

AP - 96

ANNUAL MONITORING REPORT

YEAR(S):

2008

Basin Environmental Consulting, LLC

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2009 MAR 30 PM 1 32

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P. O. Box 381
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cjbryant@basin-consulting.com
Office: (575) 396-2378 Fax: (575) 396-1429



**2008
ANNUAL MONITORING REPORT**

**LOVINGTON GATHERING WTI
SE ¼ NE ¼ SECTION 6, TOWNSHIP 17 SOUTH, RANGE 37 EAST
LATITUDE 32°, 51', 56.0" NORTH, LONGITUDE 103°, 17', 07.2" WEST
LEA COUNTY, NEW MEXICO
PLAINS SRS NUMBER: 2006-0142
NMOCD REF: 1RP-838**

PREPARED FOR:



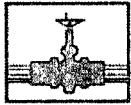
**PLAINS MARKETING, L.P.
333 CLAY STREET, SUITE 1600
HOUSTON, TEXAS 77002**

PREPARED BY:

**BASIN ENVIRONMENTAL CONSULTING, LLC
P. O. Box 381
Lovington, New Mexico 88260**

March 2009


Camille Bryant
Project Manager



PLAINS
ALL AMERICAN

RECEIVED

2009 MAR 30 PM 1 31

March 23, 2009

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

Re: Plains All American – 2008 Annual Monitoring Reports
2 Sites in Lea County, New Mexico
1 Site in Eddy County, New Mexico

Dear Mr. Hansen:

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

Lovington Gathering WTI	1RP-838	AP-96	Section 06, T17S, R37E, Lea County
Vacuum 10-Inch to Jal	1RP-0385		Section 20, T19S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053		Section 10, T18S, R29E, Eddy County

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

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

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INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Marketing, L.P., (Plains), prepared this annual report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2008 only. Site activities and remedial work are summarized in several letters and reports previously submitted to the NMOCD. For reference, the Site Location Map is provided as Figure 1.

At the request of the NMOCD, initial groundwater monitoring was conducted during the 4th quarter of 2006 to assess any potential groundwater impact from dissolved phase benzene, toluene, ethylbenzene, and xylene (BTEX) constituents. The groundwater monitoring event consisted of measuring static water levels in the monitoring wells, checking of the presence of phase-separated hydrocarbons (PSH) on the water column, and purging and sampling of each well exhibiting sufficient recharge. Based on the results of the initial monitoring and sampling event, Plains placed this site on a quarterly groundwater monitoring program.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site is SE¼, NE¼ Section 6, Township 17 South, Range 37 East. The site latitude is 32°, 51', 56.0" North and the site longitude is 103°, 17', 07.2" West. On April 21, 2006, Basin responded to the pipeline release on behalf of Plains to repair the pipeline and excavate the impacted soil. The Lovington Gathering WTI Pipeline was repaired utilizing a pipeline clamp and the visually stained soil was excavated and placed on plastic sheeting to mitigate any further hydrocarbon impact to the underlying soil. Approximately 12 barrels of crude oil was released from the Plains pipeline and 8 barrels were recovered resulting in a net loss of 4 barrels of crude oil. The excavated area was fenced and is characterized by a Plains pipeline right-of-way adjacent to an idled Plains pump station, the release occurred in a pasture containing various oil and gas production facilities. The release resulted in a visibly surface stained area covering approximately 30 feet in length by 27 feet in width. Excavation activities conducted during the initial response and subsequent remediation of the site covered an area approximately 30 feet in length by 27 feet in width and ranged from approximately 5 to 6 feet in depth. Excavated soil was placed on a 6-mil ploy-liner for future remedial action. Utilizing olfactory, visual and photo ionization detector (PID) technology it was determined Volatile Organic Compounds (VOCs) remained in the sidewalls and floor of the excavation.

In July 2006, a soil investigation was conducted to further delineate the horizontal and vertical extent of the on-site hydrocarbon impact, eleven (11) soil borings were advanced to a depth of thirty (30) to seventy-five (75) feet below ground surface (bgs). Based on the laboratory results of the soil samples collected during advancement of the soil borings; three (3) groundwater monitor wells (MW-1, MW-2 and MW-3) were installed to evaluate the status of the groundwater.

Based on the laboratory results from the initial groundwater sampling event (October 5, 2006), four (4) additional monitoring wells were installed in November 2006. During the installation of the groundwater monitor wells (MW-1 through MW-7); there was no visual evidence of PSH in any of the collected soil samples. The analytical results of the selected soil samples did not indicate BTEX or total petroleum hydrocarbon (TPH) concentrations above the laboratory method detection limit (MDL) with the exception of soil samples collected from monitor well MW-3, which exhibited a TPH concentration of 2,080 mg/Kg and 121 mg/Kg, at fifty-five (55) and seventy-five (75) feet bgs, respectively.

The analytical results of groundwater sampling at monitor well MW-7 indicated additional monitor wells were required to fully delineate the down gradient boundary of the dissolved phase plume. On February 7, 2007, monitor well MW-8 was installed down gradient of monitor well MW-7. The analytical results of soil samples collected during the installation of monitor well MW-8 indicated benzene and BTEX concentrations were less than the MDL and the NMOCD regulatory standard of 10 mg/Kg and 50 mg/Kg for benzene and BTEX, respectively. The analytical results indicate TPH concentrations were less than the MDL and NMOCD regulatory standard of 100 mg/Kg for soil samples collected at ten (10) and twenty-five (25) feet bgs. Soil samples collected at fifty (50) and seventy-five (75) feet bgs exhibited a TPH concentration of 14 mg/Kg (below NMOCD standard) and 101 mg/Kg, respectively.

On August 13, 2007, monitor well MW-9 was installed to further delineate the down gradient boundary of the dissolved phase plume. The analytical results of the soil samples collected during the installation of monitor well MW-9 indicated benzene, BTEX and TPH concentrations were less than the MDL and NMOCD regulatory standard in the five (5) laboratory submitted soil samples.

Currently, there are nine (9) groundwater monitoring wells on-site, MW-1 which is up gradient, MW-4 and MW-5, which are cross gradient, and MW-2, MW-3, MW-6 through MW-9, which are down gradient of the release point.

FIELD ACTIVITIES

No PSH was detected in any of the site monitor wells during the 2008 reporting period.

The site monitoring wells were gauged and sampled March 11, June 14, September 17 and December 2, 2008. During these 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 at an NMOCD approved disposal in Monument, New Mexico.

Locations of the groundwater monitoring wells and the inferred groundwater elevations, which were constructed from the measurements collected during the 2008 quarterly sampling events, are depicted on Figures 2A through 2D. The 2008 groundwater elevation data is provided as Table 1.

The Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0008 feet/foot to the south-southeast as measured between groundwater monitor wells MW-5 and MW-9. The corrected groundwater elevation ranged between 3,726.78 and 3,722.91 feet above mean sea level, in monitor well MW-1 on March 11, 2008 and in monitor well MW-9 on June 14, 2008, respectively.

LABORATORY RESULTS

Groundwater samples were collected from the groundwater monitoring wells (MW-1 through MW-9) during the quarterly monitoring event were delivered to Xenco Laboratories, formerly Environmental Laboratory of Texas, Odessa, Texas for determination of benzene, toluene, ethylbenzene and xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. Pursuant to an NMOCD request, the groundwater monitoring wells were sampled annually for concentrations of Poly Aromatic Hydrocarbons (PAH) utilizing EPA Method SW 8270C. A summary of BTEX constituent concentrations and PAH constituent concentrations for 2008 are presented in Table 2 and Table 3, respectively. The laboratory reports are provided as Appendix A.

Monitor well MW-1 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the MDL and NMOCD regulatory standard during the 1st and 2nd quarters to 0.035 mg/L during the 4th quarter of 2008. Benzene concentrations were above NMOCD regulatory standard during the 3rd and 4th quarters of the reporting period. Toluene, ethylbenzene and total xylene concentrations were less than the MDL and the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of 2008.

Monitor well MW-2 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.003 mg/L during the 2nd quarter to 0.159 mg/L during the 3rd quarter of 2008. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 3rd and 4th quarters of the reporting period. Toluene concentrations ranged from <0.002 mg/L during the 1st, 2nd and 3rd quarters to 0.002 mg/L during the 4th quarter of 2008. Toluene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Ethylbenzene concentrations were less than the MDL and NMOCD regulatory standard during all four (4) quarters of the reporting period. Total xylene concentrations ranged from the MDL during the 2nd quarter to 0.008 mg/L during the 4th quarter of 2008. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-3 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.024 mg/L during the 4th quarter to 1.159 mg/L during the 1st quarter of 2008. Benzene concentrations were above NMOCD regulatory standards for all four (4) quarters of the reporting period. Toluene concentrations ranged from <0.002 mg/L during the

3rd and 4th quarters to 0.107 mg/L during the 1st quarter of 2008. Toluene concentrations were less than NMOCD regulatory standard during all four (4) quarters of the reporting period.

Ethylbenzene concentrations ranged from <0.001 mg/L during the 3rd and 4th quarters to 0.177 mg/L during the 1st quarter of 2008. Ethylbenzene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged from 0.002 mg/L during the 3rd quarter to 0.205 mg/L during the 1st quarter of 2008. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-4 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene, ethylbenzene and total xylene were less than the MDL and NMOCD regulatory standard during all four (4) quarters of the 2008 reporting period. Toluene concentrations ranged from <0.002 mg/L during the 1st, 2nd and 3rd quarters to 0.006 mg/L during the 4th quarter of 2008. Toluene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the 2008 reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-5 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were less than the MDL and NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the 2008 reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-6 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were less than the MDL and NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the 2008 reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-7 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.036 mg/L during the 4th quarter to 0.353 mg/L during the 3rd quarter of 2008. Benzene concentrations were above NMOCD regulatory standard for all four (4) quarters of the reporting period. Toluene and ethylbenzene concentrations were less than the MDL and NMOCD regulatory standard for all four (4) quarters of the 2008 reporting period. Total xylene concentrations ranged from 0.003 mg/L during the 1st and 3rd quarters to 0.016 mg/L during the 2nd quarter of 2008. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the 2008 reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-8 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st quarter to 0.568 mg/L during the 3rd quarter of 2008. Benzene concentrations were above the NMOCD regulatory standard during the

3rd and 4th quarters of the reporting period. Toluene concentrations ranged from <0.002 mg/L during the 1st and 2nd quarters to 0.046 mg/L during the 4th quarter of 2008. Toluene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from <0.001 mg/L during the 1st and 2nd quarters to 0.008 mg/L during the 4th quarter of 2008. Ethylbenzene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged from <0.002 mg/L during the 1st and 2nd quarters to 0.054 mg/L during the 4th quarter of 2008. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-9 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were less than the MDL and NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the 2008 reporting period. Analytical results indicate PAH constituent concentrations were less than the MDL for each constituent during the 4th quarter of the reporting period.

Laboratory analytical results obtained during the 4th quarter groundwater sampling event in December 2008 indicate benzene and BTEX constituent concentrations were less than the MDL for groundwater monitor wells MW-5, MW-6 and MW-9. Analytical results indicate benzene concentrations were above the NMOCD regulatory standard for groundwater monitor wells MW-1, MW-2, MW-3, MW-7 and MW-8 at 0.035 mg/L, 0.050 mg/L, 0.024 mg/L, 0.036 mg/L and 0.234 mg/L, respectively. However, toluene, ethylbenzene and total xylene concentrations were less than the NMOCD regulatory standard.

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

SUMMARY

Based on the depth of hydrocarbon impact at this site, the NMOCD requested quarterly groundwater sampling events be conducted at this site. No PSH was detected in any of the site monitor wells during the 2008 reporting period.

Currently, there are nine groundwater monitoring wells (MW-1 through MW-9) on-site. The Groundwater Gradient Map Figure 2D, indicates a general gradient of approximately 0.0008 feet/foot to the south-southeast as measured between groundwater monitor wells MW-5 and MW-9.

Laboratory analytical results obtained during the 4th quarter groundwater sampling event in December 2008 indicate benzene and BTEX constituent concentrations were less than the MDL for groundwater monitor wells MW-5, MW-6 and MW-9. Analytical results indicate benzene concentrations were above the NMOCD regulatory standard for groundwater monitor wells MW-1, MW-2, MW-3, MW-7 and MW-8 at 0.035 mg/L, 0.050 mg/L, 0.024 mg/L, 0.036 mg/L

and 0.234 mg/L, respectively. However, toluene, ethylbenzene and total xylene concentrations were less than the NMOCD regulatory standard.

On August 18, 2008, a Stage 1 and Stage 2 Abatement Plan was submitted to the NMOCD Santa Fe Office. As of the date of publication of this report no response has been received from the NMOCD as to the status of this Abatement Plan.

