AP- 96

# ANNUAL MONITORING REPORT

YEAR(S): 2011

# Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
bjarguijo@basinenv.com

Office: (575) 396-2378

Fax: (575) 396-1429



APR 2 2012

# 2011 ANNUAL MONITORING REPORT

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

#### **LOVINGTON GATHERING WTI**

Unit Letter "H" (SE/NE), Section 6, Township 17 South, Range 37 East Latitude 32° 51' 56.0" North, Longitude 103° 17' 07.2" West Lea County, New Mexico

> Plains SRS Number: 2006-142 NMOCD Reference Number: 1PP-838

AP-96

Prepared for:



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

Prepared By:

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

March 2012

Ben J. Arguijo Project Manager



# RECEIVED

March 29, 2012

APR 2 2012

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

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

Rei

Plains All American - 2011 Annual Monitoring Reports

5 Sites in Lea County, New Mexico 1 Site in Eddy County, New Mexico

Dear Mr. Hansen:

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

Lovington Gathering WTI	AP-96 (1R-838)	Section 06, T17S, R37E, Lea County
Red Byrd #1	1R-0085	Section 01, T20S, R36E, Lea County
DCP Plant to Lea Sta. 6" #2	1R-2136	Section 31, T20S, R37E, Lea County
DCP Plant to Lea Sta. 6" Sec.31	1R-2166	Section 31, T20S, R37E, Lea County
14" Vac to Jal Legacy	1R-2162	Section 25, T22S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053	Section 10, T18S, R29E, Eddy County

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

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

Sincerely,

√ason Henry

Remediation Coordinator

Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

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#### 1.0 INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Pipeline, LP (Plains), is pleased to submit this *Annual Monitoring Report* in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1st of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of groundwater monitoring events conducted in calendar year 2011 only. For reference, a "Site Location Map" is provided as Figure 1.

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

# 2.0 SITE DESCRIPTION & BACKGROUND INFORMATION

The legal description of the site is Unit Letter "H" (SE/NE), Section 6, Township 17 South, Range 37 East. 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 responded to a pipeline release on behalf of Plains to repair the pipeline and excavate the impacted soil. The Lovington Gathering WTI Pipeline was repaired utilizing a pipeline clamp, and the visually stained soil was excavated and placed on plastic sheeting to mitigate any further hydrocarbon impact to the underlying soil. Approximately twelve (12) barrels of crude oil was released from the pipeline, and eight (8) barrels were recovered, resulting in a net loss of four (4) barrels of crude oil. The excavated area was fenced in and is characterized by a Plains pipeline right-of-way adjacent to an idled Plains pump station. The release occurred in a pasture containing various oil and gas production facilities. The release resulted in a visibly stained surface area covering approximately thirty (30) feet in length by twenty (27) feet in width. Excavation activities conducted during the initial response and subsequent remediation of the site covered an area approximately thirty (30) feet in length by twenty-seven (27) feet in width, and ranged from approximately five (5) to six (6) feet in depth. Excavated soil was placed on a six (6)-mil ploy-liner for future remedial action. Utilizing olfactory, visual, and photo-ionization detector (PID) technology, it was determined that Volatile Organic Compounds (VOC's) remained in the sidewalls and floor of the excavation.

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

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

Laboratory analytical results of groundwater sampling at monitor well MW-7 indicated additional monitor wells were required to fully delineate the down-gradient boundary of the dissolved-phase plume. On February 7, 2007, monitor well MW-8 was installed down-gradient of monitor well MW-7. Laboratory analytical results of soil samples collected during the installation of monitor well MW-8 indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL and the NMOCD regulatory standard of 10 mg/Kg and 50 mg/Kg for benzene and BTEX, respectively. Laboratory analytical results indicate TPH concentrations were less than the laboratory MDL and NMOCD regulatory standard of 100 mg/Kg for soil samples collected at ten (10) and twenty-five (25) feet bgs. Soil samples collected at fifty (50) and seventy-five (75) feet bgs exhibited a TPH concentration of 14 mg/Kg (below NMOCD 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 the soil samples collected during the installation of monitor well MW-9 indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL and NMOCD regulatory standard in the five (5) laboratory 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) laboratory submitted soil samples.

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

## 3.0 FIELD ACTIVITIES

#### 3.1 Groundwater Recovery Efforts

Basin began manual, bi-weekly recovery of hydrocarbon-impacted groundwater from monitor well MW-9 in November 2009 to control the down-gradient migration of the dissolved-phase plume. Bi-weekly recovery from monitor well MW-10 commenced in April 2011 at the behest of

the NMOCD. All recovered fluids are disposed of at an NMOCD- approved disposal facility near Lovington, New Mexico.

## 3.2 Groundwater Monitoring

The on-site monitor wells were gauged and sampled on March 22 (1Q2011), May 27 (2Q2011), August 24 (3Q2011), and November 9, 2011 (4Q2011). During these quarterly sampling events, the monitoring wells were purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos pump. Groundwater was allowed to recharge, and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer-mounted polystyrene tank and disposed of at an NMOCD-approved disposal facility near Monument, New Mexico.

Diminished well volume and recharge in monitor well MW-2 attributable to the use of a large-capacity irrigation well (Goff Dairy Well) on property adjacent to the release site precluded sample collection from the monitor well during the 2Q2011 and 4Q2011 quarterly monitoring events. Monitor well MW-2 was sampled during a follow-up site visit on September 30, 2011, to satisfy the 2Q2011 quarterly monitoring requirement.

Per NMOCD request, monthly monitoring events were conducted at MW-10 and five (5) locations (Goff Dairy Well, Goff Dairy - Ctr. Pivot Well, Goff Dairy - Ctr. Pivot Beginning, Goff Dairy - Ctr. Pivot End, and JW Well) on property adjacent to the release site (Goff Dairy #9 Pivot) on May 27, July 1, July 14, August 24, October 31, November 9, and December 14, 2011. Monthly monitoring of monitor well MW-9 commenced on December 14, 2011.

Crop harvesting and a consequent reduction in water usage on the Goff Dairy #9 Pivot precluded sample collection during the month of September. Arrangements were made with the landowner to conduct a sampling event as soon as possible following the close of the quarter. The third monthly sampling event occurred on October 10, 2011.

Winterization of the JW Well precluded sampling of the well during the December 2011 monthly sampling event. Diversion of the Goff Dairy Well into a nearby stock tank prior to the December 2011 sampling event rendered sampling of the Goff Dairy - Ctr. Pivot Beginning and Goff Dairy - Ctr. Pivot End unnecessary, as the locations were no longer representative of commingled water from the Goff Dairy and Goff Dairy - Ctr. Pivot Wells.

A yearly monitoring event for polyaromatic hydrocarbons (PAH) was conducted on December 15, 2011. Based on sampling criteria provided by the NMOCD, only monitor well MW-10 was subject to PAH monitoring during the 2011 calendar year.

Locations of the groundwater monitoring wells and the inferred groundwater gradient, which was constructed from groundwater elevation measurements collected during the 4Q2011 sampling event, are depicted in Figure 2D, "Inferred Groundwater Gradient Map – 4Q2011". The groundwater gradient map indicates a general gradient of approximately 0.0063 feet/foot to the southeast, as measured between monitor wells MW-1 and MW-10. The corrected groundwater

elevation ranged between 3,715.23 and 3,719.80 feet above mean sea level in monitor wells MW-10 and MW-5, respectively. Groundwater elevation data is provided as Table 1, "Groundwater Elevation Data - 4Q2011".

No PSH was detected in any of the on-site monitor wells during the 2011 reporting period.

#### 4.0 LABORATORY RESULTS

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

# 4.1 Quarterly Monitoring Data

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

#### Monitor Well MW-1:

o Benzene and BTEX constituent concentrations were both less than the appropriate laboratory MDL and less than New Mexico Water Quality Control Commission (NMWQCC) regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-2:

O Benzene concentrations ranged from 0.00222 mg/L in 2Q2011 to 0.179 mg/L in 3Q2011. Toluene concentrations were less than the laboratory MDL all submitted groundwater samples. Ethylbenzene concentrations ranged from less than the laboratory MDL in 1Q2011 and 2Q2011 to 0.00275 mg/L in 3Q2011. Total xylene concentrations ranged from 0.00297 mg/L in 2Q2011 to 0.0616 mg/L in 1Q2011. Diminished well volume and recharge precluded sample collection in 4Q2011. Benzene concentrations exceeded the NMWQCC regulatory standard of 0.010 mg/L in 1Q2011 and 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

# • Monitor Well MW-3:

O Benzene concentrations ranged from 0.00211 mg/L in 4Q2011 to 0.0262 mg/L in 3Q2011. Toluene concentrations ranged from less than the laboratory MDL in 2Q2011 and 4Q2011 to 0.00333 mg/L in 3Q2011. Ethylbenzene concentrations ranged were less than the laboratory MDL in all submitted groundwater samples. Total xylene concentrations ranged from 0.00345 mg/L in 4Q2011 to 0.0119 mg/L in 1Q2011. Benzene concentrations exceeded the NMWQCC regulatory standard of 0.010 mg/L in 2Q2011 and 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-4:

O Benzene concentrations ranged from less than the laboratory MDL in 1Q2011, 2Q2011, and 4Q2011 to 0.00119 mg/L in 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. The fluoride concentration in the groundwater sample collected from monitor well MW-4 during 2Q2011 was 4.76 mg/L. The chromium concentration in the groundwater sample collected from monitor well MW-4 during 2Q2011 was both less than the laboratory MDL and less than the NMWQQ regulatory standard of 0.05 mg/L. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples. The fluoride concentration exceeded the NMWQCC regulatory standard of 1.6 mg/L.

# • Monitor Well MW-5:

o Benzene and BTEX constituent concentrations were both less than the appropriate laboratory MDL and less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-6:

O Benzene concentrations ranged from less than the laboratory MDL in 1Q2011 and 2Q2011 to 0.105 mg/L in 3Q2011. Toluene and ethylbenzene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Total xylene concentrations ranged from less than the laboratory MDL in 1Q2011 and 2Q2011 to 0.0628 mg/L in 3Q2011. Benzene concentrations exceeded the NMWQCC regulatory standard of 0.010 mg/L in 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-7:

O Benzene concentrations ranged from less than the laboratory MDL in 1Q2011, 2Q2011, and 4Q2011 to 0.00192 mg/L in 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-8:

o Benzene, toluene, and ethylbenzene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Total xylene concentrations ranged from less than the laboratory MDL in 3Q2011 and 4Q2011 to 0.00260 mg/L in 2Q2011. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-9:

O Benzene concentrations ranged from less than the laboratory MDL in 2Q2011 and 4Q2011 to 0.00406 mg/L in 2Q2011. Toluene and ethylbenzene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Total xylene concentrations ranged from less than the laboratory MDL in 4Q2011 to 0.0349 mg/L in 4Q2011. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### • Monitor Well MW-10:

O Benzene concentrations ranged from less than the laboratory MDL in 4Q2011 to 1.52 mg/L in 2Q2011. Toluene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Ethylbenzene concentrations ranged from less than the laboratory MDL in 1Q2011 and 4Q2011 to 0.00158 mg/L in 3Q2011. Total xylene concentrations ranged from less than the laboratory MDL in 4Q2011 to 0.0203 mg/L in 3Q2011. Benzene concentrations exceeded the NMWQCC regulatory standard of 0.010 mg/L in 1Q2011, 2Q2011, and 3Q2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

# 4.2 Monthly Monitoring Data

Data collected during the July 7, July 11, July 14, August 24, October 31, November 9, and December 14, 2011 monthly monitoring events is summarized below. Groundwater contaminant concentrations for the monthly monitoring events are depicted in Figures 3E through 3H.

#### Monitor Well MW-9:

o Monthly monitoring of monitor well MW-9 commenced on December 14, 2011. 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:

o Benzene concentrations ranged from 0.00846 mg/L on December 14, 2011, to 3.00 mg/L on July 11, 2011. Toluene concentrations ranged from less than the laboratory MDL on October 10 and October 31, 2011, to 0.00265 mg/L on July 11, 2011. Ethylbenzene concentrations ranged from less than the laboratory MDL on October 10, 2011, to 0.00365 mg/L on July 11, 2011. Total xylene concentrations ranged from 0.0261 mg/L on December 14, 2011, to 0.121 mg/L on October 10, 2011. Benzene concentrations exceeded NMWQCC regulatory standards on July 11, October 10, and October 31, 2011. Toluene, ethylbenzene, and total xylene concentrations were less than NMWQCC regulatory standards in all submitted groundwater samples.

#### Goff Dairy Well:

October 10, October 31, November 9, and December 14, 2011, to 0.00265 mg/L on July 11, 2011. Toluene and total xylene concentrations were less than the laboratory MDL in all submitted groundwater samples. Ethylbenzene concentrations ranged from less than the laboratory MDL on May 27, August 24, October 10, October 31, and November 9, 2011, to 0.00111 mg/L on December 14, 2011. Benzene, toluene, ethylbenzene, and total xylene concentrations were less than NMWOCC 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:

o 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:

o 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:

o 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.

# 4.3 Yearly Monitoring Data

A yearly monitoring event for polyaromatic hydrocarbons (PAH) was conducted at monitor well MW-10 on December 15, 2011. PAH constituent concentrations were less than the appropriate laboratory MDL and NMOCD regulatory standards in all submitted groundwater samples.

#### ANTICIPATED ACTIONS

Quarterly monitoring and groundwater sampling of monitor wells MW-1 through MW-8 will continue throughout the 2012 calendar year. Monthly monitoring of monitor wells MW-9 and MW-10 and the Goff Dairy and Goff Dairy - Ctr. Pivot Wells will continue throughout the 2012 calendar year. Monthly monitoring of the Goff Dairy - Ctr. Pivot Beginning, Goff Dairy - Ctr. Pivot End, and JW Well will recommence as warranted. A yearly PAH monitoring event will be conducted at monitor well MW-10 during the 2012 calendar year.

The July - September 2011 Quarterly Monitoring Report, dated July 2011, and correspondence from an NMOCD representative, dated August 1, 2011, recommended bi-weekly recovery of hydrocarbon-impacted groundwater from monitor wells MW-9 and MW-10 to control the downgradient migration of the dissolved-phase plume. Based on the reduction in plume concentrations, Plains recommends the bi-weekly recovery events from MW-9 and MW-10 be reduced to weekly.

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 2012 reporting period will be submitted to the NMOCD by April 1, 2013.

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

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

# **DISTRIBUTION**

Copy 1: Edward Hansen

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Edwardj.hansen@state.nm.us

Copy 2: Geoff Leking

New Mexico Oil Conservation Division

1625 N. French Drive Hobbs, New Mexico 88240 GeoffreyR.Leking@state.nm.us

Copy 3: Jeff Dann

Plains Marketing, L.P.

333 Clay Street

**Suite 1600** 

Houston, Texas 77002 jpdann@paalp.com

Copy 4: Jason Henry

Plains Marketing, L.P. 2530 State Highway 214 Denver City, Texas 79323

jhenry@paalp.com

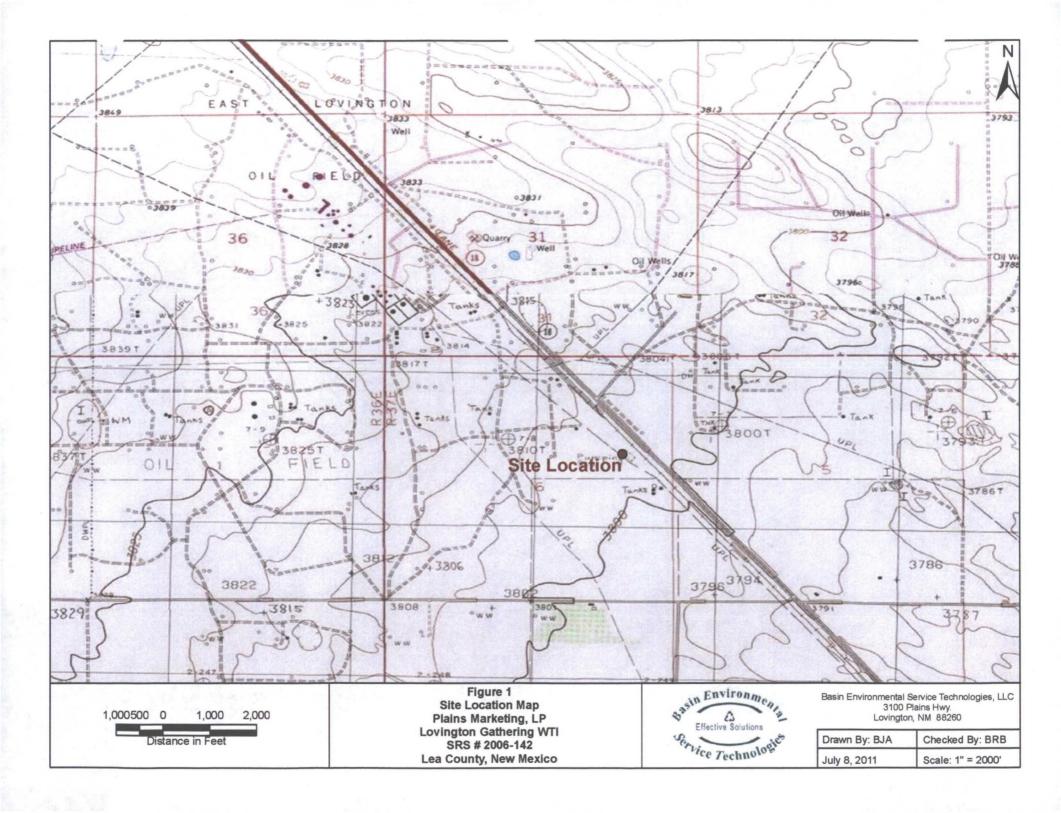
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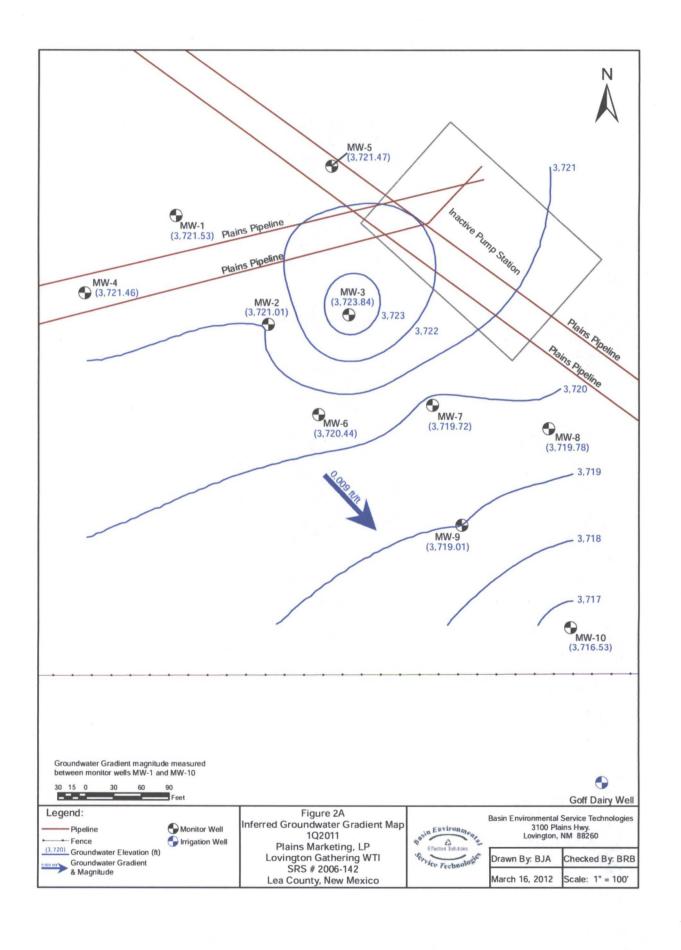
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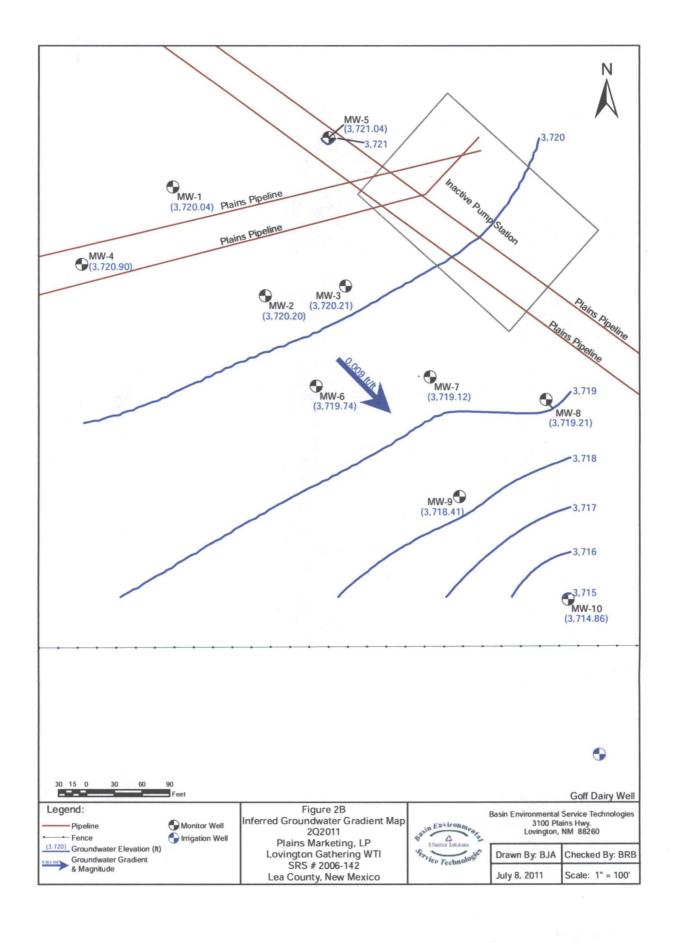
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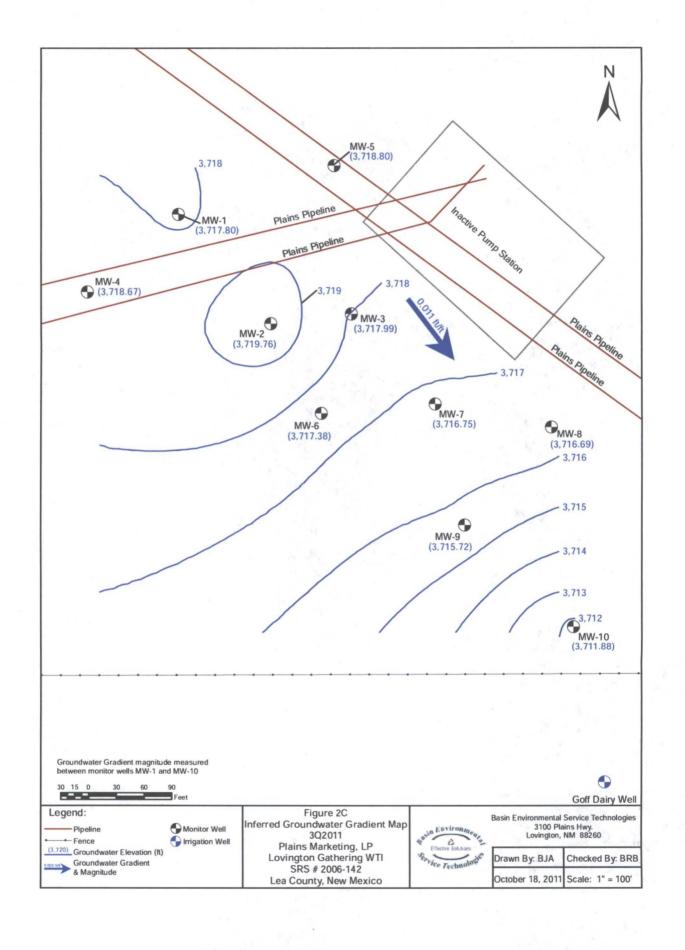
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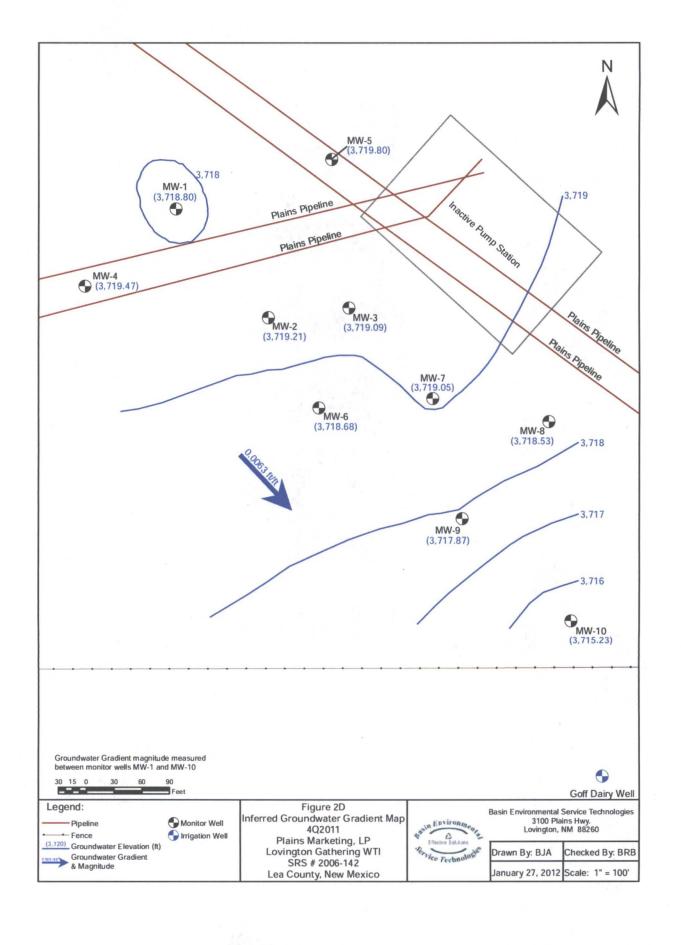
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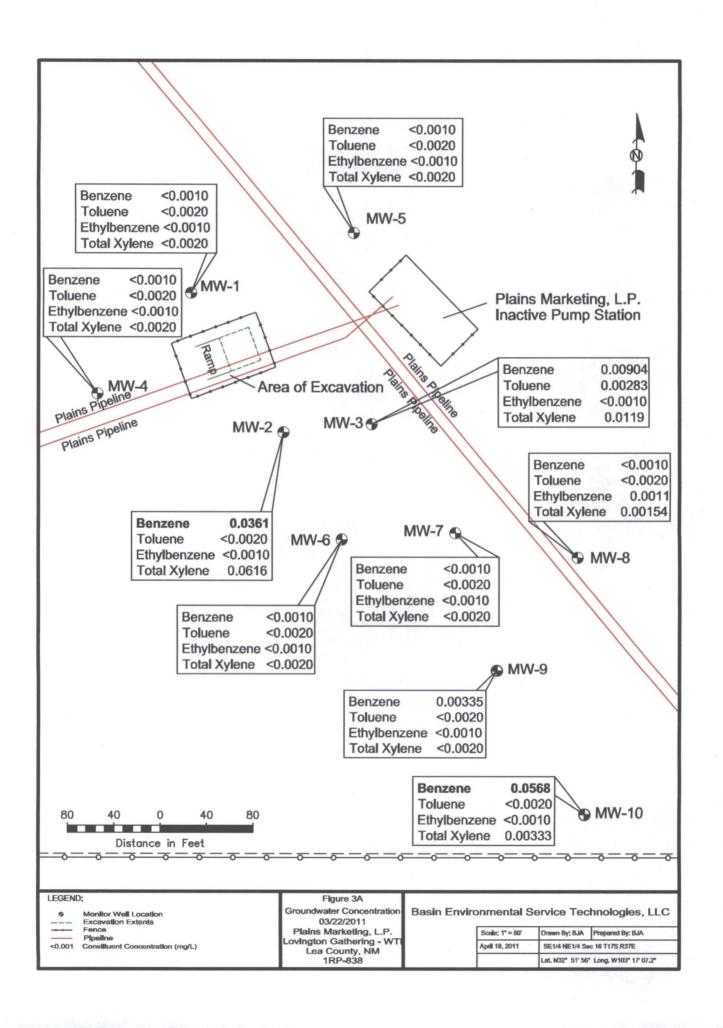


