

**AP-96**

**Plains**

**Lovington Gathering WTI**

**Quarterly Report**

**4<sup>th</sup> of 2013**

# *Basin Environmental Service Technologies, LLC*

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## **QUARTERLY MONITORING REPORT October - December 2013**

**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 #: 2006-0142**  
**NMOCD Reference #: 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

**January 2014**

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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 *Quarterly Monitoring Report* for the release site known as Lovington Gathering WTI, in compliance with the New Mexico Oil Conservation Division (NMOCD) request of April 5, 2011, requiring submittal of a *Quarterly Monitoring Report* within thirty (30) days of the end of each calendar quarter. 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 the third quarter (October - December) of 2013 only.

## 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 release on the Lovington Gathering WTI pipeline. Failure of a section of the six-inch (6") steel gathering line during purging resulted in a release of sweet crude oil. The failure was attributed to internal corrosion. The release was immediately reported to the NMOCD Hobbs District Office. The "Release Notification and Corrective Action" (Form C-141) indicated approximately twelve barrels (12 bbls) of crude oil was released from the pipeline, and approximately eight barrels (8 bbls) were recovered, resulting in a net loss of four barrels (4 bbls) of crude oil. The release occurred in a pasture containing various oil and gas production facilities and resulted in a visibly stained surface area measuring approximately one thousand, five hundred square feet (1,500 ft<sup>2</sup>). The Form C-141 is provided as Appendix B.

During initial response activities, the 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. The excavated area was fenced in and is characterized by a Plains pipeline right-of-way adjacent to an idled Plains pump station.

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. A series of eleven (11) soil borings were advanced to depths ranging from 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 sampling 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 phase-separated hydrocarbons (PSH) in any of the collected soil samples. Laboratory analytical results of selected soil samples did not indicate benzene, toluene, ethylbenzene, and total xylene (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 TPH concentrations 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 samples collected from monitor well MW-7 indicated additional monitor wells would be 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 standards 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 Remediation 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**

A quarterly groundwater monitoring event was conducted on November 8, 2013 (4Q2013), to assess the levels and extent of dissolved-phase constituents and PSH. The groundwater monitoring event consisted of measuring static water levels in the on-site monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells were purged using a PVC bailer of a minimum of three (3) well volumes of water, or until the wells were dry. 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 the site.

Diminished well volume and recharge in monitor well MW-2 attributable to the use of two (2) large-capacity irrigation wells (Goff Dairy Well and Goff Dairy - Ctr. Pivot Well) on property adjacent to the release site (Goff Dairy #9 Pivot) precluded sample collection from the monitor well during the quarterly monitoring event.

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 the Goff Dairy #9 Pivot, on October 23 and November 8, 2013.

Prior to the October 2013 monthly monitoring event, the Ctr. Pivot Well was valved off to facilitate agricultural activities in the Goff Dairy #9 Pivot, precluding sample collection from the well and the two (2) locations on the Goff Dairy Center Pivot (Goff Dairy - Ctr. Pivot Beginning and Goff Dairy - Ctr. Pivot End).

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 the inferred groundwater gradient, which was constructed from groundwater elevation measurements collected during the 4Q2013 sampling event, are depicted in Figure 2A, "Inferred Groundwater Gradient Map – 4Q2013". Groundwater elevation data is provided as Table 1, "2013 Groundwater Elevation Data". The groundwater gradient map 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. No groundwater elevation data was able to be obtained from monitor well MW-2.

No PSH was detected in any of the on-site monitor wells during the 4Q2013 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 and quarterly sampling events were delivered to Xenco Laboratories in Odessa, Texas, for determination of BTEX constituent concentrations using EPA Method SW846-8021b. Laboratory analytical results were compared to NMOCD regulatory limits based on 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”.

#### **4.1 Quarterly Monitoring Data**

Data collected during the 4Q2013 groundwater monitoring event is summarized below. Groundwater contaminant concentrations are depicted in Figure 3A, "Groundwater Concentration Map - 4Q2013".