ANTICIPATED ACTIONS

Quarterly monitoring and groundwater sampling will continue in the reporting year 2009.

LIMITATIONS

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

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

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

DISTRIBUTION

Copy 1: Edward Hansen
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cjbryant@basin-consulting.com

Copy Number: _____

Figures

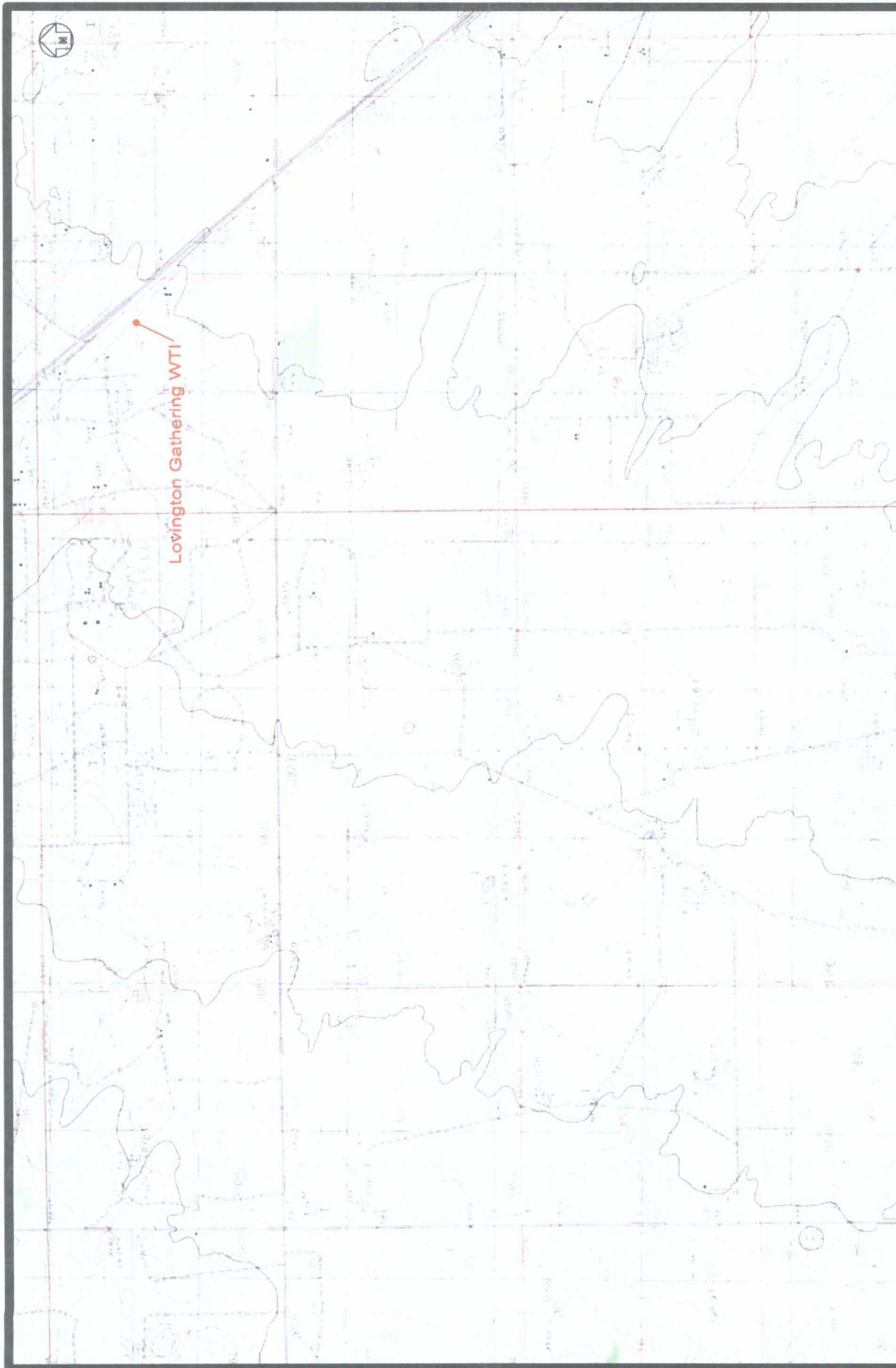


Figure 1
 Site Location Map
 Lovington Gathering WTI
 Plains Markering, L.P.
 Lea County, New Mexico
 1RP-838



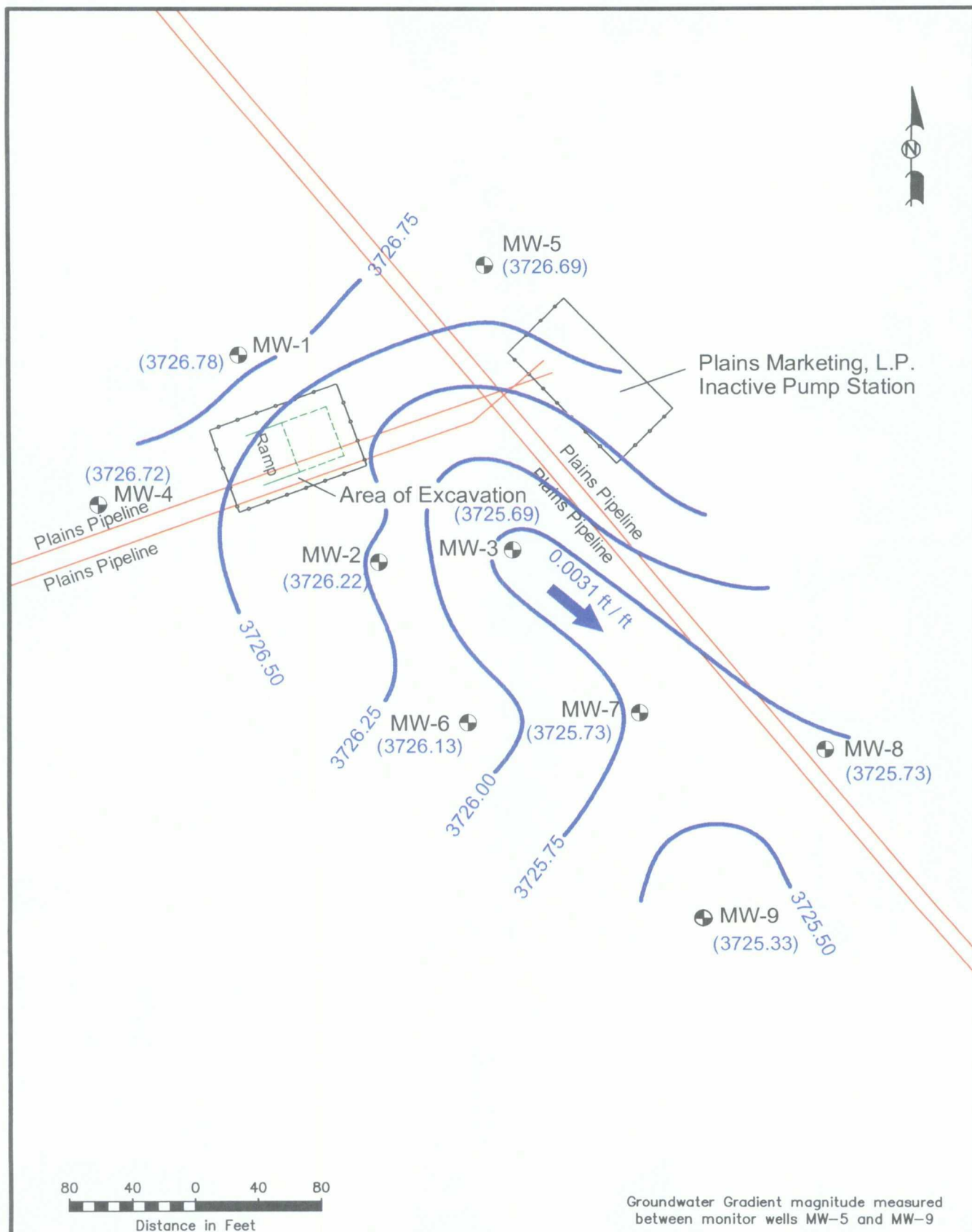
Basin Environmental Services

Prep By: CDS

Checked By: CDS

May 12, 2008

Scale 1"=3000'



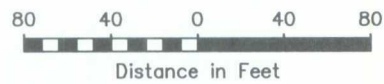
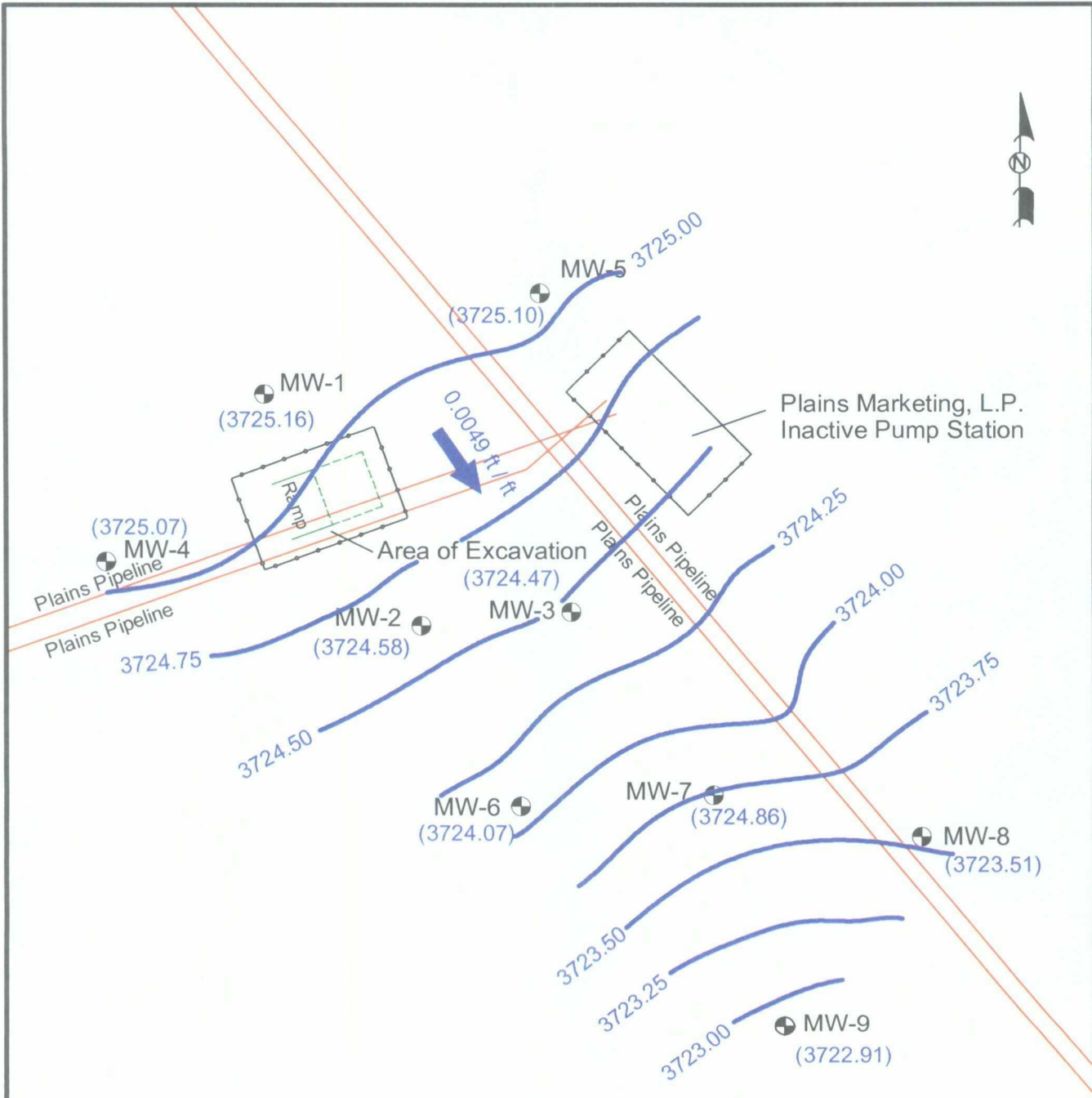
LEGEND:

- Monitor Well Location
- - - Excavation Extents
- - - Fence
- - - Pipeline
- - - Groundwater Gradient Contour Line
- (3726.46) Groundwater Elevation (feet)
- 0.0031 ft/ft Groundwater Gradient Direction and Magnitude

Figure 2A
Inferred Groundwater
Gradient Map
(03/11/08)
Plains Marketing, L.P.
Lovington Gathering WTI
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE 1/4 NE 1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



