

AP-96

Plains

Lovington Gathering WTI

**Annual Report
2013**

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2013 ANNUAL MONITORING REPORT

LOVINGTON GATHERING WTI
Unit Letter "H" (SE/NE), 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: 2006-142
NMOCD Reference Number: 1RP-838

Prepared for:



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

Prepared By:

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

March 2014

Ben J. Arguijo
Project Manager

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1.0 INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of Plains Marketing, LP (Plains), is pleased to submit this *Annual Monitoring Report* in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 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 groundwater monitoring events conducted in calendar year 2013 only.

Groundwater monitoring was conducted during each quarter of 2013 to assess the levels and extent of dissolved phase constituents and Phase-Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge.

2.0 SITE DESCRIPTION & BACKGROUND INFORMATION

The legal description of the Lovington Gathering WTI release site is Unit Letter "H" (SE/NE), Section 6, Township 17 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 51' 56.0" North latitude and 103° 17' 07.2" West longitude. A "Site Location Map" is provided as Figure 1.

On April 21, 2006, Basin Environmental, on behalf of Plains, responded to a pipeline release to repair the pipeline and excavate impacted soil. The Lovington Gathering WTI pipeline was repaired utilizing a pipeline clamp, and visibly stained soil was excavated and placed on plastic sheeting to mitigate any further hydrocarbon impact to the underlying soil. Approximately twelve barrels (12 bbls) of crude oil was released from the pipeline, and eight barrels (8 bbls) were recovered, resulting in a net loss of four barrels (4 bbls) of crude oil. The excavated area was fenced in 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 stained surface area measuring approximately one thousand, five hundred square feet (1,500 ft²). Excavation activities conducted during the initial response and subsequent remediation of the site covered an area approximately thirty feet (30') in length by twenty-seven feet (27') in width, and ranged from approximately five feet (5') to six feet (6') in depth. Excavated soil was placed on a six (6) mil polyurethane liner for future remedial action. Utilizing olfactory, visual, and photo-ionization detector (PID) technology, it was determined that Volatile Organic Compounds (VOC's) 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 feet (30') to seventy-five feet (75') below ground surface (bgs). Based on laboratory analytical results from soil samples collected during advancement of the soil borings, three (3) groundwater monitor wells (MW-1 through MW-3) were installed to evaluate the status of the groundwater.

Based on laboratory analytical results from the initial groundwater monitoring event (October 5, 2006), four (4) additional monitor wells (MW-4 through MW-7) were installed in November 2006.

During 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. Laboratory analytical results of selected soil samples did not indicate benzene, toluene, ethylbenzene, and total xylenes (BTEX) or total petroleum hydrocarbon (TPH) concentrations above the appropriate 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 feet (55') and seventy-five feet (75') bgs, respectively.

Laboratory analytical results of groundwater monitoring 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. Laboratory analytical results of soil samples collected during the installation of monitor well MW-8 indicated benzene and BTEX concentrations were both less than the appropriate laboratory MDL and less than the NMOCD regulatory standard of 10 mg/Kg and 50 mg/Kg for benzene and BTEX, respectively. Laboratory analytical results indicated TPH concentrations were both less than the laboratory MDL and less than the NMOCD regulatory standard of 100 mg/Kg for soil samples collected at ten feet (10') and twenty-five feet (25') bgs. Soil samples collected at fifty feet (50') and seventy-five feet (75') bgs exhibited a TPH concentration of 14 mg/Kg (below NMOCD standards) 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. Laboratory analytical results of soil samples collected during the installation of monitor well MW-9 indicated benzene, BTEX, and TPH concentrations were both less than the appropriate laboratory MDL and less than NMOCD regulatory standards in the five (5) submitted soil samples.

On October 28, 2009, monitor well MW-10 was installed to further delineate the down-gradient boundary of the dissolved-phase plume. Laboratory analytical results of soil samples collected during the installation of monitor well MW-10 indicated benzene, BTEX, and TPH concentrations were less than NMOCD regulatory standards in the seven (7) submitted soil samples.

Currently, there are ten (10) groundwater monitoring wells on-site: MW-1 which is up-gradient of the release site; MW-4 and MW-5, which are cross-gradient; and MW-2, MW-3, and MW-6 through MW-10, which are down-gradient of the release site.

3.0 FIELD ACTIVITIES

3.1 Groundwater Recovery Efforts

Basin Environmental began manual recovery of hydrocarbon-impacted groundwater from monitor well MW-9 in November 2009 to control the down-gradient migration of the dissolved-phase plume. Recovery from monitor well MW-10 commenced in April 2011 at the behest of the NMOCD. Based on the reduction in dissolved-phase plume concentrations at the site, in the *July – September 2013 Quarterly Monitoring Report* (dated October 2013), Plains requested permission from the NMOCD to cease groundwater recovery activities. On November 4, 2013, the request

was granted by a representative of the NMOCD's Santa Fe District Office, and weekly recovery from MW-9 and MW-10 ceased on November 8, 2013.

On May 15, 2013, an Oxygen Release Compound (ORC®) filter sock was installed in monitor well MW-3 to facilitate enhanced aerobic biodegradation of the dissolved-phase plume.

3.2 Groundwater Monitoring

The on-site monitor wells were gauged and sampled on February 22 (1Q2013), May 23 (2Q2013), August 21 (3Q2013), and November 8, 2013 (4Q2013). During these quarterly monitoring events, the monitoring wells were purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos pump. Groundwater was allowed to recharge, and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer-mounted polystyrene tank and disposed of at an NMOCD-approved disposal facility near Lovington, New Mexico.

Per NMOCD request, monthly monitoring events were conducted at monitor wells MW-9 and MW-10, as well as five (5) locations (Goff Dairy Well, Goff Dairy - Ctr. Pivot Well, Goff Dairy - Ctr. Pivot Beginning, Goff Dairy - Ctr. Pivot End, and JW Well) on property adjacent to the release site (Goff Dairy #9 Pivot) on January 31, February 28, March 27, April 9, May 23, June 25, July 16, August 21, September 19, October 23, and November 8, 2013.

Diminished well volume and recharge in monitor well MW-2 attributable to the use of a large-capacity irrigation well (Goff Dairy Well) on the adjacent Goff Dairy #9 Pivot precluded sample collection from the monitor well during the 2Q2013, 3Q2013, and 4Q2013 quarterly monitoring events. Similarly, diminished well volume and recharge precluded sample collection from monitor wells MW-4 and MW-6 in 3Q2013 and from monitor well MW-10 during the August and September 2013 monthly monitoring events.

Prior to the January, May, July, August, and November 2013 monthly monitoring events, the Goff Dairy Well and/or Ctr. Pivot Well were valved off to facilitate harvesting activities in the Goff Dairy #9 Pivot.

Access restrictions precluded sample collection from the JW Well by Basin Environmental on January 30, 2013. The well was sampled during a follow-up site visit on January 31, 2013, in which Basin Environmental was accompanied on-site by the landowner, Mr. J. Lynn Walker. Verbal permission for Basin Environmental to access the site on subsequent site visits (without prior approval from the current tenant) was granted by the landowner.

A cross-connection hazard with a chemical storage tank on the Goff Dairy Well precluded sample collection from the irrigation well during the February 2013 monthly monitoring event. A dedicated sample port was installed on the well prior to the March 2013 monthly monitoring event.

Based on the reduction in dissolved-phase plume concentrations at the site, in the *July – September 2013 Quarterly Monitoring Report* (dated October 2013), Plains requested permission from the

NMOCD to reduce the sampling frequency of monitor wells MW-1, MW-4, MW-5, and MW-8 from quarterly to semiannually. It was further requested that the sampling frequency of monitor wells MW-9 and MW-10 and the five (5) locations on the Goff Dairy #9 Pivot be reduced from monthly to quarterly. The requests were granted by a representative of the NMOCD's Santa Fe District Office on November 4, 2013.

Locations of groundwater monitoring wells and inferred groundwater gradients, which were constructed from groundwater elevation measurements collected during each of the quarterly monitoring events, are depicted in Figures 2A through 2D. The groundwater gradient map from the most recent monitoring event, 4Q2013, indicates a general gradient of approximately 0.002 feet/foot to the southeast, as measured between monitor wells MW-1 and MW-10. The corrected groundwater elevation (measured in feet above mean sea level) ranged between 3,713.88 feet in monitor well MW-7 and 3,717.27 feet in monitor well MW-4. Groundwater elevation data is provided in Table 1, "2013 Groundwater Elevation Data".

No PSH was detected in any of the on-site monitor wells during the 2013 reporting period.

4.0 LABORATORY RESULTS

Groundwater samples collected from the on-site monitor wells, the Goff Dairy irrigation wells, and the Goff Dairy Center Pivot during the monthly, quarterly, and yearly monitoring events were delivered to Xenco Laboratories in Odessa, Texas, for determination of BTEX and/or PAH constituent concentrations by EPA Methods SW846-8021b and SW846 8270C, respectively. Laboratory analytical results were compared to NMOCD and New Mexico Water Quality Control Commission (NMWQCC) regulatory limits based on the New Mexico groundwater standards found in Section 20.6.2.3103 of the New Mexico Administrative Code (NMAC). Table 2 summarizes the "Concentrations of BTEX, Fluoride & Chromium in Groundwater". Table 3 summarizes the "Concentrations of Semi-Volatile Compounds in Groundwater".

4.1 Quarterly Monitoring Data

Data collected during the quarterly groundwater monitoring events is summarized below. Groundwater contaminant concentrations for the quarterly monitoring events are depicted in Figures 3A through 3D.

- **Monitor Well MW-1:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.

- **Monitor Well MW-2:**
 - In 2Q2013, benzene, ethylbenzene, toluene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards.

- Diminished well volume and recharge precluded sample collection from monitor well MW-2 during the 1Q2013, 3Q2013, and 4Q2013 quarterly monitoring events.
- **Monitor Well MW-3:**
 - Benzene concentrations ranged from less than the laboratory MDL in 2Q2013 and 3Q2013 to 0.0112 mg/L in 1Q2013. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Benzene concentrations exceeded the NMWQCC regulatory standard of 0.010 mg/L in 1Q2013. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Monitor Well MW-4:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
 - Diminished well volume and recharge precluded sample collection from monitor well MW-4 during the 3Q2013 quarterly monitoring event.
- **Monitor Well MW-5:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Monitor Well MW-6:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
 - Diminished well volume and recharge precluded sample collection from monitor well MW-6 during the 3Q2013 quarterly monitoring event.
- **Monitor Well MW-7:**
 - Benzene concentrations ranged from less than the laboratory MDL in 1Q2013, 3Q2013, and 4Q2013 to 0.0087 mg/L in 2Q2013. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

- **Monitor Well MW-8:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Monitor Well MW-9:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Monitor Well MW-10:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.

Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in the groundwater samples collected from nine (9) of the ten (10) on-site monitor wells during all four quarters of the reporting period. Benzene concentrations in monitor well MW-3 were both less than the laboratory MDL and less than NMWQCC regulatory standards during the last three (3) quarters of the monitoring period (i.e., following the installation of the ORC filter sock on May 15, 2013).

4.2 Monthly Monitoring Data

Data collected during the January 31, February 28, March 27, April 9, May 23, June 25, July 16, August 21, September 19, October 23, and November 8, 2013 monthly monitoring events is summarized below. Groundwater contaminant concentrations for the monthly monitoring events are depicted in Figures 3A through 3K.

- **Monitor Well MW-9:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Monitor Well MW-10:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.

- Diminished well volume and recharge precluded sample collection from monitor well MW-10 during the August and September monthly monitoring events.
- **Goff Dairy Well:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Goff Dairy - Ctr. Pivot Well:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Goff Dairy - Ctr. Pivot Beginning:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **Goff Dairy - Ctr. Pivot End:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.
- **JW Well:**
 - Benzene, toluene, ethylbenzene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.

ANTICIPATED ACTIONS

Quarterly monitoring and groundwater sampling of monitor wells MW-2, MW-3, MW-6, MW-7, MW-9, and MW-10 and the five (5) locations on the Goff Dairy #9 Pivot (Goff Dairy Well, Goff Dairy - Ctr. Pivot Well, Goff Dairy - Ctr. Pivot Beginning, Goff Dairy - Ctr. Pivot End, and JW Well) will continue throughout the 2014 calendar year. Semi-annual monitoring of monitor wells MW-1, MW-4, MW-5, and MW-8 will continue throughout the 2014 calendar year.

The ORC filter sock installed in monitor well MW-3 to facilitate enhanced aerobic biodegradation of the dissolved-phase plume will be inspected and replaced (if necessary) on a quarterly basis.

Quarterly monitoring reports will be submitted within thirty (30) days of the end of each calendar quarter, unless or until directed otherwise by the NMOCD. A cumulative *Annual Monitoring Report* for the 2013 reporting period will be submitted to the NMOCD by April 1, 2014.

LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Quarterly Monitoring Report* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. Basin Environmental has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin Environmental has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

DISTRIBUTION

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Figures

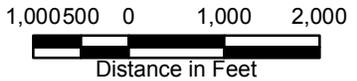
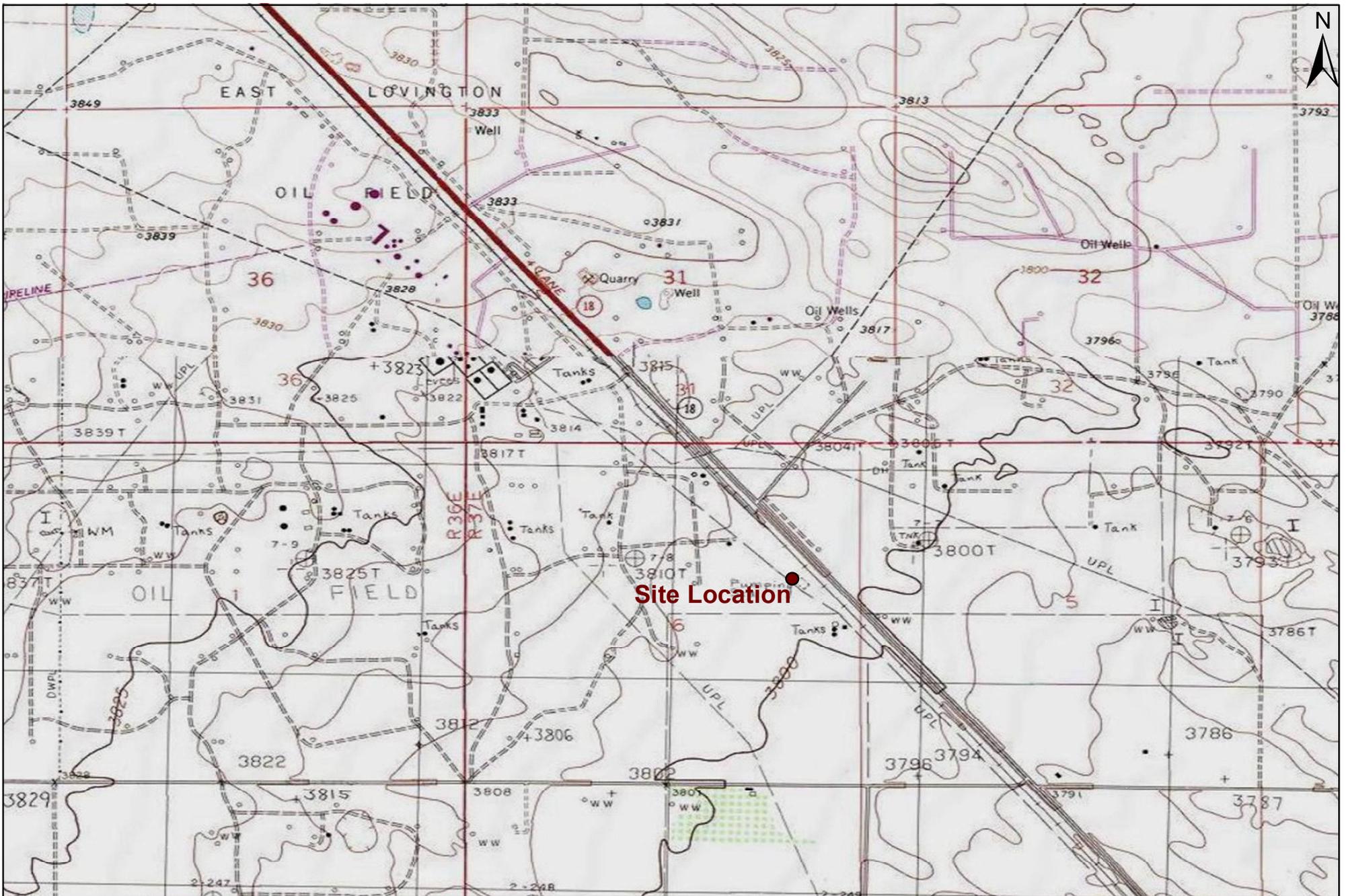
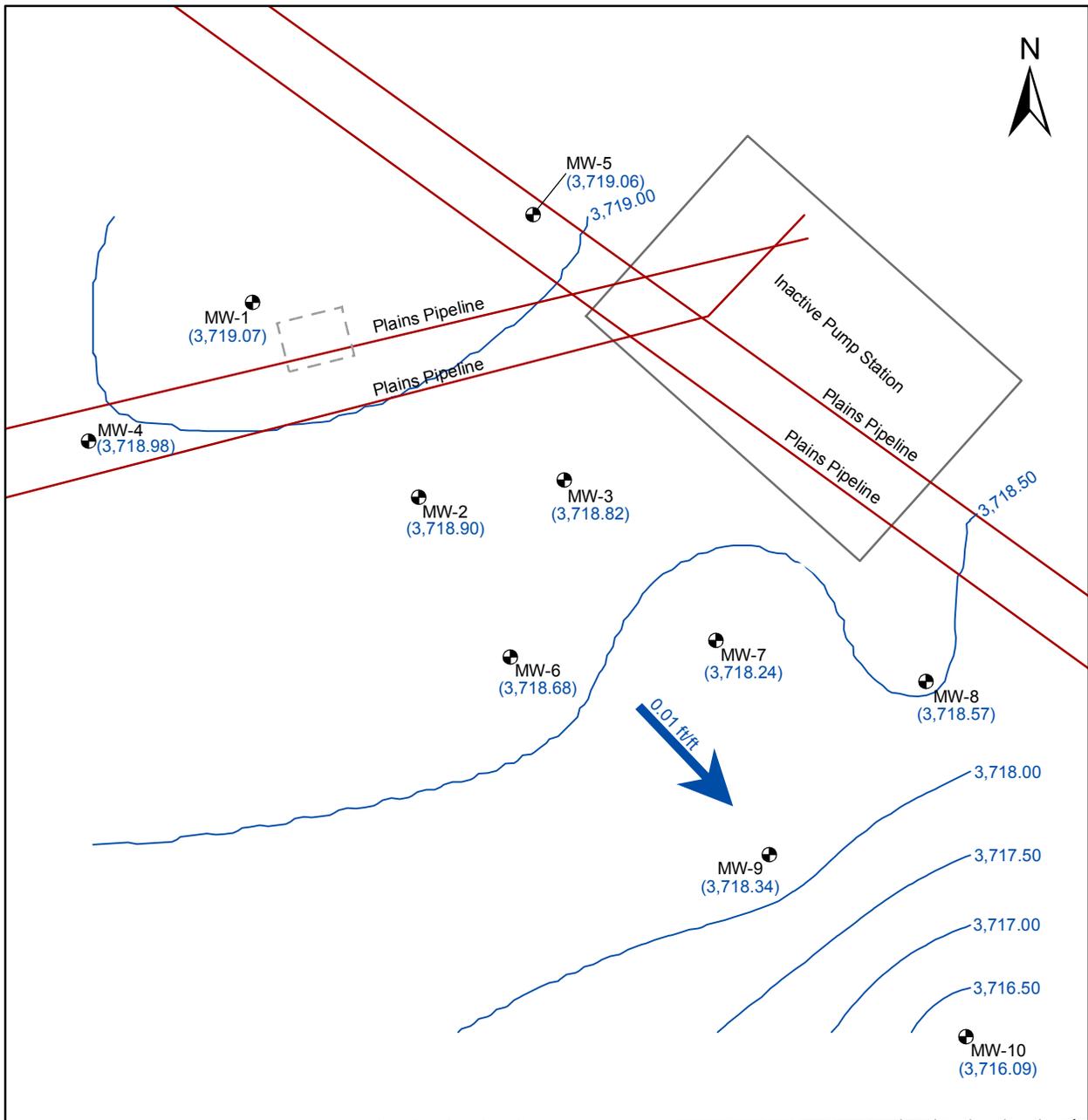


Figure 1
Site Location Map
 Plains Marketing, LP
 Lovington Gathering WTI
 Lea County, New Mexico
 Plains SRS #: 2006-142
 NMOCD Reference #: 1RP-838

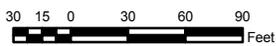


Basin Environmental Service Technologies, LLC
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
July 2, 2013	Scale: 1" = 2,000'



Groundwater Gradient magnitude measured between monitor wells MW-1 and MW-10



Goff Dairy Well

Legend:

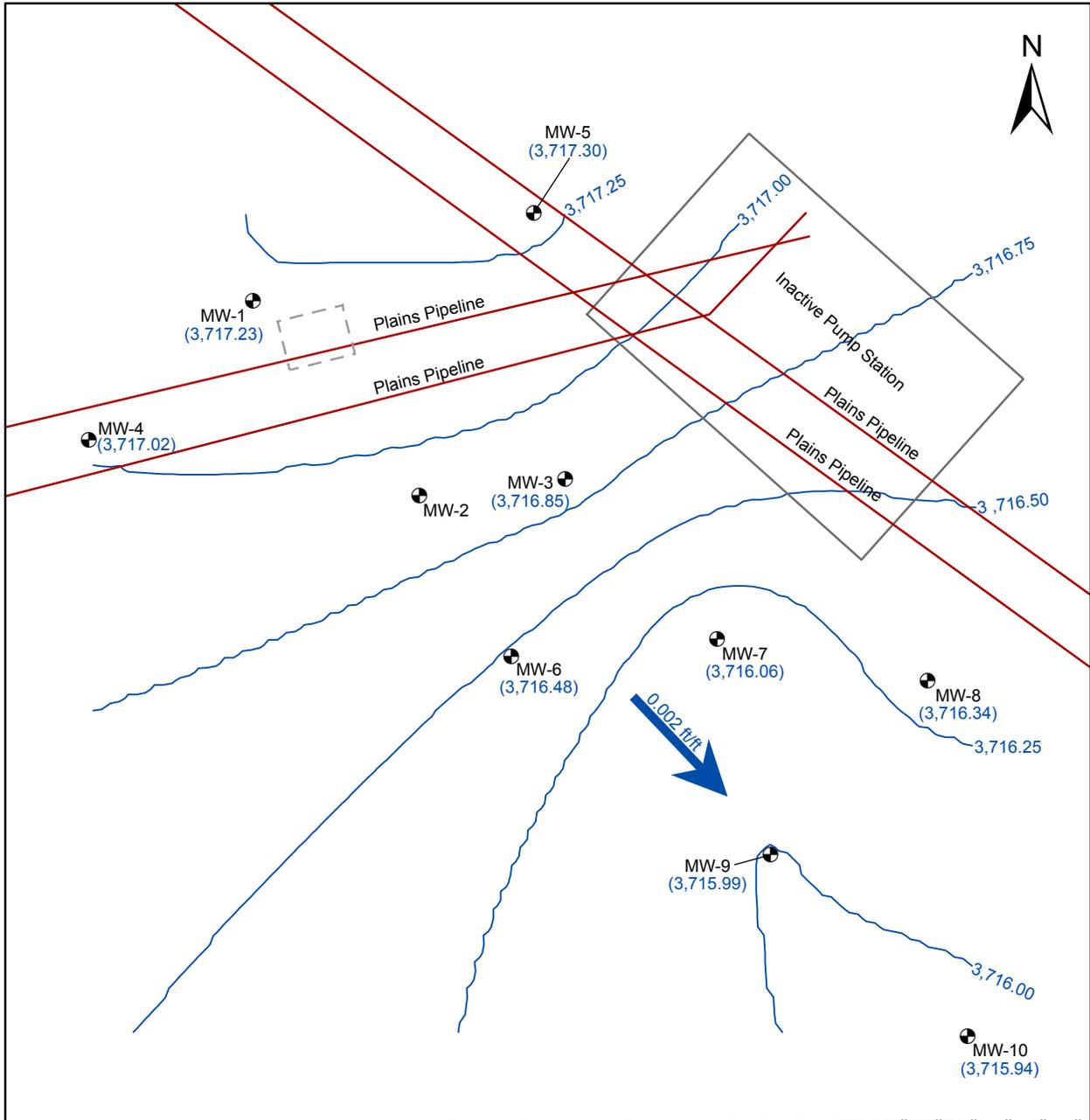
- Pipeline
- Fence
- Excavation Extent
- (3,720) Groundwater Elevation (ft)
- Groundwater Gradient & Magnitude
- Monitor Well
- Irrigation Well

Figure 2A
Inferred Groundwater Gradient Map
1Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

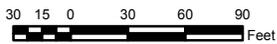


Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
April 3, 2013	Scale: 1" = 100'



Groundwater Gradient magnitude measured between monitor wells MW-1 and MW-10. Monitor well MW-2 was not used in map construction.



