** 431711-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/23/11 05:51

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	0.0289	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.

Xenco Laboratories

BS / BS. .ecoveries

Project Name: Red Byrd #1

Work Order #: 431838
Analyst: ASA
Lab Batch ID: 875908
Sample: 614751-1-BKS
Units: mg/L

Date Prepared: 11/22/2011
Batch #: 1

Project ID: TNM Red Byrd #1
Date Analyzed: 11/22/2011
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.112	112	0.100	0.107	107	5	70-125	25	
Toluene	<0.00200	0.100	0.112	112	0.100	0.107	107	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.117	117	0.100	0.111	111	5	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.231	116	0.200	0.218	109	6	70-131	25	
o-Xylene	<0.00100	0.100	0.116	116	0.100	0.110	110	5	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

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Red Byrd #1

Work Order # : 431838 **Project ID:** TNM Red Byrd #1

Lab Batch ID: 875908 **QC- Sample ID:** 431711-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/23/2011 **Date Prepared:** 11/22/2011 **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	<0.00100	0.100	0.111	111	0.100	0.107	107	4	70-125	25	
Toluene	<0.00200	0.100	0.112	112	0.100	0.107	107	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.113	113	0.100	0.110	110	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.222	111	0.200	0.215	108	3	70-131	25	
o-Xylene	<0.00100	0.100	0.112	112	0.100	0.108	108	4	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P. O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575)396-1429

Sampler Signature: Dakotah Ward e-mail: bjarguijo@basinenv.com

Project Name: Red Byrd #1

Project #: TNM Red Byrd #1

Project Loc: Lea County, NM

PO #: PAA - J. Henry

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

(lab use only)

ORDER #: 431838

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: TCLP: TPH: 418.1 8015M 8015B	TOTAL: 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.	Chloride E 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	MW-16			11/11/2011	0910		3	X		X						GW									X							X

Special Instructions:

Laboratory Comments:

Sample Containers Intact? N

VOCs Free of Headspace? N

Labels on container(s) N

Custody seals on container(s) N

Custody seals on cooler(s) N

Sample Hand Delivered N

by Sampler/Client Rep. ? N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.5 °C

Relinquished by:	Date	Time	Received by:	Date	Time
Dakotah Ward	11/18/11	0700	Shannon Brown	11/18/11	7:00
Shannon Brown	11/18/11	11:25			
			Received by ELOT:	11/18/11	11:25

Final 1.000

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains

Date/Time: 11-18-11 / 11:25

Lab ID # : 431838

Initials: TB

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	1.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 433650

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd # 1

TNM Red Byrd # 1

27-DEC-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

27-DEC-11

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

Reference: XENCO Report No: **433650**
Red Byrd # 1
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 433650. 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. 433650 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 433650

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-16	W	12-16-11 10:00		433650-001
MW-19	W	12-16-11 09:30		433650-003

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Red Byrd # 1

Project ID:	*TNM Red Byrd # 1*	*Report Date:*	*27-DEC-11*
Work Order Number:	*433650*	*Date Received:*	*12/19/2011*

Sample receipt non conformances and comments:
Sample -002 (MW-18) was broken during shipment to Houston office, client will resample.

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-877812 SVOA PAHs List by SW-846 8270C
SW8270C

Batch 877812, Nitrobenzene-d5 recovered above QC limits Data confirmed by re-analysis. Samples affected are: 615639-1-BKS.
Terphenyl-D14 recovered above QC limits Data confirmed by re-analysis. Samples affected are: 615639-1-BLK,433650-003,433650-001.

SW8270C

Batch 877812, Acenaphthylene recovered above QC limits in the laboratory control sample. Samples affected are: 433650-001, -003.