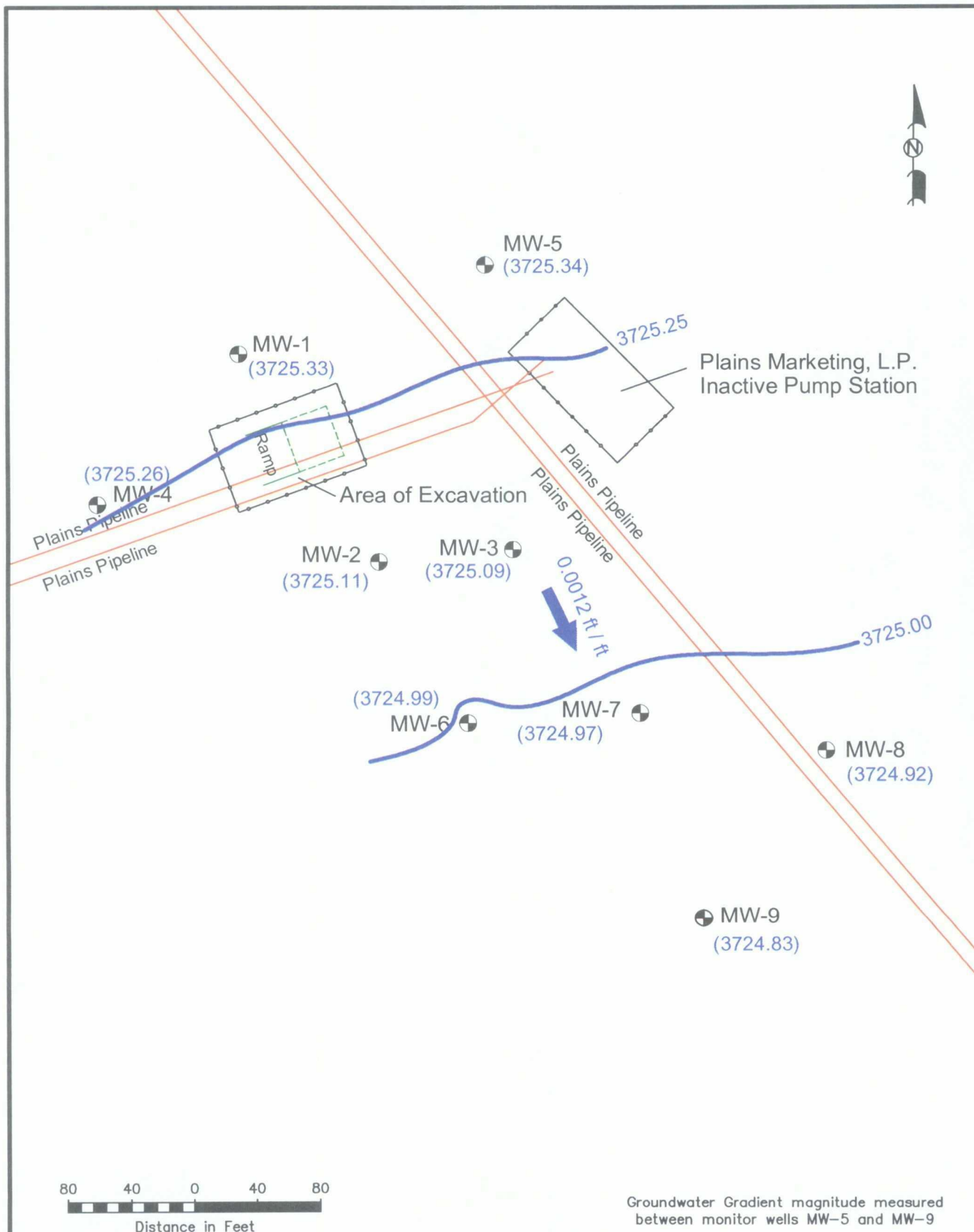
MW-7 was not used in map construction
Groundwater Gradient magnitude measured
between monitor wells MW-1 and MW-9

LEGEND:	
	Monitor Well Location
	Excavation Extents
	Fence
	Pipeline
	Groundwater Gradient Contour Line
	Groundwater Elevation (feet)
	Groundwater Gradient Direction and Magnitude

Figure 2B
Inferred Groundwater
Gradient Map
(06/14/08)
Plains Marketing, L.P.
Lovington Gathering WTI
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE1/4 NE1/4 Sec 16 T17S R37E	
	Lat. N32° 51'56" Long. W103° 17' 07.2"	



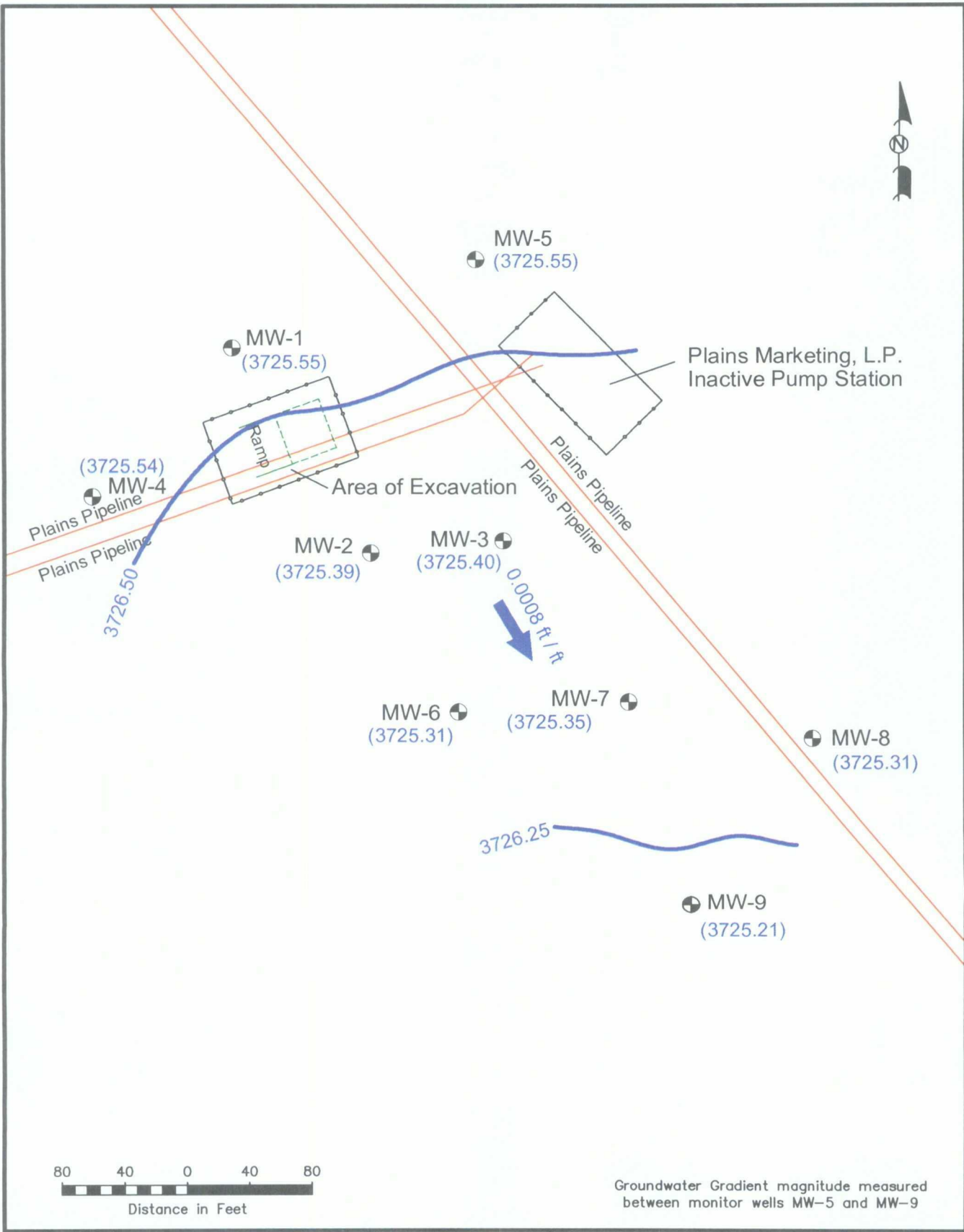
LEGEND:

- Monitor Well Location
- - - Excavation Extents
- - - Fence
- - - Pipeline
- - - Groundwater Gradient Contour Line
- (3725.26) Groundwater Elevation (feet)
- 0.0012 ft/ft Groundwater Gradient Direction and Magnitude

Figure 2C
Inferred Groundwater
Gradient Map
(09/17/08)
Plains Marketing, L.P.
Lovington Gathering WTI
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE1/4 NE1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



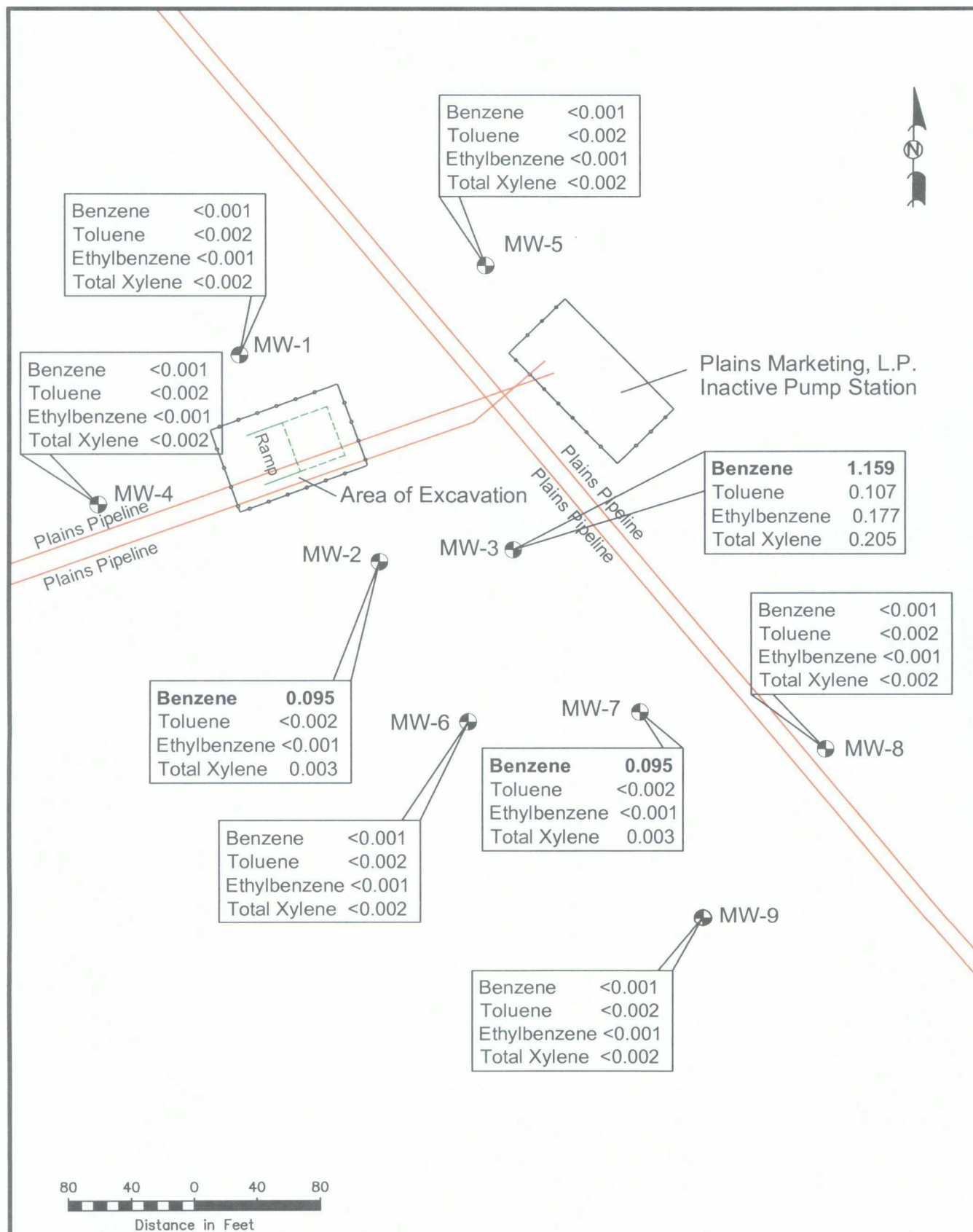
Groundwater Gradient magnitude measured between monitor wells MW-5 and MW-9

- LEGEND:
- Monitor Well Location
 - Excavation Extents
 - Fence
 - Pipeline
 - Groundwater Gradient Contour Line
 - Groundwater Elevation (feet)
 - Groundwater Gradient Direction and Magnitude