Goff Dairy Well

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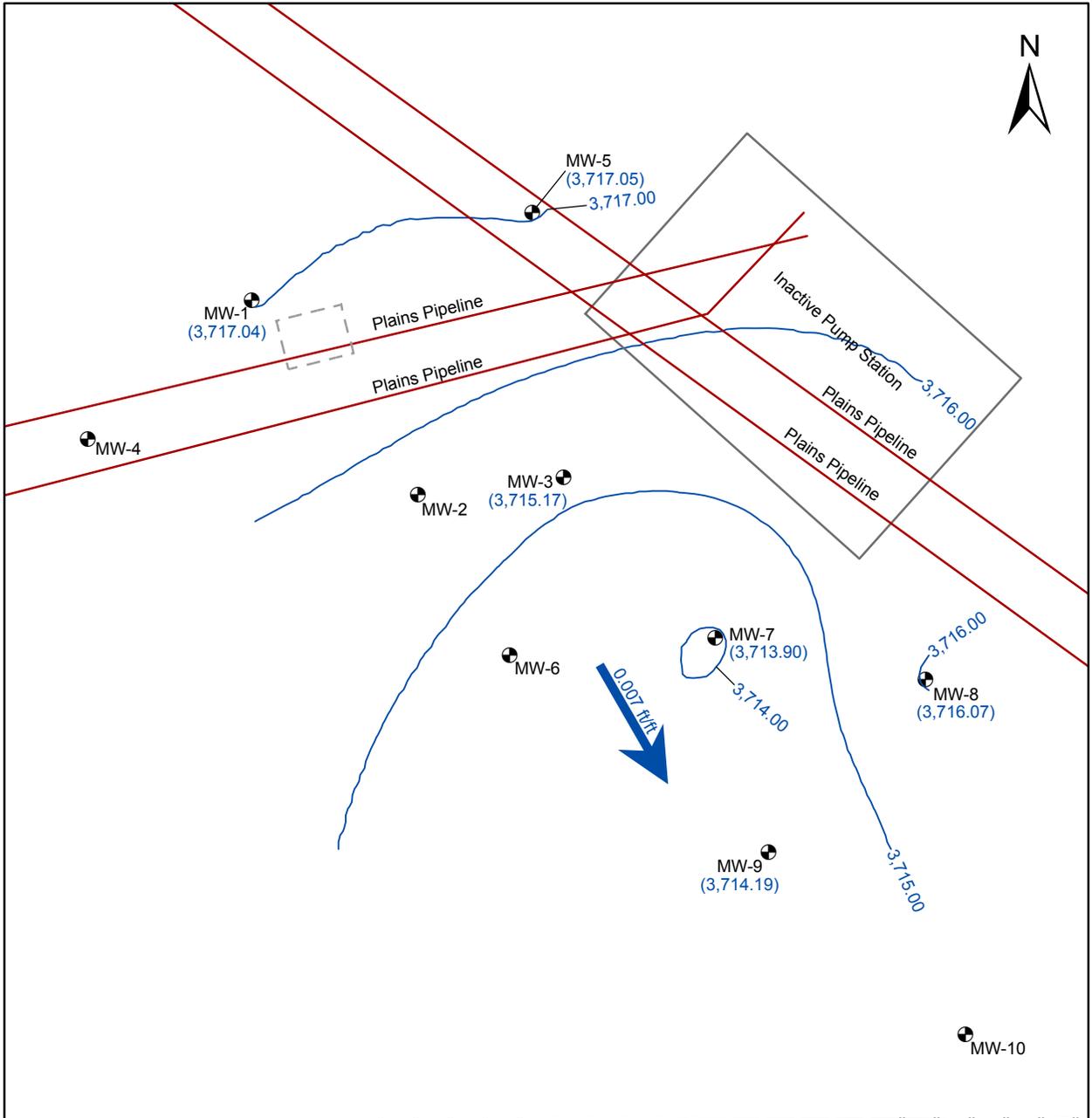
- Pipeline
- Fence
- Excavation Extent
- (3,720) Groundwater Elevation (ft)
- 0.002 ft/ft Groundwater Gradient & Magnitude
- Monitor Well
- Irrigation Well

Figure 2B
Inferred Groundwater Gradient Map - 2Q2013
 2Q2013
 Plains Marketing, LP
 Lovington Gathering WTI
 Lea County, New Mexico
 Plains SRS #: 2006-142
 NMOCD Reference #: 1RP-838

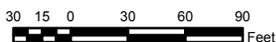


Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
July 2, 2013	Scale: 1" = 100'



Groundwater Gradient magnitude measured between monitor wells MW-1 and MW-9. Monitor wells MW-2, MW-4, MW-6 & MW-10 were not used in map construction.

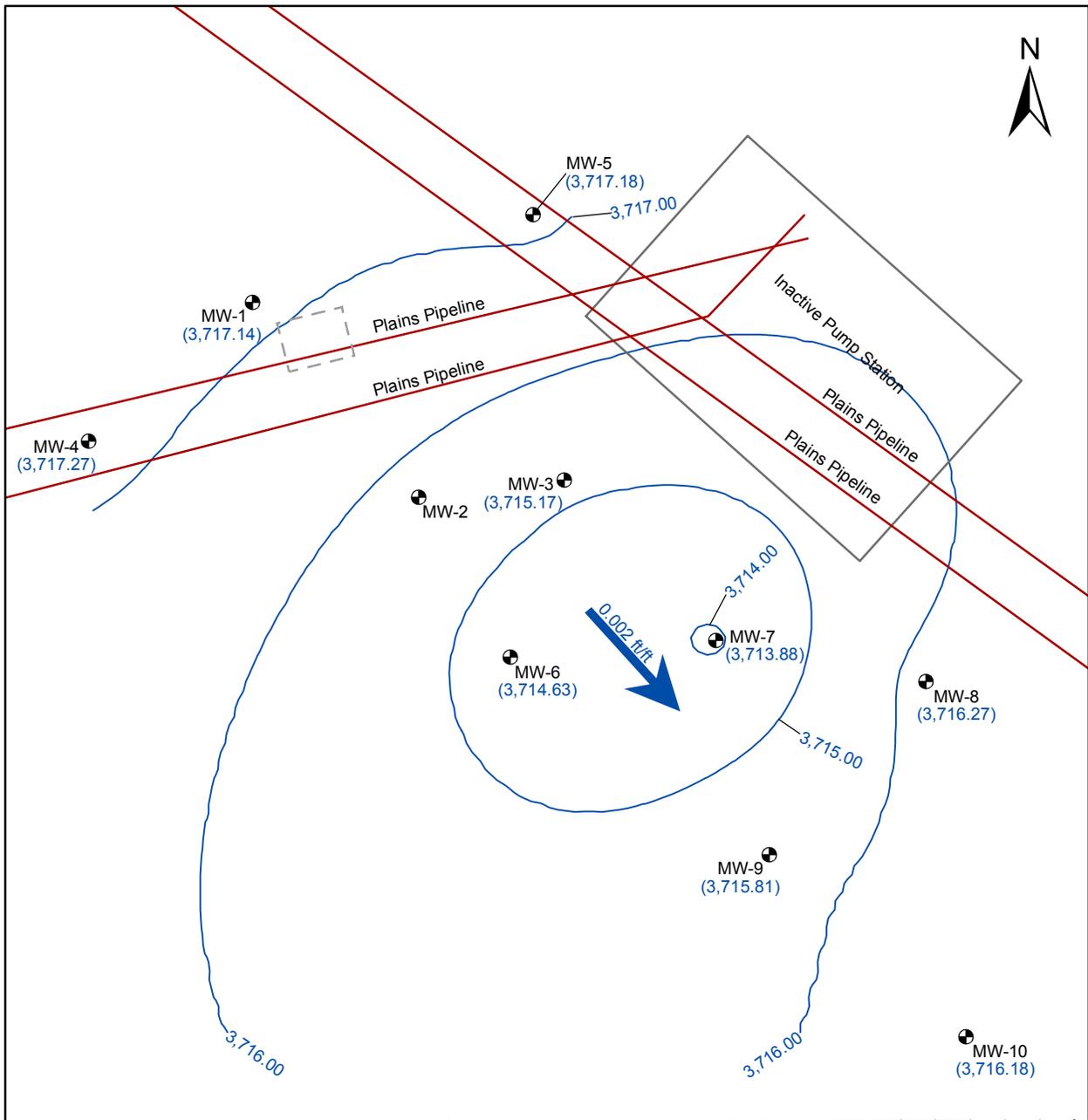


Goff Dairy Well

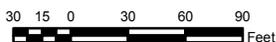
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Pipeline	Monitor Well
Fence	Irrigation Well
Excavation Extent	
(3,720) Groundwater Elevation (ft)	
0.007 ft/ft Groundwater Gradient & Magnitude	

Figure 2C
Inferred Groundwater Gradient Map
3Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

	Basin Environmental Service Technologies 3100 Plains Hwy. Lovington, NM 88260	
	Drawn By: BJA	Checked By: BRB
August 28, 2013		Scale: 1" = 100'



Groundwater Gradient magnitude measured between monitor wells MW-1 and MW-9. Monitor well MW-2 was not used in map construction.

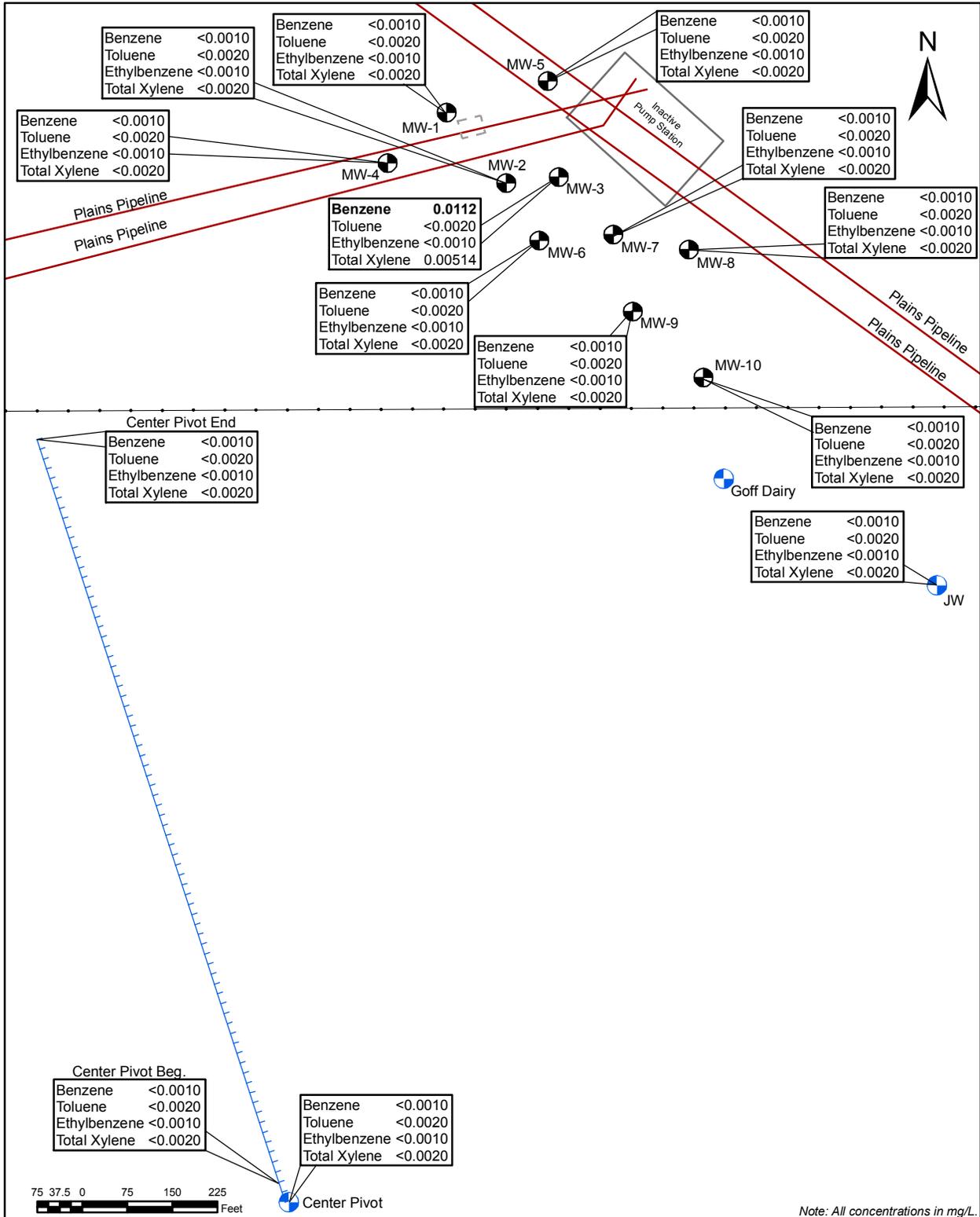


Goff Dairy Well

Legend:	
Pipeline	Monitor Well
Fence	Irrigation Well
Excavation Extent	
(3,720) Groundwater Elevation (ft)	
0.002 ft/ft Groundwater Gradient & Magnitude	

Figure 2D
Inferred Groundwater Gradient Map
4Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

	Basin Environmental Service Technologies 3100 Plains Hwy. Lovington, NM 88260	
	Drawn By: BJA January 30, 2014	Checked By: BRB Scale: 1" = 100'



Legend:

- Pipeline
- - - Excavation Extent
- +— Fence
- Center Pivot
- Monitor Well
- Irrigation Well

Figure 3A
Groundwater Concentration Map
1Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
April 4, 2013	Scale: 1" = 250'

Note: All concentrations in mg/L.

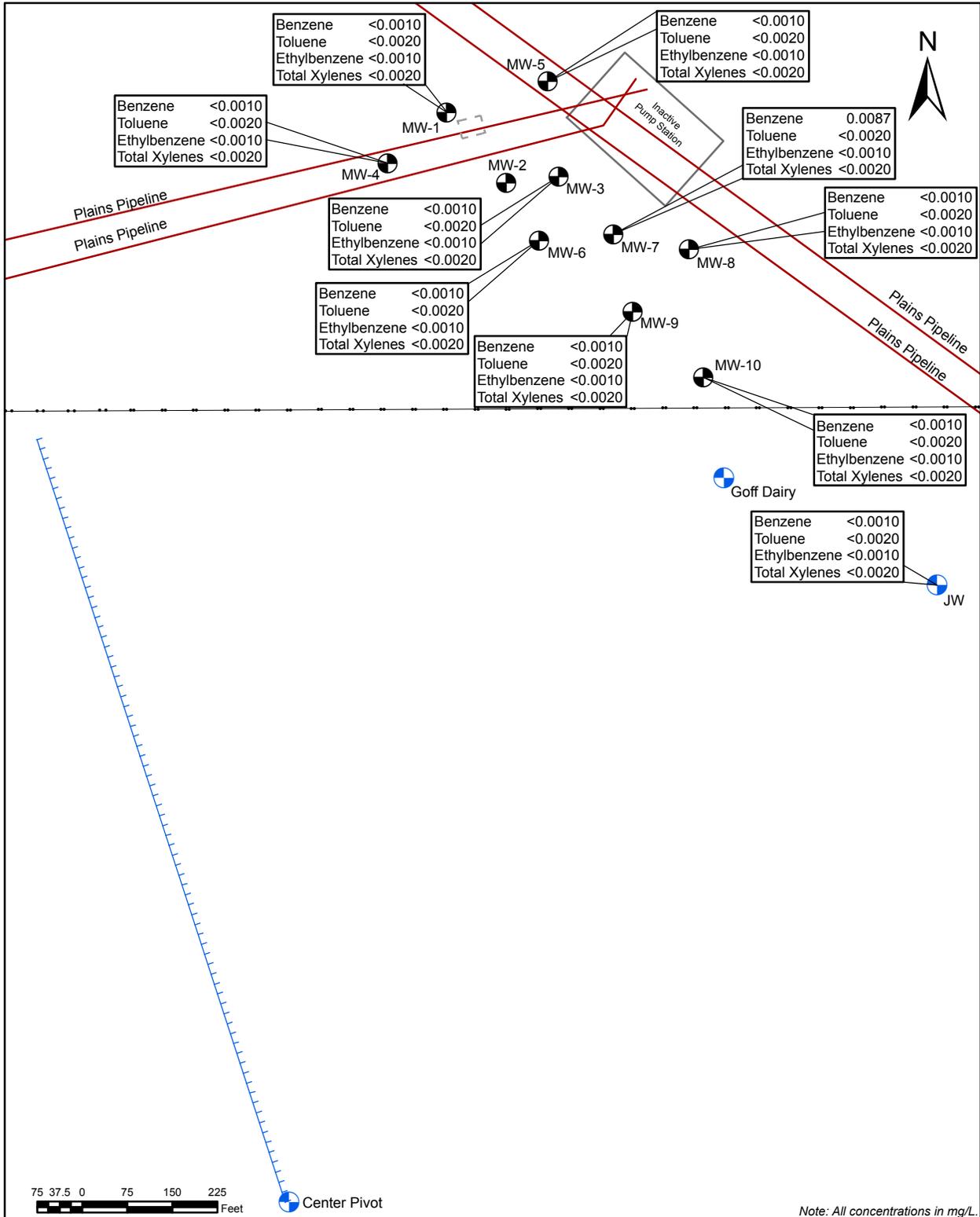
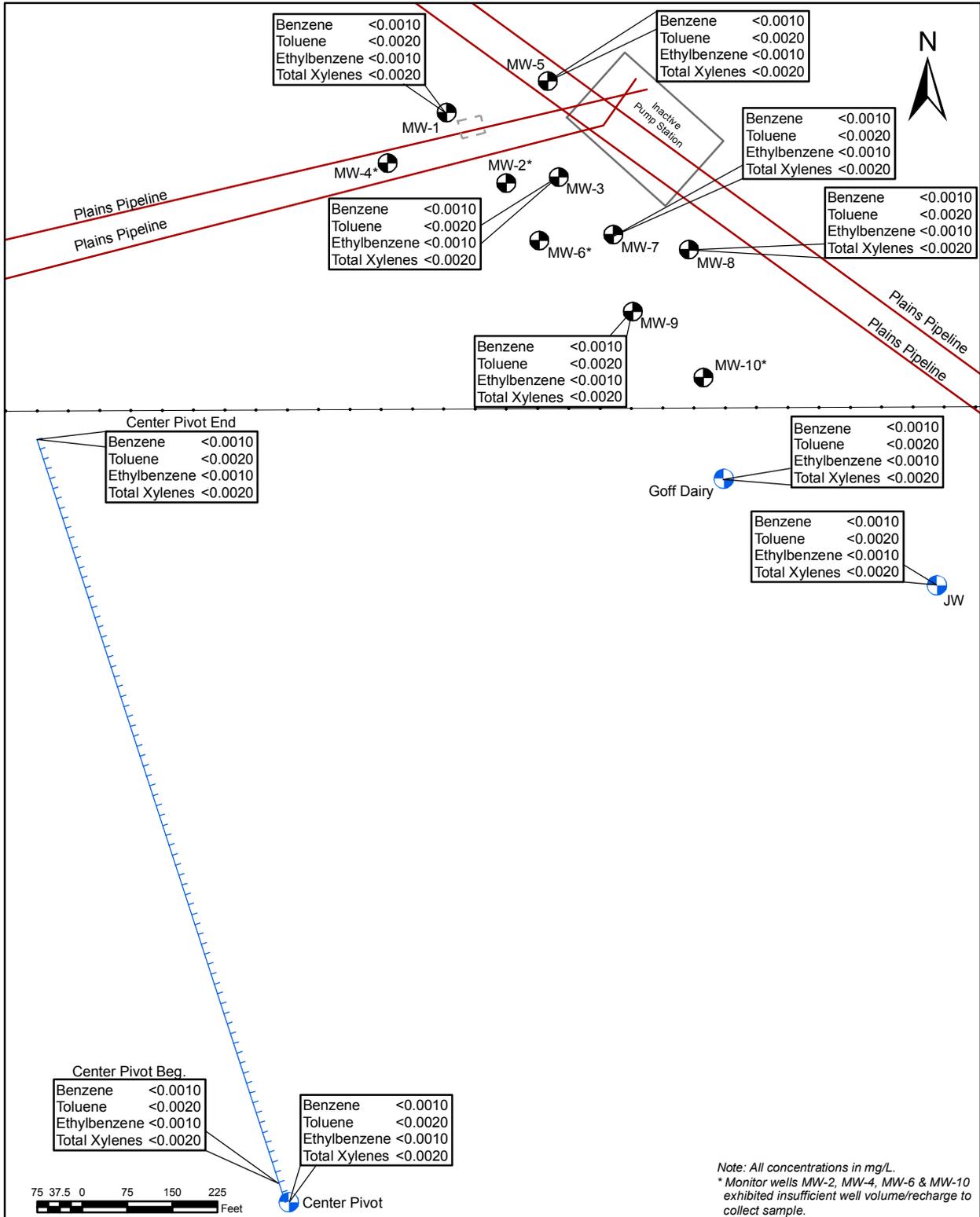