- Benzene concentrations were less than the laboratory MDL in all submitted groundwater samples, with the exception of the groundwater sample from monitor well MW-3, which exhibited a benzene concentration of 0.0024 mg/L. Benzene concentrations were less than the New Mexico Water Quality Control Commission (NMWQCC) regulatory standard of 0.010 mg/L in all submitted groundwater samples.
- Toluene concentrations were both less than the laboratory MDL and less than the NMWQCC regulatory standard of 0.750 mg/L in all submitted groundwater samples.
- Ethylbenzene concentrations were both less than the laboratory MDL and less than the NMWQCC regulatory standard of 0.750 mg/L in all submitted groundwater samples.
- Total xylene concentrations were both less than the laboratory MDL and less than the NMWQCC regulatory standard of 0.620 mg/L in all submitted groundwater samples.

#### **4.2 Monthly Monitoring Data**

Data collected during the October and November 2013 monthly monitoring events is summarized below. Groundwater contaminant concentrations for the October monitoring event are depicted in Figure 3B, "Groundwater Concentration Map - October 2013". Groundwater contaminant concentrations for the November sampling event are included in Figure 3A, "Groundwater Concentration Map - 4Q2013".

- **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.
- **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.

## **5.0 QA/QC PROCEDURES**

### **5.1 Groundwater Sampling**

Groundwater samples were submitted to Xenco Laboratories in Odessa, Texas, for analysis of BTEX constituent concentrations in accordance with EPA Method SW846-8021b. All samples were analyzed within seven (7) days of the collection date.

## **5.2 Decontamination of Equipment**

Cleaning and decontamination of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

## **5.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

## **6.0 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.

## **7.0 LIMITATIONS**

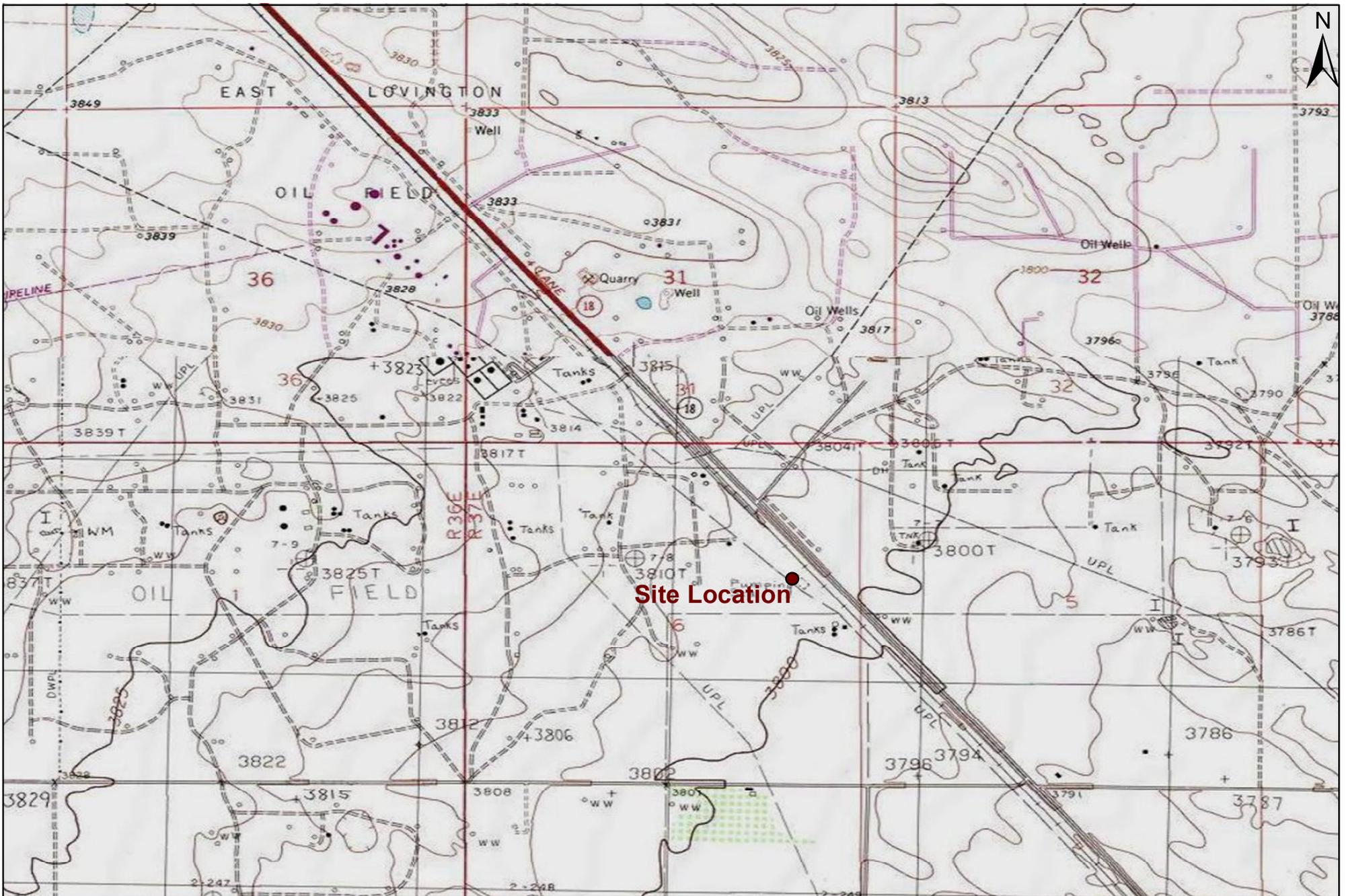
Basin Environmental Service Technologies, LLC, has prepared this *Quarterly Monitoring Report* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements made by certain 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.