Figure 2D
Inferred Groundwater
Gradient Map
(12/02/08)
Plains Marketing, L.P.
Lovington Gathering WTI
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE1/4 NE1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



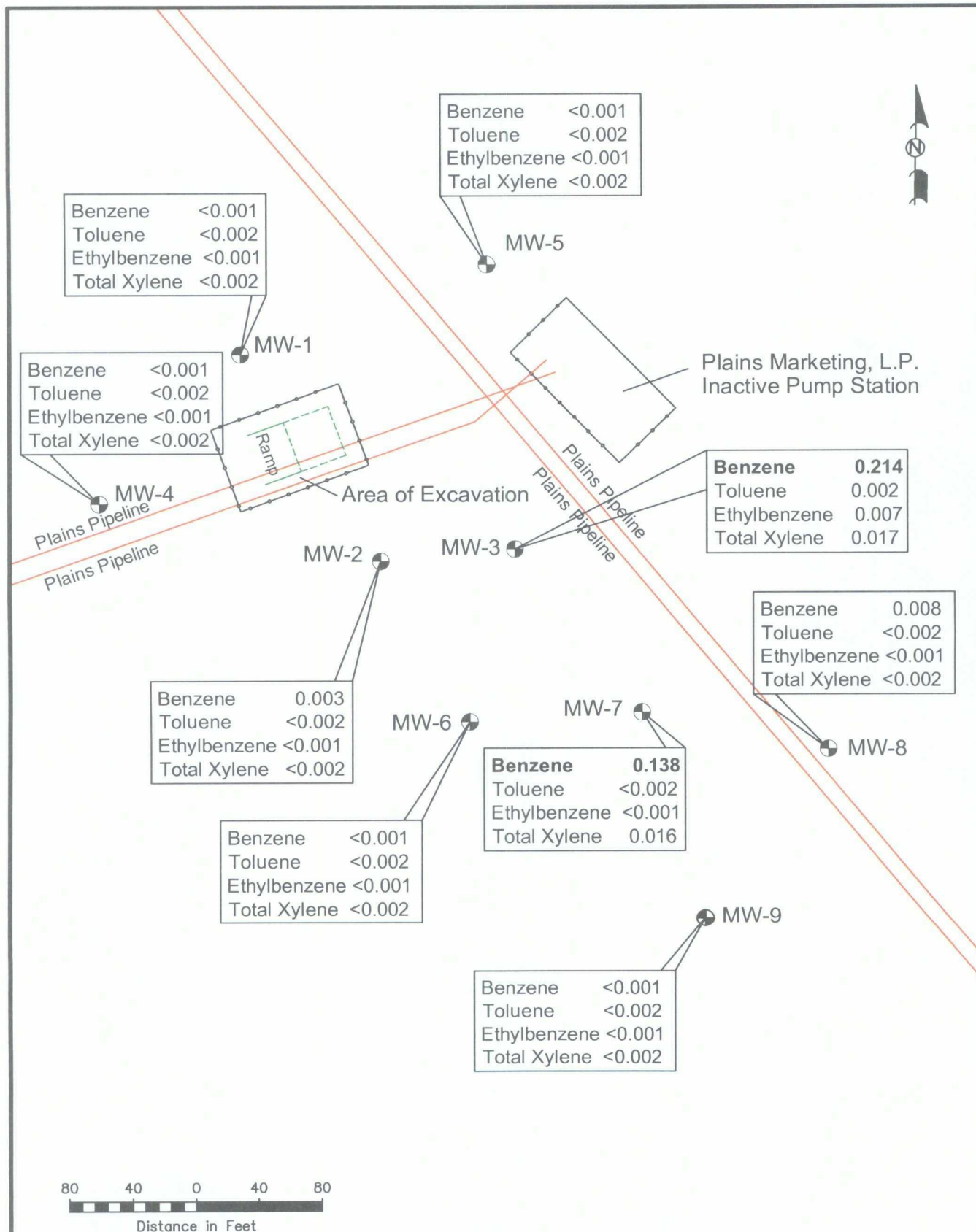
LEGEND:

- Monitor Well Location
- Excavation Extents
- Fence
- Pipeline
- <0.001 Constituent Concentration (mg/L)

Figure 3A
Groundwater Concentration
Map (03/11/08)
Plains Marketing, L.P.
Lovington Gathering - WTI
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE1/4 NE1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



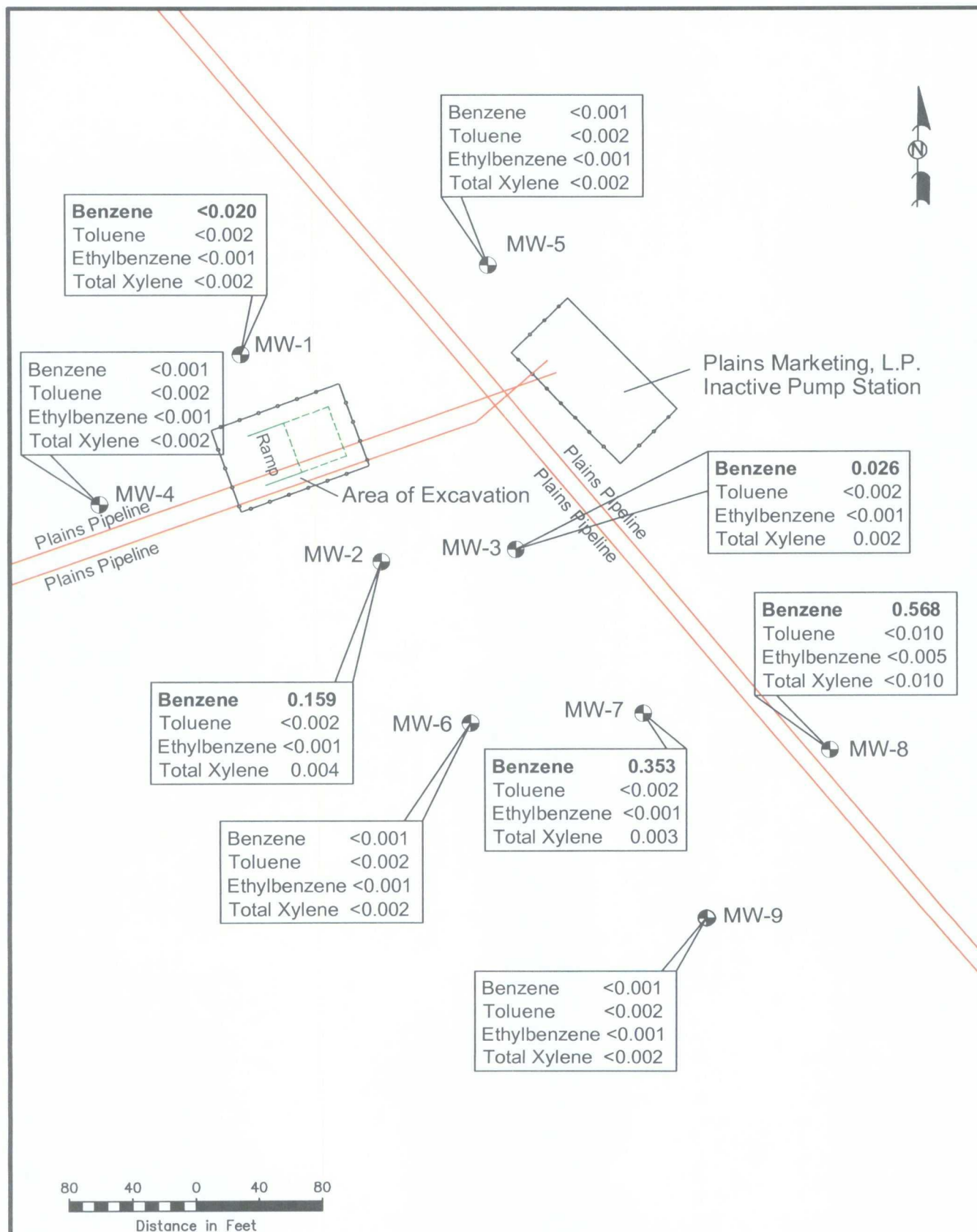
LEGEND:

- Monitor Well Location
- Excavation Extents
- Fence
- Pipeline
- <0.001 Constituent Concentration (mg/L)

Figure 3B
 Groundwater Concentration
 Map (06/14/08)
 Plains Marketing, L.P.
 Lovington Gathering - WT
 Lea County, NM
 1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2009	SE 1/4 NE 1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



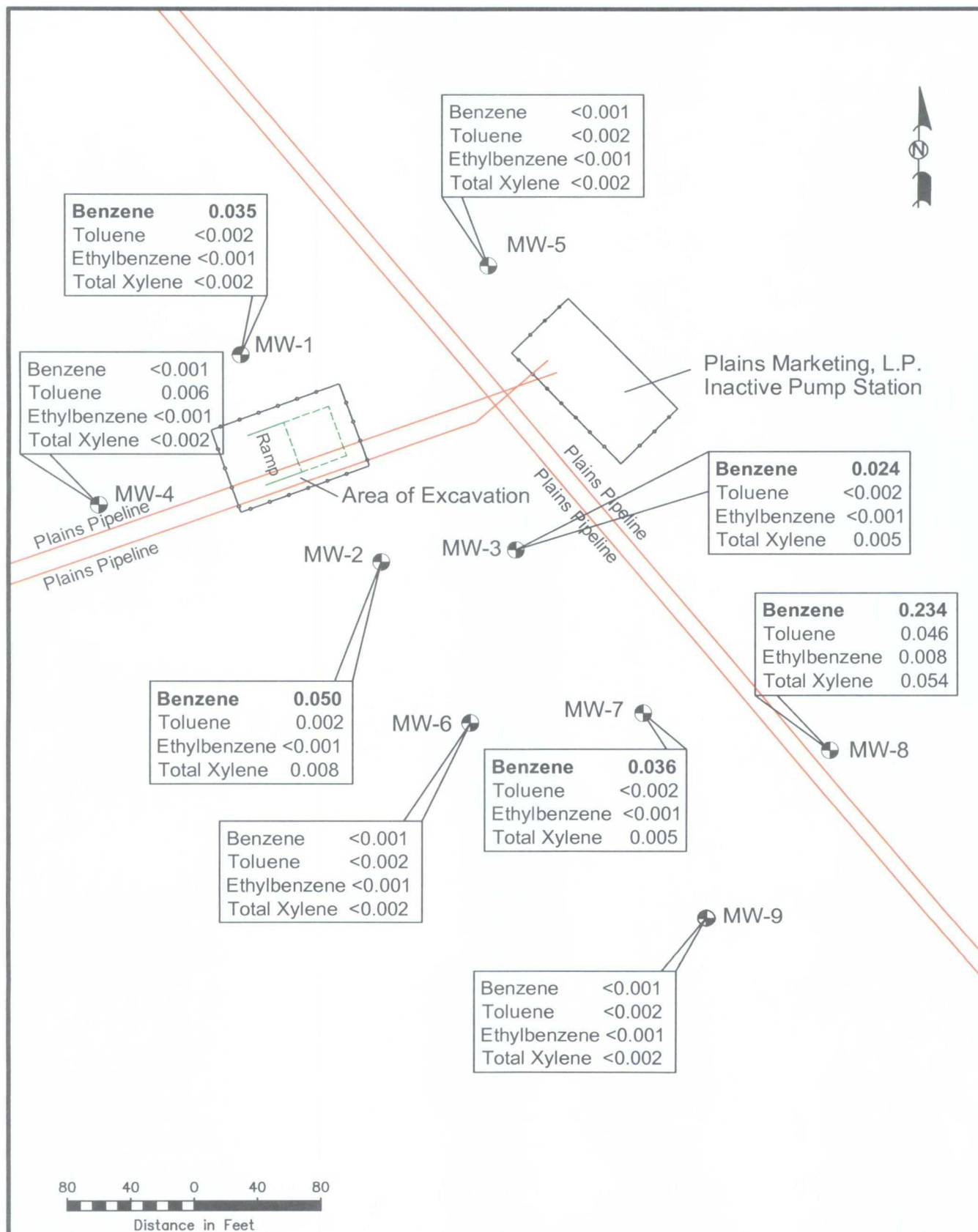
LEGEND:

- Monitor Well Location
- - - Excavation Extents
- - - Fence
- - - Pipeline
- <0.001 Constituent Concentration (mg/L)

Figure 3C
Groundwater Concentration
Map (09/17/08)
Plains Marketing, L.P.
Lovington Gathering - WT
Lea County, NM
1RP-838