Figure 3B
Groundwater Concentration Map - 2Q2013
 Plains Marketing, LP
 Lovington Gathering WT1
 Lea County, New Mexico
 Plains SRS #: 2006-142
 NMOC Reference #: 1RP-838

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
July 2, 2013	Scale: 1" = 250'



Legend:

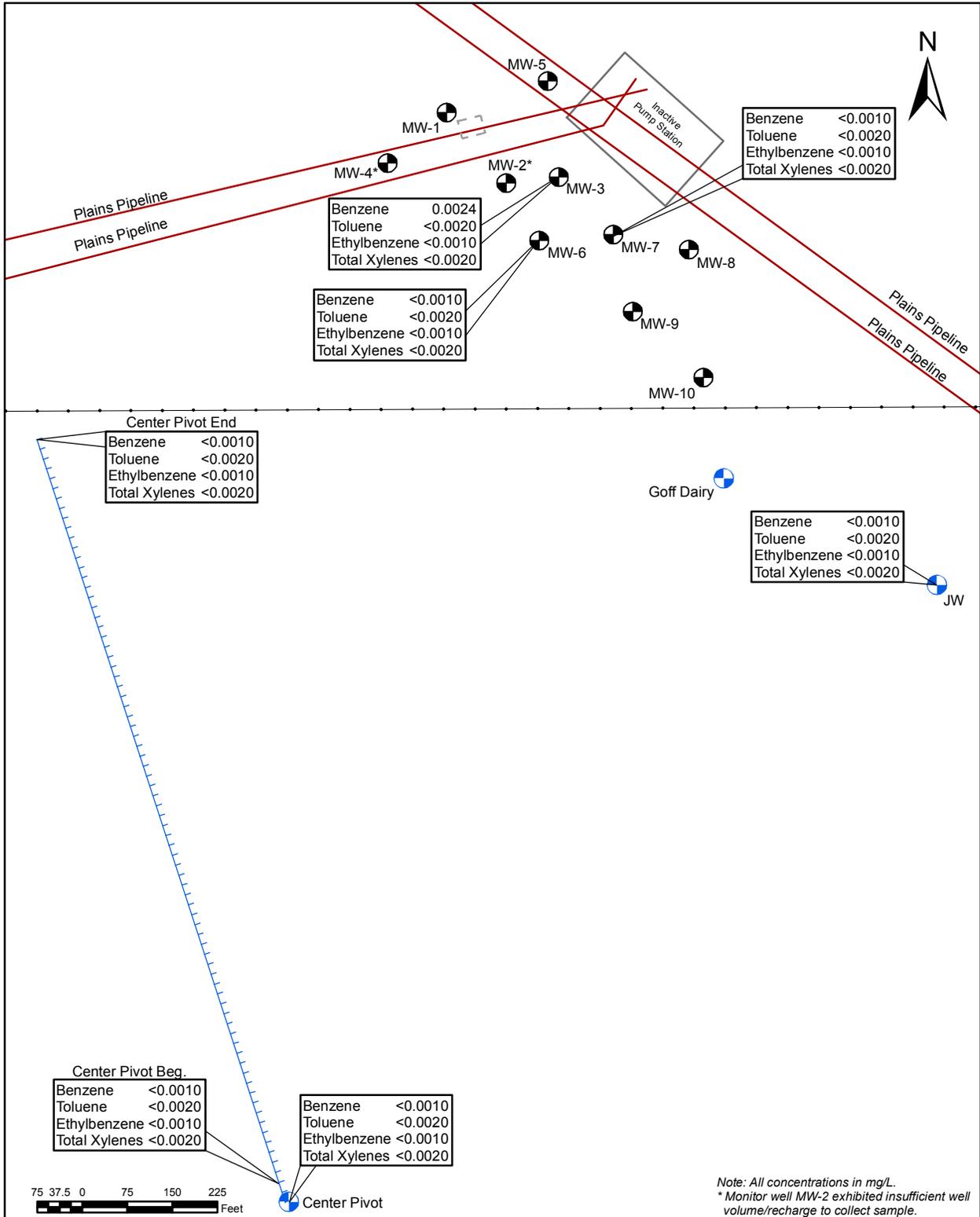
- Pipeline
- Excavation Extent
- Fence
- Center Pivot
- Monitor Well
- Irrigation Well

Figure 3C
Groundwater Concentration Map
3Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

Basin Environmental Service Technologies
Effective Solutions

Basin Environmental Service Technologies
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
August 28, 2013	Scale: 1" = 250'



- Legend:**
- Pipeline
 - Excavation Extent
 - Fence
 - Center Pivot
 - Monitor Well
 - Irrigation Well

Figure 3D
Groundwater Concentration Map
4Q2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico



Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
Jan. 29, 2014	Scale: 1" = 250'

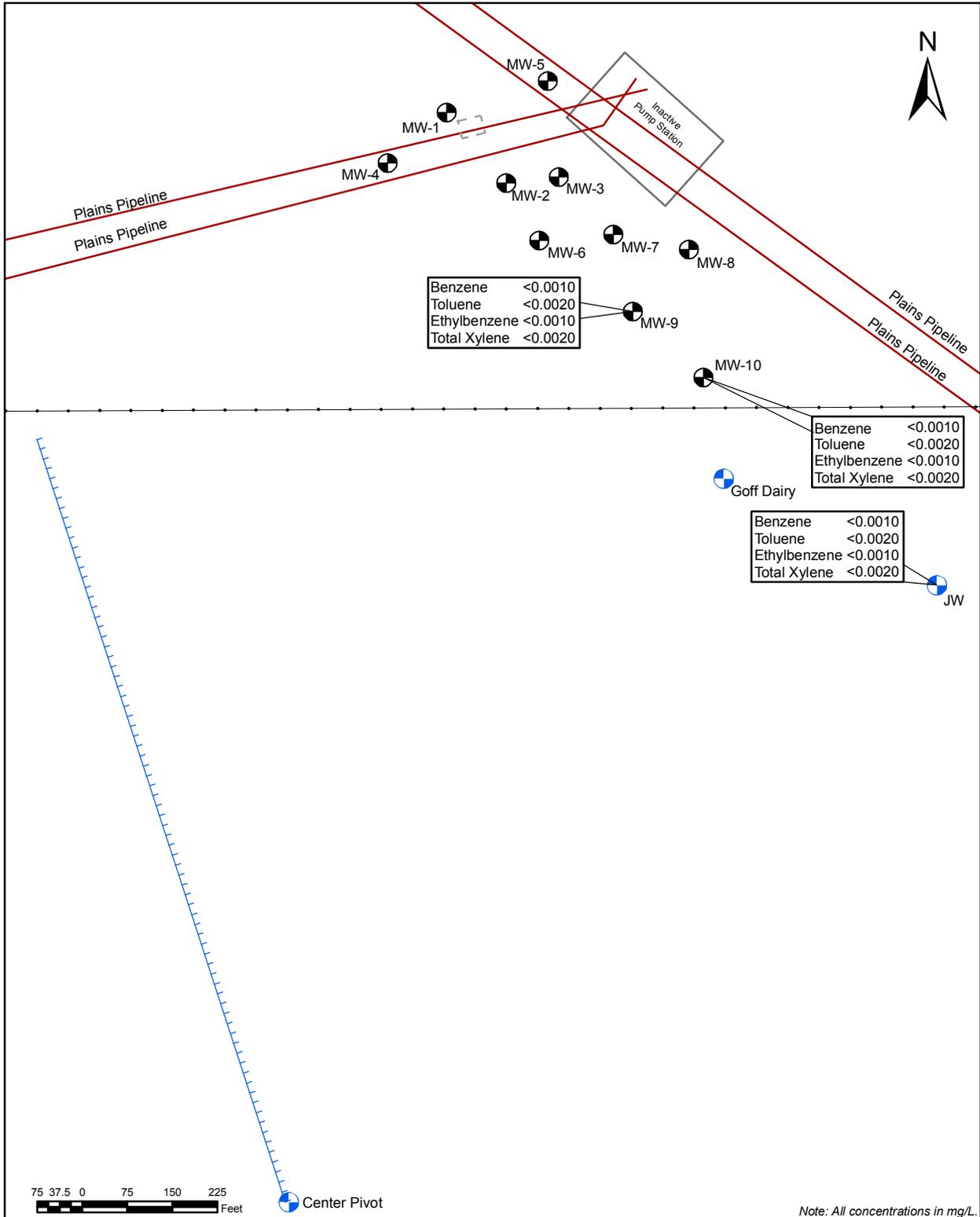
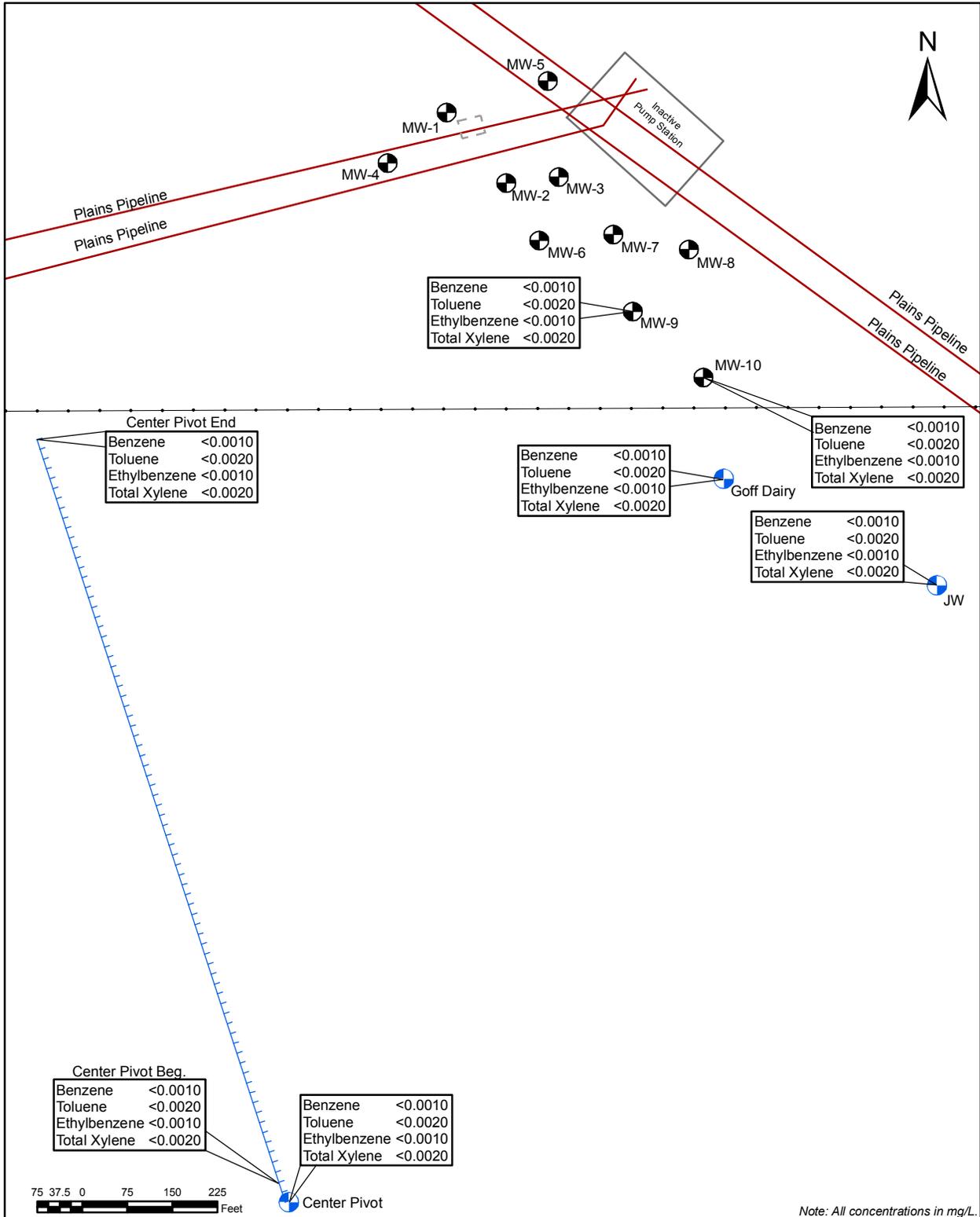


Figure 3E
Groundwater Concentration Map
January 2013
Plains Marketing, LP
Lovington Gathering WT1
SRS # 2006-142
Lea County, New Mexico

Basin Environmental Service Technologies
 Effective Solutions

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
April 4, 2013	Scale: 1" = 250'



Note: All concentrations in mg/L.

Legend:

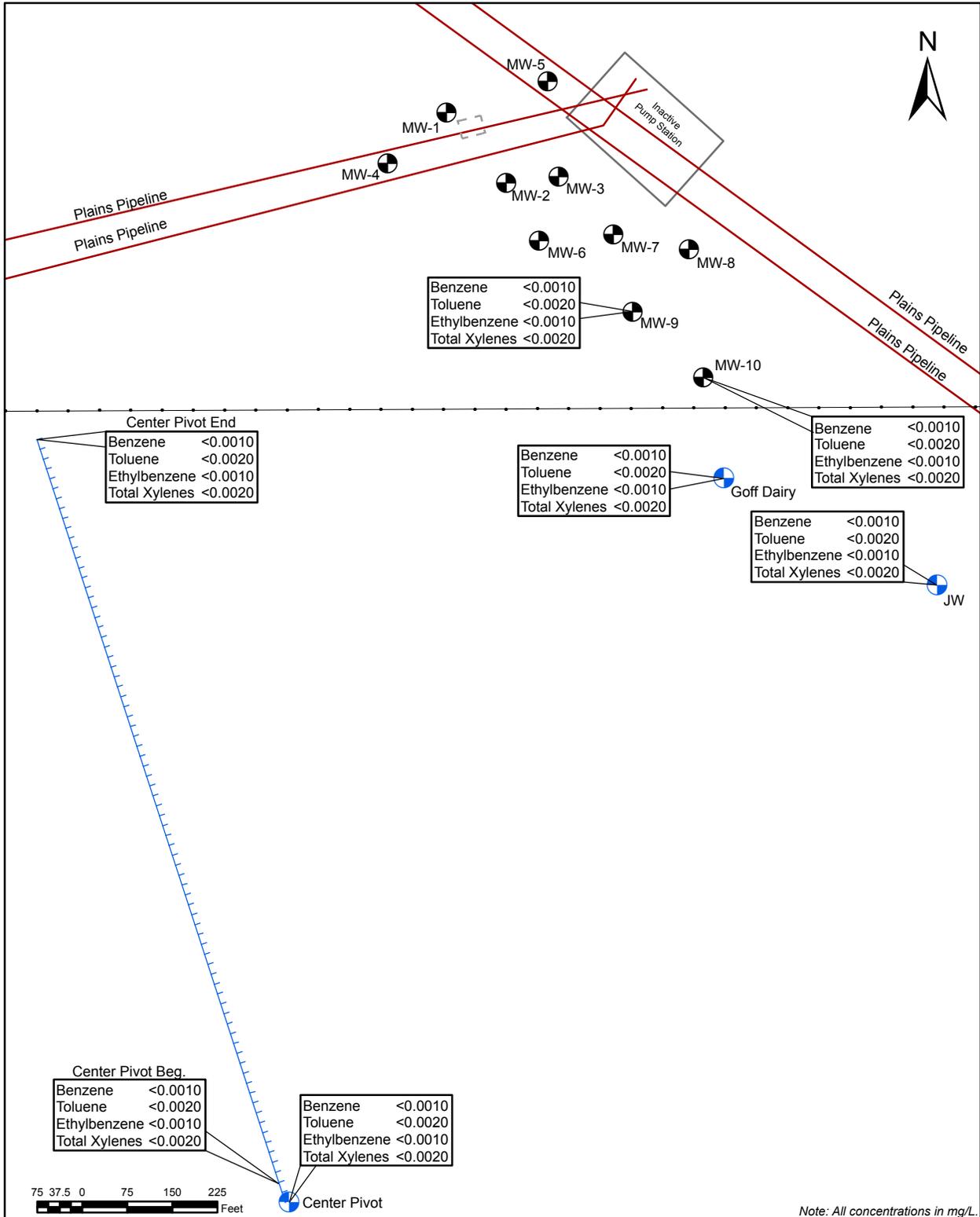
- Pipeline
- Excavation Extent
- Fence
- Center Pivot
- Monitor Well
- Irrigation Well

Figure 3F
Groundwater Concentration Map
March 2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260



Drawn By: BJA	Checked By: BRB
April 4, 2013	Scale: 1" = 250'



Note: All concentrations in mg/L.

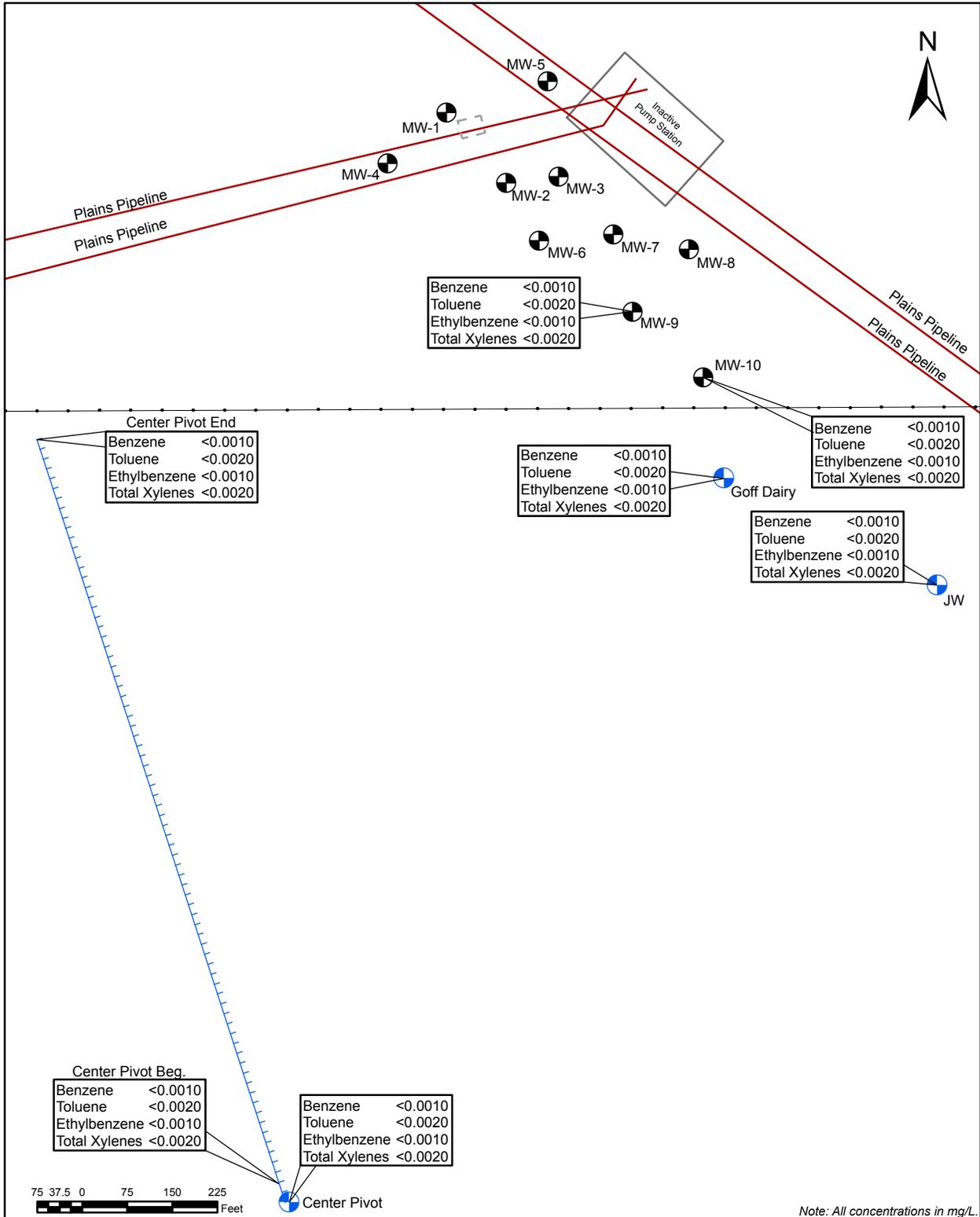
Legend:

- Pipeline
- Excavation Extent
- Fence
- Center Pivot
- Monitor Well
- Irrigation Well

Figure 3G
Groundwater Concentration Map - April 2013
 Plains Marketing, LP
 Lovington Gathering WTI
 Lea County, New Mexico
 Plains SRS #: 2006-142
 NMOC Reference #: 1RP-838

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

	Drawn By: BJA	Checked By: BRB
	July 2, 2013	Scale: 1" = 250'