Surrogates recovered high, however all analytes were non-detect. Compounds in QC recovered high, however all samples were non-detect. Samples reported as is

Certificate of Analy[illegible]ummary 433650

PLAINS ALL AMERIC[illegible]EH&S, Midland, TX

Project Name: Red Byrd # 1

Project Id: TNM Red Byrd # 1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Mon Dec-19-11 10:50 am
Report Date: 27-DEC-11
Project Manager: Brent Barron II

Analysis Requested	*Lab Id:*	433650-001		433650-003					
	Field Id:	MW-16		MW-19					
	Depth:								
	Matrix:	WATER		WATER					
	Sampled:	Dec-16-11 10:00		Dec-16-11 09:30					
SVOA PAHs List **SUB: TX104704215**	*Extracted:*	Dec-20-11 15:18		Dec-20-11 15:21					
	Analyzed:	Dec-23-11 12:18		Dec-23-11 12:42					
	Units/RL:	mg/L	RL	mg/L	RL				
Acenaphthene		ND	0.0111	ND	0.0110				
Acenaphthylene		ND	0.0111	ND	0.0110				
Anthracene		ND	0.0111	ND	0.0110				
Benzo(a)anthracene		ND	0.0111	ND	0.0110				
Benzo(a)pyrene		ND	0.0111	ND	0.0110				
Benzo(b)fluoranthene		ND	0.0111	ND	0.0110				
Benzo(k)fluoranthene		ND	0.0111	ND	0.0110				
Benzo(g,h,i)perylene		ND	0.0111	ND	0.0110				
Chrysene		ND	0.0111	ND	0.0110				
Dibenz(a,h)anthracene		ND	0.0111	ND	0.0110				
Fluoranthene		ND	0.0111	ND	0.0110				
Fluorene		ND	0.0111	ND	0.0110				
Indeno(1,2,3-c,d)Pyrene		ND	0.0111	ND	0.0110				
1-Methylnaphthalene		ND	0.00556	ND	0.00549				
2-Methylnaphthalene		ND	0.0111	ND	0.0110				
Naphthalene		ND	0.0111	ND	0.0110				
Phenanthrene		ND	0.0111	ND	0.0110				
Pyrene		ND	0.0111	ND	0.0110				

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd # 1

rk Orders : 433650,

Project ID: TNM Red Byrd # 1

ab Batch #: 877812 **Sample:** 433650-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/23/11 12:18

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0624	0.0556	112	44-117	
2-Fluorophenol	0.0312	0.0556	56	30-100	
Nitrobenzene-d5	0.0602	0.0556	108	46-111	
Phenol-d6	0.0174	0.0556	31	15-94	
Terphenyl-D14	0.0752	0.0556	135	46-126	**
2,4,6-Tribromophenol	0.0627	0.0556	113	48-117	

Lab Batch #: 877812 **Sample:** 433650-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/23/11 12:42

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0584	0.0549	106	44-117	
2-Fluorophenol	0.0298	0.0549	54	30-100	
Nitrobenzene-d5	0.0587	0.0549	107	46-111	
Phenol-d6	0.0169	0.0549	31	15-94	
erphenyl-D14	0.0702	0.0549	128	46-126	**
2,4,6-Tribromophenol	0.0596	0.0549	109	48-117	

Lab Batch #: 877812 **Sample:** 615639-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/23/11 08:25

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0538	0.0500	108	44-117	
2-Fluorophenol	0.0460	0.0500	92	30-100	
Nitrobenzene-d5	0.0539	0.0500	108	46-111	
Phenol-d6	0.0424	0.0500	85	15-94	
Terphenyl-D14	0.0654	0.0500	131	46-126	**
2,4,6-Tribromophenol	0.0445	0.0500	89	48-117	

* 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: Red Byrd # 1

Work Orders : 433650,

Project ID: TNM Red Byrd # 1

Lab Batch #: 877812 **Sample:** 615639-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/23/11 08:48

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0572	0.0500	114	44-117	
2-Fluorophenol	0.0476	0.0500	95	30-100	
Nitrobenzene-d5	0.0558	0.0500	112	46-111	**
Phenol-d6	0.0472	0.0500	94	15-94	
Terphenyl-D14	0.0580	0.0500	116	46-126	
2,4,6-Tribromophenol	0.0518	0.0500	104	48-117	

Lab Batch #: 877812 **Sample:** 615639-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 12/23/11 09:12