Basin Environmental Services

Scale: 1" = 80'	Drawn By: CDS	Prepared By: CDS
February 20, 2000	SE 1/4 NE 1/4 Sec 16 T17S R37E	
	Lat. N32° 51' 56" Long. W103° 17' 07.2"	



Benzene 0.035
Toluene <0.002
Ethylbenzene <0.001
Total Xylene <0.002

MW-1

Benzene <0.001
Toluene 0.006
Ethylbenzene <0.001
Total Xylene <0.002

MW-4

Plains Pipeline
Plains Pipeline

Ramp
Area of Excavation

MW-2

Benzene 0.050
Toluene 0.002
Ethylbenzene <0.001
Total Xylene 0.008

MW-6

Benzene <0.001
Toluene <0.002
Ethylbenzene <0.001
Total Xylene <0.002

MW-3

Benzene 0.036
Toluene <0.002
Ethylbenzene <0.001
Total Xylene 0.005

MW-7

Benzene <0.001
Toluene <0.002
Ethylbenzene <0.001
Total Xylene <0.002

MW-9

Benzene <0.001
Toluene <0.002
Ethylbenzene <0.001
Total Xylene <0.002

MW-5

Plains Marketing, L.P.
Inactive Pump Station

Benzene 0.024
Toluene <0.002
Ethylbenzene <0.001
Total Xylene 0.005

Benzene 0.234
Toluene 0.046
Ethylbenzene 0.008
Total Xylene 0.054

MW-8

80 40 0 40 80
Distance in Feet

Tables

TABLE 1
GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: 2006-142
NMOCD REF NO: 1RP-838

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	03/11/08	3,806.60	-	79.82	0.00	3,726.78
	06/14/08	3,806.60	-	81.44	0.00	3,725.16
	09/17/08	3,806.60	-	81.27	0.00	3,725.33
	12/02/08	3,806.60	-	81.05	0.00	3,725.55
MW-2	03/11/08	3,806.31	-	80.09	0.00	3,726.22
	06/14/08	3,806.31	-	81.73	0.00	3,724.58
	09/17/08	3,806.31	-	81.20	0.00	3,725.11
	12/02/08	3,806.31	-	80.92	0.00	3,725.39
MW-3	03/11/08	3,806.19	-	80.50	0.00	3,725.69
	06/14/08	3,806.19	-	81.72	0.00	3,724.47
	09/17/08	3,806.19	-	81.10	0.00	3,725.09
	12/02/08	3,806.19	-	80.79	0.00	3,725.40
MW-4	03/11/08	3,806.67	-	79.95	0.00	3,726.72
	06/14/08	3,806.67	-	81.60	0.00	3,725.07
	09/17/08	3,806.67	-	81.41	0.00	3,725.26
	12/02/08	3,806.67	-	81.13	0.00	3,725.54
MW-5	03/11/08	3,806.30	-	79.61	0.00	3,726.69
	06/14/08	3,806.30	-	81.20	0.00	3,725.10
	09/17/08	3,806.30	-	80.96	0.00	3,725.34
	12/02/08	3,806.30	-	80.75	0.00	3,725.55
MW-6	03/11/08	3,806.08	-	79.95	0.00	3,726.13
	06/14/08	3,806.08	-	82.01	0.00	3,724.07
	09/17/08	3,806.08	-	81.09	0.00	3,724.99
	12/02/08	3,806.08	-	80.77	0.00	3,725.31
MW-7	03/11/08	3,806.05	-	80.32	0.00	3,725.73
	06/14/08	3,806.05	-	81.19	0.00	3,724.86
	09/17/08	3,806.05	-	81.08	0.00	3,724.97
	12/02/08	3,806.05	-	80.70	0.00	3,725.35

TABLE 1**GROUNDWATER ELEVATION DATA**

**PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: 2006-142
NMOCD REF NO: 1RP-838**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-8	03/11/08	3,805.89	-	80.16	0.00	3,725.73
	06/14/08	3,805.89	-	82.38	0.00	3,723.51
	09/17/08	3,805.89	-	80.97	0.00	3,724.92
	12/02/08	3,805.89	-	80.58	0.00	3,725.31
MW-9	03/11/08	3,806.02	-	80.69	0.00	3,725.33
	06/14/08	3,806.02	-	83.11	0.00	3,722.91
	09/17/08	3,806.02	-	81.19	0.00	3,724.83
	12/02/08	3,806.02	-	80.81	0.00	3,725.21

TABLE 2

CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
 LOVINGTON GATHERING WTI
 LEA COUNTY, NEW MEXICO
 PLAINS SRS NO. 2006-142
 NMOCD REF NO: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	DATE ANALYZED	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)
MW-1	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	0.020	<0.002	<0.001	<0.002	<0.001
	12/02/08	12/05/08	0.035	<0.002	<0.001	<0.002	<0.001
MW-2	03/11/08	03/17/08	0.095	<0.002	<0.001	0.003	<0.001
	06/14/08	06/17/08	0.003	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	0.159	<0.002	<0.001	0.004	<0.001
	12/02/08	12/05/08	0.050	0.002	<0.001	0.007	0.001
MW-3	03/11/08	03/17/08	1.159	0.107	0.177	0.066	0.139
	06/14/08	06/17/08	0.214	0.002	0.007	0.012	0.005
	09/17/08	09/22/08	0.026	<0.002	<0.001	0.002	<0.001
	12/02/08	12/05/08	0.024	<0.002	<0.001	0.004	0.001
MW-4	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	12/05/08	<0.001	0.006	<0.001	<0.002	<0.001
MW-5	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	12/05/08	<0.001	<0.002	<0.001	<0.002	<0.001
MW-6	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	12/05/08	<0.001	<0.002	<0.001	<0.002	<0.001
MW-7	03/11/08	03/17/08	0.095	<0.002	<0.001	0.003	<0.001
	06/14/08	06/17/08	0.138	<0.002	<0.001	0.016	<0.001
	09/17/08	09/22/08	0.353	<0.002	<0.001	0.003	<0.001
	12/02/08	12/05/08	0.036	<0.002	<0.001	0.003	0.002
MW-8	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	0.008	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	0.568	<0.010	<0.005	<0.010	<0.005
	12/02/08	12/05/08	0.234	0.046	0.008	0.041	0.013

TABLE 2

CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

PLAINS MARKETING, L.P.
 LOVINGTON GATHERING WTI
 LEA COUNTY, NEW MEXICO
 PLAINS SRS NO. 2006-142
 NMOCD REF NO: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	DATE ANALYZED	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)
MW-9	03/11/08	03/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	06/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	09/22/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	12/05/08	<0.001	<0.002	<0.001	<0.002	<0.001
NMOCD CRITERIA			0.01	0.75	0.75	0.62	

TABLE 3

CONCENTRATIONS OF POLY AROMATIC HYDROCARBONS IN GROUNDWATER

PLAINS MARKETING, L.P.
 LOVINGTON GATHERING WTI
 LEA COUNTY, NEW MEXICO
 PLAINS SRS NO. 2006-142
 NMOC REF NO: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHOD: EPA SW 846 8270C																
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)Anthracene	Fluoranthene	Indeno(1,2,3-c,d)Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
MW-1	12/02/08	<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	<0.005
MW-2	12/02/08	<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	<0.005
MW-3	12/02/08	<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	<0.005
MW-4	12/02/08	<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	<0.005
MW-5	12/02/08	<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	<0.005
MW-6	12/02/08	<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	<0.005
MW-7	12/02/08	<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	<0.005
MW-8	12/01/08	<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	<0.005
MW-9	12/02/08	<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	<0.005

Appendices

Appendix A

Laboratory Reports

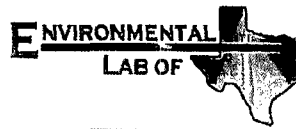
Analytical Report 299636
for
PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Lovington Gathering WTI

2006-142

19-MAR-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215

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

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

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



19-MAR-08

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

Reference: XENCO Report No: **299636**
Lovington Gathering WTI
Project Address: Lea County, NM

Camille Reynolds:

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 299636. 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. 299636 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 299636



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Mar-11-08 13:25		299636-001
MW-4	W	Mar-11-08 14:00		299636-002
MW-5	W	Mar-11-08 14:40		299636-003
MW-6	W	Mar-11-08 15:15		299636-004
MW-8	W	Mar-11-08 15:50		299636-005
MW-9	W	Mar-11-08 16:40		299636-006
MW-2	W	Mar-12-08 08:00		299636-007
MW-7	W	Mar-12-08 09:00		299636-008
MW-3	W	Mar-12-08 10:00		299636-009



Certificate of Analysis Summary 299636

PLAINS ALL AMERICAN EH&S, Midland, TX


Project Id: 2006-142
Contact: Camille Reynolds
Project Location: Lea County, NM

Project Name: Lovington Gathering WTI
Date Received in Lab: Fri Mar-14-08 12:10 pm
Report Date: 19-MAR-08
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	299636-001	299636-002	299636-003	299636-004	299636-005	299636-006
	Extracted:	Analyzed:	Units/RL:								
BTEX by EPA 8021B											
Benzene	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
Toluene	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
Ethylbenzene	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
m,p-Xylenes	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
o-Xylene	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
Xylenes, Total	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42
Total BTEX	Mar-17-08 08:42	Mar-17-08 15:39	mg/L	RL	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40	Mar-17-08 08:42

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

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 299636

PLAINS ALL AMERICAN EH&S, Midland, TX


Project Id: 2006-142
Contact: Camille Reynolds
Project Location: Lea County, NM

Project Name: Lovington Gathering WTI
Date Received in Lab: Fri Mar-14-08 12:10 pm
Report Date: 19-MAR-08
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:		299636-007		299636-008		299636-009			
	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	Field Id:	Depth:	Matrix:
BTEX by EPA 8021B			WATER	Mar-12-08 08:00	Mar-17-08 08:42	Mar-17-08 18:06	mg/L RL	WATER	Mar-12-08 09:00	WATER
					mg/L	RL				
					0.0955	0.0010	0.0437	0.0010		
					ND	0.0020	ND	0.0020		
					ND	0.0010	ND	0.0010		
Benzene					0.0032	0.0020	0.0150	0.0020		
Toluene					ND	0.0010	ND	0.0010		
Ethylbenzene					0.0032	0.0020	0.0150	0.0020		
m,p-Xylenes					ND	0.0010	ND	0.0010		
o-Xylene					0.0032	0.0020	0.0150	0.0020		
Xylenes, Total					0.0987		0.015			
Total BTEX							0.0587			

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.

* Outside XENCO'S scope of NELAC Accreditation

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 299636

Project ID: 2006-142

Lab Batch #: 717332

Sample: 299559-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 717332

Sample: 299559-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	

Lab Batch #: 717332

Sample: 299636-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 717332

Sample: 299636-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 717332

Sample: 299636-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 299636

Project ID: 2006-142

Lab Batch #: 717332

Sample: 299636-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

Lab Batch #: 717332

Sample: 299636-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 717332

Sample: 299636-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 717332

Sample: 299636-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 717332

Sample: 299636-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 299636

Project ID: 2006-142

Lab Batch #: 717332

Sample: 505989-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0355	0.0300	118	80-120	

Lab Batch #: 717332

Sample: 505989-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 717332

Sample: 505989-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 717545

Sample: 299636-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

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

Lab Batch #: 717545

Sample: 299685-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.0360	0.0300	120	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 299636

Project ID: 2006-142

Lab Batch #: 717545

Sample: 299685-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	

Lab Batch #: 717545

Sample: 506115-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 717545

Sample: 506115-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 717545

Sample: 506115-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

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

*** Poor recoveries due to dilution

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

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

Project Name: Lovington Gathering WTI

Work Order #: 299636

Analyst: SHE

Lab Batch ID: 717332

Sample: 505989-1-BKS

Date Prepared: 03/17/2008

Batch #: 1

Project ID: 2006-142

Date Analyzed: 03/17/2008

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/L											
Analytes	BTEX by EPA 8021B										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0980	98	0.1	0.0942	94	4	70-125	25
	Toluene	ND	0.1000	0.0979	98	0.1	0.0943	94	4	70-125	25
	Ethylbenzene	ND	0.1000	0.1001	100	0.1	0.0967	97	3	71-129	25
	m,p-Xylenes	ND	0.2000	0.2009	100	0.2	0.1930	97	4	70-131	25
	o-Xylene	ND	0.1000	0.1073	107	0.1	0.1022	102	5	71-133	25

Analyst: SHE

Lab Batch ID: 717545

Sample: 506115-1-BKS

Date Prepared: 03/18/2008

Batch #: 1

Date Analyzed: 03/18/2008

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/L												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.0886	89	0.1	0.0913	91	3	70-125	25	
Toluene		ND	0.1000	0.0883	88	0.1	0.0908	91	3	70-125	25	
Ethylbenzene		ND	0.1000	0.0906	91	0.1	0.0927	93	2	71-129	25	
m,p-Xylenes		ND	0.2000	0.1814	91	0.2	0.1850	93	2	70-131	25	
o-Xylene		ND	0.1000	0.0967	97	0.1	0.0982	98	2	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes

Project Name: Lovington Gathering WTI

Work Order #: 299636

Lab Batch ID: 717332

Date Analyzed: 03/17/2008

Reporting Units: mg/L

Project ID: 2006-142

QC- Sample ID: 299559-001 S Batch #: 1 Matrix: Water

Date Prepared: 03/17/2008 Analyst: SHE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/L	BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	0.0054	0.1000	0.0873	82	0.1000	0.0839	79	4	70-125	25	
		Toluene	ND	0.1000	0.0893	89	0.1000	0.0849	85	5	70-125	25	
		Ethylbenzene	ND	0.1000	0.0935	94	0.1000	0.0885	89	5	71-129	25	
		m,p-Xylenes	ND	0.2000	0.1856	93	0.2000	0.1753	88	6	70-131	25	
		o-Xylene	ND	0.1000	0.0971	97	0.1000	0.0913	91	6	71-133	25	

Lab Batch ID: 717545

Date Analyzed: 03/18/2008

Reporting Units: mg/L

QC- Sample ID: 299685-002 S Batch #: 1 Matrix: Water

Date Prepared: 03/18/2008 Analyst: SHE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/L	BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	0.0120	0.1000	0.0889	77	0.1000	0.0953	83	8	70-125	25	
		Toluene	ND	0.1000	0.0801	80	0.1000	0.0838	84	5	70-125	25	
		Ethylbenzene	ND	0.1000	0.0853	85	0.1000	0.0893	89	5	71-129	25	
		m,p-Xylenes	ND	0.2000	0.1693	85	0.2000	0.1758	88	3	70-131	25	
		o-Xylene	ND	0.1000	0.0884	88	0.1000	0.0921	92	4	71-133	25	

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

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

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West 1-20 East
Odessa, Texas 79765

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

Project Name: LOVINGTON GATHERING WTI

Project #: 2006-142

Project Loc: Lea County, NM

PO #: PAA - C. J. Reynolds

Report Format:

e-mail: kdutton@basineny.com

Page 13 of 14

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

Client: Plains
Date/ Time: 3-14-08 12:10
Lab ID #: 279636
Initials: al

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	<u>5.0</u> °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	Not Applicable	
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event

Analytical Report 305940

for

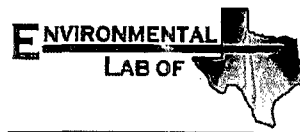
PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Lovington Gathering WTI

2006-142

19-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215

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

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

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



19-JUN-08

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

Reference: XENCO Report No: **305940**
Lovington Gathering WTI
Project Address: Lea County, NM

Camille Reynolds:

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 305940. 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. 305940 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,

A handwritten signature in black ink, appearing to read "Brent Barron, II", written over a horizontal line.

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 305940



PLAINS ALL AMERICAN EH&S, Midland, TX
Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Jun-14-08 13:00		305940-001
MW-4	W	Jun-14-08 13:15		305940-002
MW-5	W	Jun-14-08 13:30		305940-003
MW-6	W	Jun-14-08 13:45		305940-004
MW-8	W	Jun-14-08 13:55		305940-005
MW-9	W	Jun-14-08 14:10		305940-006
MW-2	W	Jun-14-08 14:20		305940-007
MW-7	W	Jun-14-08 15:30		305940-008
MW-3	W	Jun-14-08 15:50		305940-009



Certificate of Analysis Summary 305940

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Id: 2006-142
Contact: Camille Reynolds
Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Jun-16-08 05:05 pm


Report Date: 19-JUN-08

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	305940-001	305940-002	305940-003	305940-004	305940-005	305940-006
	Field Id: Depth: Matrix: Sampled:	MW-1 Jun-14-08 13:00 WATER	MW-4 Jun-14-08 13:15 WATER	MW-5 Jun-14-08 13:30 WATER	MW-6 Jun-14-08 13:45 WATER	MW-8 Jun-14-08 13:55 WATER	MW-9 Jun-14-08 14:10 WATER
BTEX by EPA 8021B	Extracted:	Jun-17-08 16:15	Jun-17-08 16:15	Jun-17-08 16:15	Jun-17-08 16:15	Jun-17-08 16:15	Jun-17-08 16:15
	Analyzed:	Jun-17-08 19:26	Jun-17-08 19:50	Jun-17-08 20:14	Jun-17-08 20:38	Jun-17-08 21:02	Jun-17-08 21:26
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0087 0.0010	ND 0.0010
Benzene		ND	ND	ND	ND	ND	ND
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes		ND	ND	ND	ND	ND	ND
Total BTEX		ND	ND	ND	ND	0.0087	ND

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

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 305940
PLAINS ALL AMERICAN EH&S, Midland, TX

Project Id: 2006-142
Contact: Camille Reynolds
Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Jun-16-08 05:05 pm
Report Date: 19-JUN-08
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	305940-007	305940-008	305940-009	
	Field Id:	MW-2	MW-7	MW-3	
	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Jun-14-08 14:20	Jun-14-08 15:30	Jun-14-08 15:50	
BTEX by EPA 8021B	Extracted:	Jun-17-08 16:15	Jun-17-08 16:15	Jun-17-08 16:15	
	Analyzed:	Jun-17-08 21:49	Jun-17-08 22:13	Jun-17-08 22:37	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
	Benzene	0.0033 0.0010	0.1388 0.0010	0.2148 0.0010	
	Toluene	ND 0.0020	ND 0.0020	0.0025 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0010	0.0071 0.0010	
m,p-Xylenes		ND 0.0020	0.0166 0.0020	0.0123 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	0.0059 0.0010	
Total Xylenes		ND	0.0166	0.0182	
Total BTEX		0.0033	0.1554	0.2426	

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
 - B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
 - D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
 - E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
 - F** RPD exceeded lab control limits.
 - J** The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
 - U** Analyte was not detected.
 - L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
 - H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
 - K** Sample analyzed outside of recommended hold time.
- * Outside XENCO'S scope of NELAC Accreditation

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Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 305940

Project ID: 2006-142

Lab Batch #: 725775

Sample: 305940-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0350	0.0300	117	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 725775

Sample: 305940-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 725775

Sample: 305940-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 725775

Sample: 305940-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0346	0.0300	115	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 725775

Sample: 305940-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 305940

Project ID: 2006-142

Lab Batch #: 725775

Sample: 305940-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 725775

Sample: 305940-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 725775

Sample: 305940-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 725775

Sample: 305940-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 725775

Sample: 305940-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 305940

Project ID: 2006-142

Lab Batch #: 725775

Sample: 305940-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 725775

Sample: 510817-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

Lab Batch #: 725775

Sample: 510817-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 725775

Sample: 510817-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

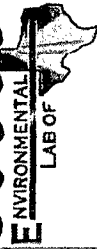
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries

Project Name: Lovington Gathering WTI

Work Order #: 305940

Analyst: SHE

Lab Batch ID: 725775

Sample: 510817-1-BKS

Date Prepared: 06/17/2008

Batch #: 1

Project ID: 2006-142

Date Analyzed: 06/17/2008

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.0926	93	0.1	0.0827	83	11	70-125	25	
Toluene		ND	0.1000	0.0970	97	0.1	0.0853	85	13	70-125	25	
Ethylbenzene		ND	0.1000	0.1118	112	0.1	0.0979	98	13	71-129	25	
m,p-Xylenes		ND	0.2000	0.2288	114	0.2	0.2010	101	13	70-131	25	
o-Xylene		ND	0.1000	0.1153	115	0.1	0.1016	102	13	71-133	25	

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

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: Lovington Gathering WTI

Work Order #: 305940

Project ID: 2006-142

Lab Batch ID: 725775

QC- Sample ID: 305940-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 06/18/2008

Date Prepared: 06/17/2008

Analyst: SHE

Reporting Units: mg/L

Reporting Units: mg/L		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0895	90	0.1000	0.0814	81	11	70-125	25	
	Toluene	ND	0.1000	0.0919	92	0.1000	0.0835	84	9	70-125	25	
	Ethylbenzene	ND	0.1000	0.1040	104	0.1000	0.0948	95	9	71-129	25	
	m,p-Xylenes	ND	0.2000	0.2115	106	0.2000	0.1934	97	9	70-131	25	
	o-Xylene	ND	0.1000	0.1090	109	0.1000	0.0995	100	9	71-133	25	

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

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

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

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

Client: Basin Env. / Plains
Date/ Time: 6-16-08 17:05
Lab ID #: 305940
Initials: at

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.5	°C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#11	Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event

Analytical Report 312889

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Lovington Gathering WTI

2006-142

25-SEP-08



E84880

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

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

Florida certification numbers:

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

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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



25-SEP-08

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

Reference: XENCO Report No: **312889**
Lovington Gathering WTI
Project Address: Lea County, NM

Camille Reynolds:

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 312889. 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. 312889 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 312889



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-5	W	Sep-17-08 14:15		312889-001
MW-1	W	Sep-17-08 14:45		312889-002
MW-4	W	Sep-17-08 15:10		312889-003
MW-6	W	Sep-17-08 15:30		312889-004
MW-9	W	Sep-17-08 15:50		312889-005
MW-2	W	Sep-17-08 16:15		312889-006
MW-8	W	Sep-17-08 16:40		312889-007
MW-7	W	Sep-17-08 17:00		312889-008
MW-3	W	Sep-17-08 17:30		312889-009



Certificate of Analysis Summary 312889

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Camille Reynolds

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-19-08 04:53 pm

Report Date: 25-SEP-08

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	312889-001	312889-002	312889-003	312889-004	312889-005	312889-006
BTEX by EPA 8021B							MW-5	MW-1	MW-4	MW-6	MW-9	MW-2
							WATER	WATER	WATER	WATER	WATER	WATER
							Sep-17-08 14:15	Sep-17-08 14:45	Sep-17-08 15:10	Sep-17-08 15:30	Sep-17-08 15:50	Sep-17-08 16:15
		Extracted:	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08						
		Analyzed:	Sep-23-08 01:37	Sep-23-08 01:59	Sep-23-08 02:22	Sep-23-08 02:45						
		Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Benzene			ND 0.0010	0.0200	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.1590
Toluene			ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes			ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0044
o-Xylene			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes			ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0044
Total BTEX			ND	0.02	ND	ND	ND	ND	ND	ND	ND	0.1634

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

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 312889

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Camille Reynolds

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-19-08 04:53 pm


Report Date: 25-SEP-08

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:		312889-007		312889-008		312889-009	
	Field Id:	Depth:	MW-8	MW-7	MW-3	Matrix:	Matrix:	Matrix:
BTEX by EPA 8021B	Sampled:	Sep-17-08 16:40	WATER	WATER	WATER	Sep-17-08 16:40	Sep-17-08 17:00	Sep-17-08 17:30
	Extracted:	Sep-23-08 15:00		Sep-22-08 16:08	Sep-23-08 15:00		Sep-23-08 15:00	
	Analyzed:	Sep-23-08 16:26		Sep-23-08 04:15	Sep-23-08 17:11		Sep-23-08 17:11	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL		mg/L RL	
		0.5689 0.0050	0.3535 0.0010	0.0266 0.0010				
Benzene		ND 0.0100	ND 0.0020	ND 0.0020				
Toluene		ND 0.0050	ND 0.0010	ND 0.0010				
Ethylbenzene		ND 0.0100	0.0036 0.0020	0.0022 0.0020				
m,p-Xylenes		ND 0.0050	ND 0.0010	ND 0.0010				
o-Xylene		ND	0.0036	0.0022				
Total Xylenes		0.5689	0.3571	0.0288				
Total BTEX								

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
 - B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
 - D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
 - E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
 - F RPD exceeded lab control limits.
 - J The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
 - U Analyte was not detected.
 - L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
 - H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
 - K Sample analyzed outside of recommended hold time.
- * Outside XENCO'S scope of NELAC Accreditation

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5757 NW 158th St, Miami Lakes, FL 33014
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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 312889,

Project ID: 2006-142

Lab Batch #: 734916

Sample: 312880-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0248	0.0300	83	80-120	

Lab Batch #: 734916

Sample: 312880-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

Lab Batch #: 734916

Sample: 312889-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0360	0.0300	120	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 734916

Sample: 312889-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0226	0.0300	75	80-120	**

Lab Batch #: 734916

Sample: 312889-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0364	0.0300	121	80-120	**
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 312889,

Project ID: 2006-142

Lab Batch #: 734916

Sample: 312889-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0365	0.0300	122	80-120	**
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 734916