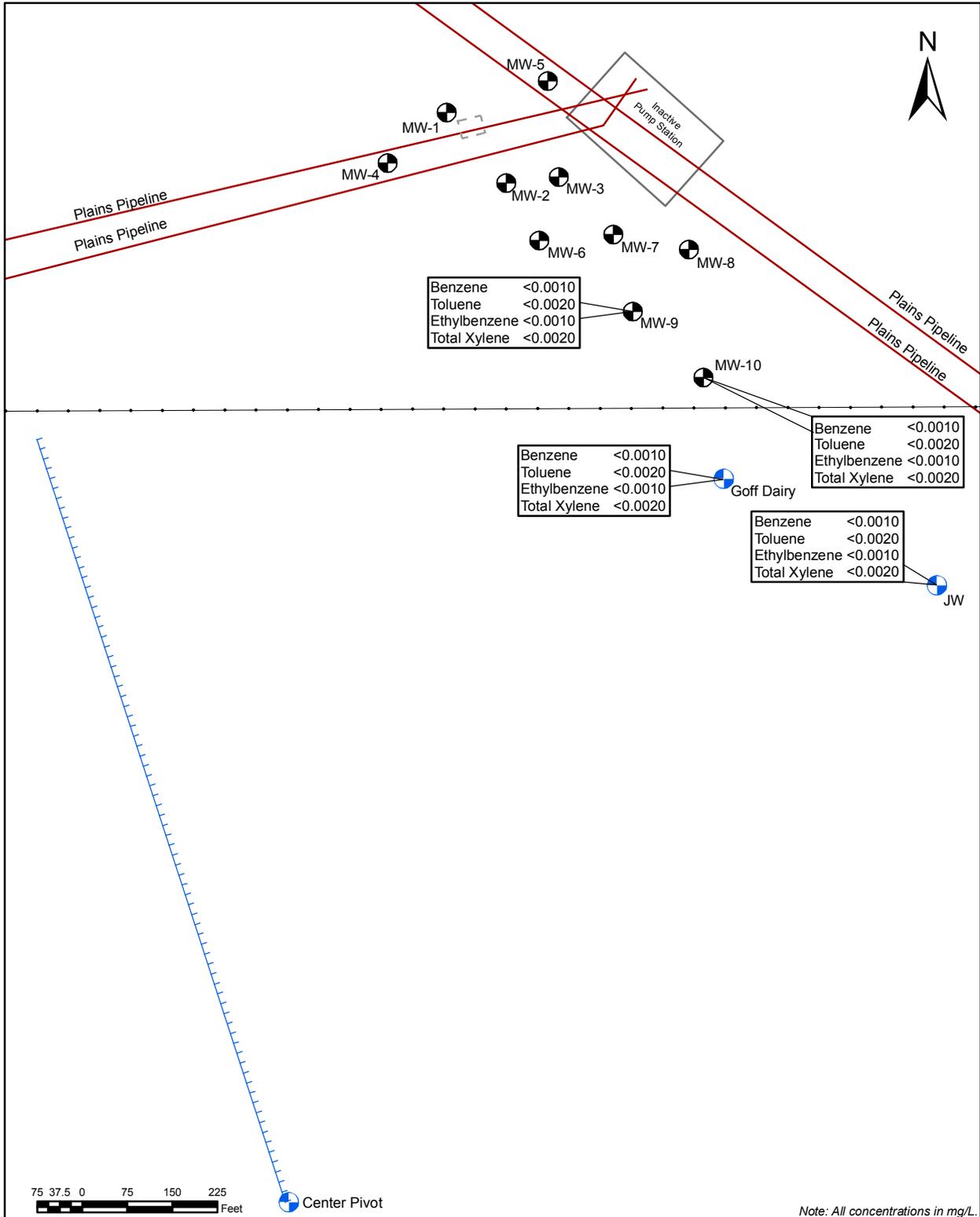


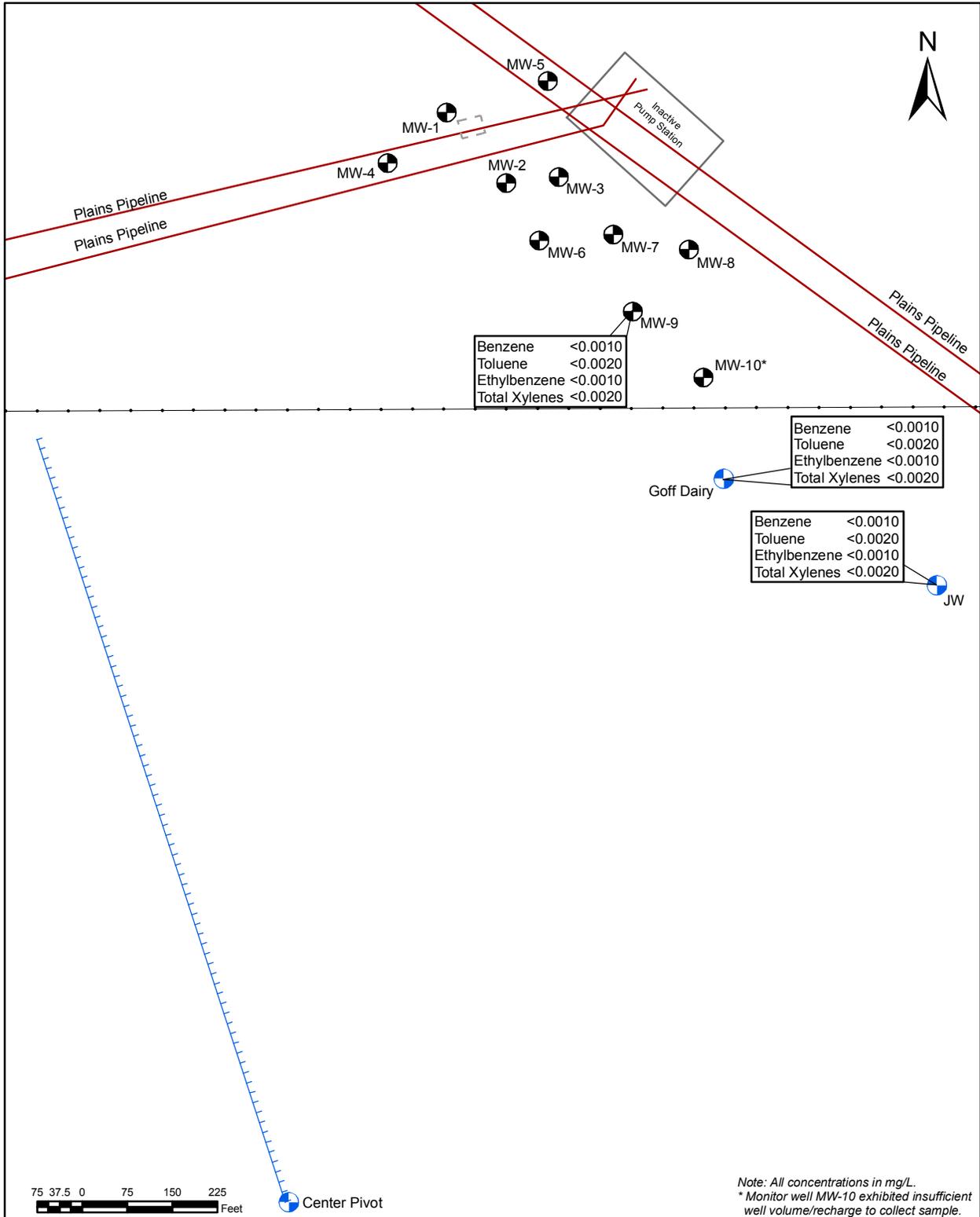
- Legend:**
- Pipeline
 - Excavation Extent
 - Fence
 - Center Pivot
 - Monitor Well
 - Irrigation Well

Figure 3H
Groundwater Concentration Map - June 2013
 Plains Marketing, LP
 Lovington Gathering WTI
 Lea County, New Mexico
 Plains SRS #: 2006-142
 NMOC Reference #: 1RP-838

Basin Environmental Service Technologies
 3100 Plains Hwy.
 Lovington, NM 88260

	Drawn By: BJA	Checked By: BRB
	July 2, 2013	Scale: 1" = 250'





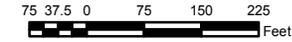
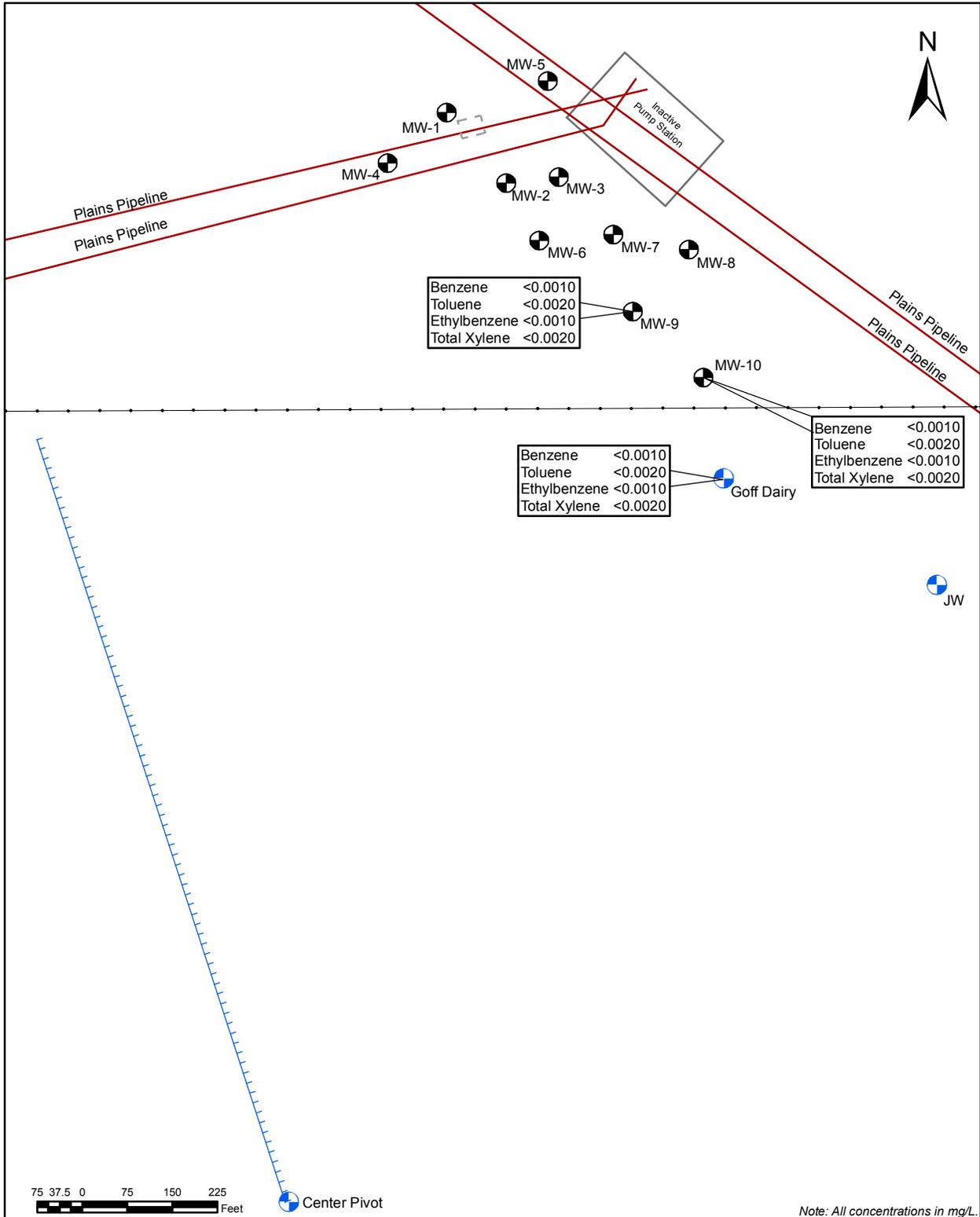
Note: All concentrations in mg/L.
 * Monitor well MW-10 exhibited insufficient well volume/recharge to collect sample.

Legend:

	Pipeline
	Excavation Extent
	Fence
	Center Pivot
	Monitor Well
	Irrigation Well

Figure 3J
Groundwater Concentration Map
September 2013
Plains Marketing, LP
Lovington Gathering WTI
SRS # 2006-142
Lea County, New Mexico

	Basin Environmental Service Technologies 3100 Plains Hwy. Lovington, NM 88260				
	<table border="1"> <tr><td>Drawn By: BJA</td><td>Checked By: BRB</td></tr> <tr><td>Sept. 26, 2013</td><td>Scale: 1" = 250'</td></tr> </table>	Drawn By: BJA	Checked By: BRB	Sept. 26, 2013	Scale: 1" = 250'
Drawn By: BJA	Checked By: BRB				
Sept. 26, 2013	Scale: 1" = 250'				



Note: All concentrations in mg/L.

Legend: Pipeline Excavation Extent Fence Center Pivot Monitor Well Irrigation Well	Figure 3K Groundwater Concentration Map October 2013 Plains Marketing, LP Lovington Gathering WTI SRS # 2006-142 Lea County, New Mexico	 Basin Environmental Service Technologies Effective Solutions	Basin Environmental Service Technologies 3100 Plains Hwy. Lovington, NM 88260	
			Drawn By: BJA Nov. 11, 2013	Checked By: BRB Scale: 1" = 250'

Tables

**TABLE 1
2013 GROUNDWATER ELEVATION DATA**

**PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	02/22/13	3,806.60	-	87.53	-	3,719.07
	05/23/13	3,806.60	-	89.37	-	3,717.23
	08/21/13	3,806.60	-	89.56	-	3,717.04
	11/08/13	3,806.60	-	89.47	-	3,717.14
MW-2	02/22/13	3,806.31	-	87.41	-	3,718.90
	05/23/13	3,806.31	-	Dry	-	-
	08/21/13	3,806.31	-	Dry	-	-
	11/08/13	3,806.31	-	Dry	-	-
MW-3	02/22/13	3,806.19	-	87.37	-	3,718.82
	05/23/13	3,806.19	-	89.34	-	3,716.85
	08/21/13	3,806.19	-	91.02	-	3,715.17
	11/08/13	3,806.19	-	91.02	-	3,715.17
MW-4	02/22/13	3,806.67	-	87.69	-	3,718.98
	05/23/13	3,806.67	-	89.65	-	3,717.02
	08/21/13	3,806.67	-	Dry	-	-
	11/08/13	3,806.67	-	89.40	-	3,717.27
MW-5	02/22/13	3,806.30	-	87.24	-	3,719.06
	05/23/13	3,806.30	-	89.00	-	3,717.30
	08/21/13	3,806.30	-	89.25	-	3,717.05
	11/08/13	3,806.30	-	89.13	-	3,717.18
MW-6	02/22/13	3,806.08	-	87.40	-	3,718.68
	05/23/13	3,806.08	-	89.60	-	3,716.48
	08/21/13	3,806.08	-	Dry	-	-
	11/08/13	3,806.08	-	91.45	-	3,714.63
MW-7	02/22/13	3,806.05	-	87.81	-	3,718.24
	05/23/13	3,806.05	-	89.99	-	3,716.06
	08/21/13	3,806.05	-	92.15	-	3,713.90
	11/08/13	3,806.05	-	92.17	-	3,713.88

**TABLE 1
2013 GROUNDWATER ELEVATION DATA**

**PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-8	02/22/13	3,805.89	-	87.32	-	3,718.57
	05/23/13	3,805.89	-	89.55	-	3,716.34
	08/21/13	3,805.89	-	89.82	-	3,716.07
	11/08/13	3,805.89	-	89.62	-	3,716.27
MW-9	02/22/13	3,806.02	-	87.68	-	3,718.34
	05/23/13	3,806.02	-	90.03	-	3,715.99
	08/21/13	3,806.02	-	91.83	-	3,714.19
	11/08/13	3,806.02	-	90.21	-	3,715.81
MW-10	02/22/13	3,806.08	-	89.99	-	3,716.09
	05/23/13	3,806.08	-	90.14	-	3,715.94
	08/21/13	3,806.08	-	Dry	-	-
	11/08/13	3,806.08	-	89.90	-	3,716.18

Elevations based on the North American Vertical Datum of 1929.

- = Not applicable

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-1	10/05/06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	12/28/06	<0.0010	<0.0010	<0.0010	0.002	<0.0010	0.002	0.002	-	-
	03/16/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	05/31/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	09/25/07	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/14/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/17/08	0.020	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.020	-	-
	12/02/08	0.035	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.035	-	-
	03/03/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/11/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
MW-2	10/05/06	0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.010	-	-
	12/28/06	0.161	<0.0010	<0.0010	0.024	<0.0010	0.024	0.185	-	-
	03/16/07	0.154	<0.0010	<0.0010	0.015	<0.0010	0.015	0.169	-	-
	05/31/07	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.005	-	-
	09/25/07	0.050	<0.0010	<0.0010	0.003	<0.0010	0.003	0.053	-	-
	11/30/07	0.928	<0.0010	<0.005	0.036	<0.005	0.036	0.964	-	-
	03/11/08	0.095	<0.0020	<0.0010	0.0032	<0.0010	0.0032	0.098	-	-
	06/14/08	0.003	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.003	-	-
	09/17/08	0.159	<0.0020	<0.0010	0.004	<0.0010	0.004	0.163	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-2	12/02/08	0.050	0.002	<0.0010	0.007	0.001	0.008	0.060	-	-
	03/03/09	0.036	<0.0020	<0.0010	0.0026	<0.0010	0.0026	0.038	-	-
	06/18/09	0.0097	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.010	-	-
	09/01/09	0.084	<0.0020	<0.0010	0.0083	<0.0010	0.0083	0.093	-	-
	12/18/09	0.0129	<0.0020	<0.0010	0.0095	<0.0010	0.0095	0.022	-	-
	03/04/10	0.0026	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0026	-	-
	05/25/10	0.0023	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0023	-	-
	08/30/10	0.0406	<0.0020	<0.0010	0.0132	<0.0010	0.0132	0.0538	-	-
	11/11/10	0.0087	<0.0020	<0.0010	0.091	<0.0010	0.091	0.0997	-	-
	03/22/11	0.0361	<0.0020	<0.0010	0.0605	0.0011	0.0616	0.0977	-	-
	05/27/11	0.00222	<0.0020	<0.0010	0.00297	<0.0010	0.00297	0.00519	-	-
	09/30/11	0.179	<0.0020	0.00275	0.00345	0.00212	0.00557	0.187	-	-
	11/09/11	Dry								
	02/06/12	0.00187	<0.0020	<0.0010	0.00212	0.00102	0.00314	0.00501	-	-
	05/23/12	Dry								
	08/28/12	Dry								
	11/27/12	Dry								
	02/28/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	Dry								
	08/21/13	Dry								
11/08/13	Dry									
MW-3	10/05/06	6.60	<0.0010	<0.0010	0.072	<0.0010	0.072	6.67	-	-
	12/28/06	1.02	<0.0010	0.005	0.028	<0.0010	0.028	1.05	-	-
	03/16/07	1.48	<0.0010	0.013	0.034	<0.0010	0.034	1.53	-	-
	05/31/07	1.66	0.010	0.034	0.029	0.012	0.041	1.75	-	-
	09/25/07	0.494	0.023	0.020	0.014	0.007	0.021	0.56	-	-
	11/30/07	5.93	0.027	0.273	0.141	0.074	0.215	6.45	-	-
	03/11/08	1.159	0.107	0.177	0.066	0.139	0.205	1.65	-	-
	06/14/08	0.214	0.002	0.007	0.012	0.005	0.017	0.24	-	-
	09/17/08	0.026	<0.0020	<0.0010	0.002	<0.0010	0.002	0.03	-	-
	12/02/08	0.024	<0.0020	<0.0010	0.004	0.001	0.005	0.03	-	-
	03/03/09	1.367	0.0305	0.0251	0.0173	0.0158	0.0331	1.46	-	-
	06/18/09	0.0031	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/01/09	0.0073	0.0033	<0.0010	0.0028	0.0015	0.0043	0.01	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	0.0011	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0011	-	-
05/25/10	0.0109	0.0033	<0.0010	0.0048	0.0027	0.0075	0.0217	-	-	
08/30/10	0.0092	0.0036	<0.0010	0.006	0.0033	0.0093	0.0221	-	-	

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

**PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838**

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-3	11/11/10	0.0033	<0.0020	<0.0010	0.0023	0.0013	0.0036	0.0069	-	-
	03/22/11	0.00904	0.00283	<0.0010	0.00815	0.00375	0.0119	0.0238	-	-
	05/27/11	0.0205	<0.0020	<0.0010	0.00308	0.00116	0.00424	0.0247	-	-
	08/24/11	0.0262	0.00333	<0.0010	0.00827	0.00312	0.0114	0.0409	-	-
	11/09/11	0.00211	<0.0020	<0.0010	0.00231	0.00114	0.00345	0.00556	-	-
	02/06/12	0.0214	0.00306	0.00126	0.00751	0.00345	0.0110	0.0367	-	-
	05/23/12	0.00929	0.00201	<0.0010	0.00584	0.00261	0.00845	0.0198	-	-
	08/28/12	0.00747	<0.0020	<0.0010	<0.0020	0.00136	0.00136	0.00883	-	-
	11/27/12	0.0120	0.00284	0.00109	0.00710	0.00252	0.00962	0.0256	-	-
	02/22/13	0.0112	<0.0020	<0.0010	0.00302	0.00212	0.00514	0.0163	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	0.00241	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00241	-	-
MW-4	12/28/06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	03/16/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	05/30/07	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.001	-	-
	09/25/07	<0.0010	0.001	<0.0010	<0.0020	<0.0010	<0.0020	0.001	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/14/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/17/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/02/08	<0.0010	0.006	<0.0010	<0.0020	<0.0010	<0.0020	0.006	-	-
	03/03/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/11/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	4.76	<0.0050
08/24/11	0.00119	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00119	-	-	
11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WT1
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-4	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	Dry								
MW-5	12/28/06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	03/16/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	05/30/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	09/25/07	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/14/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/17/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/02/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/03/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/25/10	0.0014	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0014	-	-
	08/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/11/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
MW-6	12/28/06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	03/16/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	05/30/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	09/25/07	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-6	06/14/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/17/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/02/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/03/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/18/09	0.0044	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0044	-	-
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/18/09	0.013	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0130	-	-
	03/04/10	0.0063	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0063	-	-
	05/25/10	0.0059	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0059	-	-
	08/30/10	0.0053	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0053	-	-
	11/11/10	0.0082	<0.0020	<0.0010	0.0035	<0.0010	0.0035	0.0117	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	0.105	<0.0020	<0.0010	0.0597	0.00309	0.0628	0.168	-	-
	11/09/11	0.00356	<0.0020	<0.0010	0.0388	<0.0010	0.0388	0.0424	-	-
	02/06/12	0.0129	<0.0020	0.00106	0.133	<0.0010	0.133	0.147	-	-
	05/23/12	0.00768	<0.0010	<0.0010	0.157	<0.0010	0.157	0.165	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	0.0026	<0.0010	0.0026	0.0026	-	-
	11/27/12	0.00121	<0.0020	<0.0010	0.0414	<0.0010	0.0414	0.0426	-	-
	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	Dry								
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
MW-7	12/28/06	0.047	<0.0010	<0.0010	0.001	<0.0010	0.001	0.0480	-	-
	03/16/07	0.047	<0.0010	<0.0010	0.015	<0.0010	0.015	0.0620	-	-
	05/31/07	0.039	<0.0010	<0.0010	0.005	<0.0010	0.005	0.0440	-	-
	09/25/07	0.037	<0.0010	<0.0010	0.030	<0.0010	0.03	0.0670	-	-
	11/30/07	0.026	<0.0020	<0.0010	0.022	<0.0010	0.022	0.0480	-	-
	03/11/08	0.095	<0.0020	<0.0010	0.0032	<0.0010	0.0032	0.0982	-	-
	06/14/08	0.138	<0.0020	<0.0010	0.016	<0.0010	0.016	0.1540	-	-
	09/17/08	0.353	<0.0020	<0.0010	0.003	<0.0010	0.003	0.3560	-	-
	12/02/08	0.036	<0.0020	<0.0010	0.003	0.002	0.005	0.0410	-	-
	03/03/09	0.0775	<0.0020	<0.0010	0.0327	<0.0010	0.0327	0.1102	-	-
	06/18/09	0.057	<0.0020	<0.0010	0.0329	<0.0010	0.0329	0.0899	-	-
	09/01/09	0.012	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0120	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER

PLAINS MARKETING, LP
LOVINGTON GATHERING WT1
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-7	08/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/11/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	0.00192	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00192	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	0.0087	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0087	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
MW-8	03/16/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	05/31/07	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	09/25/07	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/14/08	0.008	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.008	-	-
	09/17/08	0.568	<0.0100	<0.005	<0.0100	<0.005	<0.0100	0.568	-	-
	12/02/08	0.234	0.046	0.008	0.041	0.013	0.054	0.342	-	-
	03/03/09	0.0284	<0.0020	<0.0010	0.0068	<0.0010	0.0068	0.0352	-	-
	06/18/09	0.0045	<0.0020	0.0016	0.0032	<0.0010	0.0032	0.0093	-	-
	09/01/09	0.0013	<0.0020	0.0011	0.0141	<0.0010	0.0141	0.0165	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	<0.0010	<0.0020	0.0011	<0.0020	<0.0010	<0.0020	0.0011	-	-
	05/25/10	0.0012	<0.0020	0.001	<0.0020	<0.0010	<0.0020	0.0022	-	-
	08/30/10	<0.0010	<0.0020	0.0014	<0.0020	<0.0010	<0.0020	0.0014	-	-
	11/11/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/22/11	<0.0010	<0.0020	<0.0010	<0.0020	0.00154	0.00154	0.00154	-	-
	05/27/11	<0.0010	<0.0020	<0.0010	<0.0020	0.00260	0.00260	0.00260	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-8	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
MW-9	09/25/07	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/07	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/11/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/14/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/17/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/02/08	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/03/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/01/09	0.9717	0.0641	<0.0100	0.0867	0.0422	0.1289	1.1647	-	-
	09/10/09	1.838	<0.0200	<0.0100	0.0537	<0.0100	0.0537	1.8917	-	-
	10/05/09	0.985	<0.0020	<0.0010	0.0442	<0.0010	0.0442	1.0292	-	-
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/04/10	0.0192	<0.0020	<0.0010	0.0027	<0.0010	0.0027	0.0219	-	-
	05/25/10	0.0421	<0.0020	<0.0010	0.0063	<0.0010	0.0063	0.0484	-	-
	08/30/10	0.1259	<0.0020	<0.0010	0.0344	<0.0010	0.0344	0.1603	-	-
	11/11/10	0.0265	<0.0020	<0.0010	0.0097	<0.0010	0.0097	0.0362	-	-
	03/22/11	0.00335	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00335	-	-
	05/27/11	0.00406	<0.0020	<0.0010	0.00326	<0.0010	0.00326	0.00732	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	0.00237	<0.0010	0.00237	0.00237	-	-
	11/09/11	0.00179	<0.0020	<0.0010	0.00349	<0.0010	0.00349	0.00528	-	-
12/14/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
01/05/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
06/19/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
10/31/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
12/19/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
01/30/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WT1
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-9	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/29/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/16/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/19/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
MW-10	11/02/09	<0.005	<0.005	<0.005	<0.010	<0.005	<0.010	<0.010	-	-
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/11/10	0.0350	<0.0020	<0.0010	0.0035	<0.0010	0.0035	0.0385	-	-
	03/22/11	0.0568	<0.0020	<0.0010	0.00333	<0.0010	0.00333	0.0601	-	-
	05/27/11	1.52	<0.0020	0.00107	0.0113	<0.0010	0.0113	1.53	-	-
	07/11/11	3.00	0.00265	0.00365	0.0248	0.00232	0.0271	3.03	-	-
	08/24/11	0.654	<0.0020	0.00158	0.0177	0.00262	0.0203	0.676	-	-
	10/10/11	0.183	<0.0020	<0.0010	0.121	<0.0010	0.121	0.304	-	-
	10/31/11	0.053	<0.0020	0.0014	0.0944	0.00222	0.0966	0.151	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/14/11	0.00846	0.00226	<0.0010	0.0261	<0.0010	0.0261	0.0368	-	-
	01/05/12	0.00432	<0.0020	<0.0010	0.0126	<0.0010	0.0126	0.0169	-	-
	02/06/12	0.00233	<0.0020	<0.0010	0.00644	<0.0010	0.00644	0.00877	-	-
	03/01/12	0.00134	<0.0020	<0.0010	0.00423	<0.0010	0.00423	0.00557	-	-
	04/18/12	0.00338	<0.0020	<0.0010	0.0175	<0.0010	0.0175	0.0209	-	-
	05/23/12	0.00387	<0.0010	<0.0010	0.103	<0.0010	0.103	0.107	-	-
	06/19/12	<0.0010	<0.0010	<0.0010	0.0157	<0.0010	0.0157	0.0157	-	-
	07/30/12					Dry				
	08/28/12	<0.0010	<0.0020	<0.0010	0.0134	0.00138	0.0148	0.0148	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/12	<0.0010	<0.0020	0.00124	0.00308	0.00149	0.00457	0.00581	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/19/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	01/30/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/22/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
MW-10	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/16/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	Dry								
	09/19/13	Dry								
	10/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
Goff Dairy Well	05/27/11	0.00125	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00123	-	-
	07/11/11	0.00262	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00262	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/14/11	<0.0010	<0.0020	0.00111	<0.0020	<0.0010	<0.0020	0.00111	-	-
	01/05/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/06/12	<0.0010	<0.0020	0.00111	0.00201	<0.0010	0.00201	0.00201	-	-
	03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/16/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
09/19/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
10/23/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
Goff Dairy - Ctr. Pivot Well	07/07/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/14/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	01/05/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/06/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

**PLAINS MARKETING, LP
LOVINGTON GATHERING WT1
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838**

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
Goff Dairy - Ctr. Pivot Well	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/19/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/19/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/28/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
Goff Dairy - Ctr. Pivot Beg.	07/07/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/19/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/28/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
Goff Dairy - Ctr. Pivot End	07/07/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

**PLAINS MARKETING, LP
LOVINGTON GATHERING WT1
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838**

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
Goff Dairy - Ctr. Pivot End	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/19/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/28/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
JW Well	07/14/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/24/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/10/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/09/11	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/01/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/18/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/23/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/19/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/30/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/28/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	09/11/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	10/31/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/27/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/19/12	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	01/31/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	02/28/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	03/27/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	04/09/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	05/29/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	06/25/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	07/16/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	08/21/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-

**TABLE 2
CONCENTRATIONS OF BTEX, FLUORIDE & CHROMIUM IN GROUNDWATER**

PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2006-142
NMOCD REFERENCE #: 1RP-838

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021b							300.1	SW846-6010C
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	FLUORIDE (mg/L)	CHROMIUM (mg/L)
JW Well	09/19/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/08/13	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
NMOCD REGULATORY STANDARD		0.01	0.75	0.75	TOTAL XYLENES 0.62				1.6	0.05

Appendices

Appendix A
Laboratory Analytical Reports

Analytical Report 456861,456863

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI SRS #2006-142

08-FEB-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



08-FEB-13

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

Reference: XENCO Report No(s): **456861,456863**
Lovington Gathering WTI SRS #2006-142
Project Address: Lovington

Ben Arguijo:

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(s) 456861,456863. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 456861 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,

Alejandro Montoya

New Mexico Laboratory Director

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Sample Cross Reference 456861,456863



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI SRS #2006-142

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	01-30-13 14:05		456861-001
MW-10	W	01-30-13 14:20		456861-002
JW Well	W	01-31-13 12:50		456863-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI SRS #2006-142



Project ID:
Work Order Number(s): 456861,456863

Report Date: 08-FEB-13
Date Received: 02/01/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 456861,456863



PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142

Project Id:

Contact: Ben Arguijo

Date Received in Lab: Fri Feb-01-13 12:40 pm

Report Date: 08-FEB-13

Project Location: Lovington

Project Manager: Nicholas Straccione

Analysis Requested	Lab Id:	456861-001	456861-002				
	Field Id:	MW-9	MW-10				
	Depth:						
	Matrix:	WATER	WATER				
	Sampled:	Jan-30-13 14:05	Jan-30-13 14:20				
BTEX by EPA 8021B	Extracted:	Feb-06-13 09:00	Feb-06-13 09:00				
	Analyzed:	Feb-06-13 11:44	Feb-06-13 12:01				
	Units/RL:	mg/L RL	mg/L RL				
Benzene		ND 0.00100	ND 0.00100				
Toluene		ND 0.00200	ND 0.00200				
Ethylbenzene		ND 0.00100	ND 0.00100				
m_p-Xylenes		ND 0.00200	ND 0.00200				
o-Xylene		ND 0.00100	ND 0.00100				
Total Xylenes		ND 0.00100	ND 0.00100				
Total BTEX		ND 0.00100	ND 0.00100				

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Alejandro Montoya
New Mexico Laboratory Director



Certificate of Analysis Summary 456861,456863



PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142

Project Id:

Contact: Ben Arguijo

Date Received in Lab: Fri Feb-01-13 12:40 pm

Report Date: 08-FEB-13

Project Location: Lovington

Project Manager: Nicholas Straccione

Analysis Requested	Lab Id:	456863-001					
	Field Id:	JW Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	Jan-31-13 12:50					
BTEX by EPA 8021B	Extracted:	Feb-06-13 09:00					
	Analyzed:	Feb-06-13 10:55					
	Units/RL:	mg/L RL					
Benzene		ND 0.00100					
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m_p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		ND 0.00100					

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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Alejandro Montoya
New Mexico 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 affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 456861, 456861,456863

Project ID:

Lab Batch #: 906400

Sample: 456863-001 / SMP

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 02/06/13 10:55	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 906400

Sample: 456861-001 / SMP

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 02/06/13 11:44	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	0.0301	0.0300	100	80-120	

Lab Batch #: 906400

Sample: 456861-002 / SMP

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 02/06/13 12:01	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 906400

Sample: 633456-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 02/06/13 10:38	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	0.0252	0.0300	84	80-120	

Lab Batch #: 906400

Sample: 633456-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 02/06/13 10:21	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	0.0312	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 456861, 456861,456863

Project ID:

Lab Batch #: 906400

Sample: 633456-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 02/06/13 10:04		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0283	0.0300	94	80-120	

Lab Batch #: 906400

Sample: 456863-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 02/06/13 11:11		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0281	0.0300	94	80-120	
4-Bromofluorobenzene		0.0311	0.0300	104	80-120	

Lab Batch #: 906400

Sample: 456863-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 02/06/13 11:28		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzene		0.0313	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 456861, 456861,456863

Analyst: KEB

Date Prepared: 02/06/2013

Project ID:

Date Analyzed: 02/06/2013

Lab Batch ID: 906400

Sample: 633456-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.106	106	0.100	0.0849	85	22	70-125	25	
Toluene	<0.00200	0.100	0.107	107	0.100	0.0846	85	23	70-125	25	
Ethylbenzene	<0.00100	0.100	0.108	108	0.100	0.0846	85	24	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.213	107	0.200	0.166	83	25	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.0842	84	22	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 SRS #2006-142

Work Order #: 456861

Project ID:

Lab Batch ID: 906400

QC- Sample ID: 456863-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 02/06/2013

Date Prepared: 02/06/2013

Analyst: KEB

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	<0.00100	0.100	0.0886	89	0.100	0.102	102	14	70-125	25
Toluene	<0.00200	0.100	0.0840	84	0.100	0.104	104	21	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0854	85	0.100	0.103	103	19	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.165	83	0.200	0.199	100	19	70-131	25	
o-Xylene	<0.00100	0.100	0.0818	82	0.100	0.102	102	22	71-133	25	

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

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

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



CHAIN OF CUSTODY RECORD

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
 Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O #: 450861

Field billable Hrs :

Container Type Codes	
VA Vial Amber	ES Encore Sampler
VC Vial Clear	TS TerraCore Sampler
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
PC Plastic Clear	
Other	

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal
 40ml, 125 ml, 250 ml, 500 ml, 1L, Other

Company: Basin Environmental Service Technologies, LLC Phone: (575)396-2378
 Address: 3100 Plains Hwy. Fax: (575)396-1429
 City: Lovington State: NM Zip: 88260
 PM/Attn: Ben Arguijo Email: bjaruijo@basinenv.com
 Project ID: Lovington Gathering WTI PO#: PAA-J. Henry
 SRS #2006-142
 Invoice To: Jason Henry Plains All American Quote #:

TAT Work Days = D Need results by: _____ Time: _____
 Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

Sampler Signature: [Signature] Circle One Event: Daily Weekly Monthly Quarterly
 Semi-Annual Annual N/A

ANALYSES REQUESTED

Analysis	TPH	BTEX	Chloride
Lab Only:			

Preservative Type Codes	
A. None	E. HCL
B. HNO ₃	F. MeOH
H ₂ SO ₄	G. Na ₂ S ₂ O ₃
D. NaOH	H. NaHSO ₄
I. Ice	J. MCAA
K. ZnAc&NaOH	L. Asbc Acid&NaOH
C.	

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Depth	Volume	Retention
1	MW-9	1/30/13	14:05	GW		3	
2	MW-10	1/30/13	14:20	GW		3	
3	MW-11	1/30/13	14:30	GW		3	
4							
5							
6							
7							
8							
9							
0							

Matrix Type Codes	
GW Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DW Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	
Other	

REMARKS

Reg. Program / Clean-up Std	STATE for Cons & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolest Temp °C	Lab. Use Only	YES	NO	NA
CTLs TRRP DW NPDES LPST DryCln	FL TX GA NC SC NJ PA OK LA	1 2 3 4 CLP AFCEE QAPP	ADaPT SEDD ERPIMS	Match Incomplete	18.2 3 1.5	Non-Conformances found?			
Other:	AL NM Other:	NELAC DoD-ELAP Other:	XLS Other:	Absent Unclear		Samples intact upon arrival?			
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time	Received on Wet Ice?	
1 <u>[Signature]</u>	Basin Env	1/31/13	13:45	<u>[Signature]</u>	Basin Env	1/31/13	13:45	Labeled with proper preservatives?	
2 <u>[Signature]</u>	Basin Env	1/31/13	14:30	<u>[Signature]</u>	MS	1/31/13	23:00	Received within holding time?	
3 <u>[Signature]</u>				<u>[Signature]</u>	XENCO	2/4/13	12:40	Custody seals intact?	
4								VOCs rec'd w/o headspace?	
								Proper containers used?	
								pH verified-acceptable, excl VOCs?	
								Received on time to meet HTs?	

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330 C.O.C. Serial #
 FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full. Revision Date: Nov 12, 2009



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 02/01/2013 12:40:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 456861

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____



CHAIN OF CUSTODY RECORD

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
 Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O #: 4568103
 Field billable Hrs: _____

Container Type Codes	
VA Vial Amber	ES Encore Sampler
VC Vial Clear	TS TerraCore Sampler
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
PC Plastic Clear	
Other _____	
Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal, 40ml, 125 ml, 250 ml, 500 ml, 1L, Other	

Company: Basin Environmental Service Technologies, LLC	Phone: (575)396-2378
Address: 3100 Plains Hwy.	Fax: (575)396-1429
City: Lovington	State: NM Zip: 88260
PM/Attn: Ben Arguijo	Email: bjarguijo@basinenv.com
Project ID: Lovington Gathering WTI SRS #2006-142	PO#: PAA-J. Henry
Invoice To: Jason Henry Plains All American	Quote #: _____
Sampler Signature:	Circle One Event: Daily Weekly <u>Monthly</u> Quarterly

TAT Work Days = D Need results by: _____ Time: _____
 Std (5-7D) 6Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	TPH	BTEX	Chloride	Other
1	JW Well	1/31/13	1250	GW		X		
2								
3								
4								
5								
6								
7								
8								
9								
0								

Preservative Type Codes		
A. None	E. HCL	I. Ice
B. HNO ₃	F. MeOH	J. MCAA
H ₂ SO ₄	G. Na ₂ S ₂ O ₃	K. ZnAc&NaOH
D. NaOH	H. NaHSO ₄	L. Asbc Acid&NaOH
O.		

Matrix Type Codes		
GW Ground Water	S Soil/Sediment/Solid	
WW Waste Water	W Wipe	
DW Drinking Water	A Air	
SW Surface Water	O Oil	
OW Ocean/Sea Water	T Tissue	
PL Product-Liquid	U Urine	
PS Product-Solid	B Blood	
SL Sludge		
Other		

REMARKS

3rd sample set from 1/30/13

Reg. Program	Clear-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coaters Temp: °C	Lab Use Only	YES NO N/A
CTLs TRRP DW NPDES LPST DryCln		FL TX GA NC SC NJ PA OK LA	1 2 3 4 CLP AFCEE QAPP	ADaPT SEDD ERPIMS	Match Incomplete	189 2 3 1.5	Non-Conformances found?	
Other:		AL NM Other:	NELAC DoD-ELAP Other:	XLS Other:	Absent Unclear		Samples intact upon arrival?	
	Retained by	Affiliator	Date	Time	Retained by	Affiliator	Date	Time
1		Basin Env	1/31/13	1930		MS	1/31/13	230
2					J. Arguijo	XENCO	2/1/13	12:40
3								
4								

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
 FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Analytical Report 458445

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo
Lovington Gathering WTI SRS #2006-142

04-MAR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



04-MAR-13

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

Reference: XENCO Report No(s): **458445**
Lovington Gathering WTI SRS #2006-142
Project Address: Lovington

Ben Arguijo:

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(s) 458445. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 458445 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,

Nicholas Straccione
Project Manager

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Sample Cross Reference 458445



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI SRS #2006-142

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	02-22-13 11:30		458445-001
MW-3	W	02-22-13 11:55		458445-002
MW-4	W	02-22-13 12:10		458445-003
MW-5	W	02-22-13 13:05		458445-004
MW-6	W	02-22-13 13:25		458445-005
MW-7	W	02-22-13 13:40		458445-006
MW-8	W	02-22-13 14:00		458445-007
MW-9	W	02-22-13 15:10		458445-008
MW-10	W	02-22-13 14:15		458445-009



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lovington Gathering WTI SRS #2006-142



Project ID:
Work Order Number(s): 458445

Report Date: 04-MAR-13
Date Received: 02/27/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 458445

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Project Location: Lovington

Date Received in Lab: Wed Feb-27-13 10:20 am

Report Date: 04-MAR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	458445-001	458445-002	458445-003	458445-004	458445-005	458445-006
	<i>Field Id:</i>	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Feb-22-13 11:30	Feb-22-13 11:55	Feb-22-13 12:10	Feb-22-13 13:05	Feb-22-13 13:25	Feb-22-13 13:40
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-01-13 07:50					
	<i>Analyzed:</i>	Mar-01-13 14:20	Mar-01-13 14:04	Mar-01-13 13:48	Mar-01-13 13:32	Mar-01-13 13:15	Mar-01-13 12:26
	<i>Units/RL:</i>	mg/L RL					
Benzene		ND 0.00100	0.0112 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m_p-Xylenes		ND 0.00200	0.00302 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00100	0.00212 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total Xylenes		ND 0.00100	0.00514 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total BTEX		ND 0.00100	0.0163 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Nicholas Straccione
Project Manager



Certificate of Analysis Summary 458445

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Date Received in Lab: Wed Feb-27-13 10:20 am

Report Date: 04-MAR-13

Project Location: Lovington

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	458445-007	458445-008	458445-009			
	<i>Field Id:</i>	MW-8	MW-9	MW-10			
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER			
	<i>Sampled:</i>	Feb-22-13 14:00	Feb-22-13 15:10	Feb-22-13 14:15			
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-01-13 07:50	Mar-01-13 07:50	Mar-01-13 07:50			
	<i>Analyzed:</i>	Mar-01-13 12:09	Mar-01-13 11:53	Mar-01-13 12:59			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
Benzene		ND 0.00100	ND 0.00100	ND 0.00100			
Toluene		ND 0.00200	ND 0.00200	ND 0.00200			
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100			
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200			
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100			
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100			
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100			

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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Nicholas Straccione
Project Manager

Flagging Criteria

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 9701 Harry Hines Blvd, Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 458445,

Project ID:

Lab Batch #: 908039

Sample: 458445-008 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 11:53	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0262	0.0300	87	80-120	
4-Bromofluorobenzene		0.0263	0.0300	88	80-120	

Lab Batch #: 908039

Sample: 458445-007 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 12:09	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0255	0.0300	85	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 908039

Sample: 458445-006 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 12:26	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0333	0.0300	111	80-120	

Lab Batch #: 908039

Sample: 458445-009 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 12:59	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0280	0.0300	93	80-120	
4-Bromofluorobenzene		0.0310	0.0300	103	80-120	

Lab Batch #: 908039

Sample: 458445-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 13:15	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0251	0.0300	84	80-120	
4-Bromofluorobenzene		0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 458445,

Project ID:

Lab Batch #: 908039

Sample: 458445-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 13:32	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0323	0.0300	108	80-120	
4-Bromofluorobenzene		0.0265	0.0300	88	80-120	

Lab Batch #: 908039

Sample: 458445-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 13:48	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	

Lab Batch #: 908039

Sample: 458445-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 14:04	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0264	0.0300	88	80-120	
4-Bromofluorobenzene		0.0274	0.0300	91	80-120	

Lab Batch #: 908039

Sample: 458445-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 14:20	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0269	0.0300	90	80-120	

Lab Batch #: 908039

Sample: 634479-1-BLK / BLK

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/01/13 09:10	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0314	0.0300	105	80-120	
4-Bromofluorobenzene		0.0294	0.0300	98	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 458445,

Project ID:

Lab Batch #: 908039

Sample: 634479-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/01/13 08:38		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0277	0.0300	92	80-120	
4-Bromofluorobenzene		0.0338	0.0300	113	80-120	

Lab Batch #: 908039

Sample: 634479-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/01/13 08:54		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0328	0.0300	109	80-120	

Lab Batch #: 908039

Sample: 458187-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/01/13 10:15		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0345	0.0300	115	80-120	

Lab Batch #: 908039

Sample: 458187-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/01/13 10:31		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		0.0305	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 458445

Analyst: KEB

Date Prepared: 03/01/2013

Project ID:

Date Analyzed: 03/01/2013

Lab Batch ID: 908039

Sample: 634479-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.0936	94	0.100	0.0997	100	6	70-125	25	
Toluene	<0.00200	0.100	0.0925	93	0.100	0.0973	97	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0943	94	0.100	0.0962	96	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.187	94	0.200	0.194	97	4	70-131	25	
o-Xylene	<0.00100	0.100	0.0936	94	0.100	0.0967	97	3	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 SRS #2006-142

Work Order #: 458445

Project ID:

Lab Batch ID: 908039

QC- Sample ID: 458187-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 03/01/2013

Date Prepared: 03/01/2013

Analyst: KEB

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	<0.00100	0.100	0.107	107	0.100	0.106	106	1	70-125	25
Toluene	<0.00200	0.100	0.109	109	0.100	0.102	102	7	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.108	108	1	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.205	103	0.200	0.208	104	1	70-131	25	
o-Xylene	<0.00100	0.100	0.102	102	0.100	0.104	104	2	71-133	25	

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

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

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



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 02/27/2013 10:20:00 AM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 458445

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____

Analytical Report 458587

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo
Lovington Gathering WTI SRS #2006-142

06-MAR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



06-MAR-13

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

Reference: XENCO Report No(s): **458587**
Lovington Gathering WTI SRS #2006-142
Project Address: Lovington

Ben Arguijo:

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(s) 458587. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 458587 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,

Nicholas Straccione
Project Manager

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 458587



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI SRS #2006-142

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Goff Dairy - Ctr. Pivot Well	W	02-28-13 09:30		458587-001
Goff Dairy - Ctr. Pivot Beg.	W	02-28-13 09:45		458587-002
Goff Dairy - Ctr. Pivot End	W	02-28-13 10:00		458587-003
J.W. Well	W	02-28-13 10:15		458587-004
MW-2	W	02-28-13 10:45		458587-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lovington Gathering WTI SRS #2006-142