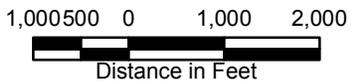
## 8.0 DISTRIBUTION

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# Figures

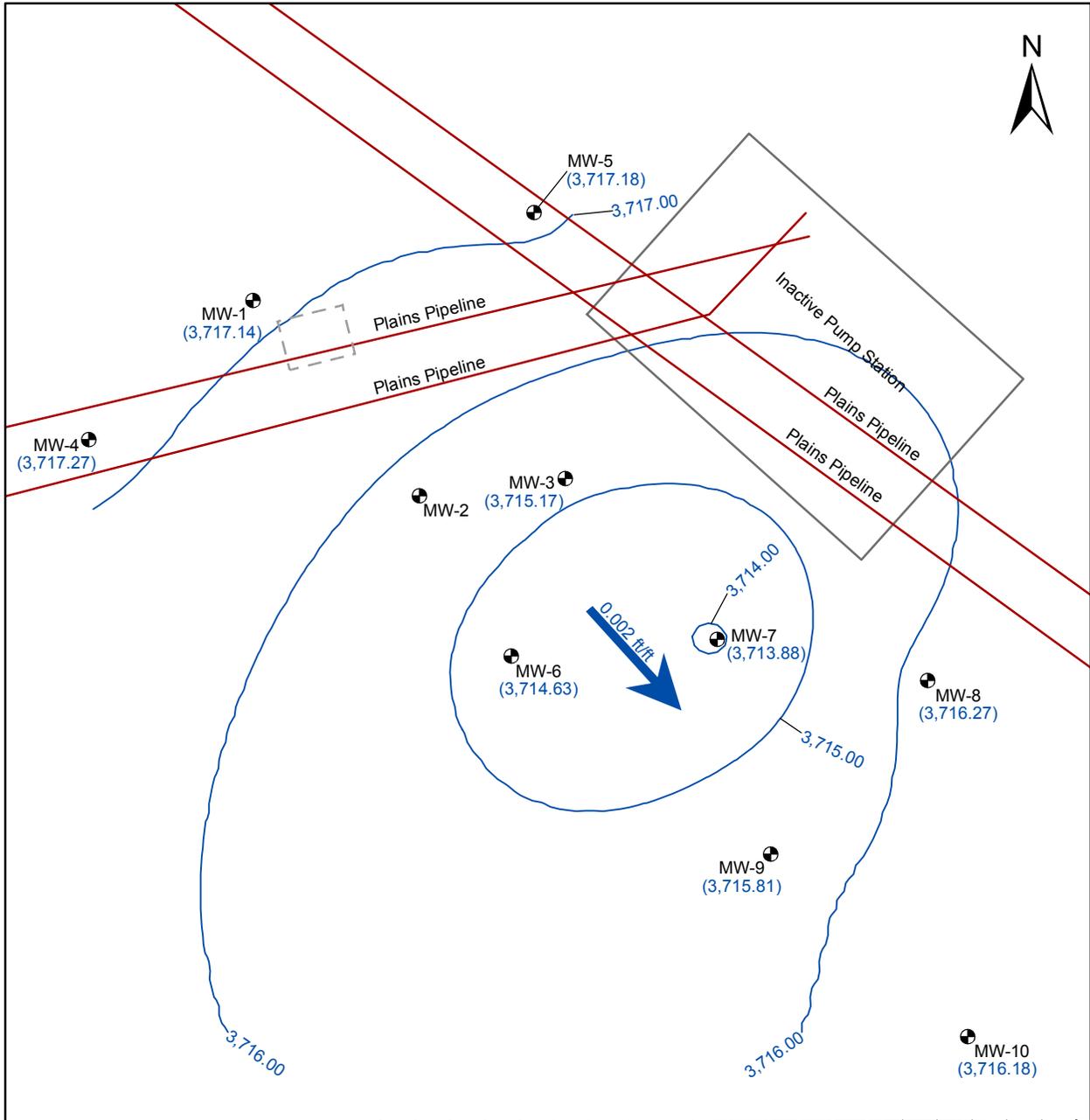


**Figure 1**  
**Site Location Map**  
 Plains Marketing, LP  
 Lovington Gathering WTI  
 Lea County, New Mexico  
 Plains SRS #: 2006-142  
 NMOCD Reference #: 1RP-838

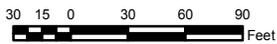


Basin Environmental Service Technologies, LLC  