Sample: 312889-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0364	0.0300	121	80-120	**
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 734916

Sample: 312889-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0147	0.0300	49	80-120	**

Lab Batch #: 734916

Sample: 312889-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0095	0.0300	32	80-120	**

Lab Batch #: 734916

Sample: 516098-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 312889,

Project ID: 2006-142

Lab Batch #: 734916

Sample: 516098-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0362	0.0300	121	80-120	**
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 734916

Sample: 516098-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 735018

Sample: 312889-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0105	0.0300	35	80-120	**

Lab Batch #: 735018

Sample: 312889-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	80-120	
4-Bromofluorobenzene	0.0227	0.0300	76	80-120	**

Lab Batch #: 735018

Sample: 312889-009 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 312889,

Project ID: 2006-142

Lab Batch #: 735018

Sample: 312889-009 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 735018

Sample: 516175-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0248	0.0300	83	80-120	

Lab Batch #: 735018

Sample: 516175-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0370	0.0300	123	80-120	**
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 735018

Sample: 516175-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 312889

Analyst: ASA

Lab Batch ID: 734916

Sample: 516098-1-BKS

Units: mg/L

Date Prepared: 09/22/2008

Batch #: 1

Project ID: 2006-142

Date Analyzed: 09/22/2008

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	ND	0.1000	0.1052	105	0.1	0.1034	103	2	70-125	25
	Toluene	ND	0.1000	0.1005	101	0.1	0.0990	99	2	70-125	25
	Ethylbenzene	ND	0.1000	0.1021	102	0.1	0.1002	100	2	71-129	25
	m,p-Xylenes	ND	0.2000	0.2121	106	0.2	0.2085	104	2	70-131	25
	o-Xylene	ND	0.1000	0.0966	97	0.1	0.0961	96	1	71-133	25

Analyst: ASA

Lab Batch ID: 735018

Sample: 516175-1-BKS

Date Prepared: 09/23/2008

Batch #: 1

Date Analyzed: 09/23/2008

Matrix: Water

Units: mg/L

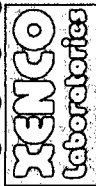
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.1034	103	0.1	0.1089	109	5	70-125	25
	Toluene	ND	0.1000	0.0996	100	0.1	0.1049	105	5	70-125	25
	Ethylbenzene	ND	0.1000	0.1016	102	0.1	0.1071	107	5	71-129	25
	m,p-Xylenes	ND	0.2000	0.2104	105	0.2	0.2220	111	5	70-131	25
	o-Xylene	ND	0.1000	0.0948	95	0.1	0.1014	101	7	71-133	25

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 312889

Lab Batch ID: 734916

Date Analyzed: 09/23/2008

Reporting Units: mg/L

Project ID: 2006-142

QC- Sample ID: 312880-001 S

Batch #: 1 Matrix: Water

Date Prepared: 09/22/2008

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0910	91	0.1000	0.1002	100	9	70-125	25
	Toluene	ND	0.1000	0.0858	86	0.1000	0.0939	94	9	70-125	25
	Ethylbenzene	ND	0.1000	0.0855	86	0.1000	0.0936	94	9	71-129	25
	m,p-Xylenes	ND	0.2000	0.1770	89	0.2000	0.1937	97	9	70-131	25
	o-Xylene	ND	0.1000	0.0833	83	0.1000	0.0912	91	9	71-133	25

Lab Batch ID: 735018

Date Analyzed: 09/23/2008

Reporting Units: mg/L

QC- Sample ID: 312889-009 S

Batch #: 1 Matrix: Water

Date Prepared: 09/23/2008

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	0.0266	0.1000	0.1289	102	0.1000	0.1344	108	6	70-125	25
	Toluene	ND	0.1000	0.0979	98	0.1000	0.1012	101	3	70-125	25
	Ethylbenzene	ND	0.1000	0.0965	97	0.1000	0.1010	101	4	71-129	25
	m,p-Xylenes	0.0022	0.2000	0.2011	99	0.2000	0.2100	104	5	70-131	25
	o-Xylene	ND	0.1000	0.0926	93	0.1000	0.0972	97	4	71-133	25

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

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

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

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

Client: Basin Env. / Plains
Date/ Time: 9/19/08 16:53
Lab ID #: 312889
Initials: AL

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	45	°C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#11	Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

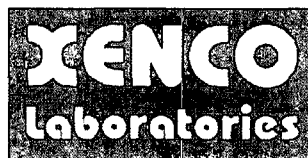
- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event

Analytical Report 319271
for
PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lovington Gathering WTI
2006-142

09-DEC-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:

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

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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



09-DEC-08

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

Reference: XENCO Report No: **319271**
Lovington Gathering WTI
Project Address: Lea County, NM

Daniel Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 319271. 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 it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 319271 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 319271



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-5	W	Dec-02-08 08:35		319271-001
MW-4	W	Dec-02-08 08:55		319271-002
MW-6	W	Dec-02-08 09:25		319271-003
MW-9	W	Dec-02-08 09:45		319271-004
MW-1	W	Dec-02-08 10:10		319271-005
MW-3	W	Dec-02-08 10:30		319271-006
MW-2	W	Dec-02-08 12:40		319271-007
MW-8	W	Dec-02-08 13:00		319271-008
MW-7	W	Dec-02-08 13:15		319271-009



Certificate of Analysis Summary 319271

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Daniel Bryant

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Dec-03-08 09:17 am


Report Date: 09-DEC-08

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	319271-001	319271-002	319271-003	319271-004
	Field Id:	MW-5	MW-4	MW-6	MW-9
	Depth:				
	Matrix:	WATER	WATER	WATER	WATER
	Sampled:	Dec-02-08 08:35	Dec-02-08 08:55	Dec-02-08 09:25	Dec-02-08 09:45
BTEX by EPA 8021B	Extracted:	Dec-04-08 16:05	Dec-04-08 16:05	Dec-04-08 16:05	Dec-04-08 16:05
	Analyzed:	Dec-05-08 03:24	Dec-05-08 03:47	Dec-05-08 04:11	Dec-05-08 04:34
	Units/RL:	mg/L	mg/L	mg/L	mg/L
		RL	RL	RL	RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Toluene		ND 0.0020	0.0062 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		ND 0.0010	0.0062 0.0010	ND 0.0010	ND 0.0010
SVOA PAHs List by EPA 8270C	Extracted:	Dec-04-08 10:33	Dec-04-08 10:36	Dec-04-08 10:39	Dec-04-08 10:42
	Analyzed:	Dec-04-08 21:06	Dec-04-08 21:50	Dec-04-08 22:34	Dec-04-08 23:18
	Units/RL:	mg/L	mg/L	mg/L	mg/L
		RL	RL	RL	RL
Acenaphthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Acenaphthylene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Benzo(a)anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Benzo(a)pyrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Benzo(b)fluoranthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Benzo(k)fluoranthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Benzo(g,h,i)perylene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Chrysene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Dibenz(a,h)Anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Fluoranthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Fluorene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Indeno(1,2,3-c,d)Pyrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
1-Methylnaphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
2-Methylnaphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Naphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Phenanthrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005
Pyrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005

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

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 319271

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Date Received in Lab: Dec-03-08 09:17 am

Contact: Daniel Bryant

Report Date: 09-DEC-08


Project Location: Lea County, NM

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	319271-005		319271-006		319271-007		319271-008	
		Field Id:	MW-1		MW-3		MW-2		MW-8	
		Depth:								
		Matrix:	WATER		WATER		WATER		WATER	
		Sampled:	Dec-02-08 10:10		Dec-02-08 10:30		Dec-02-08 12:40		Dec-02-08 13:00	
BTEX by EPA 8021B		Extracted:	Dec-04-08 16:05		Dec-04-08 16:05		Dec-04-08 16:05		Dec-04-08 16:05	
		Analyzed:	Dec-05-08 04:58		Dec-05-08 05:21		Dec-05-08 05:45		Dec-05-08 12:01	
		Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene			0.0358	0.0010	0.0249	0.0010	0.0503	0.0010	0.2345	0.0050
Toluene			ND	0.0020	ND	0.0020	0.0026	0.0020	0.0468	0.0100
Ethylbenzene			ND	0.0010	ND	0.0010	ND	0.0010	0.0085	0.0050
m,p-Xylenes			ND	0.0020	0.0040	0.0020	0.0073	0.0020	0.0419	0.0100
o-Xylene			ND	0.0010	0.0019	0.0010	0.0014	0.0010	0.0135	0.0050
Total Xylenes			ND	0.0010	0.0059	0.0010	0.0087	0.0010	0.0554	0.0050
Total BTEX			0.0358	0.0010	0.0308	0.0010	0.0616	0.0010	0.3452	0.0050
SVOA PAHs List by EPA 8270C		Extracted:	Dec-04-08 10:45		Dec-04-08 10:48		Dec-04-08 10:51		Dec-04-08 10:54	
		Analyzed:	Dec-05-08 00:02		Dec-05-08 00:47		Dec-05-08 02:47		Dec-05-08 03:31	
		Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Acenaphthene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Acenaphthylene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Anthracene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(a)anthracene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(a)pyrene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(b)fluoranthene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(k)fluoranthene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(g,h,i)perylene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chrysene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Dibenz(a,h)Anthracene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluoranthene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluorene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Indeno(1,2,3-c,d)Pyrene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
1-Methylnaphthalene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
2-Methylnaphthalene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Naphthalene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Phenanthrene			ND	0.005	ND	0.005	ND	0.005	ND	0.005
Pyrene			ND	0.005	ND	0.005	ND	0.005	ND	0.005

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

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 319271

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lovington Gathering WTI

Project Id: 2006-142

Date Received in Lab: Dec-03-08 09:17 am

Contact: Daniel Bryant

Report Date: 09-DEC-08


Project Location: Lea County, NM

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	319271-009		
		Field Id:	MW-7		
		Depth:			
		Matrix:	WATER		
		Sampled:	Dec-02-08 13:15		
BTEX by EPA 8021B		Extracted:	Dec-05-08 12:55		
		Analyzed:	Dec-06-08 05:31		
		Units/RL:	mg/L RL		
Benzene			0.0364 0.0010		
Toluene			ND 0.0020		
Ethylbenzene			ND 0.0010		
m,p-Xylenes			0.0039 0.0020		
o-Xylene			0.0025 0.0010		
Total Xylenes			0.0064 0.0010		
Total BTEX			0.0428 0.0010		
SVOA PAHs List by EPA 8270C		Extracted:	Dec-04-08 10:57		
		Analyzed:	Dec-05-08 04:16		
		Units/RL:	mg/L RL		
Acenaphthene			ND 0.005		
Acenaphthylene			ND 0.005		
Anthracene			ND 0.005		
Benzo(a)anthracene			ND 0.005		
Benzo(a)pyrene			ND 0.005		
Benzo(b)fluoranthene			ND 0.005		
Benzo(k)fluoranthene			ND 0.005		
Benzo(g,h,i)perylene			ND 0.005		
Chrysene			ND 0.005		
Dibenz(a,h)Anthracene			ND 0.005		
Fluoranthene			ND 0.005		
Fluorene			ND 0.005		
Indeno(1,2,3-c,d)Pyrene			ND 0.005		
1-Methylnaphthalene			ND 0.005		
2-Methylnaphthalene			ND 0.005		
Naphthalene			ND 0.005		
Phenanthrene			ND 0.005		
Pyrene			ND 0.005		

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742525

Sample: 319271-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0209	0.0300	70	80-120	**

Lab Batch #: 742525

Sample: 319271-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 742525

Sample: 319271-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

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

Lab Batch #: 742525

Sample: 319271-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0347	0.0300	116	80-120	
4-Bromofluorobenzene	0.0206	0.0300	69	80-120	**

Lab Batch #: 742525

Sample: 319271-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0201	0.0300	67	80-120	**

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742525

Sample: 319271-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0202	0.0300	67	80-120	**

Lab Batch #: 742525

Sample: 319271-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0186	0.0300	62	80-120	**

Lab Batch #: 742525

Sample: 319271-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0203	0.0300	68	80-120	**
4-Bromofluorobenzene	0.0209	0.0300	70	80-120	**

Lab Batch #: 742525

Sample: 319271-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0207	0.0300	69	80-120	**

Lab Batch #: 742525

Sample: 319271-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0225	0.0300	75	80-120	**

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742525

Sample: 520624-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 742525

Sample: 520624-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 742525

Sample: 520624-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 742793

Sample: 319271-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0174	0.0300	58	80-120	*

Lab Batch #: 742793

Sample: 319397-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0184	0.0300	61	80-120	*

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742793

Sample: 319397-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0181	0.0300	60	80-120	*