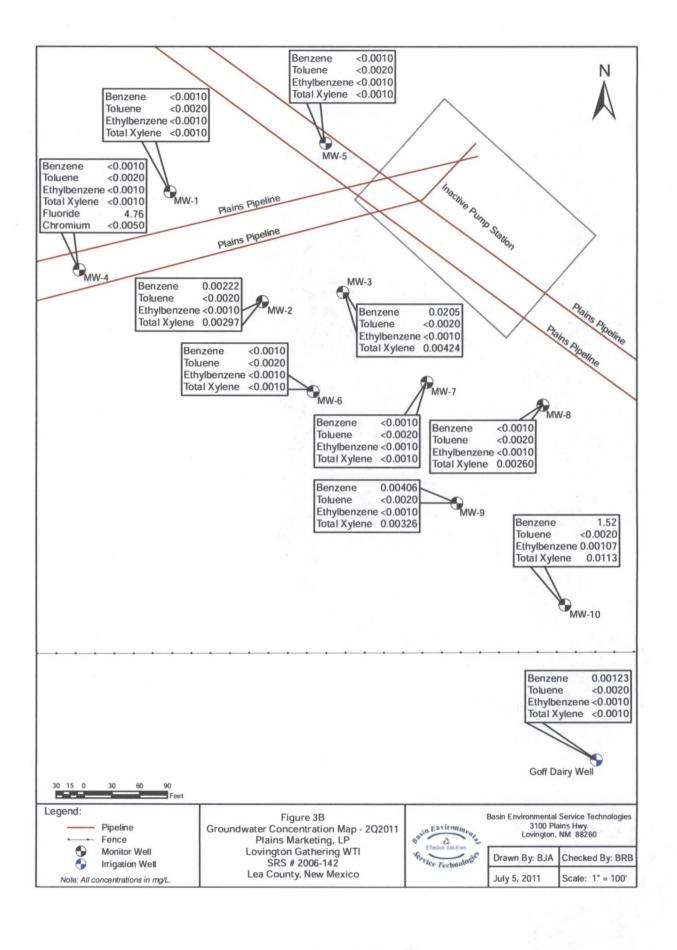


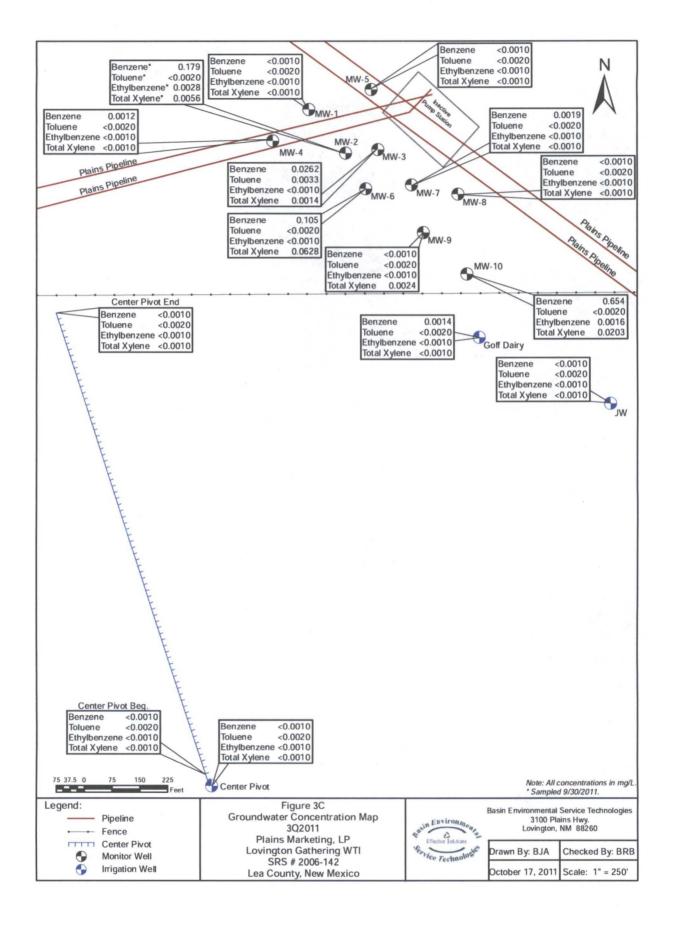


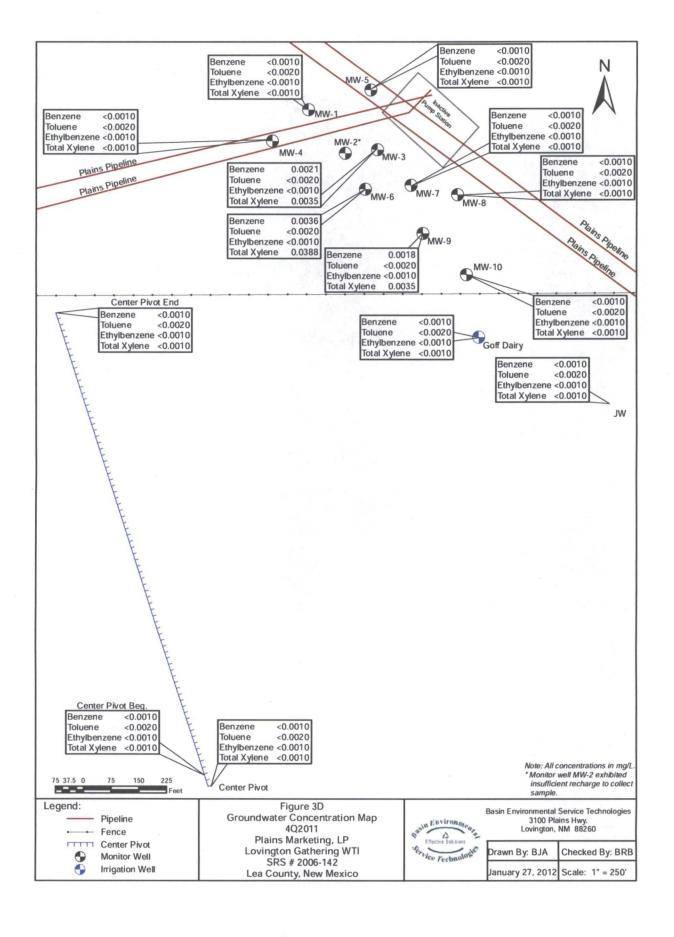


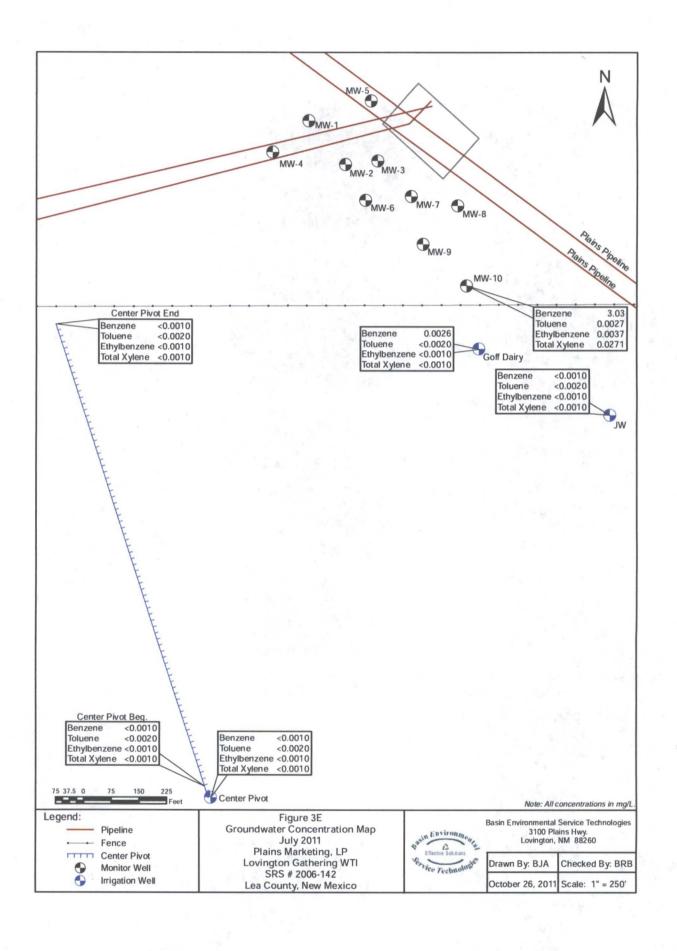


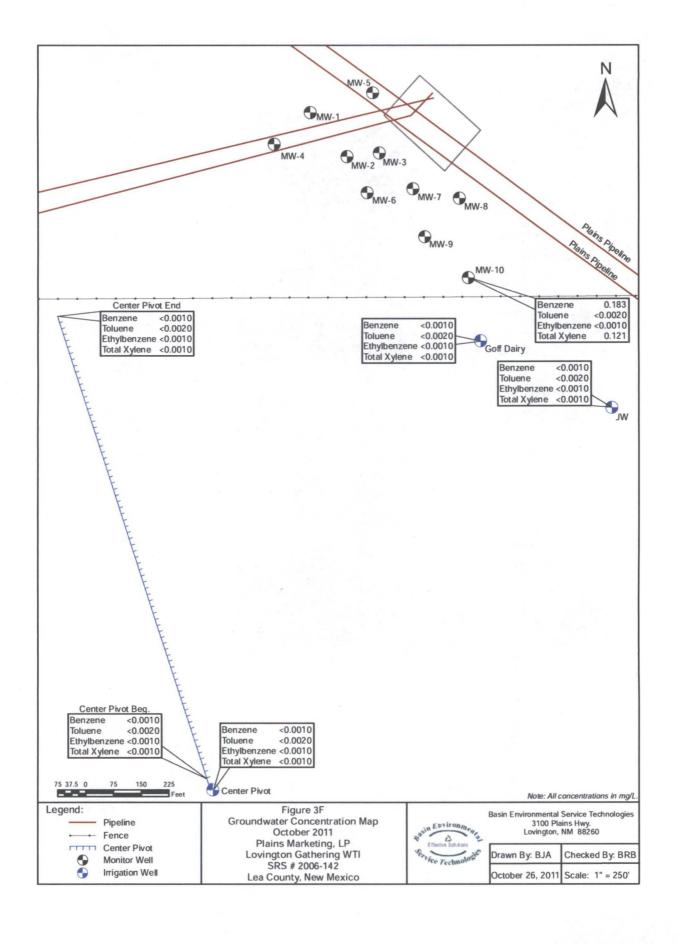


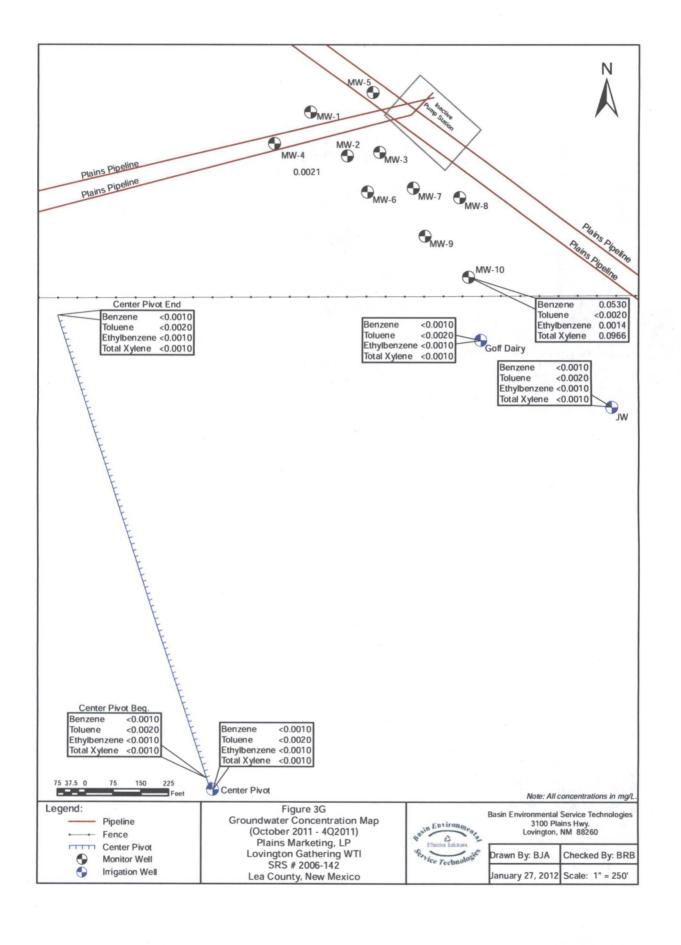


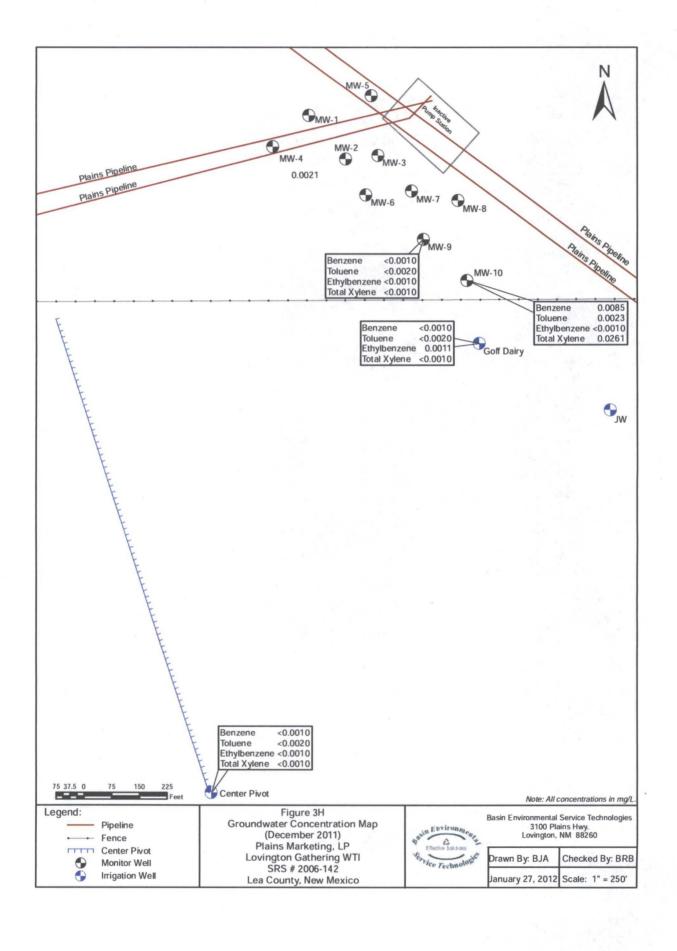












**Tables** 

# TABLE 1

# **2011 GROUNDWATER ELEVATION DATA**

PLAINS MARKETING, L.P. LOVINGTON GATHERING WTI LEA COUNTY, NEW MEXICO PLAINS SRS NO: 2006-142

NMOCD REF NO: 1RP-838

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	03/22/11	3,806.60	-	85.07	-	3,721.53
	05/27/11	3,806.60	-	86.56	-	3,720.04
	08/24/11	3,806.60	-	88.80		3,717.80
	11/09/11	3,806.60	-	87.80	-	3,718.80
				in a start	A Company	
MW-2	03/22/11	3,806.31	-	85.30	-	3,721.01
	05/27/11	3,807.31	-	87.11	-	3,720.20
•	08/24/11	3,806.31	-	87.55	-	3,718.76
	11/09/11	3,807.31	-	88.10	-	3,719.21
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	a day of a last					
MW-3	03/22/11	3,806.19	-	82.35	_	3,723.84
-	05/27/11	3,807.19	-	86.98	-	3,720.21
	08/24/11	3,806.19	-	89.20	-	3,716.99
	11/09/11	3,807.19	-	88.10	_	3,719.09
			The house of the	A CHANG		<b>为人的意思,不是</b> 然
MW-4	03/22/11	3,806.67	-	85.21	_	3,721.46
	05/27/11	3,807.67		86.77	• -	3,720.90
	08/24/11	3,806.67	•	89.00	-	3,717.67
	11/09/11	3,807.67	-	88.20	· _	3,719.47
4.800 107	2000 C. S.				Particle.	
MW-5	03/22/11	3,806.30	<u>-</u>	84.83	_	3,721.47
	05/27/11	3,807.30	_	86.26	-	3,721.04
	08/24/11	3,806.30	-	88.50	-	3,717.80
	11/09/11	3,807.30	-	87.50	_	3,719.80
				* **		
MW-6	03/22/11	3,806.08	-	85.64	-	3,720.44
	05/27/11	3,807.08	•	87.34	-	3,719.74
	08/24/11	3,806.08	-	89.70	-	3,716.38
	11/09/11	3,807.08	-	88.40	-	3,718.68
	Back 1000 And 1000 A					
MW-7	03/22/11	3,806.05	-	86.33	-	3,719.72
	05/27/11	3,807.05	<u>-</u>	87.93	-	3,719.12
	08/24/11	3,806.05	· -	90.30	_	3,715.75
	11/09/11	3,807.05	-	88.00	-	3,719.05
and the second						

# TABLE 1

# **2011 GROUNDWATER ELEVATION DATA**

PLAINS MARKETING, L.P. LOVINGTON GATHERING WTI LEA COUNTY, NEW MEXICO PLAINS SRS NO: 2006-142

NMOCD REF NO: 1RP-838

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-8	03/22/11	3,805.89	-	86.11	-	3,719.78
	05/27/11	3,806.89	<u>.</u>	87.68		3,719.21
•	08/24/11	3,805.89	<b>-</b>	90.20		3,715.69
	11/09/11	3,806.89	-	88.36	-	3,718.53
AND THE				Farms.		
MW-9	03/22/11	3,806.02	-	87.01	-	3,719.01
	05/27/11	. 3,807.02	-	88.61	-	3,718.41
	08/24/11	3,806.02		91.30		3,714.72
	11/09/11	3,807.02	- `	89.15	_	3,717.87
		SPSM K			<b>以有</b> 义是"元"	
MW-10	03/22/11	3,806.08	-	89.55	-	3,716.53
	05/27/11	3,806.08	<u>-</u> ·	91.22	•	3,714.86
	08/24/11	3,806.08	-	94.20		3,711.88
	11/09/11	3,806.08	-	90.85	-	3,715.23
	the state of the state of	A MARTINET AND AND A	Act Company			

·	1			300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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	10/5/2006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	•	•
***	12/28/2006	<0.0010	<0.0010	<0.0010	0.002	<0.0010	0.002	0.002	•	
•1	3/16/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	•	
•	5/31/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	•	-
. "	9/25/2007	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	, -
11	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
11	6/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	9/1.7/2008	0.020	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.020	-	
14	12/2/2008	0.035	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.035		-
	3/3/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
11	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
	9/1/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	·	
	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
. ••	3/4/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
	5/25/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
**	8/30/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		· -
**	11/11/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		<del></del>
**	3/22/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	
••	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	· -
; <b>"</b>	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		•
	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		•
	. J. J. A. G. 177 . 1	200	NEW YORK PART	60 Jan 18	4444111	P. Barrier		E TAPA	1 - 1 - 1 - 1 - 1 - 1 - 1	
MW-2	10/5/2006	0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.010		-
10	12/28/2006	0.161	<0.0010	<0.0010	0.024	<0.0010	0.024	0.185		<del></del>
	3/16/2007	0.154	<0.0010	<0.0010	0.015	<0.0010	0.015	0.169	-	<del></del>
"	5/31/2007	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.005		-
	9/25/2007	0.050	<0.0010	<0.0010	0.003	<0.0010	0.003	0.053		
• 10	11/30/2007	0.928	<0.0010	< 0.005	0.036	<0.005	0.036	0.964	-	
**	3/11/2008	0.095	<0.0020	<0.0010	0.0032	<0.0010	0.0032	0.098	-	
**	6/14/2008	0.003	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.003	-	-
**	9/17/2008	0.159	<0.0020	<0.0010	0.004	<0.0010	0.004	0.163	-	
	1	10 July 1					4 ( )		als, entrick, it	1.4 3.48.5
NMOCD CRITER		0.01	0.75	0.75	TO1	AL XYLENES	0.62		1.6	0.05