 3100 Plains Hwy.  
 Lovington, NM 88260

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



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



Goff Dairy Well

**Legend:**

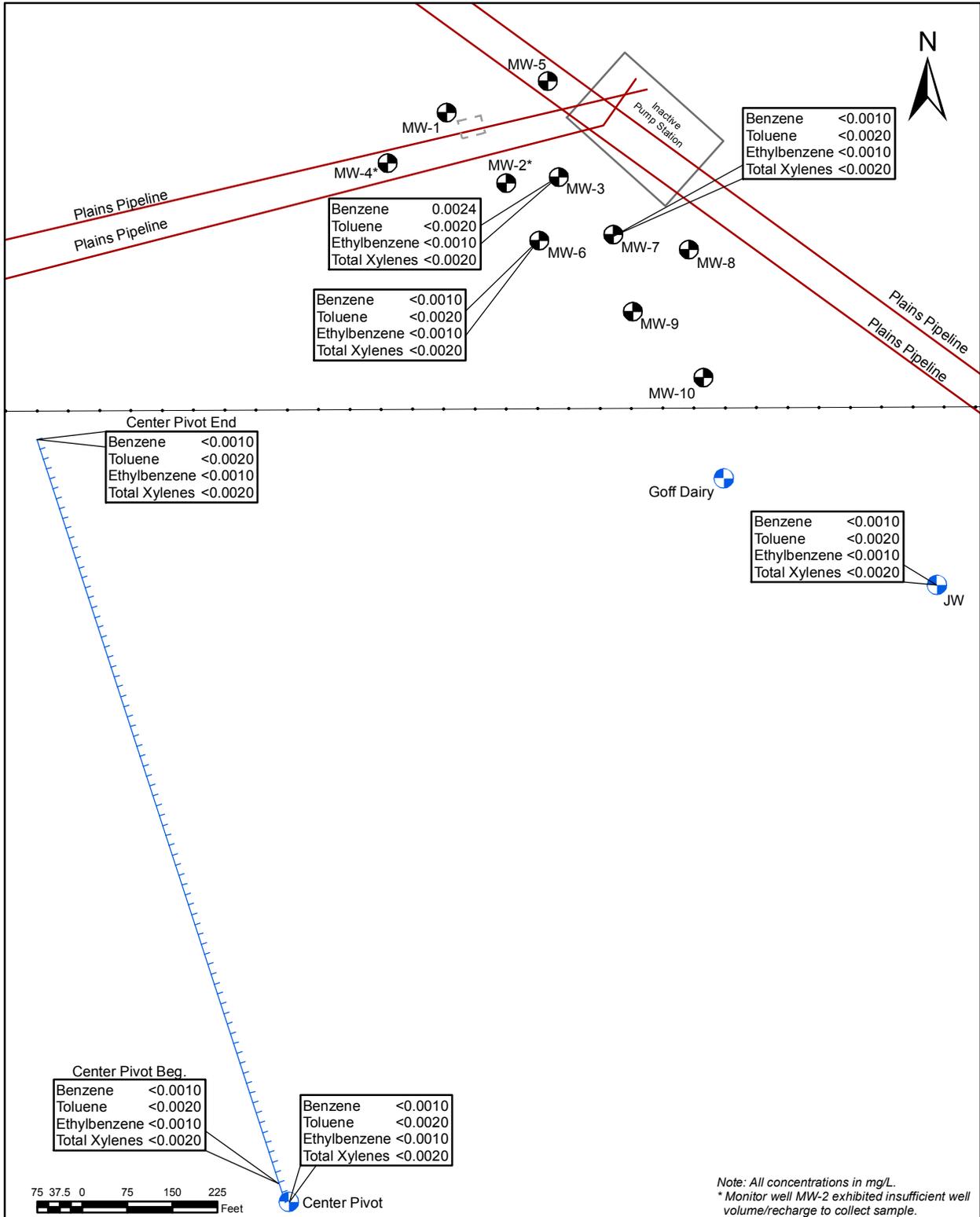
- Pipeline
- Fence
- Excavation Extent
- Monitor Well
- Irrigation Well
- (3,720) Groundwater Elevation (ft)
- 0.002 ft/ft Groundwater Gradient & Magnitude