Project ID:
Work Order Number(s): 458587

Report Date: 06-MAR-13
Date Received: 03/01/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 458587

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Project Location: Lovington

Date Received in Lab: Fri Mar-01-13 03:45 pm

Report Date: 06-MAR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	458587-001	458587-002	458587-003	458587-004	458587-005	
	<i>Field Id:</i>	Goff Dairy - Ctr. Pivot Well	Goff Dairy - Ctr. Pivot Beg.	Goff Dairy - Ctr. Pivot End	J.W. Well	MW-2	
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	
	<i>Sampled:</i>	Feb-28-13 09:30	Feb-28-13 09:45	Feb-28-13 10:00	Feb-28-13 10:15	Feb-28-13 10:45	
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-05-13 10:45	Mar-05-13 10:45	Mar-05-13 10:45	Mar-05-13 10:45	Mar-05-13 10:45	
	<i>Analyzed:</i>	Mar-05-13 16:18	Mar-05-13 16:34	Mar-05-13 16:51	Mar-05-13 17:07	Mar-05-13 17:24	
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Nicholas Straccione
Project Manager

Flagging Criteria

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 9701 Harry Hines Blvd , Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 458587, 458587

Project ID:

Lab Batch #: 908315

Sample: 458587-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/05/13 16:18	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0285	0.0300	95	80-120	
4-Bromofluorobenzene		0.0245	0.0300	82	80-120	

Lab Batch #: 908315

Sample: 458587-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/05/13 16:34	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0257	0.0300	86	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	

Lab Batch #: 908315

Sample: 458587-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/05/13 16:51	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0264	0.0300	88	80-120	

Lab Batch #: 908315

Sample: 458587-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/05/13 17:07	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0307	0.0300	102	80-120	
4-Bromofluorobenzene		0.0272	0.0300	91	80-120	

Lab Batch #: 908315

Sample: 458587-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/05/13 17:24	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0328	0.0300	109	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 458587, 458587

Project ID:

Lab Batch #: 908315

Sample: 634671-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/05/13 12:44		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0343	0.0300	114	80-120	
4-Bromofluorobenzene		0.0259	0.0300	86	80-120	

Lab Batch #: 908315

Sample: 634671-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/05/13 12:11		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0319	0.0300	106	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 908315

Sample: 634671-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/05/13 12:27		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0324	0.0300	108	80-120	
4-Bromofluorobenzene		0.0244	0.0300	81	80-120	

Lab Batch #: 908315

Sample: 458482-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/05/13 17:40		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0286	0.0300	95	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	

Lab Batch #: 908315

Sample: 458482-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 03/05/13 17:57		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 458587, 458587

Analyst: KEB

Date Prepared: 03/05/2013

Project ID:

Date Analyzed: 03/05/2013

Lab Batch ID: 908315

Sample: 634671-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.108	108	0.100	0.0926	93	15	70-125	25	
Toluene	<0.00200	0.100	0.105	105	0.100	0.0856	86	20	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.0880	88	21	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.209	105	0.200	0.171	86	20	70-131	25	
o-Xylene	<0.00100	0.100	0.107	107	0.100	0.0857	86	22	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 SRS #2006-142

Work Order #: 458587

Project ID:

Lab Batch ID: 908315

QC- Sample ID: 458482-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 03/05/2013

Date Prepared: 03/05/2013

Analyst: KEB

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	<0.00100	0.100	0.101	101	0.100	0.0922	92	9	70-125	25
Toluene	<0.00200	0.100	0.0948	95	0.100	0.0912	91	4	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0976	98	0.100	0.0910	91	7	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.187	94	0.200	0.175	88	7	70-131	25	
o-Xylene	<0.00100	0.100	0.0937	94	0.100	0.0843	84	11	71-133	25	

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

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

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



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 03/01/2013 03:45:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 458587

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____

Analytical Report 460151

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo
Lovington Gathering WTI SRS #2006-142

01-APR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



01-APR-13

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

Reference: XENCO Report No(s): **460151**
Lovington Gathering WTI SRS #2006-142
Project Address: Lovington

Ben Arguijo:

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(s) 460151. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 460151 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,

Nicholas Straccione
Project Manager

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

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 460151



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI SRS #2006-142

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
J.W. Well	W	03-27-13 08:15		460151-001
Goff Dairy Well	W	03-27-13 08:35		460151-002
Center Pivot Well	W	03-27-13 08:45		460151-003
Center Pivot Well Beg.	W	03-27-13 08:55		460151-004
Center Pivot Well End	W	03-27-13 09:15		460151-005
MW-9	W	03-27-13 13:30		460151-006
MW-10	W	03-27-13 13:45		460151-007



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lovington Gathering WTI SRS #2006-142



Project ID:
Work Order Number(s): 460151

Report Date: 01-APR-13
Date Received: 03/28/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 460151

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Project Location: Lovington

Date Received in Lab: Thu Mar-28-13 02:04 pm

Report Date: 01-APR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	460151-001	460151-002	460151-003	460151-004	460151-005	460151-006
	<i>Field Id:</i>	J.W. Well	Goff Dairy Well	Center Pivot Well	Center Pivot Well Beg.	Center Pivot Well End	MW-9
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Mar-27-13 08:15	Mar-27-13 08:35	Mar-27-13 08:45	Mar-27-13 08:55	Mar-27-13 09:15	Mar-27-13 13:30
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-28-13 16:10	Mar-28-13 16:10	Mar-28-13 16:10	Mar-28-13 16:10	Mar-28-13 16:10	Mar-28-13 16:10
	<i>Analyzed:</i>	Mar-28-13 21:28	Mar-28-13 22:17	Mar-28-13 22:33	Mar-28-13 22:50	Mar-29-13 07:23	Mar-28-13 23:22
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.9%

Nicholas Straccione
Project Manager



Certificate of Analysis Summary 460151

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Date Received in Lab: Thu Mar-28-13 02:04 pm

Report Date: 01-APR-13

Project Location: Lovington

Project Manager: Nicholas Straccione

Analysis Requested	Lab Id:	460151-007					
	Field Id:	MW-10					
	Depth:						
	Matrix:	WATER					
	Sampled:	Mar-27-13 13:45					
BTEX by EPA 8021B	Extracted:	Mar-28-13 16:10					
	Analyzed:	Mar-28-13 23:39					
	Units/RL:	mg/L RL					
Benzene		ND 0.00100					
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m_p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		ND 0.00100					

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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Version: 1.0%

Nicholas Straccione
Project Manager

Flagging Criteria

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 9701 Harry Hines Blvd, Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460151,

Project ID:

Lab Batch #: 910140

Sample: 460151-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 21:28	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0318	0.0300	106	80-120	

Lab Batch #: 910140

Sample: 460151-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 22:17	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0311	0.0300	104	80-120	
4-Bromofluorobenzene		0.0319	0.0300	106	80-120	

Lab Batch #: 910140

Sample: 460151-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 22:33	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzene		0.0307	0.0300	102	80-120	

Lab Batch #: 910140

Sample: 460151-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 22:50	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0287	0.0300	96	80-120	
4-Bromofluorobenzene		0.0303	0.0300	101	80-120	

Lab Batch #: 910140

Sample: 460151-006 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 23:22	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0290	0.0300	97	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460151,

Project ID:

Lab Batch #: 910140

Sample: 460151-007 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 23:39	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0285	0.0300	95	80-120	
4-Bromofluorobenzene		0.0272	0.0300	91	80-120	

Lab Batch #: 910140

Sample: 460151-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/29/13 07:23	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0256	0.0300	85	80-120	

Lab Batch #: 910140

Sample: 635836-1-BLK / BLK

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 21:11	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	
4-Bromofluorobenzene		0.0257	0.0300	86	80-120	

Lab Batch #: 910140

Sample: 635836-1-BKS / BKS

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 20:39	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	

Lab Batch #: 910140

Sample: 635836-1-BSD / BSD

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 03/28/13 20:55	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0328	0.0300	109	80-120	
4-Bromofluorobenzene		0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460151,

Project ID:

Lab Batch #: 910140

Sample: 460151-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/28/13 21:44

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	0.0302	0.0300	101	80-120	

Lab Batch #: 910140

Sample: 460151-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/28/13 22:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 460151

Project ID:

Analyst: KEB

Date Prepared: 03/28/2013

Date Analyzed: 03/28/2013

Lab Batch ID: 910140

Sample: 635836-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.0933	93	0.100	0.0971	97	4	70-125	25	
Toluene	<0.00200	0.100	0.0901	90	0.100	0.0963	96	7	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0830	83	0.100	0.0866	87	4	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.169	85	0.200	0.178	89	5	70-131	25	
o-Xylene	<0.00100	0.100	0.0930	93	0.100	0.0941	94	1	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 460151

Project ID:

Lab Batch ID: 910140

QC- Sample ID: 460151-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 03/28/2013

Date Prepared: 03/28/2013

Analyst: KEB

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	<0.00100	0.100	0.0891	89	0.100	0.0905	91	2	70-125	25
Toluene	<0.00200	0.100	0.0906	91	0.100	0.0880	88	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0816	82	0.100	0.0779	78	5	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.163	82	0.200	0.151	76	8	70-131	25	
o-Xylene	<0.00100	0.100	0.0910	91	0.100	0.0844	84	8	71-133	25	

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

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

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



CHAIN OF CUSTODY RECORD

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
 Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Page 1 of 1

LAB W.O #: 460151
 Field billable Hrs :

Container Type Codes		
VA Vial Amber	ES Encore Sampler	
VC Vial Clear	TS TerraCore Sampler	
VP Vial Pre-preserved	AC Air Canister	
GA Glass Amber	TB Tedlar Bag	
GC Glass Clear	ZB Zip Lock Bag	
PA Plastic Amber	PC Plastic Clear	
PC Plastic Clear		
Other		

Company: Basin Environmental Service Technologies, LLC Phone: (575)396-2378
 Address: 3100 Plains Hwy. Fax: (575)396-1429
 City: Lovington State: NM Zip: 88260
 PM/Attn: Ben Arguijo Email: bjarguijo@basinenv.com
 Project ID: Lovington Gathering WTI SRS #2006-142 PO#: PAA-J. Henry
 Invoice To: Jason Henry Plains All American Quote #:

TAT Work Days = D Need results by: _____ Time: _____
 Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Filter	Integrity	PK (M)	Volatiles	TPH	BTEX	Chloride	Lab Only
1	J.W. Well	3-27-13	08:15					3		X		
2	Goff Dairy Well	3-27-13	08:35					3		X		
3	Center Pivot Well	3-27-13	08:45					3		X		
4	Center Pivot Well Beg	3-17-13	08:55					3		X		
5	Center Pivot well End	3-17-13	09:15					1		X		
6	MW-9	3-17-13	13:30					3		X		
7	MW-10	3-17-13	13:45					3		X		

Preservative Type Codes		
A. None	F. MeOH	J. MCAA
B. HNO ₃	G. Na ₂ S ₂ O ₃	K. ZnAc&NaOH
D. NaOH	H. NaHSO ₄	L. Asbc Acid&NaOH
C.		

Matrix Type Codes		
GW Ground Water	S Soil/Sediment/Solid	
WW Waste Water	W Wipe	
DW Drinking Water	A Air	
SW Surface Water	O Oil	
OW Ocean/Sea Water	T Tissue	
PL Product-Liquid	U Urine	
PS Product-Solid	B Blood	
SL Sludge		
Other		

REMARKS

Reg. Program / Clear-up Sc	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	QC & Labels	Cooler Temp °C	Lab Use Only	YES	NO	NA
CTLs TRRP DW NPDES LPST DryCin	FL TX GA NC SC NJ PA OK LA	1 2 3 4 CLP AFCEE QAPP	ADaPT SEDD ERPIMS	Match Incomplete	1 2 3 1.0	Non-Conformances found?			
Other:	AL NM Other:	NELAC DoD-ELAP Other:	XLS Other:	Absent Unclear		Samples intact upon arrival?			
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time		
1 <i>Michael Ramo</i>	Basin Env.	3-27-13	14:25	<i>Shane...</i>	MS	3/27/13	2:05		
2				<i>Shane...</i>	Xenco	3/28/13	14:04		
3									
4									

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
 FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full. Revision Date: Nov 12, 2009

Final 1,000 Page 13 of 14



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 03/28/2013 02:04:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 460151

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____

Analytical Report 460960

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo
Lovington Gathering WTI SRS #2006-142

17-APR-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



17-APR-13

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

Reference: XENCO Report No(s): **460960**
Lovington Gathering WTI SRS #2006-142
Project Address: Lovington

Ben Arguijo:

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(s) 460960. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 460960 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,

Nicholas Straccione
Project Manager

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Sample Cross Reference 460960



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI SRS #2006-142

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Center Pivot Well	W	04-09-13 08:25		460960-001
Center Pivot Beg	W	04-09-13 08:30		460960-002
Center Pivot End	W	04-09-13 08:35		460960-003
Goff Dairy Well	W	04-09-13 08:45		460960-004
J.W. Well	W	04-09-13 09:00		460960-005
MW-9	W	04-09-13 10:05		460960-006
MW-10	W	04-09-13 10:00		460960-007



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lovington Gathering WTI SRS #2006-142



Project ID:
Work Order Number(s): 460960

Report Date: 17-APR-13
Date Received: 04/09/2013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 460960

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Project Location: Lovington

Date Received in Lab: Tue Apr-09-13 03:25 pm

Report Date: 17-APR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	460960-001	460960-002	460960-003	460960-004	460960-005	460960-006
	<i>Field Id:</i>	Center Pivot Well	Center Pivot Beg	Center Pivot End	Goff Dairy Well	J.W. Well	MW-9
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
<i>Sampled:</i>	Apr-09-13 08:25	Apr-09-13 08:30	Apr-09-13 08:35	Apr-09-13 08:45	Apr-09-13 09:00	Apr-09-13 10:05	
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-12-13 08:00	Apr-12-13 08:00	Apr-12-13 08:00	Apr-12-13 08:00	Apr-12-13 08:00	Apr-12-13 08:00
	<i>Analyzed:</i>	Apr-12-13 09:55	Apr-12-13 10:10	Apr-12-13 10:26	Apr-12-13 10:42	Apr-12-13 10:58	Apr-12-13 11:14
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100

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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Nicholas Straccione
Project Manager

Certificate of Analysis Summary 460960

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI SRS #2006-142



Project Id:

Contact: Ben Arguijo

Date Received in Lab: Tue Apr-09-13 03:25 pm

Report Date: 17-APR-13

Project Location: Lovington

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i> 460960-007 <i>Field Id:</i> MW-10 <i>Depth:</i> <i>Matrix:</i> WATER <i>Sampled:</i> Apr-09-13 10:00					
BTEX by EPA 8021B	<i>Extracted:</i> Apr-12-13 08:00 <i>Analyzed:</i> Apr-12-13 11:30 <i>Units/RL:</i> mg/L RL					
Benzene	ND	0.00100				
Toluene	ND	0.00200				
Ethylbenzene	ND	0.00100				
m_p-Xylenes	ND	0.00200				
o-Xylene	ND	0.00100				
Total Xylenes	ND	0.00100				
Total BTEX	ND	0.00100				

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Nicholas Straccione
Project Manager

Flagging Criteria

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 9701 Harry Hines Blvd, Dallas, TX 75220
 5332 Blackberry Drive, San Antonio TX 78238
 2505 North Falkenburg Rd, Tampa, FL 33619
 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460960,

Project ID:

Lab Batch #: 911347

Sample: 460960-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 04/12/13 09:55		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0344	0.0300	115	80-120	
4-Bromofluorobenzene		0.0243	0.0300	81	80-120	

Lab Batch #: 911347

Sample: 460960-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 04/12/13 10:10		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0330	0.0300	110	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	

Lab Batch #: 911347

Sample: 460960-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 04/12/13 10:26		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0338	0.0300	113	80-120	
4-Bromofluorobenzene		0.0248	0.0300	83	80-120	

Lab Batch #: 911347

Sample: 460960-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 04/12/13 10:42		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		0.0252	0.0300	84	80-120	

Lab Batch #: 911347

Sample: 460960-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 04/12/13 10:58		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0331	0.0300	110	80-120	
4-Bromofluorobenzene		0.0241	0.0300	80	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460960,

Project ID:

Lab Batch #: 911347

Sample: 460960-006 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 04/12/13 11:14	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0331	0.0300	110	80-120	
4-Bromofluorobenzene		0.0244	0.0300	81	80-120	

Lab Batch #: 911347

Sample: 460960-007 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 04/12/13 11:30	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0329	0.0300	110	80-120	
4-Bromofluorobenzene		0.0244	0.0300	81	80-120	

Lab Batch #: 911347

Sample: 636546-1-BLK / BLK

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 04/12/13 09:39	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0329	0.0300	110	80-120	
4-Bromofluorobenzene		0.0251	0.0300	84	80-120	

Lab Batch #: 911347

Sample: 636546-1-BKS / BKS

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 04/12/13 08:51	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0313	0.0300	104	80-120	
4-Bromofluorobenzene		0.0285	0.0300	95	80-120	

Lab Batch #: 911347

Sample: 636546-1-BSD / BSD

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 04/12/13 09:07	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0307	0.0300	102	80-120	
4-Bromofluorobenzene		0.0287	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI SRS #2006-142

Work Orders : 460960,

Project ID:

Lab Batch #: 911347

Sample: 460960-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/12/13 12:33

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	0.0271	0.0300	90	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 460960

Analyst: DYV

Date Prepared: 04/12/2013

Project ID:

Date Analyzed: 04/12/2013

Lab Batch ID: 911347

Sample: 636546-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.0921	92	0.100	0.0952	95	3	70-125	25	
Toluene	<0.00200	0.100	0.0815	82	0.100	0.0836	84	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0829	83	0.100	0.0854	85	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.167	84	0.200	0.172	86	3	70-131	25	
o-Xylene	<0.00100	0.100	0.0845	85	0.100	0.0877	88	4	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries



Project Name: Lovington Gathering WTI SRS #2006-142

Work Order #: 460960

Lab Batch #: 911347

Date Analyzed: 04/12/2013

QC- Sample ID: 460960-001 S

Reporting Units: mg/L

Date Prepared: 04/12/2013

Batch #: 1

Project ID:

Analyst: DYV

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
BTEX by EPA 8021B	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Benzene	<0.00100	0.100	0.0884	88	70-125	
Toluene	<0.00200	0.100	0.0782	78	70-125	
Ethylbenzene	<0.00100	0.100	0.0810	81	71-129	
m_p-Xylenes	<0.00200	0.200	0.163	82	70-131	
o-Xylene	<0.00100	0.100	0.0823	82	71-133	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference [E] = 200*(C-A)/(C+B)
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



CHAIN OF CUSTODY RECORD

Page 1 of 1

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O #: 460960

Field billable Hrs :

Container Type Codes

VA Vial Amber	ES Encore Sampler
VC Vial Clear	TS TerraCore Sampler
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
PC Plastic Clear	
Other	

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal
4um, 125 ml, 250 ml, 500 ml, 1L, Other

Preservative Type Codes

A. None	<u>E. HCl</u>	<u>I. Ice</u>	
B. HNO ₃	F. MeOH	J. MCAA	C.
H ₂ SO ₄	G. Na ₂ S ₂ O ₃	K. ZnAc&NaOH	
D. NaOH	H. NaHSO ₄	L. Asbc Acid&NaOH	
O.			

Matrix Type Codes

<u>GW</u> Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DW Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	
Other	

TAT Work Days = D Need results by: _____ Time: _____
(Std (5-7D)) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Container Type	Pres Type	Matrix	TPH	BTEX	Chloride										
				<u>VC</u>											
				<u>E-1</u>											

Company: Basin Environmental Service Technologies, LLC Phone: (575)396-2378
 Address: 3100 Plains Hwy. Fax: (575)396-1429
 City: Lovington State: NM Zip: 88260
 PM/Attn: Ben Arguijo Email: bjarguijo@basinenv.com
 Project ID: Lovington Gathering WTI SRS #2006-142 PO#: PAA-J. Henry
 Invoice To: Jason Henry Plains All American Quote #:

Sampler Signature: [Signature] Circle One Event: Daily Weekly Monthly Quarterly
 Semi-Annual Annual N/A

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Volume (mL)	Container	Exempt	Volatiles by 2000
1	Center Pivot Well	4.9.13	08:25				3			
2	Center Pivot Beg.	4.9.13	08:30				3			
3	Center Pivot End	4.9.13	08:35				3			
4	Golf Dairy well	4.9.13	08:45				3			
5	J.W. well	4.9.13	09:00				3			
6	MW-9	4.9.13	10:05				3			
7	MW-10	4.9.13	10:00				3			
8										
9										
0										

Lab Only:

REMARKS

Reg. Program / Clean-up Std.	STATE for Certs & Regs.	CAVOC Level & Certification	EDDs	QC & Labels	Coasters Temp. °C	Lab Use Only	
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	15.0 2 3	Lab Use Only YES NO N/A	
Relinquished by:	Affiliation	Date	Time	Received by:	Affiliation	Date	Time
1 <u>[Signature]</u>	Basin Env	4-9-13	11:00	<u>[Signature]</u>	Basin	4-9-13	11:00
2 <u>[Signature]</u>	Basin	4-9-13	11:05	<u>[Signature]</u>	Basin	4-9-13	11:05
3 <u>[Signature]</u>	Basin	4-9-13	3:25	<u>[Signature]</u>	MS	4-9-13	3:25
4							

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330 C.O.C. Serial #
 FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full. Revision Date: Nov 12, 2009

Final 1,000 Page 13 of 14



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 04/09/2013 03:25:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 460960

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: _____

Date: _____

Checklist reviewed by: _____

Date: _____

Analytical Report 464134

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

2006-142

05-JUN-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

05-JUN-13

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

Reference: XENCO Report No(s): **464134**
Lovington Gathering WTI
Project Address: Lovington, NM

Ben Arguijo:

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(s) 464134. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 464134 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,



Kelsey Brooks
Project Manager

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Sample Cross Reference 464134



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	05-23-13 14:45		464134-001
MW-3	W	05-23-13 14:00		464134-002
MW-4	W	05-23-13 15:00		464134-003
MW-5	W	05-23-13 14:25		464134-004
MW-6	W	05-23-13 14:40		464134-005
MW-7	W	05-23-13 11:30		464134-006
MW-8	W	05-23-13 11:10		464134-007
MW-9	W	05-29-13 10:20		464134-008
MW-10	W	05-23-13 10:35		464134-009
JW Well	W	05-29-13 11:40		464134-010

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142
Work Order Number(s): 464134

Report Date: 05-JUN-13
Date Received: 05/29/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-915358 BTEX by EPA 8021B
SW8021BM

Batch 915358, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 464134-004, -006.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