SVOA PAHs List Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0540	0.0500	108	44-117	
2-Fluorophenol	0.0451	0.0500	90	30-100	
Nitrobenzene-d5	0.0530	0.0500	106	46-111	
Phenol-d6	0.0450	0.0500	90	15-94	
Terphenyl-D14	0.0557	0.0500	111	46-126	
2,4,6-Tribromophenol	0.0495	0.0500	99	48-117	

* 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 / BS. Recoveries

Project Name: Red Byrd # 1

Work Order #: 433650 **Project ID:** TNM Red Byrd # 1

Analyst: MCH **Date Prepared:** 12/20/2011 **Date Analyzed:** 12/23/2011

Lab Batch ID: 877812 **Sample:** 615639-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

SVOA PAHs List 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
Acenaphthene	<0.0100	0.0500	0.0548	110	0.0500	0.0537	107	2	27-132	31	
Acenaphthylene	<0.0100	0.0500	0.0549	110	0.0500	0.0533	107	3	46-108	25	H
Anthracene	<0.0100	0.0500	0.0504	101	0.0500	0.0494	99	2	47-145	25	
Benzo(a)anthracene	<0.0100	0.0500	0.0515	103	0.0500	0.0506	101	2	33-143	25	
Benzo(a)pyrene	<0.0100	0.0500	0.0510	102	0.0500	0.0510	102	0	65-135	25	
Benzo(b)fluoranthene	<0.0100	0.0500	0.0506	101	0.0500	0.0479	96	5	24-159	25	
Benzo(k)fluoranthene	<0.0100	0.0500	0.0478	96	0.0500	0.0494	99	3	25-125	25	
Benzo(g,h,i)perylene	<0.0100	0.0500	0.0472	94	0.0500	0.0464	93	2	65-135	25	
Chrysene	<0.0100	0.0500	0.0542	108	0.0500	0.0530	106	2	65-135	25	
Dibenz(a,h)anthracene	<0.0100	0.0500	0.0538	108	0.0500	0.0533	107	1	50-125	25	
Fluoranthene	<0.0100	0.0500	0.0523	105	0.0500	0.0513	103	2	47-125	25	
Fluorene	<0.0100	0.0500	0.0540	108	0.0500	0.0525	105	3	48-139	25	
Indeno(1,2,3-c,d)Pyrene	<0.0100	0.0500	0.0541	108	0.0500	0.0535	107	1	27-160	25	
Naphthalene	<0.0100	0.0500	0.0504	101	0.0500	0.0490	98	3	26-175	25	
Phenanthrene	<0.0100	0.0500	0.0476	95	0.0500	0.0464	93	3	65-135	25	
Pyrene	<0.0100	0.0500	0.0524	105	0.0500	0.0513	103	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

Final 1.000

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P. O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575)396-1429

Sampler Signature:

e-mail: bjarguijo@basinenv.com

Project Name: Red Byrd #1

Project #: TNM Red Byrd #1

Project Loc: Lea County, NM

PO #: PAA - J. Henry

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

(lab use only)

ORDER #: 433650

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 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	PAH	Chloride E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	MW-16			12/16/2011	1000		1	X								GW										X		X
02	MW-18			12/16/2011	0850		1	X								GW										X		X
03	MW-19			12/16/2011	0930		1	X								GW										X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	12/19/11	10:50			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Zinn	12-19-11	10:50

Laboratory Comments:

Sample Containers Intact? Y N NA

VOCs Free of Headspace? Y N NA

Labels on container(s) Y N

Custody seals on container(s) Y N NA

Custody seals on cooler(s) Y N NA

Sample Hand Delivered by Sampler/Client Rep. ? Y N

by Courier? UPS DHL FedEx Lone Star

1 Lumber

Temperature Upon Receipt: 5 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin / Plains

Date/Time: 12.19.11 10.50

Lab ID # : 433450

Initials: AE

Sample Receipt Checklist

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

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

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 433838

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Red Byrd #1

TNM Red Byrd #1

03-JAN-12

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

03-JAN-12

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

Reference: XENCO Report No: **433838**
Red Byrd #1
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 433838. 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. 433838 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 433838