Lab Batch #: 742793

Sample: 8406040-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 742793

Sample: 8406040-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0178	0.0300	59	80-120	*

Lab Batch #: 742793

Sample: 8406040-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742468

Sample: 319271-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.018	0.050	36	21-100	
Nitrobenzene-d5	0.033	0.050	66	35-114	
Phenol-d6	0.010	0.050	20	10-94	
Terphenyl-D14	0.035	0.050	70	33-141	
2,4,6-Tribromophenol	0.048	0.050	96	10-123	

Lab Batch #: 742468

Sample: 319271-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.019	0.050	38	21-100	
Nitrobenzene-d5	0.033	0.050	66	35-114	
Phenol-d6	0.012	0.050	24	10-94	
Terphenyl-D14	0.037	0.050	74	33-141	
2,4,6-Tribromophenol	0.046	0.050	92	10-123	

Lab Batch #: 742468

Sample: 319271-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.019	0.050	38	21-100	
Nitrobenzene-d5	0.033	0.050	66	35-114	
Phenol-d6	0.011	0.050	22	10-94	
Terphenyl-D14	0.036	0.050	72	33-141	
2,4,6-Tribromophenol	0.046	0.050	92	10-123	

** 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: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742468

Sample: 319271-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.019	0.050	38	21-100	
Nitrobenzene-d5	0.033	0.050	66	35-114	
Phenol-d6	0.011	0.050	22	10-94	
Terphenyl-D14	0.037	0.050	74	33-141	
2,4,6-Tribromophenol	0.045	0.050	90	10-123	

Lab Batch #: 742468

Sample: 319271-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.036	0.050	72	43-116	
2-Fluorophenol	0.017	0.050	34	21-100	
Nitrobenzene-d5	0.032	0.050	64	35-114	
Phenol-d6	0.010	0.050	20	10-94	
Terphenyl-D14	0.033	0.050	66	33-141	
2,4,6-Tribromophenol	0.037	0.050	74	10-123	

Lab Batch #: 742468

Sample: 319271-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.017	0.050	34	21-100	
Nitrobenzene-d5	0.032	0.050	64	35-114	
Phenol-d6	0.009	0.050	18	10-94	
Terphenyl-D14	0.038	0.050	76	33-141	
2,4,6-Tribromophenol	0.042	0.050	84	10-123	

** 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: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742468

Sample: 319271-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.037	0.050	74	43-116	
2-Fluorophenol	0.016	0.050	32	21-100	
Nitrobenzene-d5	0.032	0.050	64	35-114	
Phenol-d6	0.009	0.050	18	10-94	
Terphenyl-D14	0.034	0.050	68	33-141	
2,4,6-Tribromophenol	0.037	0.050	74	10-123	

Lab Batch #: 742468

Sample: 319271-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.014	0.050	28	21-100	
Nitrobenzene-d5	0.034	0.050	68	35-114	
Phenol-d6	0.009	0.050	18	10-94	
Terphenyl-D14	0.035	0.050	70	33-141	
2,4,6-Tribromophenol	0.039	0.050	78	10-123	

Lab Batch #: 742468

Sample: 319271-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.018	0.050	36	21-100	
Nitrobenzene-d5	0.033	0.050	66	35-114	
Phenol-d6	0.011	0.050	22	10-94	
Terphenyl-D14	0.035	0.050	70	33-141	
2,4,6-Tribromophenol	0.041	0.050	82	10-123	

** 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: Lovington Gathering WTI

Work Orders : 319271,

Project ID: 2006-142

Lab Batch #: 742468

Sample: 520591-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.038	0.050	76	43-116	
2-Fluorophenol	0.026	0.050	52	21-100	
Nitrobenzene-d5	0.034	0.050	68	35-114	
Phenol-d6	0.019	0.050	38	10-94	
Terphenyl-D14	0.038	0.050	76	33-141	
2,4,6-Tribromophenol	0.041	0.050	82	10-123	

Lab Batch #: 742468

Sample: 520591-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.036	0.050	72	43-116	
2-Fluorophenol	0.027	0.050	54	21-100	
Nitrobenzene-d5	0.032	0.050	64	35-114	
Phenol-d6	0.021	0.050	42	10-94	
Terphenyl-D14	0.040	0.050	80	33-141	
2,4,6-Tribromophenol	0.043	0.050	86	10-123	

Lab Batch #: 742468

Sample: 520591-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

SVOA PAHs List by EPA 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2-Fluorobiphenyl	0.039	0.050	78	43-116	
2-Fluorophenol	0.028	0.050	56	21-100	
Nitrobenzene-d5	0.035	0.050	70	35-114	
Phenol-d6	0.020	0.050	40	10-94	
Terphenyl-D14	0.039	0.050	78	33-141	
2,4,6-Tribromophenol	0.042	0.050	84	10-123	

** 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.

Project Name: Lovington Gathering WTI

Work Order #: 319271

Analyst: BHW

Lab Batch ID: 742525

Sample: 520624-1-BKS

Date Prepared: 12/04/2008

Batch #: 1

Project ID: 2006-142

Date Analyzed: 12/05/2008

Matrix: Water

Units: mg/L

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/L												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.1003	100	0.1	0.1030	103	3	70-125	25	
Toluene		ND	0.1000	0.0928	93	0.1	0.0953	95	3	70-125	25	
Ethylbenzene		ND	0.1000	0.0994	99	0.1	0.1027	103	3	71-129	25	
m,p-Xylenes		ND	0.2000	0.1998	100	0.2	0.2061	103	3	70-131	25	
o-Xylene		ND	0.1000	0.0951	95	0.1	0.0978	98	3	71-133	25	

Analyst: ASA

Lab Batch ID: 742793

Sample: 8406040-1-BKS

Date Prepared: 12/05/2008

Batch #: 1

Date Analyzed: 12/06/2008

Matrix: Water

Units: mg/L

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/L												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.1089	109	0.1	0.1100	110	1	70-125	25	
Toluene		ND	0.1000	0.0995	100	0.1	0.1002	100	1	70-125	25	
Ethylbenzene		ND	0.1000	0.1041	104	0.1	0.1055	106	1	71-129	25	
m,p-Xylenes		ND	0.2000	0.2083	104	0.2	0.2109	105	1	70-131	25	
o-Xylene		ND	0.1000	0.0991	99	0.1	0.1006	101	2	71-133	25	

Relative Percent Difference RPD = $200 * [(C-F)/(C+E)]$

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: Lovington Gathering WTI

Work Order #: 319271

Analyst: KAN

Lab Batch ID: 742468

Sample: 520591-1-EKS

Date Prepared: 12/04/2008

Batch #: 1

Project ID: 2006-142

Date Analyzed: 12/04/2008

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
SVOA PAHs List by EPA 8270C	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	Acenaphthene	ND	0.050	0.046	92	0.05	0.048	96	4	54-114	25
	Acenaphthylene	ND	0.050	0.046	92	0.05	0.048	96	4	53-113	25
	Anthracene	ND	0.050	0.048	96	0.05	0.050	100	4	56-116	25
	Benzo(a)anthracene	ND	0.050	0.047	94	0.05	0.049	98	4	59-116	25
	Benzo(a)pyrene	ND	0.050	0.050	100	0.05	0.052	104	4	58-118	25
	Benzo(b)fluoranthene	ND	0.050	0.049	98	0.05	0.052	104	6	54-123	25
	Benzo(k)fluoranthene	ND	0.050	0.050	100	0.05	0.052	104	4	52-122	25
	Benzo(g,h,i)perylene	ND	0.050	0.050	100	0.05	0.052	104	4	47-129	25
	Chrysene	ND	0.050	0.047	94	0.05	0.049	98	4	58-116	25
	Dibenz(a,h)Anthracene	ND	0.050	0.050	100	0.05	0.051	102	2	46-131	25
	Fluoranthene	ND	0.050	0.049	98	0.05	0.051	102	4	55-120	25
	Fluorene	ND	0.050	0.049	98	0.05	0.050	100	2	56-114	25
Indeno(1,2,3-c,d)Pyrene	ND	0.050	0.051	102	0.05	0.053	106	4	44-132	25	
1-Methylnaphthalene	ND	0.050	0.046	92	0.05	0.048	96	4	47-113	25	
2-Methylnaphthalene	ND	0.050	0.051	102	0.05	0.054	108	6	57-106	25	
Naphthalene	ND	0.050	0.045	90	0.05	0.048	96	6	53-110	25	
Phenanthrene	ND	0.050	0.048	96	0.05	0.050	100	4	56-116	25	
Pyrene	ND	0.050	0.048	96	0.05	0.050	100	4	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



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 319271

Lab Batch ID: 742525

Date Analyzed: 12/05/2008

Reporting Units: mg/L

Project ID: 2006-142

QC- Sample ID: 319271-001 S

Batch #: 1 Matrix: Water

Date Prepared: 12/04/2008

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1021	102	0.1000	0.1026	103	1	70-125	25	
Toluene	ND	0.1000	0.0927	93	0.1000	0.0960	96	3	70-125	25	
Ethylbenzene	ND	0.1000	0.0972	97	0.1000	0.1059	106	9	71-129	25	
m,p-Xylenes	ND	0.2000	0.1954	98	0.2000	0.2025	101	3	70-131	25	
o-Xylene	ND	0.1000	0.0945	95	0.1000	0.0987	99	4	71-133	25	

Lab Batch ID: 742793

Date Analyzed: 12/06/2008

Reporting Units: mg/L

QC- Sample ID: 319397-002 S

Batch #: 1 Matrix: Water

Date Prepared: 12/05/2008

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0733	0.1000	0.1467	73	0.1000	0.1500	77	5	70-125	25	
Toluene	ND	0.1000	0.0643	64	0.1000	0.0655	66	3	70-125	25	X
Ethylbenzene	0.0014	0.1000	0.0636	62	0.1000	0.0653	64	3	71-129	25	X
m,p-Xylenes	ND	0.2000	0.1267	63	0.2000	0.1308	65	3	70-131	25	X
o-Xylene	ND	0.1000	0.0596	60	0.1000	0.0617	62	3	71-133	25	X

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

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

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-553-1800
Fax: 432-553-1713

Project Name: Lovington Gathering WTI

Project #: 2008-142

Project Loc: Lea County, NM

PO #: PAA - D.M. Bryant

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

e-mail: cstanley@basineny.com

ORDER #:	319211										
LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field #	Total # of Containers	Field #	Field #	Field #	Field #
01	MW-5			12/22/2008	835	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
02	MW-4			12/22/2008	855	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
03	MW-6			12/22/2008	925	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
04	MW-9			12/22/2008	945	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
05	MW-1			12/22/2008	1010	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
06	MW-3			12/22/2008	1030	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
07	MW-2			12/22/2008	1240	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
08	MW-8			12/22/2008	1300	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
09	MW-7			12/22/2008	1315	3	X	X	GW	TPH: 418 8015M 8015H	TPH: 1X 1006 TX 1006
Special Instructions:											
Laboratory Comments: (VOCs) 419.0. per S											
Sample Containers Intact?											
VOCs Free of Headspace?											
Labels on containers?											
Lab use only on containers?											
C. Sample Hand Delivered?											
by Sample/Cell Box?											
by Count?											
LPS											
DHL											
Faster											
Low Star											
Temperature Upon Receipt:											
°C											

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

Client: Basin Env. / Plains
Date/ Time: 12/03/03 9:17
Lab ID #: 349271
Initials: gmb

Sample Receipt Checklist

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

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event

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

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Plains Pipeline	Contact Camille Reynolds
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965
Facility Name Lovington Gathering WTI	Facility Type 6" Steel Pipeline

Surface Owner Robert Rice	Mineral Owner	Lease No.
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LOCATION OF RELEASE

Unit Letter H	Section 6	Township 17S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude 32° 51' 56.0" Longitude 103° 17' 07.2"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 12 barrels	Volume Recovered 8 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 4-21-2006 @ 13:00	Date and Hour of Discovery 4-21-2006 @ 13:15
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Pat Caperton	
By Whom? Camille Reynolds	Date and Hour 4-21-2006 @ 15:35	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken Internal corrosion while purging the line resulted in release of sweet crude oil. The line has been purged. The line is an idle 6-inch steel gathering line. The pressure on the line was approximately 50 psi and the gravity of the sweet crude oil was 34. The sweet crude has an H₂S content of <10 ppm. The line was approximately 1.5 feet bgs at the release point.

Describe Area Affected and Cleanup Action Taken.* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was approximately 1,500 ft².

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: <u>Camille Reynolds</u>		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:	
Date: 4/26/2006	Phone: 505-441-	Attached <input type="checkbox"/>	

facility - PPAC0611638437
inri lead - PPAC0611638542

application - PPAC0611639267