Project Id: 2006-142

Contact: Ben Arguijo

Project Location: Lovington, NM

Date Received in Lab: Wed May-29-13 02:00 pm

Report Date: 05-JUN-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	464134-001	464134-002	464134-003	464134-004	464134-005	464134-006
	<i>Field Id:</i>	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	May-23-13 14:45	May-23-13 14:00	May-23-13 15:00	May-23-13 14:25	May-23-13 14:40	May-23-13 11:30
BTEX by EPA 8021B	<i>Extracted:</i>	May-31-13 11:00	May-31-13 11:00	May-31-13 11:00	Jun-04-13 11:30	May-31-13 11:00	Jun-04-13 11:30
	<i>Analyzed:</i>	May-31-13 12:35	May-31-13 12:52	May-31-13 13:08	Jun-04-13 13:18	May-31-13 20:08	Jun-04-13 13:34
	<i>Units/RL:</i>	mg/L RL					
Benzene		ND 0.00100	0.00868 0.00100				
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m,p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		ND 0.00100	0.00868 0.00100				

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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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464134

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lovington Gathering WTI

Project Id: 2006-142

Contact: Ben Arguijo

Date Received in Lab: Wed May-29-13 02:00 pm

Report Date: 05-JUN-13

Project Location: Lovington, NM

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	464134-007	464134-008	464134-009	464134-010		
	<i>Field Id:</i>	MW-8	MW-9	MW-10	JW Well		
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER		
	<i>Sampled:</i>	May-23-13 11:10	May-29-13 10:20	May-23-13 10:35	May-29-13 11:40		
BTEX by EPA 8021B	<i>Extracted:</i>	May-31-13 11:00	May-31-13 11:00	May-31-13 11:00	May-31-13 11:00		
	<i>Analyzed:</i>	May-31-13 14:13	May-31-13 20:57	May-31-13 14:46	May-31-13 21:13		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200		
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
m,p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200		
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		

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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Kelsey Brooks
Project Manager

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 464134,

Project ID: 2006-142

Lab Batch #: 915160

Sample: 464134-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 12:35	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 915160

Sample: 464134-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 12:52	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	0.0281	0.0300	94	80-120	

Lab Batch #: 915160

Sample: 464134-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 13:08	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 915160

Sample: 464134-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 14:13	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 915160

Sample: 464134-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 14:46	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 464134,

Project ID: 2006-142

Lab Batch #: 915160

Sample: 464134-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 05/31/13 20:08	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0333	0.0300	111	80-120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	

Lab Batch #: 915160

Sample: 464134-008 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 05/31/13 20:57	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	

Lab Batch #: 915160

Sample: 464134-010 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 05/31/13 21:13	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0312	0.0300	104	80-120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	

Lab Batch #: 915358

Sample: 464134-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 06/04/13 13:18	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0279	0.0300	93	80-120	
4-Bromofluorobenzene		0.0286	0.0300	95	80-120	

Lab Batch #: 915358

Sample: 464134-006 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 06/04/13 13:34	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0332	0.0300	111	80-120	
4-Bromofluorobenzene		0.0245	0.0300	82	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 464134,

Project ID: 2006-142

Lab Batch #: 915160

Sample: 639030-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 05/31/13 12:03		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0245	0.0300	82	80-120	
4-Bromofluorobenzene		0.0344	0.0300	115	80-120	

Lab Batch #: 915358

Sample: 639146-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 06/04/13 13:01		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0278	0.0300	93	80-120	

Lab Batch #: 915160

Sample: 639030-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 05/31/13 11:30		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0240	0.0300	80	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	

Lab Batch #: 915358

Sample: 639146-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 06/04/13 12:29		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		0.0273	0.0300	91	80-120	

Lab Batch #: 915160

Sample: 639030-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 05/31/13 11:46		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0358	0.0300	119	80-120	
4-Bromofluorobenzene		0.0316	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 464134,

Project ID: 2006-142

Lab Batch #: 915358

Sample: 639146-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/04/13 12:45	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 915160

Sample: 464134-010 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 21:30	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 915358

Sample: 464200-004 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/04/13 14:56	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 915160

Sample: 464134-010 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/31/13 21:46	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 915358

Sample: 464200-004 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/04/13 15:12	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 464134

Analyst: DYV

Date Prepared: 05/31/2013

Project ID: 2006-142

Date Analyzed: 05/31/2013

Lab Batch ID: 915160

Sample: 639030-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.112	112	0.100	0.105	105	6	70-125	25	
Toluene	<0.00200	0.100	0.108	108	0.100	0.112	112	4	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.113	113	4	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.233	117	0.200	0.225	113	3	70-131	25	
o-Xylene	<0.00100	0.100	0.113	113	0.100	0.104	104	8	71-133	25	

Analyst: DYV

Date Prepared: 06/04/2013

Date Analyzed: 06/04/2013

Lab Batch ID: 915358

Sample: 639146-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.107	107	0.100	0.106	106	1	70-125	25	
Toluene	<0.00200	0.100	0.106	106	0.100	0.111	111	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.118	118	0.100	0.118	118	0	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.215	108	0.200	0.220	110	2	70-131	25	
o-Xylene	<0.00100	0.100	0.107	107	0.100	0.106	106	1	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 464134

Project ID: 2006-142

Lab Batch ID: 915160

QC- Sample ID: 464134-010 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/31/2013

Date Prepared: 05/31/2013

Analyst: DYV

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	<0.00100	0.100	0.0834	83	0.100	0.0884	88	6	70-125	25	
Toluene	<0.00200	0.100	0.0821	82	0.100	0.0998	100	19	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0912	91	0.100	0.106	106	15	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.163	82	0.200	0.188	94	14	70-131	25	
o-Xylene	<0.00100	0.100	0.0814	81	0.100	0.0861	86	6	71-133	25	

Lab Batch ID: 915358

QC- Sample ID: 464200-004 S

Batch #: 1 Matrix: Water

Date Analyzed: 06/04/2013

Date Prepared: 06/04/2013

Analyst: DYV

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	0.0201	0.100	0.117	97	0.100	0.118	98	1	70-125	25	
Toluene	<0.00200	0.100	0.105	105	0.100	0.109	109	4	70-125	25	
Ethylbenzene	<0.00100	0.100	0.112	112	0.100	0.114	114	2	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.211	106	0.200	0.226	113	7	70-131	25	
o-Xylene	<0.00100	0.100	0.103	103	0.100	0.113	113	9	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 05/29/2013 02:00:00 PM

Temperature Measuring device used :

Work Order #: 464134

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Kelsey Brooks* Date: 05/30/2013
 Kelsey Brooks

Checklist reviewed by: *Kelsey Brooks* Date: 05/30/2013
 Kelsey Brooks

Analytical Report 465764

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

2006-142

03-JUL-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

03-JUL-13

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

Reference: XENCO Report No(s): **465764**
Lovington Gathering WTI
Project Address: Lovington

Ben Arguijo:

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(s) 465764. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 465764 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,



Kelsey Brooks
Project 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*



Sample Cross Reference 465764



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	06-25-13 09:40		465764-001
MW-10	W	06-25-13 09:30		465764-002
Goff Dairy Well	W	06-25-13 10:00		465764-003
JW Well	W	06-25-13 10:15		465764-004
Goff Dairy-Ctr. Pivot Well	W	06-25-13 10:30		465764-005
Goff Dairy-Ctr. Pivot Beg.	W	06-25-13 10:45		465764-006
Goff Dairy-Ctr. Pivot End	W	06-25-13 11:00		465764-007



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142
Work Order Number(s): 465764

Report Date: 03-JUL-13
Date Received: 06/26/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 465764

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Jun-26-13 03:43 pm

Report Date: 03-JUL-13

Project Location: Lovington

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	465764-001	465764-002	465764-003	465764-004	465764-005	465764-006
	<i>Field Id:</i>	MW-9	MW-10	Goff Dairy Well	JW Well	Goff Dairy-Ctr. Pivot Well	Goff Dairy-Ctr. Pivot Beg.
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Jun-25-13 09:40	Jun-25-13 09:30	Jun-25-13 10:00	Jun-25-13 10:15	Jun-25-13 10:30	Jun-25-13 10:45
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-02-13 08:30	Jul-02-13 08:30				
	<i>Analyzed:</i>	Jul-02-13 11:56	Jul-02-13 12:12	Jul-02-13 12:28	Jul-02-13 12:44	Jul-02-13 13:00	Jul-02-13 13:16
	<i>Units/RL:</i>	mg/L RL	mg/L RL				
Benzene		ND 0.00100	ND 0.00100				
Toluene		ND 0.00200	ND 0.00200				
Ethylbenzene		ND 0.00100	ND 0.00100				
m,p-Xylenes		ND 0.00200	ND 0.00200				
o-Xylene		ND 0.00100	ND 0.00100				
Total Xylenes		ND 0.00100	ND 0.00100				
Total BTEX		ND 0.00100	ND 0.00100				

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Project Id: 2006-142

Contact: Ben Arguijo

Project Location: Lovington

Date Received in Lab: Wed Jun-26-13 03:43 pm

Report Date: 03-JUL-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	465764-007					
	Field Id:	Goff Dairy-Ctr. Pivot End					
	Depth:						
	Matrix:	WATER					
	Sampled:	Jun-25-13 11:00					
BTEX by EPA 8021B	Extracted:	Jul-02-13 08:30					
	Analyzed:	Jul-02-13 13:32					
	Units/RL:	mg/L RL					
Benzene		ND 0.00100					
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m,p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		ND 0.00100					

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analytical Results 465764



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

Sample Id: **MW-9**
Lab Sample Id: 465764-001

Matrix: Water
Date Collected: 06.25.13 09.40

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 11.56	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 11.56	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 11.56	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 11.56	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 11.56	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 11.56	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 11.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	80-120	07.02.13 11.56		
4-Bromofluorobenzene	460-00-4	84	%	80-120	07.02.13 11.56		



Certificate of Analytical Results 465764



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

Sample Id: **MW-10**
Lab Sample Id: 465764-002

Matrix: Water
Date Collected: 06.25.13 09.30

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 12.12	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 12.12	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 12.12	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 12.12	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 12.12	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 12.12	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 12.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	80-120	07.02.13 12.12		
4-Bromofluorobenzene	460-00-4	85	%	80-120	07.02.13 12.12		



Certificate of Analytical Results 465764



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

Sample Id: **Goff Dairy Well**

Matrix: Water

Date Received: 06.26.13 15.43

Lab Sample Id: 465764-003

Date Collected: 06.25.13 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 12.28	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 12.28	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 12.28	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 12.28	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 12.28	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 12.28	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 12.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	80-120	07.02.13 12.28		
4-Bromofluorobenzene	460-00-4	81	%	80-120	07.02.13 12.28		



Certificate of Analytical Results 465764



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

Sample Id: **JW Well**
Lab Sample Id: 465764-004

Matrix: Water
Date Collected: 06.25.13 10.15

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 12.44	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 12.44	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 12.44	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 12.44	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 12.44	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 12.44	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 12.44	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	80-120	07.02.13 12.44		
4-Bromofluorobenzene	460-00-4	82	%	80-120	07.02.13 12.44		



Certificate of Analytical Results 465764



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

Sample Id: **Goff Dairy-Ctr. Pivot Well**
Lab Sample Id: 465764-005

Matrix: Water
Date Collected: 06.25.13 10.30

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 13.00	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 13.00	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 13.00	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 13.00	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 13.00	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 13.00	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 13.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	120	%	80-120	07.02.13 13.00		
4-Bromofluorobenzene	460-00-4	83	%	80-120	07.02.13 13.00		



Certificate of Analytical Results 465764



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

Sample Id: **Goff Dairy-Ctr. Pivot Beg.**
Lab Sample Id: 465764-006

Matrix: Water
Date Collected: 06.25.13 10.45

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 13.16	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 13.16	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 13.16	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 13.16	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 13.16	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 13.16	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 13.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	120	%	80-120	07.02.13 13.16		
4-Bromofluorobenzene	460-00-4	84	%	80-120	07.02.13 13.16		



Certificate of Analytical Results 465764



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

Sample Id: **Goff Dairy-Ctr. Pivot End**
Lab Sample Id: 465764-007

Matrix: Water
Date Collected: 06.25.13 11.00

Date Received: 06.26.13 15.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DYV

% Moisture:

Analyst: DYV

Date Prep: 07.02.13 08.30

Seq Number: 917642

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00100	mg/L	07.02.13 13.32	U	1
Toluene	108-88-3	ND	0.00200	mg/L	07.02.13 13.32	U	1
Ethylbenzene	100-41-4	ND	0.00100	mg/L	07.02.13 13.32	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	mg/L	07.02.13 13.32	U	1
o-Xylene	95-47-6	ND	0.00100	mg/L	07.02.13 13.32	U	1
Total Xylenes	1330-20-7	ND	0.00100	mg/L	07.02.13 13.32	U	1
Total BTEX		ND	0.00100	mg/L	07.02.13 13.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	80-120	07.02.13 13.32		
4-Bromofluorobenzene	460-00-4	86	%	80-120	07.02.13 13.32		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



PLAINS ALL AMERICAN EH&S
Lovington Gathering WTI

Analytical Method: BTEX by EPA 8021B

Seq Number: 917642

MB Sample Id: 640592-1-BLK

Matrix: Water

LCS Sample Id: 640592-1-BKS

Prep Method: SW5030B

Date Prep: 07.02.13

LCSD Sample Id: 640592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.109	109	0.114	114	70-125	4	25	mg/L	07.02.13 10:36	
Toluene	<0.00200	0.100	0.0928	93	0.0920	92	70-125	1	25	mg/L	07.02.13 10:36	
Ethylbenzene	<0.00100	0.100	0.0805	81	0.0820	82	71-129	2	25	mg/L	07.02.13 10:36	
m,p-Xylenes	<0.00200	0.200	0.161	81	0.164	82	70-131	2	25	mg/L	07.02.13 10:36	
o-Xylene	<0.00100	0.100	0.0829	83	0.0846	85	71-133	2	25	mg/L	07.02.13 10:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	118		104		107		80-120	%	07.02.13 10:36
4-Bromofluorobenzene	80		87		80		80-120	%	07.02.13 10:36

Analytical Method: BTEX by EPA 8021B

Seq Number: 917642

Parent Sample Id: 465764-002

Matrix: Water

MS Sample Id: 465764-002 S

Prep Method: SW5030B

Date Prep: 07.02.13

MSD Sample Id: 465764-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.120	120	0.117	117	70-125	3	25	mg/L	07.02.13 14:52	
Toluene	<0.00200	0.100	0.0910	91	0.0933	93	70-125	2	25	mg/L	07.02.13 14:52	
Ethylbenzene	<0.00100	0.100	0.0804	80	0.0837	84	71-129	4	25	mg/L	07.02.13 14:52	
m,p-Xylenes	<0.00200	0.200	0.162	81	0.166	83	70-131	2	25	mg/L	07.02.13 14:52	
o-Xylene	<0.00100	0.100	0.0830	83	0.0842	84	71-133	1	25	mg/L	07.02.13 14:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		94		80-120	%	07.02.13 14:52
4-Bromofluorobenzene	81		83		80-120	%	07.02.13 14:52



CHAIN OF CUSTODY RECORD

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Page 1 of 1

LAB W.O.# :

465764

Field billable Hrs :

* Container Type Codes

- VA Vial Amber ES Encore Sampler
- VC Vial Clear TS TerraCore Sampler
- VP Vial Pre-preserved AC Air Canister
- GA Glass Amber TB Tedlar Bag
- GC Glass Clear ZB Zip Lock Bag
- PA Plastic Amber PC Plastic Clear
- PC Plastic Clear

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal, 40ml, 125 ml, 250 ml, 500 ml, 1L, Other

** Preservative Type Codes

- A. None E. HCL I. Ice
- B. HNO₃ F. MeOH J. MCAA C.
- H₂SO₄ G. Na₂S₂O₃ K. ZnAc&NaOH
- D. NaOH H. NaHSO₄ L. Asbc Acid&NaOH
- O.

^ Matrix Type Codes

- GW Ground Water S Soil/Sediment/Solid
- WW Waste Water W Wipe
- DW Drinking Water A Air
- SW Surface Water O Oil
- OW Ocean/Sea Water T Tissue
- PL Product-Liquid U Urine
- PS Product-Solid B Blood
- SL Sludge
- Other

Company: Basin Environmental Service Technologies, LLC Phone: (575)396-2378
 Address: 3100 Plains Hwy. Fax: (575)396-1429
 City: Lovington State: NM Zip: 88260
 PM/Attn: Ben J. Arguijo Email: bjarguijo@basinenv.com
 Project ID: Lovington Gathering WTI SRS #2006-142 PO#: PAA-J. Henry
 Invoice To: Jason Henry Plains All American Quote #:
 Sampler Signature: Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

TAT Work Days = D Need results by: _____ Time: _____
 Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Example Volatiles by 8260	Cont Type *	VC	Pres Type **	Hold Sample (CALL) on Highest TPH	Run PAH Only if
									E, I	E, I			
1	MW-9	6/25/13	9:40	GW			3	TPH					
2	MW-10	6/25/13	9:30	GW			3	BTEX					
3	Goff Dairy Well	6/25/13	10:00	GW			3	Chloride					
4	JW Well	6/25/13	10:15	GW			3						
5	Goff Dairy - Ctr. Pivot Well	6/25/13	10:30	GW			3						
6	Goff Dairy - Ctr. Pivot Beg.	6/25/13	10:45	GW			3						
7	Goff Dairy - Ctr. Pivot End	6/25/13	11:00	GW			3						
8													
9													
0													

REMARKS

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C	Lab Use Only	YES NO N/A
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADAPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	18.52 3	Non-Conformances found? Samples intact upon arrival? Received on Wet Ice? Labeled with proper preservatives? Received within holding time? Custody seals intact? VOCs rec'd w/o headspace? Proper containers used? pH verified-acceptable, excl VOCs? Received on time to meet HTs?	_____ _____ _____ _____ _____ _____ _____ _____ _____
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1 <i>Joel Jansen</i>		6-26-13	6:45	<i>Adrian...</i>		6-26-13	6:45
2 <i>Ben J. Arguijo</i>		6-26-13	3:40	<i>MS</i>		6-26-13	3:40
3							
4							

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

C.O.C. Serial #



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 06/26/2013 03:43:00 PM

Temperature Measuring device used :

Work Order #: 465764

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Kelsey Brooks* Date: 06/27/2013
 Kelsey Brooks

Checklist reviewed by: *Kelsey Brooks* Date: 06/27/2013
 Kelsey Brooks

Analytical Report 466896

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijjo

Lovington Gathering WTI

2006-142

23-JUL-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



23-JUL-13

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

Reference: XENCO Report No(s): **466896**
Lovington Gathering WTI
Project Address:

Ben Arguijjo:

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(s) 466896. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 466896 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,

Kelsey Brooks
Project Manager

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Sample Cross Reference 466896



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	07-16-13 00:00		466896-001
MW-10	W	07-16-13 00:00		466896-002
Goff Dairy Well	W	07-16-13 00:00		466896-003
JW Well	W	07-16-13 00:00		466896-004



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142
Work Order Number(s): 466896

Report Date: 23-JUL-13
Date Received: 07/17/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 466896

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Ben Arguijjo

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Jul-17-13 08:43 am

Report Date: 23-JUL-13

Project Location:

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	466896-001	466896-002	466896-003	466896-004		
	<i>Field Id:</i>	MW-9	MW-10	Goff Dairy Well	JW Well		
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER		
	<i>Sampled:</i>	Jul-16-13 00:00	Jul-16-13 00:00	Jul-16-13 00:00	Jul-16-13 00:00		
BTEX by EPA 8021	<i>Extracted:</i>	Jul-22-13 16:00	Jul-22-13 16:00	Jul-22-13 16:00	Jul-22-13 16:00		
	<i>Analyzed:</i>	Jul-22-13 21:19	Jul-22-13 21:35	Jul-22-13 21:51	Jul-22-13 22:07		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200		
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200		
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Xylenes, Total		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100		

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
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- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 466896,

Project ID: 2006-142

Lab Batch #: 918983

Sample: 466896-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 07/22/13 21:19	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	

Lab Batch #: 918983

Sample: 466896-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 07/22/13 21:35	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0289	0.0300	96	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

Lab Batch #: 918983

Sample: 466896-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 07/22/13 21:51	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0259	0.0300	86	80-120	

Lab Batch #: 918983

Sample: 466896-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 07/22/13 22:07	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0286	0.0300	95	80-120	
4-Bromofluorobenzene		0.0253	0.0300	84	80-120	

Lab Batch #: 918983

Sample: 641457-1-BLK / BLK

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 07/22/13 21:03	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0251	0.0300	84	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 466896,

Project ID: 2006-142

Lab Batch #: 918983

Sample: 641457-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 07/22/13 20:15		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0330	0.0300	110	80-120	
4-Bromofluorobenzene		0.0287	0.0300	96	80-120	

Lab Batch #: 918983

Sample: 641457-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 07/22/13 20:31		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0323	0.0300	108	80-120	
4-Bromofluorobenzene		0.0297	0.0300	99	80-120	

Lab Batch #: 918983

Sample: 466896-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 07/22/13 23:59		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0330	0.0300	110	80-120	
4-Bromofluorobenzene		0.0311	0.0300	104	80-120	

Lab Batch #: 918983

Sample: 466896-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 07/23/13 00:15		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0320	0.0300	107	80-120	
4-Bromofluorobenzene		0.0301	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 466896

Analyst: KEB

Date Prepared: 07/22/2013

Project ID: 2006-142

Date Analyzed: 07/22/2013

Lab Batch ID: 918983

Sample: 641457-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.00100	0.100	0.101	101	0.100	0.101	101	0	70-125	25	
Toluene	<0.00200	0.100	0.0964	96	0.100	0.0973	97	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0979	98	0.100	0.100	100	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.193	97	0.200	0.198	99	3	70-131	25	
o-Xylene	<0.00100	0.100	0.0956	96	0.100	0.0981	98	3	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 #: 466896

Project ID: 2006-142

Lab Batch ID: 918983

QC- Sample ID: 466896-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 07/22/2013

Date Prepared: 07/22/2013

Analyst: KEB

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.111	111	0.100	0.105	105	6	70-125	25	
Toluene	<0.00200	0.100	0.107	107	0.100	0.102	102	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.106	106	5	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.218	109	0.200	0.207	104	5	70-131	25	
o-Xylene	<0.00100	0.100	0.109	109	0.100	0.104	104	5	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 07/17/2013 08:43:00 AM

Temperature Measuring device used :

Work Order #: 466896

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Kelsey Brooks* Date: 07/18/2013
 Kelsey Brooks

Checklist reviewed by: *Kelsey Brooks* Date: 07/18/2013
 Kelsey Brooks



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 07/17/2013 08:43:00 AM

Temperature Measuring device used :

Work Order #: 466896

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Kelsey Brooks* Date: 07/18/2013
 Kelsey Brooks

Checklist reviewed by: *Kelsey Brooks* Date: 07/18/2013
 Kelsey Brooks

Analytical Report 469081, 469097

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

SRS# 2006-142

28-AUG-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



Sample Cross Reference 469081



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	08-21-13 12:00		469081-001
MW-3	W	08-21-13 11:00		469081-002
MW-5	W	08-21-13 11:30		469081-003
MW-7	W	08-21-13 10:00		469081-004
MW-8	W	08-21-13 09:30		469081-005
MW-9	W	08-21-13 14:30		469081-006