**Figure 2**  
**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
January 30, 2014	Scale: 1" = 100'



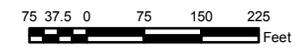
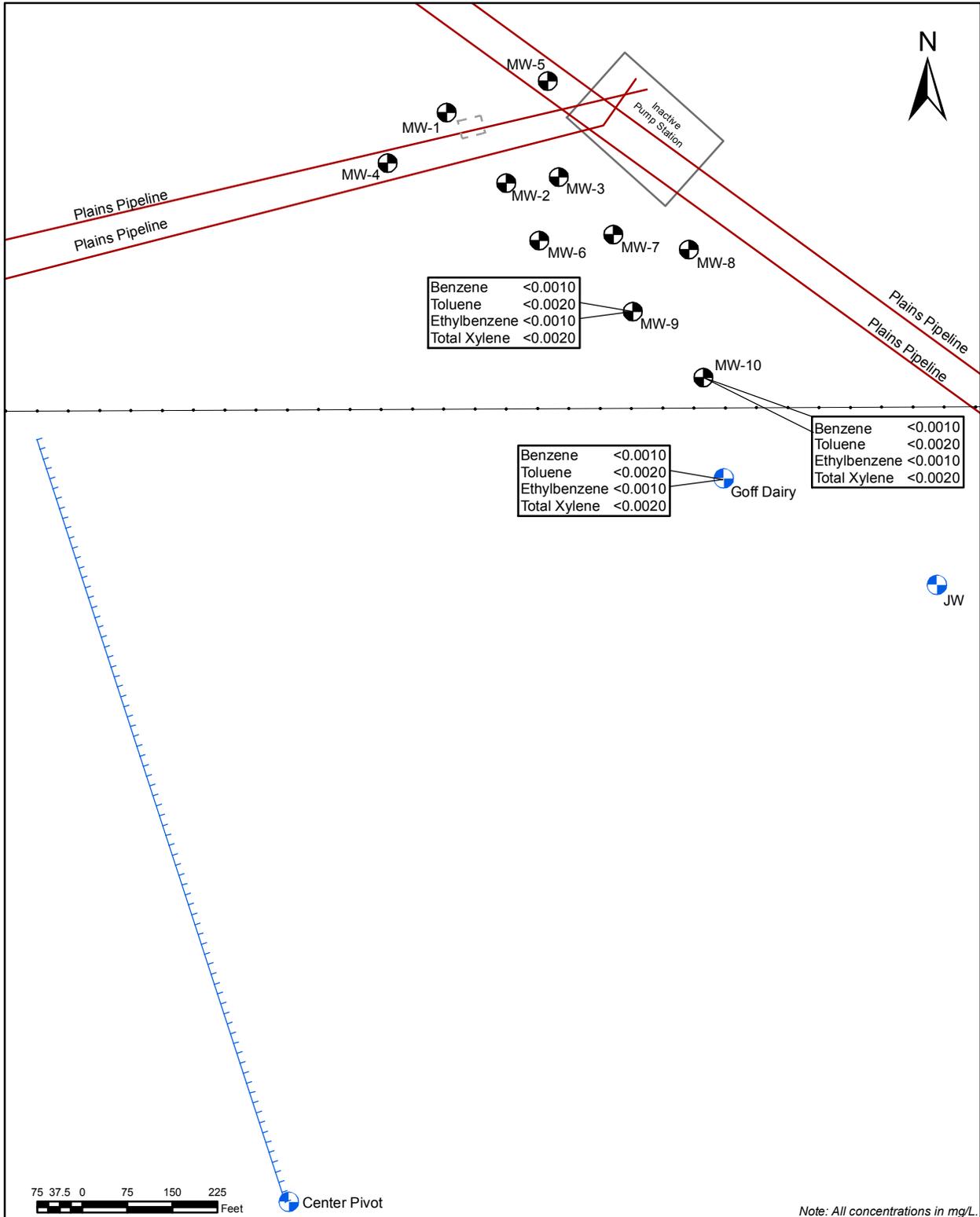
- Legend:**
- Pipeline
  - Excavation Extent
  - Fence
  - Center Pivot
  - Monitor Well
  - Irrigation Well