		· · · · · ·	•	300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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 .	12/2/2008	0.050	0.002	<0.0010	0.007	0.001	0.008	0.060		-
11	3/3/2009	0.036	<0.0020	<0.0010	0.0026	<0.0010	0.0026	0.038	-	•
"	6/18/2009	0.0097	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.010	-	
	9/1/2009	0.084	<0.0020	<0.0010	0.0083	<0.0010	0.0083	0.093	-	•
	12/18/2009	0.0129	<0.0020	<0.0010	0.0095	<0.0010	0.0095	0.022	-	-
	3/4/2010	0.0026	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0026	-	-
	5/25/2010	0.0023	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0023	-	-
"	8/30/2010	0.0406	<0.0020	<0.0010	0.0132	<0.0010	0.0132	0.0538		-
	11/11/2010	0.0087	<0.0020	<0.0010	0.091	<0.0010	0.091	0.0997		
•	3/22/2011	0.0361	<0.0020	<0.0010	0.0605	0.0011	0.0616	0.0977		
u u	5/27/2011	0.00222	<0.0020	<0.0010	0.00297	<0.0010	0.00297	0.00519		-
•	9/30/2011	0.179	<0.0020	0.00275	0.00345	0.00212	0.00557	0.187	-	-
The state of the s		1.377.3678	The water	and the same	物的原理	188511515	141		418 54 7	
MW-3	10/5/2006	6.60	<0.0010	<0.0010	0.072	<0.0010	0.072	6.67	-	-
	12/28/2006	1.02	<0.0010	0.005	0.028	<0.0010	0.028	1.05	-	-
•	3/16/2007	1.48	<0.0010	0.013	0.034	<0.0010	0.034	1.53	-	
0	5/31/2007	1.66	0.010	0.034	0.029	0.012	0.041	1.75	-	
	9/25/2007	0.494	0.023	0.020	0.014	0.007	0.021	0.56	-	
, ""	11/30/2007	5.93	0.027	0.273	0.141	0.074	0.215	6.45	-	-
	3/11/2008	1.159	0.107	0.177	0.066	0.139	0.205	1.65		
u	6/14/2008	0.214	0.002	0.007	0.012	0.005	0.017	0.24	-	
	9/17/2008	0.026	<0.0020	<0.0010	0.002	<0.0010	0.002	0.03	_	
	12/2/2008	0.024	<0.0020	<0.0010	0.004	0.001	0.005	0.03		
01	3/3/2009	1.367	0.0305	0.0251	0.0173	0.0158	0.0331	1.46		
	6/18/2009	0.0031	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	· ·	
41	9/1/2009	0.0073	0.0033	<0.0010	0.0028	0.0015	0.0043	0.01		
41	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
**	3/4/2010	0.0011	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0011	-	<b>-</b>
	5/25/2010	0.0109	0.0033	<0.0010	0.0048	0.0027	0.0075	0.0217	-	-
	8/30/2010	0.0092	0.0036	<0.0010	0.006	0.0033	0.0093	0.0221		
	11/11/2010	0.0033	<0.0020	<0.0010	0.0023	0.0013	0.0036	0.0069		•
10	3/22/2011	0.00904	0.00283	<0.0010	0.00815	0.00375	0.0119	0.0238	-	· -
	7 (	3 7	25, 5, 5, 7, 25, 8							W
NMOCD CRITER	IA.	0.01	0.75	0.75	TO	AL XYLENES	0.62		1.6	0.05

				300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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)
MVV-3	5/27/2011	0.0205	<0.0020	<0.0010	0.00308	0.00116	0.00424	0.0247	-	-
**	8/24/2011	0.0262	0.00333	<0.0010	0.00827	0.00312	0.0114	0.0409		•
•	11/9/2011	0.00211	<0.0020	<0.0010	0.00231	0.00114	0.00345	0.00556		•
		17.5545	2	1. 5. 1974						وإصواره يهاد
MW-4	12/28/2006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
0	3/16/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
**	5/30/2007	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.001	-	-
11	9/25/2007	<0.0010	0.001	<0.0010	<0.0020	<0.0010	<0.0020	0.001		-
**	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
14	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
"	6/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
11	9/17/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
#	12/2/2008	<0.0010	0.006	<0.0010	<0.0020	<0.0010	<0.0020	0.006	-	-
11	3/3/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
11	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
••	9/1/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
11	3/4/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
10	5/25/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
11	8/30/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	• -	-
94	11/11/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
91	3/22/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
91	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	4.76	<0.0050
11	8/24/2011	0.00119	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00119		•
•	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
and the second	3.3	12 12	101512024	EVALUATE.	was all the	44, 1. Y.S.		7 42 100	10 500 336	K. SPELLE
MW-5	12/28/2006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
84	3/16/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		-
**	5/30/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	i -	-
81	9/25/2007	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<b>-</b>	-
81	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		<u> </u>
H	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	1 -
#1	6/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<u> </u>	1 .
11	9/17/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	_	<u> </u>
	1.41			10 m		**. *** ::				14 6 6 6 6 6
NMOCD CRITER	RIA	0.01	0.75	0.75	TO1	AL XYLENES	0.62		1.6	0.05

			· · · · · · · · · · · · · · · · · · ·	300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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-5	12/2/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	
"	3/3/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	•
	9/1/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	
	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		•
	3/4/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
11	5/25/2010	0.0014	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0014		-
. 10	8/30/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
0	11/11/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
0	3/22/2011	< 0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
0	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
**	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
			English .	1			( ) · · · · · · · · · · · · · · · · · ·			- 17. 3 概…
MW-6	12/28/2006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		-
·	3/16/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	•	-
10	5/30/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	9/25/2007	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	· ·
	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	6/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	
	9/17/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	• .	
0	12/2/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	3/3/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0:0020	-	
	6/18/2009	0.0044	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0044		-
	9/1/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	12/18/2009	0.013	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0130	•	
	3/4/2010	0.0063	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0063		-
0	5/25/2010	0.0059	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0059	-	
•	8/30/2010	0.0053	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0053	-	-
	11/11/2010	0.0082	<0.0020	<0.0010	0.0035	<0.0010	0.0035	0.0117	•	-
. 11	3/22/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
LONG PROPERTY OF THE			<u> </u>	A 18 1 12 1	A CONTRACTOR OF THE SECOND			0.29 网络"从"		Same of the same
NMOCD CRITER	IA .	0.01	0.75	0.75	TOT	AL XYLENES	0.62		1.6	0.05

				300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
- 11	8/24/2011	0.105	<0.0020	<0.0010	0.0597	0.00309	0.0628	0.168	-	-
	11/9/2011	0.00356	<0.0020	<0.0010	0.0388	<0.0010	0.0388	0.0424		
图数图1740744169周期	をおります からっ	A 1200 180	<b>公本 江海松</b>	一切は対数機能	Ballin of the	4.19.43	<b>*</b> (4) (1) (1)	至此的形式。2	14.16.18.18.18.18.1	ART. FLF
MVV-7	12/28/2006	0.047	<0.0010	<0.0010	0.001	<0.0010	0.001	0.0480	-	-
	3/16/2007	0.047	<0:0010	<0.0010	0.015	<0.0010	0.015	0.0620		-
10	5/31/2007	0.039	<0.0010	<0.0010	0.005	<0.0010	0.005	0.0440	-	-
"	9/25/2007	0.037	<0.0010	<0.0010	0.030	<0.0010	0.03	0.0670	-	-
11	11/30/2007	0.026	<0.0020	<0.0010	0.022	<0.0010	0.022	0.0480	•	-
•	3/11/2008	0.095	<0.0020	<0.0010	0.0032	<0.0010	0.0032	0.0982	-	
"	6/14/2008	0.138	<0.0020	<0.0010	0.016	<0.0010	0.016	0.1540	-	-
"	9/17/2008	0.353	<0.0020	<0.0010	0.003	<0.0010	0.003	0.3560	-	-
11	12/2/2008	0.036	<0.0020	<0.0010	0.003	0.002	0.005	0.0410	-	
"	3/3/2009	0.0775	<0.0020	<0.0010	0.0327	<0.0010	0.0327	0.1102	-	-
11	6/18/2009	0.057	<0.0020	<0.0010	0.0329	<0.0010	0.0329	0.0899	-	•
**	9/1/2009	0.012	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.0120	-	
11	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
"	3/4/2010	<0.0010	<0.0020	< 0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	-
	5/25/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
11	8/30/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
11	11/11/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
11	3/22/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
"	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<del>-</del> -	-
11	8/24/2011	0.00192	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00192	-	-
11	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-
		111111111111111111111111111111111111111		\$1.50 B	74	1.35		174 M. N. C.	1 a de tiñ	73K - 5 -
MVV-8	3/16/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		-
	5/31/2007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
	9/25/2007	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
"	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	1 -
11	6/14/2008	0.008	<0.0020	<0.0010	< 0.0020	<0.0010	<0.0020	0.008		-
"	9/17/2008	0.568	<0.0100	<0.005	<0.0100	<0.005	< 0.0100	0.568	-	-
	No.	1 1 1 1 1 1 1	· (4)		- pi 25	F1 X 5 2 2 1		<b>艾瑟克马克</b>	e i jijet	
NMOCD CRITER	RIA	0.01.	0.75	0.75	TOT	AL XYLENES	0.62		1.6	0.05

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

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

				300.1	SW846-6010C					
SAMPLE LOCATION	SAMPLE DATE	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	12/2/2008	0.234	0.046	0.008	0.041	0.013	0.054	0.342		•
19	3/3/2009	0.0284	<0.0020	<0.0010	0.0068	<0.0010	0.0068	0.0352	-	
	6/18/2009	0.0045	<0.0020	0.0016	0.0032	<0.0010	0.0032	0.0093		
п	9/1/2009	0.0013	<0.0020	0.0011	0.0141	<0.0010	0.0141	0.0165		· ·
	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
H	3/4/2010	<0.0010	<0.0020	0.0011	<0.0020	<0.0010	<0.0020	0.0011	•	
, н	5/25/2010	0.0012	<0.0020	0.001	<0.0020	<0.0010	<0.0020	0.0022	-	
ы	8/30/2010	<0.0010	<0.0020	0.0014	<0.0020	<0.0010	<0.0020	0.0014	-	
н	11/11/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
n·	3/22/2011	<0.0010	<0.0020	<0.0010	<0.0020	0.00154	0.00154	0.00154		
ы	5/27/2011	<0.0010	<0.0020	<0.0010	<0.0020	0.00260	0.00260	0.00260		
81	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		· .
II .	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
<b>公司的经济企业</b> 的证明。	74	1,410,5350pT			3		- 2	2.31	• • • • • • • • • • • • • • • • • • • •	1 0 0 45 3
MW-9	9/25/2007	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
"	11/30/2007	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		<u> </u>
u	3/11/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	1 -
BI .	6/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	<b>†</b> .
u	9/17/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<u>-</u>	†
11	12/2/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
, n	3/3/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	_	
• .	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		
11	9/1/2009	0.9717	0.0641	<0.0100	0.0867	0.0422	0.1289	1.1647		•
**	9/10/2009	1.838	<0.0200	<0.0100	0.0537	<0.0100	0.0537	1.8917		· .
01	10/5/2009	0.985	<0.0020	<0.0010	0.0442	<0.0010	0.0442	1.0292		
	12/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	
n	3/4/2010	0.0192	<0.0020	<0.0010	0.0027	<0.0010	0.0027	0.0219	-	<u> </u>
	5/25/2010	0.0421	<0.0020	<0.0010	0.0063	<0.0010	0.0063	0.0484	-	-
01	8/30/2010	0.1259	<0.0020	<0.0010	0.0344	<0.0010	0.0344	0.1603	-	<u> </u>
•	11/11/2010	0.0265	<0.0020	<0.0010	0.0097	<0.0010	0.0097	0.0362	•	· -
11	3/22/2011	0.00335	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00335		<u> </u>
48	5/27/2011	0.00406	<0.0020	<0.0010	0.00326	<0.0010	0.00326	0.00732	-	<u> </u>
. 11	8/24/2011	<0.0010	<0.0020	<0.0010	0.00237	<0.0010	0.00237	0.00237	•	1 .
	11/9/2011	0.00179	<0.0020	<0.0010	0.00349	<0.0010	0.00349	0.00528		
	12/14/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		<del>                                     </del>
THE VICTOR STREET, S. C. C. C.	1 11 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2004	***		TOTAL SERVE		CALL AND			NOVE WITH
NMOCD CRITER		0.01	0.75	0.75	as septembers the print	AL XYLENES		present and Present Alberta Line St.	1.6	0.05

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

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

		METHODS: EPA SW 846-8021b								SW846-6010C	
SAMPLE LOCATION	SAMPLE DATE	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	11/2/2009	<0.005	<0.005	<0.005	<0.010	<0.005	<0.010	<0.010	-		
•	3/4/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11	5/25/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
	8/30/2010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11	11/11/2010	0.0350	<0.0020	<0.0010	0.0035	<0.0010	0.0035	0.0385	-	-	
£9	3/22/2011	0.0568	<0.0020	<0.0010	0.00333	<0.0010	0.00333	0.0601	-	-	
	5/27/2011	1.52	<0.0020	0.00107	0.0113	<0.0010	0.0113	1.53		-	
41	7/11/2011	3.00	0.00265	0.00365	0.0248	0.00232	0.0271	3.03	-		
- 41	8/24/2011	0.654	<0.0020	0.00158	0.0177	0.00262	0.0203	0.676	-		
	10/10/2011	0.183	<0.0020	<0.0010	0.121	<0.0010	0.121	0.304	-	-	
	10/31/2011	0.053	<0.0020	0.0014	0.0944	0.00222	0.0966	0.151	-	-	
	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		-	
==	12/14/2011	0.00846	0.00226	<0.0010	0.0261	<0.0010	0.0261	0.0368	-	-	
Provide Attained	验少价格准约4、	ma s	1. 1	5-33-27 N	8" 20 M. 1 A	The second section	1 41 41 4 4	Kith Block		1.1.13 4.73	
Goff Dairy Well	5/27/2011	0.00125	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00123	-	-	
	7/11/2011	0.00262	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	0.00262	-	-	
	8/24/2011	< 0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
	10/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
	10/31/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	-	
**	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	` •	-	
	12/14/2011	<0.0010	<0.0020	0.00111	<0.0020	<0.0010	<0.0020	0.00111			
7 10 10 10 10 10 10 10 10 10 10 10 10 10	12		387	189.1891		\$ .5 F		39 A 1 3 B 1			
Goff Dairy - Ctr. Pivot Well	7/7/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
"	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	< 0.0020	<0.0020	-	-	
	10/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
"	10/31/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
"	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
	12/14/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
11 11 11 11 11 11 11 11 11 11 11 11 11	14 30 8 5 ··			2 50 34	1.74			避免的 湿。		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Goff Dairy - Ctr. Pivot Beg.	7/7/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
11	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-	
••	10/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-		
	10/31/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		• .	
. ,	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020			
	A STATE OF THE STA		5 19813		College College	125 (1.454)			<b>*</b> *********	The Market State of the State o	
NMOCD CRITER	Α	0.01	0.75	0.75		AL XYLENES			1.6	0.05	

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

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

				METH	ODS: EPA S	W 846-8021b			300.1	SW846-6010C
SAMPLE LOCATION	SAMPLE DATE	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	7/7/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020		•
"	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
10	10/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	• •
19	10/31/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	•
15	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
	The same	Section . Section	* TO WAR				graph of the		Salarana Cara	
JW Well	7/14/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	-
11	8/24/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	·<0.0020	<0.0020	-	•
•	10/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	•
61	10/31/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	-	Ī
u	11/9/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	•	<u>-</u>
	12.70	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				July 19 The		1. 1.77	Carl Same Carl	1 9 g
NMOCD CRITER	IA	0.01	0.75	0.75	TOT	AL XYLENES	0.62		1.6	0.05

#### TABLE 3

#### CONCENTRATIONS OF SEMI-VOLATILE COMPOUNDS IN GROUNDWATER

#### PLAINS PIPELINE, L.P.

# LOVINGTON GATHERING WTI

LEA COUNTY, NEW MEXICO

#### NMOCD REFERENCE NUMBER 1RP-838

ſ		EPA SW846 8270C, 3510																		
	SAMPLE LOCATION	SAMPLE DATE	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
I	MW-10	12/15/2011	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0051	<0.0102	<0.0102	<0.0102	<0.0102
	79.77			1000	## 10 TO			\$2. C		3.45	mar of the			1. 18. 16. 18.	ta .	1 1	,	334 82		

All concentrations reported in mg/L

**Appendices** 

# Appendix A Laboratory Analytical Reports

# **Analytical Report 410609**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

**Lovington Gathering WTI** 

2006-142

28-MAR-11



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):

Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

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

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





28-MAR-11

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

Reference: XENCO Report No: 410609

**Lovington Gathering WTI**Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 410609. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 410609 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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

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



# **Sample Cross Reference 410609**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Mar-22-11 09:50		410609-001
MW-2	. W	Mar-22-11 09:35	•	410609-002
MW-3	W	Mar-22-11 09:30	•	410609-003
MW-4	W	Mar-22-11 10:00		410609-004
MW-5	W	Mar-22-11 09:45		410609-005
MW-6	W	Mar-22-11 09:40		410609-006
MW-7	W	Mar-22-11 09:00		410609-007
MW-8	. <b>W</b>	Mar-22-11 09:05		410609-008
MW-9	W	Mar-22-11 10:30		410609-009
MW-10	W	Mar-22-11 08:30	٠	410609-010



#### CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 410609

Report Date: 28-MAR-11

Date Received: 03/22/2011

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



# Certificate of Analy Summary 410609 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Tue Mar-22-11 02:42 pm

Report Date: 28-MAR-11

Project Manager: Brent Barron, II

								2 . 0 , 0 . 0	В	Dient Dairon,	**		
	Lab Id:	410609-0	001	410609-0	002	410609-0	03	410609-0	04	410609-0	05	410609-0	006
Analysis Requested	Field Id:	MW-l		MW-2	;	MW-3		MW-4		MW-5		.MW-6	;
Anaiysis Kequesieu	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	₹	WATE	ર	WATE	١ ا	WATE	R,
	Sampled:	Mar-22-11	09:50	Mar-22-11	09:35	Mar-22-11 (	09:30	Mar-22-11	10:00	Mar-22-11 (	09:45	Mar-22-11	09:40
BTEX by EPA 8021B	Extracted:	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00
	Analyzed:	Mar-25-11	13:57	Mar-25-11	14:19	Mar-25-11	14:42	Mar-25-11	15:05	Mar-25-11	15:29	Mar-25-11	15:51
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.0010	0.0361	0.0010	0.00904	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		ND	0.0020	ND	0.0020	0.00283	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
m_p-Xylenes		ND	0.0020	0.0605	0.0020	0.00815	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
o-Xylene		ND	0.0010	0.00110	0.0010	0.00375	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total Xylenes		, ND	0.0010	0.0616	0.0010	0.0119	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total BTEX		ND	0.0010	0.0977	0.0010	0.0238	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
	<del></del>												

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

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

Brent Barron, II Odessa Laboratory Manager



### Certificate of Analysis Summary 410609 PLAINS ALL AMERICAN EH&S, Midland, TX

inelad:

**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Mar-22-11 02:42 pm

Report Date: 28-MAR-11

Project Manager: Brent Barron, II

	Lab Id:	410609-0	07	410609-0	800	410609-009		410609-0	10	
Analysis Requested	Field Id:	MW-7		MW-8		MW-9	,	MW-10	0	
Anutysis Kequesieu	Depth:									
	Matrix:	WATE	R.	WATE	R	WATE	R	WATE	R	
	Sampled:	Mar-22-11	09:00	Mar-22-11	09:05	Mar-22-11	10:30	Mar-22-11	08:30	,
BTEX by EPA 8021B	Extracted:	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00	Mar-24-11	14:00	
	Analyzed:	Mar-25-11	16:16	Mar-25-11	16:39	Mar-25-11	17:01	Mar-25-11	17:24	
	Units/RL:	mg/L	RL_	mg/L	RL	mg/L	RL	mg/L	RL	
Benzene		ND	0.0010	· ND	0.0010	0.00335	0.0010	0.0568	0.0010	
Toluene		ND	0.0020	ND	0.0020	ND	0.0020	ND -	0.0020	
Ethylbenzene		ND	0.0010	ND	0.0010	ND	.0.0010	ND	0.0010	
m_p-Xylenes		ND	0.0020	ND	0.0020	ND	0.0020	0.00333	0.0020	
o-Xylene		ND.	0.0010	0.00154	0.0010	ND	0.0010	ND	0.0010	
Total Xylenes		ND	0.0010	0.00154	0.0010	ND	0.0010	0.00333	0.0010	
Total BTEX		ND	0.0010	0.00154	0.0010	0.00335	0.0010	0.0601	0.0010	

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 KENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II Odessa Laboratory Manager



# Flagging Criteria

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

  The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit
- **POL** Practical Quantitation Limit
- \* Outside XENCO's scope of NELAC Accreditation.

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Lovington Gathering WTI

Work Orders: 410609,

**Project ID: 2006-142** 

Lab Batch #: 849442

Sample: 599029-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 12:03	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]		÷				
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	•				
4-Bromofluorobenzene	0.0320	0.0300	107	80-120					

Lab Batch #: 849442

Sample: 599029-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 12:26	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D] ·	ŀ					
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	·				
4-Bromofluorobenzene	0.0323	0.0300	108	80-120					

Lab Batch #: 849442

Sample: 599029-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 03/25/11 13:34	SURROGATE RECOVERY STUDY							
BTEX b	y EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Aı	nalytes			{D}					
1,4-Difluorobenzene		0.0288	0.0300	96	80-120				
4-Bromofluorobenzene		0.0292	0.0300	97	80-120				

Lab Batch #: 849442

Sample: 410609-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 13:57	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			(D)						
1,4-Difluorobenzene	0.0288	0.0300	96	80-120					
4-Bromofluorobenzene	0.0295	0.0300	98	80-120					

Lab Batch #: 849442

Sample: 410609-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 14:19	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			{D]					
1,4-Difluorobenzene	0.0288	0.0300	96	80-120				
4-Bromofluorobenzene	0.0309	0.0300	103	80-120				

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 410609, Lab Batch #: 849442

Sample: 410609-003 / SMP

Project ID: 2006-142

Matrix: Water Batch:

Units: mg/L Date Analyzed: 03/25/11 14:42	SU	RROGATE R	RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
Analytes				20.422							
1,4-Difluorobenzene	0.0282	0.0300	94	80-120							
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	٠						

Lab Batch #: 849442

Sample: 410609-004 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 15:0	5 SU	RROGATE R	RECOVERY	ECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits	Flags							
Analytes	1-3	123	[D]	%R								
1,4-Difluorobenzene .	0.0289	0.0300	96	80-120	41							
4-Bromofluorobenzene	0.0300	0.0300	100	80-120								

Lab Batch #: 849442

Sample: 410609-005 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 15:29	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	,	,	[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 849442

Sample: 410609-006 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 03/25/11 15:51	SU	RROGATE R	ECOVERY S	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
• • •	Analytes			[D]		
1,4-Difluorobenzene		0.0286	0.0300	95	80-120	•
4-Bromofluorobenzene		0.0291-	0.0300	97	80-120	

Lab Batch #: 849442

Sample: 410609-007 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 16:16	Su	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
Analytes			. ,		<u></u>				
1,4-Difluorobenzene	0.0291	0.0300	97	80-120					
4-Bromofluorobenzene	0.0290	0.0300	97	80-120					

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 410609,

Project ID: 2006-142

Lab Batch #: 849442

Sample: 410609-008 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 16:39	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	l IAI	[2]	[D]	,,,,	• ,			
1,4-Difluorobenzene	0.0273	0.0300	91	80-120				
4-Bromofluorobenzene	0.0294	0.0300	98	80-120				

Lab Batch #: 849442

Sample: 410609-009 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 17:01	SU	RROGATE R	RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]		-					
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	<u>.                                    </u>					
4-Bromofluorobenzene	0.0289	0.0300	96	80-120						

Lab Batch #: 849442

Sample: 410609-010 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11.17:24	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0292	0.0300	97	80-120			
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	٠.		