PLAINS ALL AMERICAN EH&S, Midland, TX

Red Byrd #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-18	W	12-21-11 08:35		433838-001

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Red Byrd #1

Project ID:	*TNM Red Byrd #1*	*Report Date:*	*03-JAN-12*
Work Order Number:	*433838*	*Date Received:*	*12/21/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 433838

PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Red Byrd #1

Project Id: TNM Red Byrd #1
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Wed Dec-21-11 01:20 pm
Report Date: 03-JAN-12
Project Manager: Brent Barron II

Analysis Requested	*Lab Id:*	433838-001					
	Field Id:	MW-18					
	Depth:						
	Matrix:	WATER					
	Sampled:	Dec-21-11 08:35					
SVOA PAHs List by EPA 8270C SUB: E871002	*Extracted:*	Dec-28-11 16:00					
	Analyzed:	Dec-30-11 11:25					
	Units/RL:	mg/L	RL				
Acenaphthene		ND	0.0500				
Acenaphthylene		ND	0.0500				
Anthracene		ND	0.0500				
Benzo(a)anthracene		ND	0.0500				
Benzo(a)pyrene		ND	0.0500				
Benzo(b)fluoranthene		ND	0.0500				
Benzo(k)fluoranthene		ND	0.0500				
Benzo(g,h,i)perylene		ND	0.0500				
Chrysene		ND	0.0500				
Dibenz(a,h)Anthracene		ND	0.0500				
Fluoranthene		ND	0.0500				
Fluorene		ND	0.0500				
Indeno(1,2,3-c,d)Pyrene		ND	0.0500				
1-Methylnaphthalene		ND	0.0250				
2-Methylnaphthalene		ND	0.0500				
Naphthalene		ND	0.0500				
Phenanthrene		ND	0.0500				
Pyrene		ND	0.0500				

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

rk Orders : 433838,

Project ID: TNM Red Byrd #1

Lab Batch #: 878168 **Sample:** 433838-001 / SMP **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 12/30/11 11:25

SVOA PAHs List by EPA 8270C	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	28.2	50.0	56	44-117	
2-Fluorophenol	17.3	50.0	35	30-100	
Nitrobenzene-d5	29.1	50.0	58	46-111	
Phenol-d6	10.7	50.0	21	15-94	
Terphenyl-D14	31.6	50.0	63	46-126	
2,4,6-Tribromophenol	32.6	50.0	65	48-117	

Lab Batch #: 878168 **Sample:** 615966-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 12/29/11 11:50

SVOA PAHs List by EPA 8270C	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	46.0	50.0	92	44-117	
2-Fluorophenol	39.6	50.0	79	30-100	
Nitrobenzene-d5	46.8	50.0	94	46-111	
Phenol-d6	30.6	50.0	61	15-94	
:rphenyl-D14	58.8	50.0	118	46-126	
2,4,6-Tribromophenol	42.5	50.0	85	48-117	

Lab Batch #: 878168 **Sample:** 615966-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 12/29/11 12:37

SVOA PAHs List by EPA 8270C	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	48.0	50.0	96	44-117	
2-Fluorophenol	39.0	50.0	78	30-100	
Nitrobenzene-d5	47.4	50.0	95	46-111	
Phenol-d6	33.1	50.0	66	15-94	
Terphenyl-D14	50.1	50.0	100	46-126	
2,4,6-Tribromophenol	51.4	50.0	103	48-117	

* 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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Red Byrd #1

Work Orders : 433838,

Project ID: TNM Red Byrd #1

Lab Batch #: 878168 **Sample:** 615966-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: ug/L **Date Analyzed:** 12/29/11 13:01

SVOA PAHs List by EPA 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	46.8	50.0	94	44-117	
2-Fluorophenol	39.1	50.0	78	30-100	
Nitrobenzene-d5	48.0	50.0	96	46-111	
Phenol-d6	33.1	50.0	66	15-94	
Terphenyl-D14	48.4	50.0	97	46-126	
2,4,6-Tribromophenol	50.6	50.0	101	48-117	