**Figure 3A**  
**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'



Note: All concentrations in mg/L.

**Legend:**

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

**Figure 3B**  
**Groundwater Concentration Map**  
**October 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
Nov. 11, 2013	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**

<b>WELL NUMBER</b>	<b>DATE MEASURED</b>	<b>CASING WELL ELEVATION</b>	<b>DEPTH TO PRODUCT</b>	<b>DEPTH TO WATER</b>	<b>PSH THICKNESS</b>	<b>CORRECTED GROUNDWATER ELEVATION</b>
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	<b>0.020</b>	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.020	-	-
	12/02/08	<b>0.035</b>	<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	<b>0.161</b>	<0.0010	<0.0010	0.024	<0.0010	0.024	0.185	-	-
	03/16/07	<b>0.154</b>	<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	<b>0.050</b>	<0.0010	<0.0010	0.003	<0.0010	0.003	0.053	-	-
	11/30/07	<b>0.928</b>	<0.0010	<0.005	0.036	<0.005	0.036	0.964	-	-
	03/11/08	<b>0.095</b>	<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	<b>0.159</b>	<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	<b>0.0205</b>	<0.0020	<0.0010	0.00308	0.00116	0.00424	0.0247	-	-
	08/24/11	<b>0.0262</b>	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	<b>0.0214</b>	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	<b>0.0120</b>	0.00284	0.00109	0.00710	0.00252	0.00962	0.0256	-	-
	02/22/13	<b>0.0112</b>	<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	<b>4.76</b>	<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 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-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 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-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	<0.0020	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	<b>0.568</b>	<0.0100	<0.005	<0.0100	<0.005	<0.0100	0.568	-	-
	12/02/08	<b>0.234</b>	0.046	0.008	0.041	0.013	0.054	0.342	-	-
	03/03/09	<b>0.0284</b>	<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	<b>0.9717</b>	0.0641	<0.0100	0.0867	0.0422	0.1289	1.1647	-	-
	09/10/09	<b>1.838</b>	<0.0200	<0.0100	0.0537	<0.0100	0.0537	1.8917	-	-
	10/05/09	<b>0.985</b>	<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	<b>0.0192</b>	<0.0020	<0.0010	0.0027	<0.0010	0.0027	0.0219	-	-
	05/25/10	<b>0.0421</b>	<0.0020	<0.0010	0.0063	<0.0010	0.0063	0.0484	-	-
	08/30/10	<b>0.1259</b>	<0.0020	<0.0010	0.0344	<0.0010	0.0344	0.1603	-	-
	11/11/10	<b>0.0265</b>	<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	<b>0.0350</b>	<0.0020	<0.0010	0.0035	<0.0010	0.0035	0.0385	-	-
	03/22/11	<b>0.0568</b>	<0.0020	<0.0010	0.00333	<0.0010	0.00333	0.0601	-	-
	05/27/11	<b>1.52</b>	<0.0020	0.00107	0.0113	<0.0010	0.0113	1.53	-	-
	07/11/11	<b>3.00</b>	0.00265	0.00365	0.0248	0.00232	0.0271	<b>3.03</b>	-	-
	08/24/11	<b>0.654</b>	<0.0020	0.00158	0.0177	0.00262	0.0203	0.676	-	-
	10/10/11	<b>0.183</b>	<0.0020	<0.0010	0.121	<0.0010	0.121	0.304	-	-
	10/31/11	<b>0.053</b>	<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 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-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	-	-
<b>NMOCD REGULATORY STANDARD</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>TOTAL XYLENES 0.62</b>				<b>1.6</b>	<b>0.05</b>