Lab Batch #: 849442

**Sample:** 410609-006 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 17:47  BTEX by EPA 8021B  Analytes		SURROGATE RECOVERY STUDY							
		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			[D]					
1,4-Difluorobenzene	•	0.0309	0.0300	103	80-120				
4-Bromofluorobenzene		0.0324	0.0300	108	80-120				

Lab Batch #: 849442

Sample: 410609-006 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/25/11 18:09	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0313	0.0300	104	80-120				
4-Bromofluorobenzene	0.0308	0.0300	103	80-120				

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution





Project Name: Lovington Gathering WTI

Work Order #: 410609

Analyst: ASA Lab Batch ID: 849442 Date Prepared: 03/24/2011

**Project ID: 2006-142** 

**Date Analyzed:** 03/25/2011

Sample: 599029-1-BKS Batch #: 1

Matrix: Water

Units: mg/L BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.102	102	0.100	0.109	109	7	70-125	25	
Toluene	. <0.00200	0.100	0.102	102	0.100	0.109	109	· 7	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0986	99	0.100	0.106	106	7	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.207	104	8	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.111	111	,6	71-133	25	



# Form 3 - MS / MSD Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 410609

**Project ID: 2006-142** 

Lab Batch ID: 849442

QC- Sample ID: 410609-006 S

Batch #:

Matrix: Water

**Date Analyzed:** 03/25/2011

Date Prepared: 03/24/2011

ASA Analyst:

Penarting Unite: ma/I

Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.00100	0.100	0.106	106	0.100	0.107	107	1	70-125	25	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-125	25 .	
Ethylbenzene	<0.00100	0.100	0.101	101	0.100	0.100	100	1	71-129	. 25	
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.187	94	· 3	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.103	103	2	71-133	25	

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

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Ben J. Arguijo Project Name: Lovington Gathering WTI Company Name Basin Environmental Service Technologies, LLC Project #: 2006-142 Company Address: P. O. Box 301 Project Loc: Lea County, NM City/State/Zip: Lovington, NM 88260 PO#: PAA- J. Henry X Standard □ TRRP ☐ NPDES Telephone No: (575)396-2378 Fax No: (575) 396-1429 Report Format: bjarquijo@basinenv.com Sampler Signature: e-mail: Analyze For. (lab use only) TCLP: TOTAL ORDER #: Preservation & # of Containers Metals: As Ag Ba Cd Cr Pb Hg Se BTEX 8260 vnions (Cl. SO4, Alkalinity) Standard TAT 4 DAY only) ₹ 3eginning Depth Fotal #. of Containers Time Sampled Depth HCI LAC Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> NaOH Other ( HNO None AB FIELD CODE 01 3/22/2011 3 | X MW-1 GW 02 3/22/2011 3 X **GW** MW-2 03 MW-3 3/22/2011 3 X **GW** X 3 X 04 MW-4 3/22/2011 **GW** 05 3 MW-5 3/22/2011 **GW** 1)6 3 X X MW-6 3/22/2011 GW 01 3 X X MW-7 3/22/2011 **GW** 03 MW-8 3/22/2011 3 X X GW 09  $3 \times$ X 3/22/2011 GW MW-9 10 3/22/2011 **GW** MW-10 Laboratory Comments: Special Instructions: Sample Containers Intact? VOCs Free of Headspace? Labels on container(s) Relinquished by: Custody seals on container(s) 3-221 16:55 Custody seals on cooler(s) Date Sample Hand Delivered Received by: by Sampler/Client Rep by Courier? UPS DHL FedEx Lone Star Date Date Received by ELOT: Relinquished by Temperature Upon Receipt:



#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Datlas Houston, Miami, Odessa, Philadelphia Phoesir, San Antonio, Tarma Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

#### Prelogin / Nonconformance Report - Sample Log-In

~ .			l o:		or control	. 209		
Client 🖰	isin I	nv.	Plain	S				
Date/Time:	3.22	11 1	4:42					
Lab ID#:	4	060	<u> </u>	<u> </u>		٠		
Initials:		AE:						
			S	ample Receipt Ch	ecklist			
1. Samples o	n ice?				Stue	Water,	No	
2. Shipping o	container in	good cond	ition?		Yes	No	None	
3. Custody s	eals intact o	n shipping	container (co	oler) and bottles?	(Yes)	No	NA	
4. Chain of C	custody pres	ent?			Yes	No		
5. Sample in	structions co	omplete or	chain of cus	tody?	Yes	No		
6. Any missi	ng / extra sa	mples?			Yes	(No)		
7. Chain of c	ustody sign	ed when re	linguished / r	eceived?	Yes	No		
8. Chain of c	ustody agre	es with sa	mple label(s)?	)	Yes	No		
9. Container	labels legibl	le and inta	ct?		Yes	No		
10. Sample r	natrîx / prop	erties agre	e with chain o	of custody?	Yes	No		
11. Samples	in proper co	ontainer / b	ottle?		Yes	No-		
12 Samples	properly pro	served?	**************************************		Yes	No	N/A	·
13. Sample o	container int	act?	·		YES	No		
14. Sufficien	it sample am	ount for in	dicated test(s	1)?	Yes	No		
15. All samp	les received	within su	ficient hold ti	me?	Yes	No .		
16. Subcont	ract of samp	te(s)?			Yes	No	(N/A)	
17. VOC san	nple have ze	ro head sp	ace?		(Yes)	No	N/A	
18. Cooler 1	No.	Cooler 2	No.	Cooler 3 No.	Cooler 4 No	<u>.                                    </u>	Cooler 5 No.	
fbs	3.600	ibs	•c	lbs	°C lbs	9	C lbs	°c
			None	conformance Doci	mentation			
Contact:			Contacted b	y:		Date/Time:		
	•		• .					
Regarding:	<del></del>							
	<del></del>	·	<del></del>	<del></del>	·.			
Corrective /	Action Taker	1:						
				···				
			;					
Check all th	hat annha	Coelina	noncesso has b	egun shortly after san	nding event and	out of temp	erature	
check an ii		CO	ndition accept	table by NELAC 5.5.8.3	.1.a.1.			• • •
	·	□ initial an	d Backup Ten	nperature confirm out (	of temperature co	anditions	•	

# **Analytical Report 418116**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI

2006-142

06-JUN-11

Collected By: Client



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06-JUN-11

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

Reference: XENCO Report No: 418116
Lovington Gathering WTI

Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 418116. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 418116 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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# **Sample Cross Reference 418116**



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	May-27-11 08:40		418116-001
MW-2	W	May-27-11 08:35		418116-002
MW-3	W	May-27-11 08:25		418116-003
MW-4	W	May-27-11 08:50		418116-004
MW-5	W	May-27-11 08:20		418116-005
MW-6	· W	May-27-11 09:00		418116-006
MW-7	W	May-27-11 09:10		418116-007
MW-8	W	May-27-11 09:20		418116-008
MW-9	W	May-27-11 09:25		418116-009
MW-10	W	May-27-11 09:35		418116-010



#### CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 418116

Report Date: 06-JUN-11

Date Received: 05/27/2011

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-858300 Inorganic Anions In Water by E300

E300MI

Batch 858300, Fluoride RPD was outside laboratory control limits.

Samples affected are: 418116-004

E300MI -

Batch 858300, Fluoride recovered below QC limits in the Matrix Spike.

Samples affected are: 418116-004.

The Laboratory Control Sample for Fluoride is within laboratory Control Limits

Batch: LBA-858485 BTEX by EPA 8021

SW8021BM

Batch 858485, 1,4-Difluorobenzene recovered above QC limits . Matrix interferences is

suspected; data confirmed by re-analysis

Samples affected are: 418116-010.



# Certificate of Analys Summary 418116 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri May-27-11 04:42 pm

Report Date: 06-JUN-11

			•					Project Ma	nager:	Brent Barron,	П		
	Lab Id:	418116-0	01	418116-0	002	418116-0	003	418116-0	004	418116-0	05	418116-0	006
Anglysis Pagyastad	Field Id:	MW-1	ļ	MW-2		MW-3	3	MW-4	<b>,</b>	MW-5	٠.	MW-6	5
Analysis Requested	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R .	WATE	R
	Sampled:	May-27-11	08:40	May-27-11	08:35	May-27-11	08:25	May-27-11	08:50	May-27-11	08:20	May-27-11	09:00
BTEX by EPA 8021	Extracted:	Jun-01-11	11:34	Jun-01-11 1	1:34	Jun-01-11	11:34	Jun-01-11	11:34	Jun-01-11 1	1:34	Jun-01-11	11:34
	Analyzed:	Jun-02-11	13:57	Jun-02-11 1	4:20	Jun-02-11	14:43	Jun-02-11	15:06	Jun-02-11 1	5:29	Jun-02-11	15:52
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		, ND	0.0010	0.00222	0.0010	0.0205	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020	· ND	0.0020
Ethylbenzene		ND	0100.0	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
m_p-Xylenes		ND	0.0020	0.00297	0.0020	0.00308	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
o-Xylene		ND	0.0010	ND	0.0010	0.00116	0.0010	ND	0.0010	. ND	0.0010	ND	0.0010
Xylenes, Total		ND	0.0010	0.00297	0.0010	0.00424	0.0010	ND	0.0010	· ND	0.0010	ND	0.0010
Total BTEX		ND	0.0010	0.00519	0.0010	0.0247	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Inorganic Anions In Water by E300	Extracted:												
	Analyzed:	•						Jun-01-i1	10:44				
	Units/RL:							mg/L	RL	•			
Fluoride								4.76	2.00				
Chloride								24.3	5.00				
Metals, Total by SW846 6010C	Extracted:							Jun-02-11	11:44				
SUB: E87429	Analyzed:							Jun-05-11	13:49				
	. Units/RL:							mg/L	RL				
Chromium								ND	0.0500				

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 involced for this work order unless otherwise agreed to in writing.

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Brent Barron, II Odessa Laboratory Manager



# Certificate of Analysis Summary 418116

# PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri May-27-11 04:42 pm

Report Date: 06-JUN-11

Project Manager: Brent Barron, II

Lab Id:	418116-0	07	418116-0	08	418116-0	09	418116-0	010			
Field Id:	MW-7	MW-7		1	MW-9		MW-10	0			
Depth:				1							
Matrix:	WATE	١ ا	WATER	١	WATE	R	WATE	R			
Sampled:	May-27-11 (	09:10	May-27-11 (	09:20	May-27-11	09:25	May-27-11	09:35			
Extracted:	Jun-02-11 1	2:15	Jun-02-11 1	2:15	Jun-02-11 1	2:15	Jun-02-11	12:15			
Analyzed:	Jun-02-11 1	9:19	Jun-02-11 1	9:41	Jun-02-11 2	20:04	Jun-02-11	20:27			
Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		·	
	ND	0.0010	ND -	0.0010	0.00406	0.0010	1.52 D	0.0250			
	ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020			
	ND	0.0010	ND	0.0010	ND	0.0010	0.00107	0.0010			
	ND	0.0020	ND	0.0020	0.00326	0.0020	0.0113	0.0020			-
	ND	0.0010	0.00260	0.0010	ND	0.0010	ND	0.0010			
	ND	0.0010	0.00260	0.0010	0.00326	0.0010	0.0113	0.0010			
	ND	0.0010	0.00260	0.0010	0.00732	0.0010	1.53 D	0.0010			
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id:         MW-7           Depth:         WATER           Matrix:         WATER           Sampled:         May-27-11 (           Extracted:         Jun-02-11 1           Analyzed:         Jun-02-11 1           Units/RL:         mg/L           ND         ND           ND         ND           ND         ND           ND         ND           ND         ND           ND         ND	Field Id: MW-7  Depth: WATER  Sampled: May-27-11 09:10  Extracted: Jun-02-11 12:15  Analyzed: Jun-02-11 19:19  Units/RL: mg/L RL  ND 0.0010  ND 0.0020  ND 0.0020  ND 0.0010  ND 0.0010  ND 0.0010	Field Id:         MW-7         MW-8           Depth:         WATER         WATER           Sampled:         May-27-11 09:10         May-27-11 0           Extracted:         Jun-02-11 12:15         Jun-02-11 1           Analyzed:         Jun-02-11 19:19         Jun-02-11 1           Units/RL:         mg/L         RL         mg/L           ND         0.0010         ND           ND         0.0020         ND           ND         0.0010         ND           ND         0.0010         0.00260           ND         0.0010         0.00260           ND         0.0010         0.00260	Field Id:         MW-7         MW-8           Depth:         WATER         WATER           Matrix:         WATER         WATER           Sampled:         May-27-11 09:10         May-27-11 09:20           Extracted:         Jun-02-11 12:15         Jun-02-11 12:15           Analyzed:         Jun-02-11 19:19         Jun-02-11 19:41           Units/RL:         mg/L         RL         mg/L         RL           ND         0.0010         ND         0.0010           ND         0.0020         ND         0.0020           ND         0.0010         ND         0.0020           ND         0.0010         0.00260         0.0010           ND         0.0010         0.00260         0.0010           ND         0.0010         0.00260         0.0010	Field Id:         MW-7         MW-8         MW-9           Depth:         WATER         WATER         WATER         WATER           Sampled:         May-27-11 09:10         May-27-11 09:20         May-27-11 07         May-	Field Id:         MW-7         MW-8         MW-9           Depth:         WATER         WATER         WATER         WATER           Sampled:         May-27-11 09:10         May-27-11 09:20         May-27-11 09:25           Extracted:         Jun-02-11 12:15         Jun-02-11 12:15         Jun-02-11 12:15           Analyzed:         Jun-02-11 19:19         Jun-02-11 19:41         Jun-02-11 20:04           Units/RL:         mg/L         RL         mg/L         RL           ND         0.0010         ND         0.0010         0.00406         0.0010           ND         0.0020         ND         0.0020         ND         0.0020           ND         0.0020         ND         0.0020         ND         0.0020           ND         0.0010         0.00260         0.0010         ND         0.0010           ND         0.0010         0.00260         0.0010         ND         0.0010           ND         0.0010         0.00260         0.0010         ND         0.0010	Field Id:         MW-7         MW-8         MW-9         MW-10           Depth:         Matrix:         WATER         MAY-27-11 09:25         May-27-11         Jun-02-11 12:15         Ju	Field Id:         MW-7         MW-8         MW-9         MW-10           Depth:         WATER         May-27-11 09:35         May-27-11 09:25         May-27-11 09:35         May-27-11 09:25         May-27-11 09:25         May-27-11 09:35         Jun-02-11 12:15         Jun-02-11 20:04         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/	Field Id:         MW-7         MW-8         MW-9         MW-10           Depth:         WATER         WATER         WATER         WATER           Sampled:         May-27-11 09:10         May-27-11 09:20         May-27-11 09:25         May-27-11 09:35           Extracted:         Jun-02-11 12:15         Jun-02-11 12:15         Jun-02-11 12:15         Jun-02-11 12:15         Jun-02-11 12:15           Analyzed:         Jun-02-11 19:19         Jun-02-11 19:41         Jun-02-11 20:04         Jun-02-11 20:27           Units/RL:         mg/L         RL         mg/L         RL         mg/L         RL           ND         0.0010         ND         0.0010         0.00406         0.0010         1.52 D         0.0250           ND         0.0020         ND         0.0020         ND         0.0020         ND         0.0020           ND         0.0010         ND         0.0010         ND         0.0010         ND         0.0010           ND         0.0020         ND         0.0020         0.00326         0.0020         0.0113         0.0020           ND         0.0010         0.00260         0.0010         ND         0.0010         ND         0.0010           ND	Field Id:         MW-7         MW-8         MW-9         MW-10           Depth:         WATER         WATER         WATER           May-27-11 09:10         May-27-11 09:20         May-27-11 09:25         May-27-11 09:35           Extracted:         Jun-02-11 12:15         Jun-02-11 12:15

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Brent Barron, II Odessa Laboratory Manager



# Flagging Criteria

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

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West 1-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



Project Name: Lovington Gathering WTI

Work Orders: 418116,

**Project ID: 2006-142** 

Lab Batch #: 858471

Sample: 604212-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/01/11 12:10	SU	RROGATE RI	ECOVERY S	STUDY	
ВТЕ	CX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4.5.9	Analytes	,,				
1,4-Difluorobenzene	· · · ·	0.0310	0.0300	. 103	80-120	
4-Bromofluorobenzene		0.0333	0.0300	111	80-120	

Lab Batch #: 858471

**Sample:** 604212-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date An	alyzed: 06/01/11 12:33	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA	8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			•	[D]		
1,4-Difluorobenzene		0.0321	0.0300	107	80-120	
4-Bromofluorobenzene		0:0337	0.0300	112	80-120	:

Lab Batch #: 858471

Sample: 604212-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 13:42	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R.	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 858471

Sample: 418009-008 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 17:52	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 858471

Sample: 418116-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/11 13:57	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96 ·	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 418116,

Sample: 418116-002 / SMP

Project ID: 2006-142 Matrix: Water

80-120

Batch:

0.0302

Lab Batch #: 858471 Units: mg/L ·

Date Analyzed: 06/02/11 14:20	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %Ř	Control Limits %R	Flags
Analytes			[D]		•
·	0.0279	0.0300	93	80-120	

4-Bromofluorobenzene Lab Batch #: 858471

1,4-Difluorobenzene

Sample: 418116-003 / SMP

Matrix: Water Batch:

0.0300

Units: mg/L Date Analyzed: 06/02/11 14		SU	RROGATE RI	ECOVERY	STUDY	
BTEX by E	PA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analy	tes			[D]		
1,4-Difluorobenzene		0.0286	0.0300	95	80-120	
4-Bromofluorobenzene		0.0307	0.0300	102	80-120	

Lab Batch #: 858471

Sample: 418116-004 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/11 15:06	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0283	0.0300	94	80-120		
4-Bromofluorobenzene	0.0293	. 0.0300	98 -	80-120		

Lab Batch #: 858471

Sample: 418116-005 / SMP

**Batch:** 

Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY Date Analyzed: 06/02/11 15:29 Amount True Control BTEX by EPA 8021 Found Amount Recovery Limits Flags [B] %R %R [A] [D]**Analytes** 1,4-Difluorobenzene 0.0327 0.0300 109 80-120 4-Bromofluorobenzene 0.0320 0.0300 107 80-120

Lab Batch #: 858471

Sample: 418116-006 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/11 15:5	2 SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		,	[D]				
1,4-Difluorobenzene	0.0322	0.0300	107	80-120			
4-Bromofluorobenzene	0.0327	0.0300	109	80-120			

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

**Work Orders:** 418116,

Project ID: 2006-142

Lab Batch #: 858485

Sample: 604236-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/11 17:25		SURROGATE RECOVERY STUDY					
BTE	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]	·		
1,4-Difluorobenzene		0.0300	0.0300	100	80-120		
4-Bromofluorobenzene		0.0327	0.0300	109	80-120		

Lab Batch #: 858485

**Sample:** 604236-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/11 17:48	SURROGATE RECOVERY STUDY						
втв	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]	• .			
1,4-Difluorobenzene		0.0315	0.0300	105	80-120			
4-Bromofluorobenzene	2,	0.0324	0.0300	108	80-120			

Lab Batch #: 858485

Sample: 604236-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/11 18:56	SURROGATE RECOVERY STUDY					
вт	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0288	0.0300	96	· 80-120		
4-Bromofluorobenzene		0.0294	0.0300	98	80-120		

Lab Batch #: 858485

Sample: 418116-007 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/11 19:19	SURROGATE RECOVERY STUDY					
вт	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0298	0.0300	99	-80-120		
4-Bromofluorobenzene		0.0316	0.0300	105	80-120		

Lab Batch #: 858485

Sample: 418116-008 / SMP

Batch: 1

Matrix: Water

<b>Units:</b> mg/L <b>Date Analyzed:</b> 06/02/11 19:41	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	·Control Limits %R	Flags	
Analytes			[D]	<u> </u>		
1,4-Difluorobenzene	0.0262	0.0300	87	80-120		
4-Bromofluorobenzene	0.0276	0.0300	. 92	80-120		

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 418116,

Sample: 418116-009 / SMP

Project ID: 2006-142

0.0300

Matrix: Water

Lab Batch #: 858485 Units: mg/L

Date Analyzed: 06/02/11 20:04	SU	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
	0.0281	0.0300	94	80-120	

Batch:

4-Bromofluorobenzene Lab Batch #: 858485

1,4-Difluorobenzene

Sample: 418116-010 / SMP

Batch:

0.0319

Matrix: Water

80-120

Units: mg/L Date Analyzed: 06/02/11 20:27	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0496	0.0300	165	80-120	**	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120		

Lab Batch #: 858485

Sample: 418116-007 S/MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/11 23:05	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0321	0.0300	107	80-120		
4-Bromofluorobenzene	0.0339	0.0300	113	80-120		

Lab Batch #: 858485

Sample: 418116-007 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 0	6/02/11 23:28	SURROGATE	RECOVERY	STUDY	
BTEX by EPA 8021	Amou Foun [A]		Recovery %R.	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.028	5 0.0300	95	80-120	
4-Bromofluorobenzene	0.032	4 0.0300	108	80-120	

Lab Batch #: 858712

Sample: 604361-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/03/11 22:11	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1,4-Difluorobenzene	0.0311	0.0300	104	80-120					
4-Bromofluorobenzene	0.0331	. 0.0300	110	80-120					

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 418116,

Project ID: 2006-142

Lab Batch #: 858712

Sample: 604361-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/03/11 22:34	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]		i			
1,4-Difluorobenzene	0.0306	0.0300	102	80-120				
4-Bromofluorobenzene	0.0318	0.0300	106	80-120				

Lab Batch #: 858712

**Sample:** 604361-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/03/11 23:42	SURROGATE RECOVERY STUDY								
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flägs				
•	Analytes			<b>[D</b> ]						
1,4-Difluorobenzene		0.0292	0.0300	97	80-120					
4-Bromofluorobenzene		0.0304	0.0300	101	80-120					

Lab Batch #: 858712

Sample: 418116-010 / DL

Batch:

Matrix: Water

Units: mg/L D	ate Analyzed: 06/04/11 06:52	SURROGATE RECOVERY STUDY								
·	EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Ana	iytes			(5)						
1,4-Difluorobenzene		0.0309	0.0300	103	80-120					
4-Bromofluorobenzene		0.0347	0.0300	116	80-120					

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution





Project Name: Lovington Gathering WTI

Work Order #: 418116

Analyst: ASA

**Date Prepared:** 06/01/2011

**Project ID:** 2006-142 **Date Analyzed:** 06/01/2011

Lab Batch ID: 858471

Sample: 604212-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

	L									•	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	",	[B]	[C]	[D]	<b>(E</b> )	Result [F]	[G]	,,	,,,,	,,,,,	
Benzene	<0.00100	0.100	0.101	101	0.100	0.103	103	2	70-125	25	
Toluene	<0.00200	0.100	0.104	104	0.100	0.106	106	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.105	105	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.224	112	2	· 70-131 .	25	
o-Xylene	<0.00100	0.100	0.118	118	0.100	0.121	121	3	71-133	25	

Analyst: ASA

**Date Prepared:** 06/02/2011

Date Analyzed: 06/02/2011

Lab Batch ID: 858485

Sample: 604236-1-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	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.0967	97	0.100	0.101	101	4	70-125	25	
Toluene	<0.00200	0.100	0.0979	98	0.100	0.103	103	5	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0946	95	0.100	0.0982	98	4	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.199	100	0.200	0.206	103	3	- 70-131	25	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.115	115	4	71-133	25	



RI ANK /RI ANK SPIKE / RI ANK SPIKE DIPLICATE RECOVERY STUDY

0.0996

0.212

0.115

100

106

115



25

25

25

Project Name: Lovington Gathering WTI

Work Order #: 418116

Analyst: ASA

Date Prepared: 06/03/2011

**Project ID: 2006-142** Date Analyzed: 06/03/2011

Lab Batch ID: 858712

Sample: 604361-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L		DEANK STIKE / BEANK STIKE DOTEICATE RECOVERT STODI										
BTEX by EPA 8021	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes	[A]	[ <b>B</b> ]	[C]	[D]	(E)	Result [F]	[G]	70	70K	76KFD		
Benzene	<0.00100	0.100	0.0917	92	0.100	0.0994	99	. 8	70-125	25		
Toluene	< 0.00200	0.100	0.0925	93	0.100	0.102	102 -	10	70-125	25		

91

98

109

0.100

0.200

0.100

0.0911

0.196

0.109

Analyst: LATCOR

**Date Prepared:** 06/01/2011

Date Analyzed: 06/01/2011

9

8

71-129

70-131

71-133

Lab Batch ID: 858300

Ethylbenzene

m\_p-Xylenes

o-Xylene

Sample: 858300-1-BKS

<0.00100

< 0.00200

< 0.00100

Batch #: 1

0.100

0.200

0.100

Matrix: Water

Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
Inorganic Anions In Water by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Fluoride	<0.200	1.30	1.15	88	1.30	1.46	112	24	80-120	20	F