* 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 / BS. .ecoveries

Project Name: Red Byrd #1

Work Order #: 433838
Analyst: MCH
Lab Batch ID: 878168
Sample: 615966-1-BKS
Units: mg/L

Date Prepared: 12/28/2011
Batch #: 1

Project ID: TNM Red Byrd #1
Date Analyzed: 12/29/2011
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C 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
Acenaphthene	<0.0100	0.0500	0.0489	98	0.0500	0.0480	96	2	54-114	25	
Acenaphthylene	<0.0100	0.0500	0.0490	98	0.0500	0.0477	95	3	53-113	25	
Anthracene	<0.0100	0.0500	0.0483	97	0.0500	0.0489	98	1	56-116	25	
Benzo(a)anthracene	<0.0100	0.0500	0.0487	97	0.0500	0.0481	96	1	59-116	25	
Benzo(a)pyrene	<0.0100	0.0500	0.0499	100	0.0500	0.0503	101	1	58-118	25	
Benzo(b)fluoranthene	<0.0100	0.0500	0.0454	91	0.0500	0.0472	94	4	54-123	25	
Benzo(k)fluoranthene	<0.0100	0.0500	0.0517	103	0.0500	0.0502	100	3	52-122	25	
Benzo(g,h,i)perylene	<0.0100	0.0500	0.0516	103	0.0500	0.0497	99	4	47-129	25	
Chrysene	<0.0100	0.0500	0.0482	96	0.0500	0.0469	94	3	58-116	25	
Dibenz(a,h)Anthracene	<0.0100	0.0500	0.0483	97	0.0500	0.0474	95	2	46-131	25	
Fluoranthene	<0.0100	0.0500	0.0481	96	0.0500	0.0491	98	2	55-120	25	
Fluorene	<0.0100	0.0500	0.0482	96	0.0500	0.0479	96	1	56-114	25	
Indeno(1,2,3-c,d)Pyrene	<0.0100	0.0500	0.0513	103	0.0500	0.0508	102	1	44-132	25	
1-Methylnaphthalene	<0.00500	0.0500	0.0465	93	0.0500	0.0468	94	1	47-113	25	
2-Methylnaphthalene	<0.0100	0.0500	0.0468	94	0.0500	0.0475	95	1	57-106	25	
Naphthalene	<0.0100	0.0500	0.0463	93	0.0500	0.0463	93	0	53-110	25	
Phenanthrene	<0.0100	0.0500	0.0484	97	0.0500	0.0489	98	1	56-116	25	
Pyrene	<0.0100	0.0500	0.0500	100	0.0500	0.0472	94	6	57-119	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P. O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575)396-1429

Sampler Signature:

e-mail: bjarguijo@basinenv.com

Project Name: Red Byrd #1

Project #: TNM Red Byrd #1

Project Loc: Lea County, NM

PO #: PAA - J. Henry

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

(lab use only)

ORDER #: 433838

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: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	PAH	Chloride E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	MW-18			12/21/2011	08:35		1	X								GW											X			X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Miguel Rivera	12/21/11	1320			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Ian Baron	12/21/11	13:20

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 by Sampler/Client Rep.?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 12.0 °C

Final 1.000

XENCO Laboratories

XENCO Laboratories
Atlanta, Boca Raton, Corpus Christi, Dallas
Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Environmental
Date/Time: 12-21-11 13:20
Lab ID #: 458838
Initials: JB

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	12.0 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Appendix B

Release Notification &

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 Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name:	Red Byrd # 1	Facility Type:	Steel Pipeline

Surface Owner:	Mineral Owner	Lease No.
Red Byrd		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	1	20S	36E					Lea

Latitude 32° 36' 09.8" N **Longitude** 103° 17' 58.5" W

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered
Source of Release: Steel Pipeline	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*

Describe Area Affected and Cleanup Action Taken.*
NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable.

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:	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	Attached ☐
Date: 3/21/2005 Phone: (505)441-0965		

* Attach Additional Sheets If Necessary