# **Appendices**

**Appendix A**  
**Laboratory Analytical Reports**

**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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*Certified and approved by numerous States and Agencies.*

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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			
<b>BTEX by EPA 8021</b>	<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.

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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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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 : 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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*Certified and approved by numerous States and Agencies.*

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# Sample Cross Reference 473757



## PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
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
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	Nov-11-13 14:00	Nov-11-13 14:00	Nov-11-13 14:00	Nov-11-13 14:00	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	mg/L    RL	mg/L    RL	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	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
Xylenes, Total		ND    0.00100	ND    0.00100	ND    0.00100	ND    0.00100	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.

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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

<b>Analysis Requested</b>	<b>Lab Id:</b>	473757-007				
	<b>Field Id:</b>	Goff Dairy--Ctr Piver End				
	<b>Depth:</b>					
	<b>Matrix:</b>	WATER				
	<b>Sampled:</b>	Nov-08-13 10:30				
<b>BTEX by EPA 8021</b>	<b>Extracted:</b>	Nov-11-13 14:00				
	<b>Analyzed:</b>	Nov-11-13 20:23				
	<b>Units/RL:</b>	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      **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 : 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

<b>BTEX by EPA 8021</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
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

<b>BTEX by EPA 8021</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
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#:
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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



# 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 #: 473757  
 Field billable Hrs: \_\_\_\_\_

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/Att: Ben J. Arguijo Email: bjarguijo@basinenv.com  
 Project ID: Lovington Gathering WTI SRS #2006-142 PO#: PAA-C. Bryant  
 Invoice To: Camille Bryant 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 \_\_\_\_\_

**\* 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 \_\_\_\_\_

**\*\* Preservative Type Codes**

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

**ANALYSES REQUESTED**

Cont Type* VC	VC																			
Pres Type** E, I	E, I																			
Example Volatiles by 8260	TPH	BTEX	Chloride																	
	# Cont	Lab Only:																		

**^ 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			

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)	Total # of containers	# Cont	Lab Only:
1	MW-3	11/8	8:00	GW			3		
2	MW-6	11/8	8:30	GW			3		X
3	MW-7	11/8	9:00	GW			3		X
4	JW well	11/8	9:30	GW			3		X
5	Goff Dairy - Ctr. Pivet well	11/8	10:00	GW			3		X
6	Goff Dairy - Ctr. Pivet Beg.	11/8	10:15	GW			3		X
7	Goff Dairy - Ctr. Pivet End.	11/8	10:30	GW			3		X
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
TLs 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	1 3.0 2 3 80	YES NO N/A
Other:	AL NM Other:	NELAC DoD-ELAP Other:	XLS Other:	Absent Unclear		Non-Conformances found?
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Samples intact upon arrival?
<i>[Signature]</i>	ET	11/8/13	1:50	Verde-Rosendo	MS	Received on Wet Ice?
<i>[Signature]</i>	XENCO	11/9/13	12:30			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?

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 # \_\_\_\_\_

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



# 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

**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.	

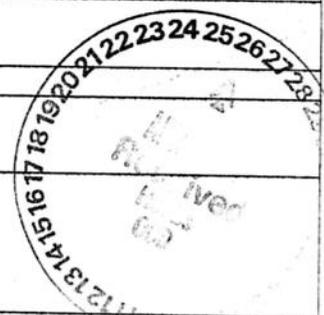
**LOCATION OF RELEASE**

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 H<sub>2</sub>S 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 ft<sup>2</sup>.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature <i>Camille Reynolds</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	
Date: 4/26/2006 0066	Phone: 505-441-	Attached <input type="checkbox"/>