Project Name: Lovington Gathering WTI

Work Order #: 418116

Analyst: 4150

**Date Prepared:** 06/02/2011

**Project ID: 2006-142** 

Date Analyzed: 06/05/2011

Matrix: Water

Lab Batch ID: 858659

Sample: 604134-1-BKS

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/L Metals, Total by SW846 6010C Blank Spike Blank Blank Blank Blk. Spk Control Control Spike Sample Result Added Spike Spike Spike Dup. RPD Limits Flag Added Limits [A] Result %R Duplicate %R %R %RPD [B] [C]  $|\mathbf{D}|$ Result [F] |G|[E]Analytes Chromium < 0.0500 1.00 0.913 91 1.00 0.929 80-120 20



#### Form 3 - MS Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 418116

Lab Batch #: 858471 Date Analyzed: 06/01/2011

**Project ID: 2006-142** 

Date Prepared: 06/01/2011

Analyst: ASA

QC- Sample ID: 418009-008 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATRIX / MATRIX SPIKE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Benzene	0.00219	0.100	0.0889	87	70-125			
Toluene	<0.00200	0.100	0.0899	90	70-125			
Ethylbenzene	<0.00100	0.100	0.0867	87	71-129			
m_p-Xylenes	<0.00200	0.200	0.182	91	70-131			
o-Xylene	0.00271	0.100	0.0997	97	71-133			

Lab Batch #: 858300

Date Analyzed: 06/01/2011

Date Prepared: 06/01/2011

Analyst: LATCOR

QC- Sample ID: 418228-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATRIX / MATRIX SPIKE RECOVERY STUDY							
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Fluoride	41.3	130	112	54	80-120	Х		

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

BRL - Below Reporting Limit



## Form 3 - N.

# **MSD** Recoveries



**Project Name: Lovington Gathering WTI** 

Work Order #: 418116

**Project ID: 2006-142** 

Lab Batch ID: 858485

QC- Sample ID: 418116-007 S

Batch #:

Matrix: Water

**Date Analyzed:** 06/02/2011

Date Prepared: 06/02/2011

Analyst: ASA

Paparting United mg/I

Reporting Units: mg/L		M	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		l
BTEX by EPA 8021	Parent Sample	Spike	Spiked Sample Result	Sample	-	Duplicate Spiked Sample	•	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	· [C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.00100	0.100	0.0918	92	0.100	0.0892	89	3	70-125	25	
Toluene	<0.00200	0.100	0.0932	93	0.100	0.0916	92	2	70-125 ·	25	
Ethylbenzene	<0.00100	0.100	0.0908	91	0.100	0.0893	89	2	71-129	25	-
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.187	94	3	70-131	25	
o-Xylene	<0.00100	0.100	0.109	109	0.100	0.105	105	4	71-133	25	

Lab Batch ID: 858659

QC- Sample ID: 418038-001 S

Batch #: 1

Matrix: Water

**Date Analyzed:** 06/05/2011

Date Prepared: 06/02/2011

Analyst: 4150

Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Metals, Total by SW846 6010C	Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chromium	< 0.0500	1.00	0.933	93	1.00	0.962	96	3	80-120	20	

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



# **Sample Duplicate Recovery**



Project Name: Lovington Gathering WTI

Work Order #: 418116

Lab Batch #: 858300

**Project ID: 2006-142** 

Date Prepared: 06/01/2011

Analyst: LATCOR

Date Analyzed: 06/01/2011 10:44 QC- Sample ID: 418228-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Water by E300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Fluoride	41.3	42.2	2	20	

Lab Batch #: 858659

Date Analyzed: 06/05/2011 13:32

Date Prepared: 06/02/2011

Analyst:4150

QC- Sample ID: 418038-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Metals, Total by SW846 6010C	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Chromium	< 0.0500	<0.0500	0	20	

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo		·													-	Proje	ct Na	me:	Lov	<u>/ing</u>	<u>ton</u>	Gat	her	ing	<u>wt</u>	<u> </u>		<del></del> -	
	Company Name	Basin Environmenta	l Serv	ice Te	chnol	ogies, LLC	-···					-			<u>.</u>		_	. 1	roje	ct #:	200	6-1	42		· 			<del></del>			
	Company Address:	P. O. Box 301															-	Pro	ject	Loc:	Lea	Соц	ınty,	NM							
	City/State/Zip:	Lovington, NM 88260	0																P	O #:	PAA	- J.	Henr	<u>ry</u>			•				
	Telephone No:	(575)396-2378				•	Fax No:		(57	5) 3:	96-1	429					Rep	ort F	orma	t:	X	Stan	dard		E	] TR	:RP		۱	NPDE	S
	Sampler Signature:	By My	9				· e-mail:		bja	rgui	jo@	bas	inen	v.con	n			<u>.</u>												•	_
ab use	only)	70																F			TC	LP:	Ana	lyze	For:	T		$\Box$	$\overline{}$	٠,	
RDEF	11.411/										Prese	rvati	on &	# of Co	ntain	ers	Matri	χ α	, T		τοτ	-+		+	X	┥				48, 72 hrs	
AB # (lab use only)		LD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice		HCI		NaOH Na.S.O.		Other (Specify)	DW=Drinking Weter SL=Sludge GW = Groundwater S=Soil/Soid	NP=Non-Potable Specify Other TPH: 418 1 8015M 8015	TX 1005 TX 10	Cations (Ca. Mg. Na. K)	Anions (Cl, SO4, Alkalinity)		Metals: As Ag Ba Cd Cr Po Hg Se	Volatiles Semivolatiles	STEX 8021B/5030 o BTEX 8260	RCI	N.O.R.M.		Fluoride	RUSH TAT (Pre-Schedule) 24	4 DAY 3
<u> </u>	<del></del>	WW-1			ш	5/27/2011	0840	145	-	×		X			$\top$	T	GW	<b>→</b>	Ť	Ĭ				†	Х	4			十	十	X
002	<del>                                     </del>	MW-2				5/27/2011	0835		2	X		х					GW						I	I	x				Ι	T	x
203		MW-3				5/27/2011	0825		3	X		X					GW	·						$oxed{oxed}$	х				$oldsymbol{\mathbb{T}}$	$oldsymbol{\mathbb{T}}$	х
<b>604</b>	1	W-4				5/27/2011	0850		3	×	X	X					GW	,					x	$\perp$	Х				x	$\perp$	х
305		NW-5			,	5/27/2011	0820		3	X	¥,	X		-	_		GW						$\perp$	$\perp$	X			Ш	$\perp$		х
20Ge		MW-6				5/27/2011	0900		3	X	4	X		$\perp$	┸		GW		L				$\perp$	$\perp$	\x			$\perp$	$\bot$	$\perp$	X
007	l l	WW-7				5/27/2011	0910		3	X	,	X			┸	1.	GW		$oldsymbol{\perp}$		$\downarrow$	_	$\perp$	$\perp$	<u> </u> x		Ш	$\perp$	_	$\perp$	<u> x</u>
208	, , , , , , , , , , , , , , , , , , ,	WW-8				5/27/2011	0920		3	X		X	Ш		1	_	GW	1	$\downarrow$		_		$\bot$		<u> </u> x		$\sqcup$	4	$\perp$	$\perp$	X
OCA.		NW-9 .				5/27/2011	0925		3	х		X			_	1	GW	4	$\downarrow$		_	$\bot$	4	$\bot$	X	<u> </u>	$\square$		4	1	x
010		IW-10				5/27/2011	0935		3	X		X			_L	1_	GW							丄	<u> X</u>	<u></u>	Ш	Щ	丄	丄	X
Special	Instructions:					•			• .											San	nple	Cont	laine	meni rs Int adsp	tact?		- 15	Q	シア	N N	
Relinquis	shed by:  hed by:  have Brown	5/23/ Date 5/27/	11	13 Tir 16		Received by:	en Brow	<u>~</u>								5-2 Di	ate 211 ate	Tir 130i Tir	ne ne	Cus Cus San	tody tody nple	seal seal Hand ampl	ls on Is on d Del er/Cli	ner(s) cont cool livere ient F	taine ler(s) ed Rep. '	) ်		7	(0) (1) (x ) x	N N N N one S	-
Relinquis	shed by:	Date	e	(II	ne	Received by EL	ne South								5		7 - 11	16:		Ten	npera	ature	Upc	n Re	ceip	t:		5	5.6	.c	



#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

# Prelogin / Nonconformance Report - Sample Log-In

012						•		
Client: Pla		<del></del>						•
	11 16:42				•			•
.0	114		<del></del>					
Initials:	1		<del></del>					
		S	ample Receipt Cl	ecklist				
1. Samples on ice?				Blu	ie	Water	No	
2. Shipping container in	good condition?			(Ye	5	No	None	
3. Custody seals intact o	n shipping contain	er (c	poler) and bottles?	(Ye	- 1	No	-(N/A)	19
4. Chain of Custody pres	ent?			. (₹ē	<u></u>	No	· · ·	
5. Sample instructions c	omplete on chain o	of cus	tody?	(Ye	9	No		
6. Any missing / extra sa	mples?		,	MA	-6	(No)	· ·	
7. Chain of custody sign	ed when relinquist	ied/i	received?	CFE	3	No		
8. Chain of custody agre	es with sample lab	el(s)	? .	(Ve	<b>a</b>	No		
9. Container labels legib	le and intact?	•		(Ye	3	No		1
10. Sample matrix / prop		hain d	of custody?	(Ye	Ce	No ·		
11. Samples in proper co	ontainer / bottle?			· Y	7	No		
12. Samples property pro	eserved?			(Ye	9	No	N/A	
13. Sample container int	act?			Ye		No		
14. Sufficient sample am	ount for indicated	test(s	s)?	Y	<b>B</b>	. No		:
15. All samples received	within sufficient h	old ti	me?	(Ye		No		
16. Subcontract of samp	vle(s)?			Y	<b>E</b>	No	N/A	
17. VOC sample have ze	ro head space?			. 6	\$	No	N/A	
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.	Coole	r 4 No.		Cooler 5 N	o
1bs 5.6 °C	ibs	°C	lbs	°C	ibs	°c	lb	s °C
		None	conformance Doc	umentati	20			
Contact:				dinental.				
	Contac	tea b	y:	<del></del> .,	,	Date/Time:_		
Regarding:					•		•	•
							<del></del>	•
Corrective Action Take-								
Corrective Action Taken	1:			<del></del>		<del></del>	<del></del>	
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Check all that apply:					and or	at of temper	rature	
•	condition a	ccept	able by NELAC 5.5.8.3	i.ī.a.1.				

☐ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

# **Analytical Report 418093**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI

2006-142

03-JUN-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



## 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):

Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

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

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





03-JUN-11

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

Reference: XENCO Report No: 418093

Lovington Gathering WTI
Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 418093. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 418093 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

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# **Sample Cross Reference 418093**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id		Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Goff Dairy Well	•	W	May-27-11 10:10	•	418093-001
Travel Blank		W	May-27-11 07:15	•	418093-002



## **CASE NARRATIVE**

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 418093

Report Date: 03-JUN-11 Date Received: 05/27/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



# Certificate of Analy Summary 418093 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri May-27-11 04:42 pm

Report Date: 03-JUN-11

						,	Project Manager:	Brent Barron, II	
	Lab Id:	418093-0	01	418093-0	02				
Analysis Requested	Field Id:	Goff Dairy	Well	Travel Bla	mk				
Analysis Requesieu	Depth:	•					·	:	
	Matrix:	WATEI	١ ا	WATE	ι				
	Sampled:	May-27-11	10:10	May-27-11	07:15				
BTEX by EPA 8021	Extracted:	Jun-01-11	1:34	Jun-01-11 1	1:34				
	Analyzed:	Jun-01-11 1	4:50	Jun-01-11 1	5:12			·	
	Units/RL:	mg/L	RL	mg/L	RL				
Benzene		0.00123	0.0010	ND	0.0010				
Toluene		, ND	0.0020	ND	0.0020				
Ethylbenzene		ND	0.0010	ND	0.0010				
m_p-Xylenes		ND	0.0020	ND	0.0020				
o-Xylene		ND	0.0010	ND	0.0010				
Xylenes, Total		ND	0.0010	ND	0.0010				
Total BTEX		0.00123	0.0010	ND	0.0010				

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 KENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Brent Barron, II
Odessa Laboratory Manager



## Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.
- The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit
- **POL** Practical Quantitation Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- + Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902.0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odcssa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



Project Name: Lovington Gathering WTI

Work Orders: 418093,

Project ID: 2006-142

Lab Batch #: 858471

Sample: 604212-1-BKS / BKS

Matrix: Water Batch:

Units: mg/L Date Analyzed: 06/01/11 12:10	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 858471

Sample: 604212-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 12:33	SURROGATE RECOVERY STUDY										
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes			[D]								
1,4-Difluorobenzene	0.0321	0.0300	107	80-120							
4-Bromofluorobenzene	0.0337	0.0300	112	80-120							

Lab Batch #: 858471

Sample: 604212-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 13:42	SU	ECOVERY	Y STUDY			
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			رښ			
1,4-Difluorobenzene	0.0285	0.0300	95	80-120		
4-Bromofluorobenzene	0.0311	0.0300	104	80-120		

Lab Batch #: 858471

Sample: 418093-001 / SMP

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 06/01/11 14:50	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		•
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0328	0.0300	109	80-120	

Lab Batch #: 858471

Sample: 418093-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 15:12	SU	RROGATE R	ECOVERY	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	0.0300	0.0300	100	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 418093,

**Project ID: 2006-142** 

Lab Batch #: 858471

Sample: 418009-008 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/01/11 17:52	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0302	0.0300	· 101	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# **BS / BSD Recoveries**



25

71-133

Project Name: Lovington Gathering WTI

Work Order #: 418093

Analyst: ASA

o-Xylene

Date Prepared: 06/01/2011

**Project ID: 2006-142** 

**Date Analyzed:** 06/01/2011

Matrix: Water

Lab Batch ID: 858471

Sample: 604212-1-BKS

Batch #: 1

0.100

< 0.00100

Units: mg/L		BLAN	K/BLANK	SPIKE/ E	BLANK S	PIKE DUPI	LICATE I	RECOVI	ERY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	,	[B]	[C]	[D]	[E]	Result [F]	[G]		-		İ
Benzene	<0.00100	0.100	0.101	101	0.100	0.103	103	2	70-125	25	
Toluene	<0.00200	0.100	0.104	. 104	0.100	0.106	106	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	. 0.105	105	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.224	112	2	70-131	25	

0.118

118

0.100

0.121

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

121



# Form 3 - MS Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 418093

Lab Batch #: 858471

**Project ID: 2006-142** 

Date Analyzed: 06/01/2011

Date Prepared: 06/01/2011

Analyst: ASA

QC- Sample ID: 418009-008 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L MATRIX SPIKE RECOVERY STUDY								
BTEX by EPA 8021B	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Analytes	[1-5]	(12)						
Benzene	0.00219	0.100	0.0889	87	70-125			
Toluene	<0.00200	0.100	0.0899	90	70-125			
Ethylbenzene	<0.00100	0.100	0.0867	87	71-129			
m_p-Xylenes	<0.00200	0.200	0.182	91	70-131			
o-Xylene	0.00271	0.100	0.0997	97	71-133			

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

BRL - Below Reporting Limit

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Argui	ijo				<del> </del>										_	P	roje	et Na	me:	Lo	ving	itor	<u> 1 G</u> ջ	athe	ring	<u>w</u>	<u>[[</u>				_
	Company Name	Basin Enviro	onmental Ser	vice T	echnol	ogles, LLC											~		P	roje	ct #:	200	06-1	42									
	Company Address:	P. O. Box 30	)1	•		· .											_		Pro	ect l	Loc:	Lea	Co	unty	, NM								
	City/State/Zip:	Lovington, N	NM 88260			<u>.</u>								,		: `			•	P	O #:	PA/	4- J.	Her	nry								
	Telephone No:	(575)396-237	78				Fax No:		(57	5) 3!	96-1	429				,	<del>.</del>	Repo	rt Fo	rma	t:	X	Star	ndare	 d		TF			П	NPDI	ES	
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LAB # (lab use only)		LD CODE	·	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	921	·				Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	(Specify)	r SL=Sludge	GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other		TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl. SO4, Alkalinity)		Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BIEN BUZTE/3030 OGBIEN 8260 RCI	N.O.R.M.		Fluoride	- 1 2	RUSH IAI (Pre-Schedule) 24, 4	Standard TAT 4 DAY
ωı	Goff I	Dairy Well				5/27/2011	1010		3	х		х						3W							I	7	ΧĹ						X
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### XENCO Laboratories

Attanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

## Prelogin / Nonconformance Report - Sample Log-In

Client: Pl	ains				-				
Date/Time: <u>5-2</u>	1-11 16:47							;	
Lab ID#: 41800	• •			•			•		
Initials:	em	·			•	,		,	
		Sa	ımple Receipt Cl	neckli	st				
1. Samples on ice?					Blue	Water	No		_
2. Shipping container i	in good condition?		·		(Yes)	No	None		_
3. Custody seals intac	t on shipping conta	iner (co	oler) and bottles?		(Pes)	No	- <del>(N/A)</del> -	7	
4. Chain of Custody p	esent?				<b>(B)</b>	No			
5. Sample instructions	complete on chain	of cust	ody?		(es)	No_			
6. Any missing / extra	samples?		· · · · · · · · · · · · · · · · · · ·	2	1	No		·	
7. Chain of custody si	gned when relinqui	shed / re	ceived?		<b>(Yes</b>	No			
8. Chain of custody ac	rees with sample k	abel(s)?			(Jae)	No			_
9. Container labels leg	lible and intact?				(Yes	No		_	
10. Sample matrix / pr	operties agree with	chain o	f custody?		(Yes)	No			
11. Samples in proper	container / bottle?		•		· (Ya	No			
12. Samples property	preserved?			-	Yes	No	N/A		•
13. Sample container	intact?				Ye	No			_
14. Sufficient sample	amount for indicate	d test(s	)?		Yes	No			
15. All samples receiv	ed within sufficient	hold tin	ne?		(Yes)	No			
16. Subcontract of sai	mple(s)?				Yes	(No)	N/A		
17. VOC sample have	zero head space?				(Yes)	No	N/A		
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 No		Cooler 5 No	)	
lbs 5.6	°C lbs	°င	lbs	°C	lbs	°C	lbs	3	°C
÷		None	onformance Doc	· · · · · · · · · · · · · · · · · · ·	ntation				
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Corrective Action Tak	en:	<del></del>	:						
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Check all that apply:	☐ Cooling proces	s has be	gun shortly after sar	npling	event and o	ut of temper	ature		
	condition	accepta	ble by NELAC 5.5.8.: perature confirm out	3 <b>.</b> 1.a.1.				• •	
•			would like to procee						

# **Analytical Report 422513**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

**Lovington Gathering WTI** 

2006-142

15-JUL-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



## 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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





15-JUL-11

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

Reference: XENCO Report No: 422513

**Lovington Gathering WTI**Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 422513. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 422513 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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# **Sample Cross Reference 422513**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Goff Dairy- Ctr. Pivot End	W	Jul-07-11 14:00		422513-001
Goff Dairy- Ctr. Pivot Beg.	$\mathbf{W}$ .	Jul-07-11 14:15		422513-002
Goff Dairy- Ctr. Pivot Well	W	Jul-07-11 14:20		422513-003

## **CASE NARRATIVE**



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 422513

Report Date: 15-JUL-11

Date Received: 07/08/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



## Certificate of Analy. Summary 422513 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Jul-08-11 04:05 pm

Report Date: 15-JUL-11

								Project Manager:	Brent Barr	on, II		
	Lab Id:	422513-0	01	422513-0	02	422513-0	03					
Analysis Requested	Field Id:	Goff Dairy- Ctr.	Pivot End	Goff Dairy- Ctr. I	Pivot Beg.	Goff Dairy- Ctr. I	Pivot Well					
Anaiysis Requesieu	Depth:	,						·				
	Matrix:	WATE	R	WATER	₹	WATE	R					
	Sampled:	Jul-07-11 1	4:00	Jul-07-11 1	4:15	Jul-07-11 1	4:20					
BTEX by EPA 8021	Extracted:	Jul-14-11 1	7:30	Jul-12-11 1	4:00	Jul-12-11 1	4:00					,
	Analyzed:	Jul-15-11 (	8:58	Jul-13-11 0	5:34	Jul-13-11 0	5:11					•
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL				İ	
Benzene		ND	0.0010	ND	0.0010	ND	0.0010					
Toluene		· ND	0.0020	ND	0.0020	ND	0.0020					
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0010					
m_p-Xylenes		ND	0.0020	ND	0.0020	ND	0.0020				<u> </u>	
o-Xylene		ND	0.0010	ND	0.0010	ND	0.0010					
Xylenes, Total		ND	0.0010	· ND	0.0010	· ND	0.0010				İ .	
Total BTEX		ND	0.0010	ND	0.0010	ND	0.0010				<u> </u>	

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

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

Brent Barron, II Odessa Laboratory Manager



## Flagging Criteria

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

**POL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 F. Atlanta Ave. Phoenix, AZ 85040	(602) 437-0330	



Project Name: Lovington Gathering WTI

Work Orders: 422513,

**Project ID: 2006-142** 

Lab Batch #: 863907

Sample: 607896-1-BKS/BKS

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 07/13/11 03:17	. SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		· ``.	[D]		
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 863907

Sample: 607896-1-BSD / BSD

Matrix: Water Batch:

Units: mg/L Date Analyzed: 07/13/11 03:40	l st	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 863907

Sample: 607896-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 04:48	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[ <b>D</b> ]		,		
1,4-Difluorobenzene	0.0261	0.0300	87	80-120			
4-Bromofluorobenzene	0.0264	0.0300	88	80-120			

Lab Batch #: 863907

Sample: 422513-003 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 07/13/11 05:11	SU	RROGATE RI	ECOVERY S	STUDY	
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0294	0.0300	98	80-120	
4-Bromofluorobenzene		0.0276	0.0300	92	80-120	

Lab Batch #: 863907

Sample: 422513-002 / SMP

Matrix: Water Batch:

Units: mg/L Date Analyzed: 07/13/11	)5:34 SU	RROGATE RI	ECOVERY S	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	0.0287	0.0300	96	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 422513,

**Project ID:** 2006-142

Lab Batch #: 863907

Sample: 422513-003 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 08:57	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0308	0.0300	103	80-120				
4-Bromofluorobenzene	0.0293	0.0300	98	80-120				

Lab Batch #: 863907

**Sample:** 422513-003 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 09:19	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			. [D]	-				
1,4-Difluorobenzene	0.0308	0.0300	103	80-120				
4-Bromofluorobenzene	0.0304	0.0300	101	80-120				

Lab Batch #: 863963

**Sample:** 607965-1-BKS / BKS

Batch:

1

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 06:43	SU	RROGATE R	<b>ECOVERY</b>	STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]		•					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120						
4-Bromofluorobenzene	0.0314	0.0300	. 105	80-120						

Lab Batch #: 863963

Sample: 607965-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 07:06	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount <sub>.</sub> Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[ [D]				
1,4-Difluorobenzene	0.0305	0.0300	102	80-120			
4-Bromofluorobenzene	0.0312	0.0300	104	80-120			

Lab Batch #: 863963

**Sample:** 607965-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 08:14	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	·Flags		
Analytes		·	[D]		2		
1,4-Difluorobenzene	0.0279	0.0300	93	80-120			
4-Bromofluorobenzene	0.0279	0.0300	93	80-120			

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 422513,

Lab Batch #: 863963

Sample: 422513-001 / SMP

**Project ID: 2006-142** 

Matrix: Water Batch:

<b>Units:</b> mg/L <b>Date Analyzed:</b> 07/15/11 08:58	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0282	. 0.0300	94 ·	80-120	

Lab Batch #: 863963

**Sample:** 422758-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 10:06	SU	RROGATE F	RECOVERY	RY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes			, [D]								
1,4-Difluorobenzene	0.0301	0.0300	100	80-120							
4-Bromofluorobenzene	0.0310	0.0300	103	80-120							