Sample Cross Reference 469097



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
JW WELL	W	08-21-13 14:15		469097-001
GOFF DAIRY WELL	W	08-21-13 14:00		469097-002
GOFF DAIRY--CTR. PIVOT WELL	W	08-21-13 13:40		469097-003
GOFF DAIRY--CTR. PIVOT END	W	08-21-13 13:50		469097-004
GOFF DAIRY--CTR. PIVOT BEG.	W	08-21-13 13:30		469097-005



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: SRS# 2006-142
Work Order Number(s): 469081

Report Date: 28-AUG-13
Date Received: 08/23/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: SRS# 2006-142
Work Order Number(s): 469097

Report Date: 28-AUG-13
Date Received: 08/23/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 469081

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Aug-23-13 09:34 am

Report Date: 28-AUG-13

Project Location: NM

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469081-001	469081-002	469081-003	469081-004	469081-005	469081-006
	<i>Field Id:</i>	MW-1	MW-3	MW-5	MW-7	MW-8	MW-9
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
<i>Sampled:</i>	Aug-21-13 12:00	Aug-21-13 11:00	Aug-21-13 11:30	Aug-21-13 10:00	Aug-21-13 09:30	Aug-21-13 14:30	
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-27-13 10:00					
	<i>Analyzed:</i>	Aug-27-13 14:40	Aug-27-13 14:57	Aug-27-13 15:12	Aug-27-13 15:28	Aug-27-13 16:45	Aug-27-13 17:01
	<i>Units/RL:</i>	mg/L RL					
Benzene		ND 0.00100					
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m,p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		ND 0.00100					

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 469097

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Aug-23-13 09:45 am

Report Date: 28-AUG-13

Project Location:

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	469097-001	469097-002	469097-003	469097-004	469097-005	
	Field Id:	JW WELL	GOFF DAIRY WELL	GOFF DAIRY--CTR. PIVO	GOFF DAIRY--CTR. PIVO	GOFF DAIRY--CTR. PIVO	
	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Aug-21-13 14:15	Aug-21-13 14:00	Aug-21-13 13:40	Aug-21-13 13:50	Aug-21-13 13:30	
BTEX by EPA 8021B	Extracted:	Aug-27-13 10:00	Aug-27-13 10:00	Aug-27-13 10:00	Aug-27-13 10:00	Aug-27-13 10:00	
	Analyzed:	Aug-27-13 17:17	Aug-27-13 17:33	Aug-27-13 17:49	Aug-27-13 18:06	Aug-27-13 18:22	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Toluene		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
m,p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	ND 0.00200	
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Total Xylenes		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	

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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Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 469081,

Project ID: SRS# 2006-142

Lab Batch #: 921619

Sample: 469081-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 14:40	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0300	0.0300	100	80-120	
4-Bromofluorobenzene		0.0250	0.0300	83	80-120	

Lab Batch #: 921619

Sample: 469081-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 14:57	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0247	0.0300	82	80-120	

Lab Batch #: 921619

Sample: 469081-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 15:12	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0303	0.0300	101	80-120	
4-Bromofluorobenzene		0.0244	0.0300	81	80-120	

Lab Batch #: 921619

Sample: 469081-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 15:28	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0302	0.0300	101	80-120	
4-Bromofluorobenzene		0.0250	0.0300	83	80-120	

Lab Batch #: 921619

Sample: 469081-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 16:45	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0336	0.0300	112	80-120	
4-Bromofluorobenzene		0.0241	0.0300	80	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 469081,

Project ID: SRS# 2006-142

Lab Batch #: 921619

Sample: 469081-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 17:01		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		0.0247	0.0300	82	80-120	

Lab Batch #: 921619

Sample: 643137-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 13:42		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0308	0.0300	103	80-120	
4-Bromofluorobenzene		0.0254	0.0300	85	80-120	

Lab Batch #: 921619

Sample: 643137-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 12:54		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		0.0267	0.0300	89	80-120	

Lab Batch #: 921619

Sample: 643137-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 13:10		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

Lab Batch #: 921619

Sample: 469081-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 15:44		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 469081

Analyst: JUM

Date Prepared: 08/27/2013

Project ID: SRS# 2006-142

Date Analyzed: 08/27/2013

Lab Batch ID: 921619

Sample: 643137-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.105	105	0.100	0.104	104	1	70-125	25	
Toluene	<0.00200	0.100	0.0976	98	0.100	0.0962	96	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0939	94	0.100	0.0929	93	1	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.185	93	0.200	0.184	92	1	70-131	25	
o-Xylene	<0.00100	0.100	0.0926	93	0.100	0.0916	92	1	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 469081

Lab Batch #: 921619

Date Analyzed: 08/27/2013

QC- Sample ID: 469081-001 S

Reporting Units: mg/L

Date Prepared: 08/27/2013

Batch #: 1

Project ID: SRS# 2006-142

Analyst: JUM

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00100	0.100	0.119	119	70-125	
Toluene	<0.00200	0.100	0.110	110	70-125	
Ethylbenzene	<0.00100	0.100	0.107	107	71-129	
m,p-Xylenes	<0.00200	0.200	0.210	105	70-131	
o-Xylene	<0.00100	0.100	0.105	105	71-133	

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

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 469097,

Project ID: SRS# 2006-142

Lab Batch #: 921619

Sample: 469097-001 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 17:17	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0249	0.0300	83	80-120	

Lab Batch #: 921619

Sample: 469097-002 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 17:33	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0297	0.0300	99	80-120	
4-Bromofluorobenzene		0.0246	0.0300	82	80-120	

Lab Batch #: 921619

Sample: 469097-003 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 17:49	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0302	0.0300	101	80-120	
4-Bromofluorobenzene		0.0255	0.0300	85	80-120	

Lab Batch #: 921619

Sample: 469097-004 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 18:06	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0300	0.0300	100	80-120	
4-Bromofluorobenzene		0.0247	0.0300	82	80-120	

Lab Batch #: 921619

Sample: 469097-005 / SMP

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 08/27/13 18:22	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021B						
Analytes						
1,4-Difluorobenzene		0.0303	0.0300	101	80-120	
4-Bromofluorobenzene		0.0252	0.0300	84	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 469097,

Project ID: SRS# 2006-142

Lab Batch #: 921619

Sample: 643137-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 13:42		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0308	0.0300	103	80-120	
4-Bromofluorobenzene		0.0254	0.0300	85	80-120	

Lab Batch #: 921619

Sample: 643137-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 12:54		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		0.0267	0.0300	89	80-120	

Lab Batch #: 921619

Sample: 643137-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 13:10		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

Lab Batch #: 921619

Sample: 469081-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 08/27/13 15:44		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 469097

Analyst: JUM

Date Prepared: 08/27/2013

Project ID: SRS# 2006-142

Date Analyzed: 08/27/2013

Lab Batch ID: 921619

Sample: 643137-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00100	0.100	0.105	105	0.100	0.104	104	1	70-125	25	
Toluene	<0.00200	0.100	0.0976	98	0.100	0.0962	96	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0939	94	0.100	0.0929	93	1	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.185	93	0.200	0.184	92	1	70-131	25	
o-Xylene	<0.00100	0.100	0.0926	93	0.100	0.0916	92	1	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 469097

Lab Batch #: 921619

Date Analyzed: 08/27/2013

QC- Sample ID: 469081-001 S

Reporting Units: mg/L

Date Prepared: 08/27/2013

Batch #: 1

Project ID: SRS# 2006-142

Analyst: JUM

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00100	0.100	0.119	119	70-125	
Toluene	<0.00200	0.100	0.110	110	70-125	
Ethylbenzene	<0.00100	0.100	0.107	107	71-129	
m,p-Xylenes	<0.00200	0.200	0.210	105	70-131	
o-Xylene	<0.00100	0.100	0.105	105	71-133	

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

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 08/23/2013 09:45:00 AM

Temperature Measuring device used :

Work Order #: 469097

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Kelsey Brooks* Date: 08/23/2013
 Kelsey Brooks

Checklist reviewed by: *Kelsey Brooks* Date: 08/23/2013
 Kelsey Brooks



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 08/23/2013 09:34:00 AM

Temperature Measuring device used :

Work Order #: 469081

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: 

 Kelsey Brooks

Date: 08/23/2013 _____

Checklist reviewed by: 

 Kelsey Brooks

Date: 08/23/2013 _____

Analytical Report 470800
for
PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

SRS#2006-142

26-SEP-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



26-SEP-13

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

Reference: XENCO Report No(s): **470800**
Lovington Gathering WTI
Project Address:

Ben Arguijo:

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(s) 470800. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 470800 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,

Kelsey Brooks

Project Manager

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Sample Cross Reference 470800



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	09-19-13 15:30		470800-001
JW Well	W	09-19-13 10:30		470800-002
Goff Dairy Well	W	09-19-13 10:00		470800-003



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: SRS#2006-142
Work Order Number(s): 470800

Report Date: 26-SEP-13
Date Received: 09/20/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 470800

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS#2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-20-13 08:40 am

Report Date: 26-SEP-13

Project Location:

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	470800-001	470800-002	470800-003			
	<i>Field Id:</i>	MW-9	JW Well	Goff Dairy Well			
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER			
	<i>Sampled:</i>	Sep-19-13 15:30	Sep-19-13 10:30	Sep-19-13 10:00			
BTEX by EPA 8021	<i>Extracted:</i>	Sep-25-13 17:00	Sep-25-13 17:00	Sep-25-13 17:00			
	<i>Analyzed:</i>	Sep-25-13 22:44	Sep-25-13 23:00	Sep-25-13 23:16			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
Benzene		ND 0.00100	ND 0.00100	ND 0.00100			
Toluene		ND 0.00200	ND 0.00200	ND 0.00200			
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100			
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200			
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100			
Xylenes, Total		ND 0.00100	ND 0.00100	ND 0.00100			
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100			

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd , Dallas, TX 75220	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 470800,

Project ID: SRS#2006-142

Lab Batch #: 923642

Sample: 470800-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 09/25/13 22:44		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0304	0.0300	101	80-120	
4-Bromofluorobenzene		0.0300	0.0300	100	80-120	

Lab Batch #: 923642

Sample: 470800-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 09/25/13 23:00		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		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		0.0297	0.0300	99	80-120	

Lab Batch #: 923642

Sample: 470800-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 09/25/13 23:16		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		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		0.0297	0.0300	99	80-120	

Lab Batch #: 923642

Sample: 644409-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 09/25/13 20:53		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		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		0.0296	0.0300	99	80-120	

Lab Batch #: 923642

Sample: 644409-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L		Date Analyzed: 09/25/13 20:05		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		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		0.0296	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 470800,

Project ID: SRS#2006-142

Lab Batch #: 923642

Sample: 644409-1-BSD / BSD

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 09/25/13 20:21	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0310	0.0300	103	80-120	
4-Bromofluorobenzene		0.0313	0.0300	104	80-120	

Lab Batch #: 923642

Sample: 470800-003 S / MS

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 09/26/13 09:00	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0298	0.0300	99	80-120	
4-Bromofluorobenzene		0.0300	0.0300	100	80-120	

Lab Batch #: 923642

Sample: 470800-003 SD / MSD

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY						
Units: mg/L	Date Analyzed: 09/26/13 08:44	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	
4-Bromofluorobenzene		0.0331	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 470800

Analyst: ARM

Date Prepared: 09/25/2013

Project ID: SRS#2006-142

Date Analyzed: 09/25/2013

Lab Batch ID: 923642

Sample: 644409-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.00100	0.100	0.108	108	0.100	0.114	114	5	70-125	25	
Toluene	<0.00200	0.100	0.106	106	0.100	0.113	113	6	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0988	99	0.100	0.105	105	6	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.198	99	0.200	0.210	105	6	70-131	25	
o-Xylene	<0.00100	0.100	0.0992	99	0.100	0.106	106	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 #: 470800

Project ID: SRS#2006-142

Lab Batch ID: 923642

QC- Sample ID: 470800-003 S

Batch #: 1 Matrix: Water

Date Analyzed: 09/26/2013

Date Prepared: 09/25/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.117	117	0.100	0.125	125	7	70-125	25	
Toluene	<0.00200	0.100	0.115	115	0.100	0.124	124	8	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.115	115	5	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.231	116	5	70-131	25	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.115	115	6	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 09/20/2013 08:40:00 AM

Temperature Measuring device used :

Work Order #: 470800

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	7.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Candace James*
 Candace James

Date: 09/23/2013

Checklist reviewed by: *Julian Martinez*
 Julian Martinez

Date: 09/23/2013



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 09/20/2013 08:40:00 AM

Temperature Measuring device used :

Work Order #: 470800

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	7.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
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#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ?	Yes
#22 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Candace James*
 Candace James

Date: 09/23/2013

Checklist reviewed by: _____

Date: 09/23/2013

Analytical Report 472835

for
PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

SRS#2006-142

31-OCT-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



31-OCT-13

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

Reference: XENCO Report No(s): **472835**
Lovington Gathering WTI
Project Address:

Ben Arguijo:

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(s) 472835. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 472835 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,

Kelsey Brooks

Project Manager

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Sample Cross Reference 472835



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	10-23-13 15:00		472835-001
MW-10	W	10-23-13 09:00		472835-002
Goff Dairy Well	W	10-23-13 08:30		472835-003



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: SRS#2006-142
Work Order Number(s): 472835

Report Date: 31-OCT-13
Date Received: 10/24/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 472835

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS#2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Oct-24-13 08:33 am

Report Date: 31-OCT-13

Project Location:

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	472835-001	472835-002	472835-003			
	<i>Field Id:</i>	MW-9	MW-10	Goff Dairy Well			
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER			
	<i>Sampled:</i>	Oct-23-13 15:00	Oct-23-13 09:00	Oct-23-13 08:30			
BTEX by EPA 8021	<i>Extracted:</i>	Oct-28-13 18:00	Oct-28-13 18:00	Oct-28-13 18:00			
	<i>Analyzed:</i>	Oct-30-13 17:34	Oct-30-13 17:50	Oct-30-13 18:06			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
Benzene		ND 0.00100	ND 0.00100	ND 0.00100			
Toluene		ND 0.00200	ND 0.00200	ND 0.00200			
Ethylbenzene		ND 0.00100	ND 0.00100	ND 0.00100			
m_p-Xylenes		ND 0.00200	ND 0.00200	ND 0.00200			
o-Xylene		ND 0.00100	ND 0.00100	ND 0.00100			
Xylenes, Total		ND 0.00100	ND 0.00100	ND 0.00100			
Total BTEX		ND 0.00100	ND 0.00100	ND 0.00100			

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 472835,

Project ID: SRS#2006-142

Lab Batch #: 926390

Sample: 472835-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/30/13 17:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 926390

Sample: 472835-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/30/13 17:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 926390

Sample: 472835-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/30/13 18:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0305	0.0300	102	80-120	

Lab Batch #: 926390

Sample: 646115-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/29/13 02:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 926390

Sample: 646115-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/29/13 01:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 472835,

Project ID: SRS#2006-142

Lab Batch #: 926390

Sample: 646115-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/29/13 01:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 926390

Sample: 472835-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/29/13 11:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 926390

Sample: 472835-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/29/13 11:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 472835

Project ID: SRS#2006-142

Analyst: ARM

Date Prepared: 10/28/2013

Date Analyzed: 10/29/2013

Lab Batch ID: 926390

Sample: 646115-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.00100	0.100	0.0897	90	0.100	0.0899	90	0	70-125	25	
Toluene	<0.00200	0.100	0.0901	90	0.100	0.0909	91	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0933	93	0.100	0.0942	94	1	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.190	95	0.200	0.191	96	1	70-131	25	
o-Xylene	<0.00100	0.100	0.0976	98	0.100	0.0983	98	1	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 472835

Project ID: SRS#2006-142

Lab Batch ID: 926390

QC- Sample ID: 472835-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/29/2013

Date Prepared: 10/28/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0938	94	0.100	0.0964	96	3	70-125	25	
Toluene	<0.00200	0.100	0.0937	94	0.100	0.0968	97	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0993	99	0.100	0.103	103	4	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.202	101	0.200	0.209	105	3	70-131	25	
o-Xylene	<0.00100	0.100	0.101	101	0.100	0.105	105	4	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S
Date/ Time Received: 10/24/2013 08:33:00 AM
Work Order #: 472835

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Candace James*
 Candace James

Date: 10/25/2013

Checklist reviewed by: *Kelsey Brooks*
 Kelsey Brooks

Date: 10/25/2013



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 10/24/2013 08:33:00 AM

Temperature Measuring device used :

Work Order #: 472835

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: Candace James Date: 10/25/2013
 Candace James

Checklist reviewed by: Kelsey Brooks Date: 10/25/2013
 Kelsey Brooks

Analytical Report 473757
for
PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Lovington Gathering WTI

SRS#2006-142

18-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



18-NOV-13

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

Reference: XENCO Report No(s): **473757**
Lovington Gathering WTI
Project Address: NM

Ben Arguijo:

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(s) 473757. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 473757 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,

Kelsey Brooks

Project Manager

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Sample Cross Reference 473757



PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-3	W	11-08-13 08:00		473757-001
MW-6	W	11-08-13 08:30		473757-002
MW-7	W	11-08-13 09:00		473757-003
JW Well	W	11-08-13 09:30		473757-004
Goff Dairy--Ctr. Puet Well	W	11-08-13 10:00		473757-005
Goff Dairy--Ctr Piret Beg	W	11-08-13 10:15		473757-006
Goff Dairy--Ctr Piver End	W	11-08-13 10:30		473757-007



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: *SRS#2006-142*
Work Order Number(s): *473757*

Report Date: *18-NOV-13*
Date Received: *11/08/2013*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 473757

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS#2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Nov-08-13 01:50 pm

Report Date: 18-NOV-13

Project Location: NM

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	473757-001	473757-002	473757-003	473757-004	473757-005	473757-006
	<i>Field Id:</i>	MW-3	MW-6	MW-7	JW Well	Goff Dairy--Ctr. Puet Well	Goff Dairy--Ctr Piret Beg
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Nov-08-13 08:00	Nov-08-13 08:30	Nov-08-13 09:00	Nov-08-13 09:30	Nov-08-13 10:00	Nov-08-13 10:15
BTEX by EPA 8021	<i>Extracted:</i>	Nov-11-13 14:00	Nov-11-13 14:00				
	<i>Analyzed:</i>	Nov-11-13 18:15	Nov-11-13 18:31	Nov-11-13 18:47	Nov-11-13 19:03	Nov-11-13 19:19	Nov-11-13 20:07
	<i>Units/RL:</i>	mg/L RL	mg/L RL				
Benzene		0.00241 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100
Toluene		ND 0.00200	ND 0.00200				
Ethylbenzene		ND 0.00100	ND 0.00100				
m_p-Xylenes		ND 0.00200	ND 0.00200				
o-Xylene		ND 0.00100	ND 0.00100				
Xylenes, Total		ND 0.00100	ND 0.00100				
Total BTEX		0.00241 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100	ND 0.00100

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 473757

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS#2006-142

Contact: Ben Arguijo

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Nov-08-13 01:50 pm

Report Date: 18-NOV-13

Project Location: NM

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id: 473757-007 Field Id: Goff Dairy--Ctr Piver End Depth: Matrix: WATER Sampled: Nov-08-13 10:30				
BTEX by EPA 8021	Extracted: Nov-11-13 14:00 Analyzed: Nov-11-13 20:23 Units/RL: mg/L RL				
Benzene	ND	0.00100			
Toluene	ND	0.00200			
Ethylbenzene	ND	0.00100			
m_p-Xylenes	ND	0.00200			
o-Xylene	ND	0.00100			
Xylenes, Total	ND	0.00100			
Total BTEX	ND	0.00100			

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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Kelsey Brooks
Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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4143 Greenbriar Dr, Stafford, TX 77477	Phone	Fax
9701 Harry Hines Blvd , Dallas, TX 75220	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
12600 West I-20 East, Odessa, TX 79765	(813) 620-2000	(813) 620-2033
6017 Financial Drive, Norcross, GA 30071	(432) 563-1800	(432) 563-1713
3725 E. Atlanta Ave, Phoenix, AZ 85040	(770) 449-8800	(770) 449-5477
	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 473757,

Project ID: SRS#2006-142

Lab Batch #: 927505

Sample: 473757-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 18:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 927505

Sample: 473757-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 18:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 927505

Sample: 473757-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 18:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 927505

Sample: 473757-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 19:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 927505

Sample: 473757-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 19:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 473757,

Project ID: SRS#2006-142

Lab Batch #: 927505

Sample: 473757-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 20:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0297	0.0300	99	80-120	

Lab Batch #: 927505

Sample: 473757-007 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 20:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0263	0.0300	88	80-120	

Lab Batch #: 927505

Sample: 646758-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 16:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 927505

Sample: 646758-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 15:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 927505

Sample: 646758-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 15:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders : 473757,

Lab Batch #: 927505

Sample: 473756-001 S / MS

Project ID: SRS#2006-142

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 15:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	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	0.0309	0.0300	103	80-120	

Lab Batch #: 927505

Sample: 473756-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/11/13 16:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	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	0.0317	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 473757

Project ID: SRS#2006-142

Analyst: ARM

Date Prepared: 11/11/2013

Date Analyzed: 11/11/2013

Lab Batch ID: 927505

Sample: 646758-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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	<0.00100	0.100	0.0897	90	0.100	0.0929	93	4	70-125	25	
Toluene	<0.00200	0.100	0.0918	92	0.100	0.0944	94	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0983	98	0.100	0.101	101	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.205	103	2	70-131	25	
o-Xylene	<0.00100	0.100	0.101	101	0.100	0.103	103	2	71-133	25	

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

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

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

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 473757

Project ID: SRS#2006-142

Lab Batch ID: 927505

QC- Sample ID: 473756-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/11/2013

Date Prepared: 11/11/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00516	0.100	0.0977	93	0.100	0.0969	92	1	70-125	25	
Toluene	<0.00200	0.100	0.0961	96	0.100	0.0984	98	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.106	106	4	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.208	104	0.200	0.216	108	4	70-131	25	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.109	109	5	71-133	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 11/08/2013 01:50:00 PM

Work Order #: 473757

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: *Candace James*
Candace James

Date: 11/11/2013

Checklist reviewed by: *Kelsey Brooks*
Kelsey Brooks

Date: 11/11/2013



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 11/08/2013 01:50:00 PM

Work Order #: 473757

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
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Checklist completed by: *Candace James*
Candace James

Date: 11/11/2013

Checklist reviewed by: *Kelsey Brooks*
Kelsey Brooks

Date: 11/11/2013

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

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

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.

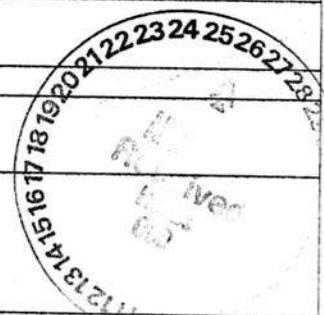
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	6	17S	37E					Lea

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 <i>Camille Reynolds</i>	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 0066	Phone: 505-441-	Attached <input type="checkbox"/>