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 422513

Analyst: ASA

**Date Prepared:** 07/12/2011

**Project ID: 2006-142** Date Analyzed: 07/13/2011

0.106

106

0.100

Matrix: Water

Lab Batch ID: 863907

Analytes Benzene

Toluene

Ethylbenzene

m p-Xylenes

o-Xylene

Sample: 607896-1-BKS

Blank

< 0.00100

< 0.00200

< 0.00100

< 0.00200

< 0.00100

Batch #: 1

Units: mg/L

BTEX by EPA 8021

#### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Spike Blank Blank Blank Bik. Spk Control Control Spike Spike Added Spike Dup. RPD Limits Limits Flag Sample Result Added Spike Result %R Duplicate %R % %R %RPD Result [F] [B] [C] [D][G]E 0.111 111 0.100 0.108 108 3 70-125 25 0.100 3 0.100 0.102 102 0.100 0.0992 99 70-125 25 0.100 0.109 109 0.100 0.107 107 2 71-129 25 2 70-131 25 0.200 0.212 106 0.200 0.207 104

0.103

Analyst: BRB

Date Prepared: 07/14/2011

0.100

3 Date Analyzed: 07/15/2011

103

Lab Batch ID: 863963

Sample: 607965-1-BKS

Batch #: 1

Matrix: Water

71-133

25

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		(B)	·[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.107	107	0.100	0.106	106	. 1	70-125	25	
Toluene	<0.00200	0.100	. 0.102	. 102	0.100	0.0991	99	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.107	107	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.212	106	0.200	0.209	105	1	70-131	25 .	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.104	. 104	1	71-133	25	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 422513

Lab Batch #: 863963

Jate Analyzed: 07/15/2011

' Project ID: 2006-142

Date Prepared: 07/14/2011

Analyst: BRB

QC- Sample ID: 422758-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L MATRIX / MATRIX					RECO	VERY STU	DY
	y EPA 8021B nalytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene		<0.00100	0.100	0.101	101	70-125	
Toluene		<0.00200	0.100	0.0926	93	70-125	
Ethylbenzene	,	<0.00100	. 0.100	0.101	· 101	71-129	
m_p-Xylenes		<0.00200	0.200	0.198	99	70-131	
o-Xylene		< 0.00100	0.100	0.0982	98	71-133	

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

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries

Project Name: Lovington Gathering WTI

Work Order #: 422513

**Project ID: 2006-142** 

Lab Batch ID: 863907

QC- Sample ID: 422513-003 S

Batch #:

Matrix: Water

**Date Analyzed:** 07/13/2011

Date Pr

repared:	0//12/2011	Anaiyst:	ASA

Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
BTEX by EPA 8021	Parent Sample Result	Spike Added	Spiked Sample Result	Sample	•	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag				
Analytes	[A]	[B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	<b>%</b>	%R	%RPD					
Benzene	<0.00100	0.100	0.107	107	0.100	0.103	103	4	70-125	25					
Toluene	<0.00200	0.100	0.0969	97	0.100	0.0938	94	3	70-125	25					
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.0997	100	2	71-129	25					
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.184	92	4	70-131	25					
o-Xylene	<0.00100	0.100	0.0991	99	0.100	0.0957	96	. 3	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

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo			<del></del>	<del></del>										_	Project Name: Lovington Gathering WTI															
	Company Name	Basin Environmental Ser	vice T	echno	logies, LLC											<b></b>		Pr	ojec	:t #:	200	)6-1	42									
	Company Address:	P. O. Box 301													Project Loc: Lea County, NM																	
	City/State/Zip:	Lovington, NM 88260											PO #: PAA- J. Henry																			
	Telephone No:	(575)396-2378				Fax No: (575) 396-1429					Report Format: X Standard TRRP								P NPDES													
	Sampler, Signature:	Mhs.		-		e-mail:		bjarguljo@basinenv.com																								
(lab uce	oniy)								-								_	F	_		TC	LP:	An	alyze	∍Fo	<u>r.</u>	$\overline{}$	$\overline{ au}$	$\overline{}$	$\exists$	ē	
ORDE	R#: 4225	13				,			-	rese	rvatio	on &	# of Co	ontain	ers	Ma	atrix	ı g	Γ_		<b>TO</b> T	-	- -	$\dashv$		X					48, 72 hrs	1
AB # (lab use only)		D CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	Total #. of Containers	lce	HNO <sub>3</sub>	HCI	42SO₄	NaOH	None None	Other (Specify)	SL=Sludge	GW = Grounowater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca. Mg. Na. K)	Anions (CI, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260 RCI	MAGN	Y.O.D.W.		1 1	RUSH TAT (Pre-Schedule) 24.	Standard TAT 4 DAY
<u>6001</u>	<del> </del>	- Ctr. Pivot End	_		7/7/2011	1400	u.	3			x						w			Ŭ		1	Ť	1	_	X	+	1	+			X
002	Goff Dairy	Ctr. Pivot Beg.			7/7/2011	1415		3	Х		x					G	w					I		$\Box$	I	х		I	Ι			X
003	Goff Dairy	Ctr. Pivot Well			7/7/2011	1420	_	3	х		x					G	W					$\perp$	$\bot$	$\perp$	$\perp$	х	$\perp$	$\perp$	L		$\Box$	X
		···		·			_	Н			-	4	$\dashv$	+	-						4	4	$\dashv$	$\dashv$	$\downarrow$	$\bot$	$\downarrow$	+		$\sqcup$	_	
		<del></del>		├	<u> </u>		-	Н	$\dashv$	$\dashv$	-	-	+	+	┼-					$\dashv$	+	+	$\dashv$	+	+	+	$\dotplus$	+	+-	┦	$\dashv$	_
						-		Н			┪		+	_	+	-					_	+	$\dashv$	+	+	╁	+	+	╁	┼┼	$\dashv$	_
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## **XENCO Laboratories**

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

# Prelogin / Nonconformance Report - Sample Log-In

Client:	lains	•			•				
Date/Time: 7-1	3-11 4:04	<u> </u>							
	122513								
Initials:	2M	,							
		5	Sample Receipt C	hecklist					
1. Samples on ice?				Blue	Water	No			
2. Shipping container	in good con	dition?		Yes	No	None			
3. Custody seals inta-	ct on shippin	g container (c	ooler) and bottles?	Yes	No	(N/A)			
4. Chain of Custody p	resent?			(Yes)	(Yes) No				
5. Sample instruction	s complete o	n chain of cus	tody?	₹es,	(Yes) No				
6. Any missing / extra	samples?			Yes	(No)				
7. Chain of custody s	igned when r	elinquished / 1	received?	Yes	No				
8. Chain of custody a	grees with sa	mple label(s)	?	Yes	No				
9. Container labels le	gible and inta	ict?		Yeş	No				
10. Sample matrix / p	roperties agn	e with chain	of custody?	Yes	No				
11. Samples in prope	r container / 1	oottle?		Yes	No				
12. Samples properly	preserved?			(Pe)	No .	N/A			
13. Sample container	intact?			Yes	No				
14. Sufficient sample	amount for i	ndicated test(s	i)?	Yes	No				
15. All samples recei	ed within su	fficient hold ti	me?	Yes	No				
16. Subcontract of sa	mple(s)?			Yes	No	N/A			
17. VOC sample have	zero head s	ace?		∕ (es)	No	N/A			
18. Cooler 1 No.	Cooler 2	No.	Cooler 3 No.	Cooler 4 No	).	Cooler 5 No.			
lbs 4.6	°C lbs	°C	lbs	°C lbs	°(	lbs lbs	°c		
		None	conformance Doc	umentation					
Contact:	<del></del>	_Contacted b	y:	<del></del>	Date/Time:				
Regarding:		<u> </u>	<u> </u>			·			
Corrective Action Tal	ken:								
	·				·				
Check all that apply:	COI	dition accept	egun shortly after san able by NELAC 5.5.8.3 perature confirm out	.1.a.1.		rature			

☐ Client understands and would like to proceed with analysis

# **Analytical Report 422757**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI

2006-142

15-JUL-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



## 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





15-JUL-11

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

Reference: XENCO Report No: 422757

Lovington Gathering WTI

Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 422757. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 422757 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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# **Sample Cross Reference 422757**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Goff Dairy Well	W	Jul-11-11 14:45		422757-001
MW-10	W	Jul-11-11 15:00	,	422757-002



## CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 422757

Report Date: 15-JUL-11 Date Received: 07/12/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-863907 BTEX by EPA 8021

SW8021BM

Batch 863907, 1,4-Difluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 422757-002.



# Certificate of Analy. Summary 422757 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142.

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Jul-12-11 01:00 pm

Report Date: 15-JUL-11

roject Location: Lea County, NWI				•			D	David David II	
	<del></del>				-		Project Manager:	Brent Barron, II	
	Lab Id:	422757-0	001	422757-0	002				
Analysis Requested	Field Id:	Goff Dairy	Goff Dairy Well		0				
Anutysis Requesteu	Depth:		1				•		,
	Matrix:	WATER		WATER					
	Sampled:	Jul-11-11 1	4:45	Jul-11-11 1	15:00				
BTEX by EPA 8021	Extracted:	Jul-12-11	15:20	Jul-12-11 1	15:20				
· ·	Analyzed:	Jul-13-11	Jul-13-11 11:11		11:34				
	Units/RL:	mg/L	RL	mg/L	RL				
Benzene		0.00262	0.0010	3.00 D	0.0250	•			
Toluene		ND	0.0020	0.00265	0.0020			,	
Ethylbenzene		ND	0.0010	0.00365	0.0010				
m_p-Xylenes		ND	0.0020	0.0248	0.0020				
o-Xylene		ND	0.0010	0.00232	0.0010				
Xylenes, Total	-	ND	0.0010	0.0271	0.0010			·	
Total BTEX	-	0.00262	0.0010	3.03 D	0.0010				

Odessa Laboratory Manager



## Flagging Criteria

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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Project Name: Lovington Gathering WTI

Work Orders: 422757,

Sample: 607896-1-BKS/BKS

Project ID: 2006-142

Lab Batch #: 863907

Matrix: Water Batch:

Units: mg/L Date Analyzed: 07/13/11 03:17 SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	t True Amount [B]	Recovery %R	Control- Limits %R	Flags	
Analytes			[D]	*		
1,4-Difluorobenzene	0.0304	0.0300	101	80-120		
4-Bromofluorobenzene	0.0318	0.0300	106	80-120		

Lab Batch #: 863907

Sample: 607896-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 03:40 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 863907

Sample: 607896-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 04:48	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0261	0.0300	87	80-120			
4-Bromofluorobenzene	0.0264	0.0300	88	80-120			

Lab Batch #: 863907

Sample: 422513-003 S / MS

Batch:

Matrix: Water

<b>Units:</b> mg/L <b>Date Analyzed:</b> 07/13/11 08:57	SU	RROGATE RI	ECOVERY	STUDY	,
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 863907

Sample: 422513-003 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 09:19	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0308	0.0300	103	80-120		
4-Bromofluorobenzene	0.0304	0.0300	101	80-120		

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / BAll results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 422757,

Project ID: 2006-142

Lab Batch #: 863907

Sample: 422757-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/13/11 11:11	SU	RROGATE R	ECOVERY	STUDY	•
BTEX by EPA 8021	Amount Found	True Amount	Recovery %R	Control Limits %R	Flags
Analytes	[A]	[B]	[D]	/oK	
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	. 80-120	

Lab Batch #: 863907

Sample: 422757-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Units: mg/L Date Analyzed: 07/13/11 11:34 SURROGATE RECOVERY STUDY					*4.
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
,	Analytes			[D]		
1,4-Difluorobenzene		0.109	0.0300	363	80-120	**
4-Bromofluorobenzene		0.0354	0.0300	118	80-120	

Lab Batch #: 863963

Sample: 607965-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 06:43 SURROGATE RECOVERY STUDY						
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
1 4 D'G	Analytes				20.100	
1,4-Difluorobenzene		0.0307	0.0300	102	80-120	
4-Bromofluorobenzene		0.0314	0.0300	105	80-120	

Lab Batch #: 863963

**Sample:** 607965-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 07/15/11 07:06	SU	RROGATE RI	ECOVERY S	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			(D)	,	
1,4-Difluorobenzene		0.0305	0.0300	102	80-120	
4-Bromofluorobenzene		0.0312	0.0300	104	80-120	

Lab Batch #: 863963

Sample: 607965-1-BLK / BLK -

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 08:1	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0279	0.0300	: 93	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution .



Project Name: Lovington Gathering WTI

Work Orders: 422757,

Lab Batch #: 863963

Sample: 422757-002 / DL

**Project ID: 2006-142** 

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 07/15/11 09:21	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0304	0.0300	101	80-120		
4-Bromofluorobenzene	0.0272	0.0300	91	. 80-120		

Lab Batch #: 863963

Sample: 422758-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 07/15/11 10:06	11 10:06 SURROGATE RECOVERY STUDY					
ВТІ	EX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene		0.0301	0.0300	100	80-120		
4-Bromofluorobenzene		0.0310	0.0300	103	80-120		

Surrogate Recovery [D] = 100 \* A / BAll results are based on MDL and validated for QC purposes.

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 422757

Analyst: ASA Date Prepared: 07/12/2011

Project ID: 2006-142

**Date Analyzed:** 07/13/2011

Lab Batch ID: 863907

Sample: 607896-1-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	Blank Spike Result	Biank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]							
Benzene	<0.00100	. 0.100	0.111	111	0.100	0.108	108	3 .	70-125	25				
Toluene-	<0.00200	0.100	0.102	102	0.100	0.0992	99	3.	70-125	25				
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.107	107	2	71-129	25				
m_p-Xylenes	<0.00200	0.200	0.212	106	0.200	0.207	104	2	70-131	25				
o-Xylene	< 0.00100	0.100	0.106	106	0.100	0.103	103	3	71-133	25				

Analyst: BRB

**Date Prepared:** 07/14/2011

Date Analyzed: 07/15/2011

Lab Batch ID: 863963

Sample: 607965-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE I	RECOVE	ERY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Biank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.107	107	0.100	0.106	106	1	70-125	25	
Toluene .	<0.00200	0.100	0.102	102	0.100	0.0991	99	3 .	70-125	25	
Ethylbenzene	<0.00100	0.100	0.109	109	0.100	0.107	107	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.212	106	0.200	0.209	105	1	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.104	104	1	71-133	25	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



## Form 3 - MS Recoveries





Work Order #: 422757

Lab Batch #: 863963

Date Analyzed: 07/15/2011

**Project ID: 2006-142** 

Date Prepared: 07/14/2011

Analyst: BRB

QC- Sample ID: 422758-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATE	RIX / MA	Added [C] [D] %R [B]				
BTEX by EPA 8021B  Analytes	Parent Sample Result [A]	Spike Added [B]	Result	%R	Limits	Flag	
Benzene	<0.00100	0.100	0.101 .	101	70-125		
Toluene	<0.00200	0.100	0.0926	93	70-125		
Ethylbenzene	<0.00100	0.100	0.101	101	71-129		
m_p-Xylenes	<0.00200	0.200	0.198	99	70-131		
o-Xylene	<0.00100	0.100	0.0982	.98	71133	,	

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

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries

**Project Name: Lovington Gathering WTI** 

Work Order #: 422757

**Project ID: 2006-142** 

Lab Batch ID: 863907 Date Analyzed: 07/13/2011

QC- Sample ID: 422513-003 S

Matrix: Water Batch #:

**Date Prepared:** 07/12/2011

Analyst: ASA

Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	 
Benzene	< 0.00100	0.100	0.107	107	0.100	0.103	103	4	70-125	25	
Toluene	<0.00200	0.100	0.0969	97	0.100	0.0938	94	3	70-125	25	
Ethylbenzene	< 0.00100	0.100	0.102	102	0.100	0.0997	100	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.184	92	4	70-131	25	
o-Xylene	<0.00100	0.100	0.0991	99	0.100	0.0957	96	3	71-133	25	

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

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

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

# **Xenco Laboratories**

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo	<u> </u>														_	Pro	oject	Nar	ne: <u> </u>	Lovi	ngto	on C	ath	nerir	ng V	<u>NTI</u>				
	Company Name	Basin Enviror	nmental Ser	vice T	echno	logies, LLC											-		Pr	ojec	t #:	2006	-14	2								
	Company Address:	P. O. Box 301															_	F	roje	ct L	oc: <u>l</u>	ea C	oun	ty, N	M							
	City/State/Zip:	Lovington, NA	A 88260										_							PC	#: <u>[</u>	PAA-	J. H	enry	<u>.                                    </u>							
	Telephone No:	(575)396-2378	<b>,</b>				Fax No:		(57	'5) 3	39 <del>6-</del> 1	429	,				R	eport	For	mat.	. [	x s	landa	ard			TRE	٠ ۲P	1	] N	PDES	s
	Sampler Signature:	1//	4				· e-mail:		bja	rgu	ijo@	bas	iner	v.cor	n		-															_
(lab use	only)			_			•														_	TCL		naly	ze F	or:	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	Firs	]
ORDEF	ilaa-	157							٠.	_	Press	ervati	ion &	# of Co	ntain	259	I Ma	atrix	_	· 1	<u> </u>	TOTA		-	F	X					48, 72 h	1
LAB # (lab use only)		_D CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	Total #. of Containers	lce	HNO <sub>3</sub>	HOI TON NOS			None	(Specify)	r SL≍Sludge	GW = Groundwater S=Soif/Soild NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl., SO4, Alkalinity)	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 80218/5030 o BTEX 8260	RCI	N.O.R.M.			RUSH TAT (Pre-Schedule) 24, 4	
Ō1		Dairy Well				7/11/2011	1445	-	3	x		х	П	十	Ť	1	1	w	-		Ť	<u>`</u>	1	ŕ	Ť	x	_	Ť	$\top$	$\top$	T	X
02		IW-10				7/11/2011	1500		3	x		х	П	$\dashv$		1.	G	w	П				1	Τ		x	$\sqcap$	$\top$	T	T	T	X
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Special I	nstructions:						-	•										•			Sam	prato ple C	onta	iners	inta				و	Commence	N N	
Relinquist	ned by:	T	Date	Tir	ne	Received by:			•	-				_	T	Da	ite	- 1	Time	,	Labe	is on	con	taine	r(s)	ainer	سا		S	3	N	
	2/125		7/11/11		00	Daketoh	wald								12	<u> </u>	3/1	$U \!$	100	- 1	Cust	ody s	eals	on c	:oole	F(S)	(3)		ξ	3	Ν	
Relinquisi <b>Dg Ko</b>	tah ward		Date 7/12/11	13;		Received by:									<u> </u>	Da			Time		t	ple H by Sa by Co	mple: urier:	r/Œie ?	ut Re	ep) S	DHL	<u>.</u>	FedE	ا ا	N N one S	
Relinquisl	ned by:		Date	Tir	ne	Received by ELO	rea E	Elle	2	2	v				-		ite }·//	13	Time	x	Tem	perat	ure l	Jpon	Rec	ceipt	: .		2	j.	, °c	



### **XENCO Laboratories**

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Pag

Client: BOSIV	Prelo Env		conformance	Report	- Sample	e Log-In		
Date/Time: 710	11 1	<u>3:00</u>						
Lab ID#: 4	dd 15		1				•	
Initials:	ME		· · · · · · · · · · · · · · · · · · ·					
	<u> </u>	S	ample Receip	t Check	list			
1. Samples on ice?		·			Blue	Water	No	
2. Shipping container	in good cond	ition?			Yes	No	None	
3. Custody seals intac	t on shipping	container (co	ooler) and bottles	?	Yes	No	NA	
4. Chain of Custody p	resent?				Yes	No	·	
5. Sample instructions	complete or	chain of cus	tody?		<b>∠Yee</b>	No		
6. Any missing / extra	samples?				Yes	No		
7. Chain of custody si	gned when re	linquished / r	eceived?		Yes	No		
8. Chain of custody ag	rees with sai	nple label(s)?	•		(Yes)	No		
9. Container labels leg	ible and inta	t?	•		Yes	No		
10. Sample matrix / pr	operties agre	e with chain o	of custody?		(Yes)	No ·		
11. Samples in proper	container / b	ottle?			Yes	No		
12. Samples properly	preserved?				Yes	No	N/A	
13. Sample container	ntact?				(Yes)	No		-
14. Sufficient sample a	amount for in	dicated test(s	)?		Yes	No	,	•
15. All samples receiv	ed within suf	ficient hold tis	me?		Yes	No		
16. Subcontract of sar	nple(s)?				Yes	No	(NA)	
17. VOC sample have	zero head sp	ace?			Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 N	lo.	Cooler 3 No.		Cooler 4 No	).	Cooler 5 No.	
lbs 3.0	°C lbs	°c	lbs	°င	lbs	°c	lbs	°င
		None	onformance l	Documei	ntation		•	
Contact:	•	Contacted by				Date/Time:		
oonact		Oomacæd by	/· <del></del>	<del></del>	_	Date/ ( iiile		
Regarding:								
				•				
Corrective Action Tak	en:							
				•				

□ Initial and Backup Temperature confirm out of temperature conditions

Check all that apply: □ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

## **Analytical Report 423313**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

**Lovington Gathering WTI** 

2006-142

18-JUL-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

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

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

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





18-JUL-11

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

Reference: XENCO Report No: 423313

Lovington Gathering WTI
Project Address: Lea County, NM

### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 423313. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 423313 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

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## **Sample Cross Reference 423313**



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

Lovington Gathering WTI

Sample Id		Matrix	Date Collected	Sample Depth	Lab Sample Id
JW Well	•	W	Jul-14-11 14:20	•	423313-001



### **CASE NARRATIVE**

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 423313

Report Date: 18-JUL-11

Date Received: 07/15/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



# Certificate of Analy. Summary 423313 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Jul-15-11 02:57 pm

Report Date: 18-JUL-11

Project Manager: Brent Barron, II

<del></del>					Project Manager:	Dicit Darion, II	
	Lab Id:	423313-001					
Analysis Requested	Field Id:	JW Well					
Anaiysis Requesteu	Depth:	•					
	Matrix:	WATER .					•
•	Sampled:	Jul-14-11 14:20					
BTEX by EPA 8021	Extracted:	Jul-15-11 17:30	·			·	
	Analyzed:	Jul-15-11 20:52		·			
	Units/RL:	mg/L RI					
Benzene		ND 0.00	10				
Toluene		ND 0.00	20				
Ethylbenzene		ND 0.00	10				
m_p-Xylenes		ND 0.00	20				
o-Xylene		ND 0.00	10				
Xylenes, Total		ND 0.00	10		,		
Total BTEX		ND 0.00	10				

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

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

Brent Barron, II Odessa Laboratory Manager



### **Flagging Criteria**

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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•	Phone	rax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



Project Name: Lovington Gathering WTI

Work Orders: 423313,

Sample: 608031-1-BKS/BKS

Project ID: 2006-142

Lab Batch #: 864101

Matrix: Water Batch:

Units: mg/L Date Analyzed: 07/15/11 18:59	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0295	0.0300	. 98	80-120	

Lab Batch #: 864101

Sample: 608031-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 07/15/11 19:22	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	EX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 864101

Sample: 608031-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 20:29	SU	RROGATE R	ECOVERY	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	<u> </u>
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 864101

Sample: 423313-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 20:52	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0300	0.0300	100	80-120				
4-Bromofluorobenzene	0.0269	0.0300	90	80-120				

Lab Batch #: 864101

**Sample:** 423313-001 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 07/15/11 23:30	SURROGATE RECOVERY STUDY										
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes	į,	[2]	[D]								
1,4-Difluorobenzene	0.0303	0.0300	101	80-120							
4-Bromofluorobenzene	0.0304	0.0300	101	80-120							

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 423313,

**Project ID:** 2006-142

Lab Batch #: 864101

Sample: 423313-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 07/15/11 23:52	SU	STUDY			
	K by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	,		[D]		
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzene		0.0307	0.0300	102	80-120	

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 423313

Analyst: ASA

Date Prepared: 07/15/2011

**Project ID: 2006-142** 

Date Analyzed: 07/15/2011

Matrix: Water

Lab Batch ID: 864101

Sample: 608031-1-BKS

Batch #: 1

Units: mg/L	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[ <b>D</b> ]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.102	102	0.100	0.101	101	1	70-125	25	
Toluene	<0.00200	0.100	0.0933	93	0.100	0.0932	93	0	70-125	25	
Ethylbenzene	<0.00100	0.100	0.103	103	0.100	0.101	101	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.201	101	0.200	0.195	98	3	70-131	25	
o-Xylene	<0.00100	0.100	0.100	100	0.100	.0.0942	94	. 6	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 #: 423313

**Project ID: 2006-142** 

Lab Batch ID: 864101

QC- Sample ID: 423313-001 S

Batch #:

Matrix: Water

**Date Analyzed:** 07/15/2011

Date Prepared: 07/15/2011

Analyst: ASA

Paparting Unite: mg/I

Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
BTEX by EPA 8021	Parent Sample Result	Spike Added	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Analytes	[A]	Added [B]	[C]	[D]	[E]	Result [F]	[G]	76	70K	70KFD				
Benzene	<0.00100	0.100	0.103	103	0.100	0.110	110	7	70-125	25				
Toluene	<0.00200	0.100	0.0953	95	0.100	0.100	100	5	70-125	25				
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.107	107	5	71-129	25	ı			
m_p-Xylenes	<0.00200	0.200	0.192	96	0.200	0.204	102	6	70-131	25				
o-Xylene	<0.00100	0.100	0.0946	· 95	0.100	0.104	104	9	71-133	25				

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

	Project Manager:	Ben J. Arguijo														-	Pı	ojec	t Na	me:	<u>Lo</u>	ving	ton	Gat	he	ring	WT	1			
	Company Name	Basin Environment	tal Service	echno	logies, LLC						_					-		P	roje	ct #:	20	06-1	42								
	Company Address:	P. O. Box 301														-		Proj	ect l	Loc:	Lea	Cou	nty,	NM	_						
	City/State/Zip:	Lovington, NM 882	60	<del></del>	<del> </del>	····			_		_					-			P	O #:	PA	4- J.	Hen	ry							
	Telephone No:	(575)396-2378				Fax No:		(57	5) 3	96-1	429					. 1	Зеро	rt Fo	rma	t:	X	Stan	dard			] TR	RP			NPDE:	s
	Sampler Signature:	May	· - · · ·		·.	e-mail:		bja	rgui	jo@l	bas	inen	v.con	n				_					Ana							<b>_</b>	٦,
(lab use	only)	7	1															┢	_		TO	LP:	Aria	lyze	POI:	1	$\overline{}$	П	<del>-</del> _	ءِ 🗕	1
` ORDEF	1107717	İ						1		Prese	rvatio	on & #	of Co	ntaine	ers	Į N	atrix	- E	1		тот	AL:	٥	7	?	┥ .			•	48. 72 hrs	1
LAB # (lab use only)		.D CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	lce	HNO3	HCI	4504	NaOH Na S.O.	None	Other ( Specify)	g Water SL=Sludge	GW = Groundwater S=Soil/Solid NP=Nor-Potable Specify Other		TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Semivolatiles	BTEX 80218/5030 o BTEX 8260	l	N.O.R.M.			RUSH TAT (Pre-Schedule) (24)	Standard TAT 4 DAY
001	<del></del>	V Well			7/14/2011	1430		3	х		x		$\top$	T	T	7	SW								X	4-		H	7	x	
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				1			_					$\vdash$	十	†	1	H		1		$\vdash$	7	_	$\top$	十	+	+	$\vdash$	-	+	十	++
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Special	Instructions: 24-hour RUS					<u> </u>			ليا				•	<u>.l.</u>	1_					San	nple	Cont	aine	rs Int	act1		لـــا		3	T X	- 4
Relinquis Relinquis	a filming	7/4/	11 15.	ime ime	Received by:	Deve	4	_						0	7//5 De	te   <u> 20</u>	// /	Tim 5.0	00	Cus Cus	tody tody	n co seal seal Hand	s on	conf	aine er(s	)		A. C.		z(3) z(8)z	}
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Relinquis	ined by: Janvey	07/L	/	ime !:57	Received by EL	Turdo	k	<u></u>						7	Ба -15		1	Tim 4:5		1	•	ature					<u>-</u>			one St	1



### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

ffective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconfo	rmance Re	port - Sampl	e Log-In		
Client: Plains					
Date/Time: 7-15   14:57				•	
Lab ID#: 423313			1.		
Initials:					
Sample	e Receipt Cl	necklist			
1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?		(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) a	and bottles?	Yes	No	N/A`	
4. Chain of Custody present?		Yes	No		
5. Sample instructions complete on chain of custody?	·	Yes	No		
6. Any missing / extra samples?		Yes	No		
7. Chain of custody signed when relinquished / receive	d?	Yes	No		
8. Chain of custody agrees with sample label(s)?	·	Yes	No		· · · · · · · · · · · · · · · · · · ·
9. Container labels legible and intact?	· · · · · · · · · · · · · · · · · · ·	Yes	No		
10. Sample matrix / properties agree with chain of cust	ody?	Yes	No		
11. Samples in proper container / bottle?	····	Yes	No	ļ	
12. Samples properly preserved?		Yes	No	N/A	<u> </u>
13. Sample container intact?	<del></del>	Yes	No		
14. Sufficient sample amount for indicated test(s)?		Yes	No		
15. All samples received within sufficient hold time?		(Yes)	No	<u> </u>	
16. Subcontract of sample(s)?	· · · · · · · · · · · · · · · · · · ·	Yes	No	N/A	
17. VOC sample have zero head space?		Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Coole	r 3 No.	Cooler 4 N	o.	Cooler 5 No.	<del> </del>
Ibs 14 6°C Ibs °C	lbs	°C lbs	°c	lbs	°د
MO M Nonconfo	mance Doc	umentation		•	
Contact: Contacted by:			Date/Time:	•	
Regarding:		·			
			-		
Corrective Action Taken:	<del> </del>		+	<u> </u>	
Check all that apply:   Cooling process has begun s  condition acceptable by	hortly after san	npling event and o	out of tempe	rature	

□ Initial and Backup Temperature confirm out of temperature conditions

□ Client understands and would like to proceed with analysis

# **Analytical Report 426487**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry
Lovington Gathering WTI
2006-142
01-SEP-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





01-SEP-11

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

Reference: XENCO Report No: 426487

Lovington Gathering WTI
Project Address: Lea County, NM

### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 426487. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 426487 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

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## **Sample Cross Reference 426487**



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	08-24-11 09:20	•	426487-001
MW-3	W	08-24-11 12:40		426487-002
MW-4	W	08-24-11 10:00		426487-003
MW-5	W	08-24-11 10:30		426487-004
MW-6	W	08-24-11 13:20		426487-005
MW-7	$\mathbf{W}^{c}$	08-24-11 17:30		426487-006
MW-8	W	08-24-11 17:40		426487-007
MW-9	W	08-24-11 15:00	·	426487-008
MW-10	W	08-24-11 14:30		426487-009
Goff Dairy Well	W	08-24-11 16:30		426487-010
Goff Dairy - Ctr. Pivot Well	$\mathbf{w}$	08-24-11 16:45		426487-011
Goff Dairy - Ctr. Pivot Beg.	W	08-24-11 17:00	•	426487-012
Goff Dairy - Ctr. Pivot End	W	08-24-11 17:25		426487-013
JW Well	W	08-24-11 17:15		426487-014

# CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 426487

Report Date: 01-SEP-11

Date Received: 08/25/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-868690 BTEX by EPA 8021

SW8021BM

Batch 868690, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 426487-009.



# Certificate of Analys. Summary 426487 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Aug-25-11 11:10 am

Report Date: 01-SEP-11

							Project Ma	nager:	Brent Barron	ш		
Lab Id:	426487-0	001	426487-	002	426487-	003	426487-	004	426487-	005	426487-	006
Field Id:	MW-1	ı	MW-	3	MW-	4	MW-	5	MW-	6	MW-	7
Depth:			1		l					•		
Matrix:	WATE	R	WATE	R	WATE	R	WATE	R .	· WATE	R	WATE	R
Sampled:	Aug-24-11	09:20	Aug-24-11	12:40	Aug-24-11	10:00	Aug-24-11	10:30	Aug-24-11	13:20	Aug-24-11	17:30
Extracted:	Aug-26-11	16:00	Aug-26-11	16:00	Aug-26-11	16:00	Aug-26-11	16:00	Aug-26-11	16:00	Aug-26-11	16:00
Analyzed:	Aug-27-11	21:13	Aug-27-11	21:35	Aug-27-11	21:58	Aug-28-11	03:16	Aug-27-11	23:52	Aug-28-11	00:14
Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL.	mg/L	RL.	mg/L	RL
	ND	0.00100	0.0262	0.00100	0.00119	0.00100	ND	0.00100	0.105	0.00100	0.00192	0.00100
	ND	0.00200	0.00333	.0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00200	0.00827	0.00200	ND	0.00200	ND	0.00200	0.0597	0.00200	ND	0.00200
	ND	0.00100	0.00312	0.00100	· ND	0.00100	ND	0.00100	0.00309	0.00100	ND	0.00100
	ND	0.00100	0.0114	0.00100	ND	0.00100	ND	0.00100	0.0628	0.00100	ND	0.00100
•	ND	0.00100	0.0409	0.00100	0.00119	0.00100	. ND	0.00100	0.168	0.00100	0.00192	0.00100
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id: MW-I Depth: Matrix: WATE Sampled: Aug-24-11 Extracted: Aug-26-11 Analyzed: Aug-27-11 Units/RL: mg/L ND ND ND ND ND ND ND	Field Id: MW-1  Depth: Matrix: WATER  Sampled: Aug-24-11 09:20  Extracted: Aug-26-11 16:00  Analyzed: Mug-27-11 21:13  Units/RL: mg/L RL  ND 0.00100  ND 0.00200  ND 0.00200  ND 0.00100  ND 0.00100  ND 0.00100  ND 0.00100	Field Id:         MW-1         MW-Depth:           Matrix:         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11           Extracted:         Aug-26-11 16:00         Aug-26-11           Analyzed:         Aug-27-11 21:13         Aug-27-11           Units/RL:         mg/L         RL         mg/L           ND         0.00100         0.0262           ND         0.00200         0.00333           ND         0.00200         0.00827           ND         0.00100         0.00312           ND         0.00100         0.0114	Field Id:         MW-1         MW-3           Depth:         WATER         WATER           Matrix:         WATER         Aug-24-11 12:40           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00           Analyzed:         Aug-27-11 21:13         Aug-27-11 21:35           Units/RL:         mg/L         RL         mg/L         RL           ND         0.00100         0.0262         0.00100           ND         0.00200         0.00333         0.00200           ND         0.00100         ND         0.00100           ND         0.00100         0.00312         0.00100           ND         0.00100         0.00114         0.00100	Field Id:         MW-1         MW-3         MW-4           Depth:         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11 12:40         Aug-24-11           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11           Analyzed:         Aug-27-11 21:13         Aug-27-11 21:35         Aug-27-11           Units/RL:         mg/L         RL         mg/L         RL         mg/L           ND         0.00100         0.00262         0.00100         0.00119           ND         0.00100         ND         0.00100         ND           ND         0.00200         0.00827         0.00200         ND           ND         0.00100         0.00312         0.00100         ND           ND         0.00100         0.0114         0.00100         ND	Field Id:         MW-1         MW-3         MW-4           Depth:         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11 12:40         Aug-24-11 10:00           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11 16:00           Analyzed:         Aug-27-11 21:13         Aug-27-11 21:35         Aug-27-11 21:58           Units/RL:         mg/L         RL         mg/L         RL           ND         0.00100         0.0262         0.00100         0.00119         0.00100           ND         0.00200         0.00333         0.00200         ND         0.00100           ND         0.00200         0.00827         0.00200         ND         0.00200           ND         0.00100         0.00312         0.00100         ND         0.00100           ND         0.00100         0.0114         0.00100         ND         0.00100	Lab Id:         426487-001         426487-002         426487-003         426487-013	Lab Id:         426487-001         426487-002         426487-003         426487-004           Field Id:         MW-1         MW-3         MW-4         MW-5           Depth:         WATER         WATER         WATER         WATER           Matrix:         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11 12:40         Aug-24-11 10:00         Aug-24-11 10:30           Extracted:         Aug-26-11 16:00         Aug-27-11 21:58         Aug-28-11 03:16           Units/RL:         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL           ND         0.00100         0.00262         0.00100         0.00119         0.00100         ND         0.00200           ND         0.00200         ND         0.00200         ND         0.00200         ND         0.00200           ND         0.00100         ND         0.00100         ND         0.00100         ND         0.00100           ND         0.00100         0.00100         ND         0.00100         ND </th <th>Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-Field Id:         MW-1         MW-3         MW-4         MW-5         MW-6         MW-</th> <th>Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-005           Field Id:         MW-1         MW-3         MW-4         MW-5         MW-6           Depth:         Matrix:         WATER         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11 12:40         Aug-24-11 10:00         Aug-24-11 10:30         Aug-24-11 13:20           Extracted:         Aug-26-11 16:00         Aug-27-11 21:35         Aug-27-11 21:58         Aug-28-11 03:16         Aug-27-11 23:52         Units/RL         Mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RD         0.00100         ND         0.001</th> <th>Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-005         426487-015         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-00</th>	Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-Field Id:         MW-1         MW-3         MW-4         MW-5         MW-6         MW-	Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-005           Field Id:         MW-1         MW-3         MW-4         MW-5         MW-6           Depth:         Matrix:         WATER         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 09:20         Aug-24-11 12:40         Aug-24-11 10:00         Aug-24-11 10:30         Aug-24-11 13:20           Extracted:         Aug-26-11 16:00         Aug-27-11 21:35         Aug-27-11 21:58         Aug-28-11 03:16         Aug-27-11 23:52         Units/RL         Mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RD         0.00100         ND         0.001	Lab Id:         426487-001         426487-002         426487-003         426487-004         426487-005         426487-015         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-002         426487-00

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

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

Brent Barron II
Odessa Laboratory Manager



### Certificate of Analysis Summary 426487 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Aug-25-11 11:10 am

Report Date: 01-SEP-11

Project Manager: Brent Barron II

Lab Id:	426487-0	007	426487-	800	426487-0	009	426487-	010	426487-	011	426487-	012						
Field Id:	MW-8	3	MW-9		MW-10		Goff Dairy Well		Goff Dairy - Ctr. Pivot We		Goff Dairy - Ctr.	Pivot Beg.						
Depth:																		
Matrix:	WATE	R	WATE	R	WATE	R	WATE	ER	WATE	R	WATE	R						
Sampled:	Aug-24-11	Aug-24-11 17:40		Aug-24-11 17:40		15:00	Aug-24-11	14:30	Aug-24-11 16:30		Aug-24-11 16:30		Aug-24-11 16:30		Aug-24-11	16:45	Aug-24-11	17:00
Extracted:	Aug-26-11	16:00	Aug-26-11	16:00	Aug-26-11	16:00	Aug-30-11	15:49	Aug-30-11	15:49	Aug-26-11	16:00						
Analyzed:	Aug-28-11	00:37	Aug-28-11	01:00	Aug-28-11	01:23	Aug-31-11	06:35	Aug-31-11	06:58	Aug-28-11	02:30						
Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL						
	ND	0.00100	ND	0.00100	0.654 D	0.0100	0.00138	0.00100	ND	0.00100	ND	0.00100						
	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200						
	ND	0.00100	ND	0.00100	0.00158	0.00100	ND	0.00100	. ND	0.00100	ND	0.00100						
	ND	0.00200	0.00237	0.00200	0.0177	0.00200	ND	0.00200	ND	0.00200	ND	0.00200						
	ND	0.00100	ND	0.00100	0.00262	0.00100	ND	0.00100	ND	0.00100	ND	0.00100						
	ND	0.00100	0.00237	0.00100	0.0203	0.00100	ND	0.00100	. ND	0.00100	ND	0.00100						
	ND	0.00100	0.00237	0.00100	0.676 D	0.00100	0.00138	0.00100	ND	0.00100	ND	0.00100						
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id: MW-5 Depth: Matrix: WATE Sampled: Aug-24-11 Extracted: Aug-26-11 Analyzed: Aug-28-11 Units/RL: mg/L ND ND ND ND ND ND	Field Id:   MW-8	Field Id:         MW-8         MW-9           Depth:         WATER         WATE           Matrix:         WATER         WATE           Sampled:         Aug-24-11 17:40         Aug-24-11           Extracted:         Aug-26-11 16:00         Aug-26-11           Analyzed:         Aug-28-11 00:37         Aug-28-11           Units/RL:         mg/L         RL         mg/L           ND         0.00100         ND           ND         0.00200         ND           ND         0.00200         0.00237           ND         0.00100         ND           ND         0.00100         ND           ND         0.00100         0.00237	Field Id:         MW-8         MW-9           Depth:         WATER         WATER           Matrix:         WATER         WATER           Sampled:         Aug-24-11 17:40         Aug-24-11 15:00           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00           Analyzed:         Aug-28-11 00:37         Aug-28-11 01:00           Units/RL:         mg/L         RL         mg/L         RL           ND         0.00100         ND         0.00100           ND         0.00200         ND         0.00200           ND         0.00200         0.00237         0.00200           ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100	Field Id:         MW-8         MW-9         MW-1           Depth:         Watrix:         WATER         MATER         WATER         Aug-24-11 15:00         Aug-26-11 16:00         Aug-26-11 16:00         Aug-28-11 01:00         Aug-26-11 16:00         Aug-28-11 01:00         Aug-28-11 01:00	Field Id:         MW-8         MW-9         MW-10           Depth:         Matrix:         WATER         WATER         WATER           Sampled:         Aug-24-11 17:40         Aug-24-11 15:00         Aug-24-11 14:30           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11 16:00           Analyzed:         Aug-28-11 00:37         Aug-28-11 01:00         Aug-28-11 01:23           Units/RL:         mg/L         RL         mg/L         RL           ND         0.00100         ND         0.00100         0.654 D         0.0100           ND         0.00200         ND         0.00200         ND         0.00200           ND         0.00100         ND         0.00100         0.0158         0.00100           ND         0.00100         ND         0.00200         0.0177         0.00200           ND         0.00100         ND         0.00100         0.00262         0.00100           ND         0.00100         ND         0.00100         0.00262         0.00100           ND         0.00100         0.00237         0.00100         0.0203         0.00100	Lab Id:         426487-007         426487-008         426487-009         426487-           Field Id:         MW-8         MW-9         MW-10         Goff Dairy           Depth:         Matrix:         WATER         WATER         WATER         WATER           Sampled:         Aug-24-11 17:40         Aug-24-11 15:00         Aug-24-11 14:30         Aug-24-11           Extracted:         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11 16:00         Aug-26-11 16:00         Aug-30-11           Analyzed:         Aug-28-11 00:37         Aug-28-11 01:00         Aug-28-11 01:23         Aug-31-11           Units/RL:         mg/L         RL         mg/L         RL         mg/L           ND         0.00100         ND         0.00100         0.654 D         0.0100         0.00138           ND         0.00200         ND         0.00200         ND         0.00200         ND           ND         0.00200         ND         0.00100         0.0177         0.00200         ND           ND         0.00100         ND         0.00100         0.00262         0.00100         ND           ND         0.00100         0.00237         0.00100         0.00262         0.00100         ND	Field Id:         MW-8         MW-9         MW-10         Goff Dairy Well           Depth:         Matrix:         WATER         Aug-24-11 16:30         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-26-11 16:00         Aug-30-11 15:49         Aug-30-11 15:49         Aug-31-11 06:35         Mug-31-11 06:35         Mug-31-11 06:35         Mug-28-11 01:00         Aug-28-11 01:03         Aug-28-11 01:23         Aug-31-11 06:35         Mug-31-11 06:35	Lab Id:         426487-007         426487-008         426487-009         426487-010         60ff Dairy Well         Goff Dairy Well         Goff Dairy - Ctr.           Matrix:         WATER         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 10:23         Aug-31-11 10:23         Aug-31-11 10:23         Aug-31-11 10:23	Lab Id:         426487-007         426487-008         426487-009         426487-010         426487-011           Field Id:         MW-8         MW-9         MW-10         Goff Dairy Well         Goff Dairy - Ctr. Pivot Well           Depth:         Matrix:         WATER         Aug-24-11 16:30         Aug-24-11 16:45         Aug-24-11 16:00         Aug-24-11 16:00         Aug-24-11 16:00         Aug-30-11 15:49         Aug-30-11 15:49         Aug-30-11 15:49         Aug-30-11 15:49         Aug-31-11 06:35         Aug-31-11 06:58         Mug-31-11 06:59         Mug-31-11 06:59         Mug-31-11 06:35         Mug-31-	Lab Id:         426487-007         426487-008         426487-009         426487-010         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-011         426487-012         426487-011         426487-011         426487-012         426487-01						

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.

The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron II Odessa Laboratory Manager



# Certificate of Analys Summary 426487 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Aug-25-11 11:10 am

Report Date: 01-SEP-11

Project Manager: Brent Barron II

				Troject Munuger.	Diene Buildirii	
Lab Id:	426487-013	426487-014				
Field Id:	Goff Dairy - Ctr. Pivot End	JW Well	,		_	
Depth:			·			:
Matrix:	WATER	WATER				
Sampled:	Aug-24-11 17:25	Aug-24-11 17:15	•	·		
Extracted:	Aug-26-11 16:00	Aug-30-11 15:49	•	·		
Analyzed:	Aug-28-11 02:53	Aug-31-11 08:52				
Units/RL:	mg/L RL	mg/L RL				
	ND 0.00100	ND 0.00100				
	ND 0.00200	ND 0.00200				
	ND 0.00100	ND 0.00100				,
	ND 0.00200	ND 0.00200				
	ND 0.00100	ND 0.00100	,			
	ND 0.00100	ND 0.00100				,
	ND 0.00100	ND 0.00100				:
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id: Depth: Matrix: WATER Sampled: Aug-24-11 17:25  Extracted: Aug-26-11 16:00 Analyzed: Aug-28-11 02:53 Units/RL: mg/L RL ND 0.00100 ND 0.00200 ND 0.00200 ND 0.00200 ND 0.00100 ND 0.00100 ND 0.00100 ND 0.00100 ND 0.00100	Field Id:         Goff Dairy - Ctr. Pivot End         JW Well           Depth:         WATER         WATER           Mag-24-11 17:25         Aug-24-11 17:15           Extracted:         Aug-26-11 16:00         Aug-30-11 15:49           Analyzed:         Aug-28-11 02:53         Aug-31-11 08:52           Units/RL:         mg/L         RL           ND         0.00100         ND         0.00100           ND         0.00200         ND         0.00200           ND         0.00200         ND         0.00200           ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100	Field Id:   Goff Dairy - Ctr. Pivot End   JW Well	Lab Id:       426487-013       426487-014         Field Id:       Goff Dairy - Ctr. Pivot End       JW Well         Depth:       Matrix:       WATER         Matrix:       Aug-24-11 17:25       Aug-24-11 17:15         Extracted:       Aug-26-11 16:00       Aug-30-11 15:49         Analyzed:       Aug-28-11 02:53       Aug-31-11 08:52         Units/RL:       mg/L       RL         ND       0.00100       ND       0.00100         ND       0.00200       ND       0.00200         ND       0.00200       ND       0.00200         ND       0.00200       ND       0.00200         ND       0.00100       ND       0.00100         ND       0.00100       ND       0.00100         ND       0.00100       ND       0.00100	Field Id:   Depth:   Matrix:   WATER   WATER   Sampled:   Aug-24-11 17:25   Aug-24-11 17:15

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

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Brent Barron II Odessa Laboratory Manager



## **Flagging Criteria**

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Lovington Gathering WTI

Work Orders: 426487,

Lab Batch #: 868690

Sample: 426487-001 / SMP

**Project ID: 2006-142** 

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/27/11 21:13	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0291	0.0300	97	80-120		
4-Bromofluorobenzene	0.0272	0.0300	91	80-120		

Lab Batch #: 868690

Sample: 426487-002 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/27/11 21:35	SURROGATE RECOVERY STUDY						
BT	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]	ŀ			
1,4-Difluorobenzene		0.0295	0.0300	98	80-120			
4-Bromofluorobenzene		0.0268	0.0300	89	80-120			

Lab Batch #: 868690

Sample: 426487-003 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/27/11 21:58	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120			
4-Bromofluorobenzene	0.0276	0.0300	92	80-120			

Lab Batch #: 868690

Sample: 426487-005 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/27/11 23:52	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount  B	Recovery %R	Control Limits %R	Flags	
Analytes		[-]	[D]	, , ,		
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	<del></del>	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120		

Lab Batch #: 868690

Sample: 426487-006 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/28/11 00:14	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	(-1	""	[D]			
1,4-Difluorobenzene	0.0267	0.0300	89	80-120		
4-Bromofluorobenzene	0.0266	0.0300	89	80-120		

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

**Work Orders:** 426487,

**Project ID: 2006-142** 

Lab Batch #: 868690

Sample: 426487-007 / SMP

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 08/28/11 00:37	SURROGATE RECOVERY STUDY					
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes .		''	[D]			
1,4-Difluorobenzene		0.0278	0.0300	93	80-120		
4-Bromofluorobenzene		0.0259	0.0300	- 86	80-120		

Lab Batch #: 868690

Sample: 426487-008 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/28/11 01:00	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0279	0.0300	93	80-120			
4-Bromofluorobenzene	0.0268	0.0300	89	80-120			

Lab Batch #: 868690

Sample: 426487-009 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/28/11 01:23	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I,4-Difluorobenzene	0.0332	0.0300	111	80-120		
4-Bromofluorobenzene	0.0220	0.0300	73	80-120	**	

Lab Batch #: 868690

Sample: 426487-012 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/28/11 02:30	SURROGATE RECOVERY STUDY					
вті	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0283	0.0300	94	80-120		
4-Bromofluorobenzene		0.0272	0.0300	91:	80-120		

Lab Batch #: 868690

Sample: 426487-013 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/28/11 02:53	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R  D	Control Limits %R	Flags	
Analytes			[6]			
1,4-Difluorobenzene	0.0291	0.0300	97	80-120		
4-Bromofluorobenzene	0.0266	0.0300 .	89	80-120		

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

**Work Orders: 426487,** 

Lab Batch #: 868690

Sample: 426487-004 / SMP

Project ID: 2006-142

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 08/28/11 03:16	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0276	0.0300	92	80-120		
4-Bromofluorobenzene	0.0266	0.0300	89	80-120		

Lab Batch #: 868958

Sample: 426487-010 / SMP

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 08/31/11 06:35	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount - [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
I,4-Difluorobenzene	0.0280	0.0300	· 93	80-120		
4-Bromofluorobenzene	0.0281	0.0300	94 .	80-120		

Lab Batch #: 868958

Sample: 426487-011 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 08/31/11	06:58 SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 868958

Sample: 426487-014 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/31/11 08:52	. SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	·		[D]		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 868958

Sample: 426487-009 / DL

Matrix: Water Batch:

Units: mg/L Date Analyzed: 08/31/11 09:37	SU	RROGATE RI	ECOVERY :	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 426487,

**Project ID: 2006-142** 

Lab Batch #: 868690

Sample: 610654-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/27/11 18:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX I	oy EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
· <b>A</b> i	nalytes			[D]		
1,4-Difluorobenzene		0.0285	0.0300	95	80-120-	
4-Bromofluorobenzene		0.0272	0.0300	91	80-120	

Lab Batch #: 868958

Sample: 610803-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 08/31/11 03:10	SU	RROGATE R	ECOVERY	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery . %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0272	0.0300	91	80-120	

Lab Batch #: 868690

Sample: 610654-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/27/11 16:39	SU	RROGATE RI	ECOVERY :	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery . %R	Control Limits %R	Flags
Analytes			[D]	,	
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 868958

Sample: 610803-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 08/31/11 01:39	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	*
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 868690

Sample: 610654-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/27/11 17:02	SU	RROGATE RI	ECOVERY S	STUDY	
ВТІ	EX by EPA 8021  Analytes	Amount · Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0322	0.0300	107	80-120	
4-Bromofluorobenzene		0.0292	0.0300	97	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 426487,

Lab Batch #: 868958

Sample: 610803-1-BSD / BSD

**Project ID: 2006-142** 

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/31/11 02:02	Su	RROGATE R	ECOVERY	STUDY	
вті	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0289	0.0300	. 96	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	

Lab Batch #: 868690

Sample: 426335-001 S / MS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/27/11 22:20	SU	RROGATE RI	ECOVERY S	STUDY	
ВТ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	- Flags
	Analytes	• •	. ,	[D]		5
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	
4-Bromofluorobenzene		0.0305	0.0300	102	80-120	

Lab Batch #: 868958

**Sample:** 426488-001 S / MS

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 08/31/11 07:20	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0298	0.0300	99	80-120	
4-Bromofluorobenzene		0.0283	0.0300	94	80-120	

Lab Batch #: 868690

Sample: 426335-001 SD / MSD

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 08/27/11 22:43	SU	RROGATE RI	ECOVERY S	STUDY	
BTE	CX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		4.	[D]		
1,4-Difluorobenzene		0.0305	0.0300	102	80-120	
4-Bromofluorobenzene		0.0277	0.0300	92 .	80-120	

Lab Batch #: 868958

Sample: 426488-001 SD / MSD

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 08/31/11 07:43	SURROGATE RECOVERY STUDY											
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R.	Flags							
	Analytes			[D]	,	•							
1,4-Difluorobenzene		0.0306	0.0300	102	80-120								
4-Bromofluorobenzene		0.0284	0.0300	95	80-120								

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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



<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution

## **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

	Project Manager:	Ben J. Arguijo	<u>.</u>			·									Pro	oject	Nar	ne: <u>L</u>	.ovi	ngto	n G	ath	erir	ıg V	<u>VTI</u>				
	Company Name	Basin Environmental S	ervice T	echno	logies, LLC											Pr	ojec	t #: <u>_2</u>	006	-142	2				·				
	Company Address:	P. O. Box 301														Proje	ct L	oc: <u>L</u>	ea C	ount	ty, NI	<u>M</u>							
	City/State/Zip:	Lovington, NM 88260							_								PC	)#: <u>P</u>	AA-	J. H	enry								
	Telephone No:	(575)396-2378			_	Fax No:	(	575)	396-	1429					Repor	t For	mat	. [	St	anda	ard			TRR	ξΡ		NP	DES	;
	Sampler Signature:	Dukotah war	ı		<u>.</u>	e-mail:	_	ojargu			nenv	.con	n		· ·							,							
(lab use							-									┝			TCLF		nalyz	ze F	or:	$\overline{}$	_	_	_	ڀ	l
ORDEF	11201	197							Pres	ervati	n 8 #	of Co	ntainer	_	Matrix				TOTAL	1	Ħ	<del> </del>	X					48, 72 hrs	
LAB # (tab use only)		_D CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	I olal #. of Containers	HNO <sub>3</sub>			NaOH NaoSo.			DW=Crinking Water SL=Siudge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	8015M	TPH TX 1005 TX 1006	Cations (Ca. Mg, Na. K)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg.Se	Volatiles	Semivolatiles	3TEX 8021B/5030 o BTEX 8260	RCI	N.O.R.M.	Fluoride		RUSH TAT (Pre-Schedule) 24, 4	Standard TAT 4 DAY
01	N	/W-1			8/24/2011	0930		3 X		x					GW						П		x		T	$\top$	I		X
	-4	AW-2			8/24/2011	12401/2		3 X		x	$\neg$				GW								x		T		Τ	П	X
09	N	NW-3			8/24/2011	124017		3 X		x	$\neg$	T			GW				1	T			х	$\Box$	T		Τ		х
03		1W-4			8/24/2011	1000		3 X		X		Т	$\sqcap$		GW		П			Τ	$\Box$		x	$\top$	T		T	$\Gamma$	X
04	A	AVV-5			8/24/2011	1030		3 X	1	x		T			GW					Τ	$\Box$		х	Т	T	$\top$	T	$\Gamma$	X
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## **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo								_						_	. F	roje	ct N	ame	<u>Lo</u>	vin	gto	n G	ath	<u>erin</u>	g W	<u>/ΤΙ</u>		<u>.                                    </u>		
	Company Name	Basin Environme	ntal Ser	vice T	echnol	ogies, LLC	·····											. 1	Proje	ect#	20	06-	142	<u></u>								
	Company Address:	P. O. Box 301										Project Loc: Lea County, NM																				
	City/State/Zip:	Lovington, NM 88	Lovington, NM 88260										PO #: PAA- J. Henry																			
	Telephone No:	(575)396-2378					Fax No:		(575	396	-142	9					Rep	ort F	orm	at:	X	Sta	nda	rd			rRR	.P	]	NP	PDES	 }
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(lab use ORDE	= :	6487				-			Г	Pro	serv:	ation 8	# of	Conta	iners	<u> </u>	Matrix			T		CLP:			$\neg$	X					48, 72 hr	
LAB # (lab use only)		D CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	90		75		o,			ter SL≛Sludge er S≂Soit/Solid	- 1	TX 1005	is (Ca, Mg, Na, K)	Anions (Cl. SO4, Aikalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 o BTEX 8260	RCI	N.O.R.M.			24,	Standard TAT 4 DAY
10	<del></del>	Dairy Well			<u> </u>	8/24/2011	1630	-	_	x	,	+	<del>                                     </del>	$\Box$	+	+	GW	+	╁	ľ	*	S	2		S	X	+	+	$\dagger$	†	Ť	X
1	<del>                                     </del>	Ctr. Pivot Well				8/24/2011	1645		3	_	7,	_			1	7	GW	T	1	T						X		T	I			х
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13	Goff Dairy -	Ctr. Pivot End				8/24/2011	1725		3	x	7	(				T	GW	I	Τ							x	$\Box$	$\Box$	$\perp$		$oxed{L}$	X
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#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist.

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page

## Prelogin / Nonconformance Report - Sample Log-In

Date/Time: 8/25/// // /0				
Lab ID #: 426487			•	
Initials: AH		,		
Sample Receipt Check	dist			
1. Samples on ice?	Blue	<b>Nater</b>	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		· ·
9. Container labels legible and intact?	Yes	No		·
10. Sample matrix / properties agree with chain of custody?	(Yes)	No ·		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No.		Cooler 5 No.	
Ibs 56°C Ibs °C Ibs °C	lbs	°c	ibs	°c
Nonconformance Docume	entation			•
Contact:Contacted by:	Dat	e/Time:_		
Regarding:	<del> </del>		- <del></del>	
	<del></del>	······		
Corrective Action Taken:				
Check all that apply: □Cooling process has begun shortly after sampling condition acceptable by NELAC 5.5.8.3.1.a.1	-	of temper	ature	

☐ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

## **Analytical Report 428994**

## for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry Lovington Gathering WTI

2006-142

12-OCT-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

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





12-OCT-11

Project Manager: Jason Henry
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150

Midland, TX 79706

Reference: XENCO Report No: 428994

Lovington Gathering WTI
Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 428994. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 428994 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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

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



## Sample Cross Reference 428994



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	09-30-11 09:00		428994-001

#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 428994

Report Date: 12-OCT-11 Date Received: 10/05/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-872166 BTEX by EPA 8021

SW8021BM

Batch 872166, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 428994-001.



## Certificate of Analys Summary 428994 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Oct-05-11 11:18 am

Report Date: 12-OCT-11
Project Manager: Brent Barron II

					 Project Manager:	Diem Danon II	
	Lab Id:	428994-00	01	,			
Analysis Requested	Field Id:	MW-2		•	•		
Anatysis Requesteu	Depth:						
	Matrix:	WATER	٠.				
	Sampled:	Sep-30-11 0	9:00				,
BTEX by EPA 8021	Extracted:	Oct-10-11 1	5:45				
·	Analyzed:	Oct-11-11 0	5:36	•		, ,	,
	Units/RL:	mg/L	RL				
Benzene		0.179	0.00100				
Toluene		ND	0.00200				
Ethylbenzene		0.00275	0.00100				·
m_p-Xylenes		0.00345	0.00200				
o-Xylene		0.00212	0.00100				
Xylenes, Total		0.00557	0.00100	-			
Total BTEX		0.187	0.00100				

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

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

Brent Barron II Odessa Laboratory Manager



## **Flagging Criteria**

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

MDL Method Detection Limit SD

SDL Sample Detection Limit

LOD Limit of Detection

**PQL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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•	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 F. Atlanta Ave. Phoenix, AZ 85040	(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 428994,

Lab Batch #: 872166

Sample: 428994-001 / SMP

Project ID: 2006-142

Matrix: Water Batch:

SURROGATE RECOVERY STUDY Units: mg/L Date Analyzed: 10/11/11 05:36 Amount True Control BTEX by EPA 8021 Amount Limits Flags Found Recovery %R [A] [B] %R [D] Analytes

1,4-Difluorobenzene 0.0275 0.0300 92 80-120 4-Bromofluorobenzene 0.0232 0.0300 80-120

Lab Batch #: 872166

Sample: 612517-1-BLK / BLK

Batch:

Matrix: Water

SURROGATE RECOVERY STUDY Date Analyzed: 10/10/11 21:14 Units: mg/L Amount True Control BTEX by EPA 8021 Limits Found Amount Recovery Flags [B] %R %R [A] [D]Analytes 1,4-Difluorobenzene 0.0278 0.0300 80-120 4-Bromofluorobenzene 0.0284 0.0300 95 80-120

Lab Batch #: 872166

Sample: 612517-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/10/11 19:43	SU	SURROGATE RECOVERY STUDY											
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags								
1,4-Difluorobenzene	0.0258	0.0300	86	80-120									
4-Bromofluorobenzene	0.0251	0.0300	84	80-120									

Lab Batch #: 872166

Sample: 612517-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/10/11 20:05	SU	JRROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 872166

Sample: 428960-001 D / MD

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 10/11/11 01:25	SU	RROGATE RI	ECOVERY S	STUDY	
	y EPA 8021 alytes	Amount Found [A]	True Amount [B]	Recovery %R  D	Control Limits %R	Flags
	azy tes					
1,4-Difluorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0.0286	0.0300	95	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 428994

Analyst: ASA

**Date Prepared:** 10/10/2011

**Project ID: 2006-142** 

Date Analyzed: 10/10/2011

Lab Batch ID: 872166

Sample: 612517-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	K/BLANK S	SPIKE / I	BLANK S	PIKE DUPI	LICATE 1	RECOVI	ERY STUD	Y	
BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	. RPD %R Limits %RPI %RPI %RPI %RPI %RPI %RPI %RPI %RPI	Control Limits %RPD	Flag	
Benzene	<0.00100	0.100	0.0908	91	0.100	0.104	104	14	70-125	25	
Toluene	<0.00200	0.100	0.0931	93	0.100	0.106	106	13	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0977	98	0.100	0.111	111	13	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.195	98	0.200	0.222	111	13	70-131	25	
o-Xylene	<0.00100	0.100	0.0980	98	0.100	0.112	112	13	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



## **Sample Duplicate Recovery**



**Project Name: Lovington Gathering WTI** 

Work Order #: 428994

Lab Batch #: 872166

**Date Analyzed:** 10/11/2011 01:25

Batch #:

**Project ID: 2006-142** 

**Date Prepared:** 10/10/2011

Analyst: ASA

QC- Sample ID: 428960-001 D

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

, Reporting Units. mg/L	Parent Sample Result   Sample Duplicate Resu				
BTEX by EPA 8021  Analyte	Result	Duplicate Result	RPD	Control Limits %RPD	Flag
Benzene	<0.00100	<0.00100	0	25 ·	U
Toluene	<0.00200	<0.00200	0	25	U
Ethylbenzene	<0.00100	<0.00100	0	25	U
m_p-Xylenes	<0.00200	<0.00200	0	25	U
o-Xylene	<0.00100	<0.00100	. 0	25	U

# Page 10 of 11

## **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo																Pro	oject	Nar	ne:	Lov	ingt	on (	Gath	eri	ng V	<u>NTI</u>				
	Company Name	Basin Environme	ental Ser	vice Te	echnol	ogies, LLC											_		Pr	ojec	t #: _	200	6-14	2								
	Company Address:	P. O. Box 301															_	F	roje	ct L	oc: [	oc: Lea County, NM										
	City/State/Zip:	Lovington, NM 8	8260												-					· PC	) #:	PAA	J. F	lenry	,							
	Telephone No:	(575)396-2378					Fax No:		/57	5) 30	96-14	120					- - R	Repor	· Fo		•	_	tand			П	TRR	 RP	-	П м	IPDE:	 s
	•						•										• '`	СРО				`	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			_		-	•			
	Sampler Signature:	PUKOTAN	ward.			<del></del>	e-mail:		bja	rgui	10@1	Dasi	nen	v.co	<u>m</u>			_					_	Analy	/ze F	or:		_		<u> </u>	1	7
(lab use	JAN	994												4 -4 0	antain.	-	1 A 4	atrix	-			TOTA	NL:	$\pm$	t	X	.				48, 72 hrs	
		, , ,	. :								rese	Valid	) N 6 #	7 61 C	ontaine			S=Soil/Solid	M 8015B	TX 1006	ξ.	lfinity)	Cr Ph Ho So	3		BTEX 8260					4	. —
AB # (lab use only)				Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	Total #. of Containers	9	HNO <sub>3</sub>	HCI	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> None	Other (Specify)		GW ≈ Groundwater S≈9 NP=Non-Potable Spec	TPH: 418.1 8015M	TPH: TX 1005	Cations (Ca. Mg. Na, K)	Anions (Cl. SO4, Alkalinity)	Motals: 4s 4s Ba Cd Cr Ph Ho	Volatiles	Semivolatiles	BTEX 80218/5030 or BTEX 8260	5	N.O.R.M.		ļ.·	USH TAT (Pre-Sc	Standard TAT 4 DAY
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#### XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

#### Prelogin / Nonconformance Report - Sample Log-In

Client: Basim Env. / Plains			•		
Date/Time: 10.5.11 11.18					
Lab ID#: 428994					:
Initials:					
Sample Receip	t Check	liet			
- Cample Receip	- Oncor		···	,	·
1. Samples on ice?		Blue	(Water)	No	
2. Shipping container in good condition?		(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles	?	YES	No	N/A	
4. Chain of Custody present?	*	Yes	No		
5. Sample instructions complete on chain of custody?		Yes	No		
6. Any missing / extra samples?		Yes	(No)		
7. Chain of custody signed when relinquished / received?		Yes	No		
8. Chain of custody agrees with sample label(s)?	<u></u> -	Yes	No		
9. Container labels legible and intact?		Yes	No		
10. Sample matrix / properties agree with chain of custody?		Yes	No ·		
11. Samples in proper container / bottle?		(Yes)	. No		
12. Samples properly preserved?		Yes	No	· N/A	
13. Sample container intact?		Yes	No		
14. Sufficient sample amount for indicated test(s)?	····	Yes	No		
15. All samples received within sufficient hold time?		Yes	No		
16. Subcontract of sample(s)?		Yes	No	(NA)	
17. VOC sample have zero head space?	·	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.		Cooler 4 No	o	Cooler 5 No.	····
lbs 5,0 °C lbs °C lbs	<u>°c</u>	Ibs	°c	lbs	°C
Nonconformance i	Docume	ntation		•.	
Contact: Contacted by:			Date/Time:		
Contacted by:		<del></del>	Date/Time:_		
Regarding:					
Corrective Action Taken:					
CONTECUTE ACTION TAXEN.					
		····			
	<del></del>				

Check all that apply: 

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

□Initial and Backup Temperature confirm out of temperature conditions

□Client understands and would like to proceed with analysis

## **Analytical Report 429246**

## for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry Lovington Gathering WTI

2006-142

18-OCT-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

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





18-OCT-11

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

Reference: XENCO Report No: 429246

Lovington Gathering WTI
Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 429246. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 429246 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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## Sample Cross Reference 429246



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Goff Dairy Well	W	10-10-11 09:15		429246-001
Goff Dairy - Ctr. Pivot Well	W	10-10-11 09:00		429246-002
Goff Dairy - Ctr. Pivot Beg.	W	10-10-11 09:00	•	429246-003
JW Well	$\mathbf{w}$	10-10-11 08:00		429246-004
MW-10	W	10-10-11 08:00		429246-005



#### **CASE NARRATIVE**

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 429246

Report Date: 18-OCT-11

Date Received: 10/10/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



## Certificate of Analy. Summary 429246 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Oct-10-11 02:40 pm

Report Date: 18-OCT-11

							Project Ma	nager:	Brent Barron	[1	
Lab Id:	429246-	001	429246-0	002	429246-0	003	429246-	004	429246-0	05	
Field Id:	Goff Dairy	Goff Dairy Well		Pivot Well	Goff Dairy - Ctr. Pivot Beg.		JW Well		MW-10		
Depth:		-								÷	
Matrix:	GROUND V	ATER	GROUND V	VATER	GROUND W	ATER	GROUND V	VATER	GROUND W	ATER	•
Sampled:	Oct-10-11	09:15	Oct-10-11	09:00	Oct-10-11	09:00	Oct-10-11	08:00	Oct-10-11 (	08:00	
Extracted:	Oct-15-11	09:40	Oct-15-11	09:40	Oct-15-11	09:40	Oct-15-11	09:40	Oct-15-11 (	9:40	
Analyzed:	Oct-18-11	02:21	Oct-18-11	02:44	Oct-18-11	03:07	Oct-18-11	03:29	Oct-18-11 (	08:39	
Units/RL:	mg/L	RĻ	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
	ND	0.00100	. ND	0.00100	. ND	0.00100	ND	0.00100	0.183	0.0100	
	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.0200	
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.0100	
	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	0.121	0.0200	
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.0100	
	ND	0.00100	ND	0.00100	ND	0.00100	· ND	0.00100	0.121	0.0100	
	ND	0.00100	ND	0.00100	ND	0.00100	· ND	0.00100	0.304	0.0100	
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id: Goff Dairy Depth: Matrix: GROUND W Sampled: Oct-10-11 Extracted: Oct-15-11 Analyzed: Oct-18-11 Units/RL: mg/L ND ND ND ND ND ND	### Field Id: Goff Dairy Well    Depth: Matrix: GROUND WATER	Field Id:   Goff Dairy   Well   Goff Dairy - Ctr.	Field Id:	Field Id:   Goff Dairy Well   Goff Dairy - Ctr. Pivot Well   Goff Dairy - Ctr.	Field Id:   Goff Dairy Well   Goff Dairy - Ctr. Pivot Well   Goff Dairy - Ctr. Pivot Beg.	Lab Id:   429246-001   429246-002   429246-003   429246-003   429246-003   429246-004     Field Id:   Goff Dairy Well   Goff Dairy - Ctr. Pivot Well   Goff Dairy - Ctr. Pivot Beg.   JW Well     Depth:   Matrix:   GROUND WATER   GROUND WATER   GROUND WATER   GROUND WATER     Sampled:   Oct-10-11 09:15   Oct-10-11 09:00   Oct-10-11 09:00   Oct-10-11     Extracted:   Oct-15-11 09:40   Oct-15-11 09:40   Oct-15-11 09:40   Oct-15-11     Analyzed:   Oct-18-11 02:21   Oct-18-11 02:44   Oct-18-11 03:07   Oct-18-11     Units/RL:   mg/L   RL   mg/L   RL   mg/L   RL   mg/L     ND	Lab Id:         429246-001         429246-002         429246-003         429246-004           Field Id:         Goff Dairy Well         Goff Dairy - Ctr. Pivot Well         Goff Dairy - Ctr. Pivot Beg.         JW Well           Depth:           Matrix:         GROUND WATER         GROUND WATER         GROUND WATER         GROUND WATER           Sampled:         Oct-10-11 09:15         Oct-10-11 09:00         Oct-10-11 09:00         Oct-10-11 09:00           Extracted:         Oct-15-11 09:40         Oct-18-11 03:07         Oct-18-11 03:29           Units/RL:         mg/L         RL         mg/L         RL         mg/L         RL         mg/L         RL           ND         0.00100         ND         0.00100         ND         0.00100         ND         0.00100           ND         0.00200         ND         0.00200         ND         0.00200         ND         0.00200           ND         0.00100         ND         0.00100         ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100         ND         0.00100 </th <th>Lab Id:         429246-001         429246-002         429246-003         429246-004</th> <th>Lab Id:         429246-001         429246-002         429246-003         429246-004         429246-005           Field Id:         Goff Dairy Well         Goff Dairy - Ctr. Pivot Well         Goff Dairy - Ctr. Pivot Beg         JW Well         MW-10           Matrix:         GROUND WATER         GROUND WATER</th>	Lab Id:         429246-001         429246-002         429246-003         429246-004	Lab Id:         429246-001         429246-002         429246-003         429246-004         429246-005           Field Id:         Goff Dairy Well         Goff Dairy - Ctr. Pivot Well         Goff Dairy - Ctr. Pivot Beg         JW Well         MW-10           Matrix:         GROUND WATER         GROUND WATER

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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Jo R

Brent Barron II Odessa Laboratory Manager



## **Flagging Criteria**

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 429246,

Lab Batch #: 872545

Sample: 429246-001 / SMP

**Project ID: 2006-142** 

Matrix: Ground Water SURROGATE RECOVERY STUDY

Units: mg/L Date Analyzed: 10/18/11 02:21 SORROGATE RECOVERY									
BTEX by EPA 8021B	Amount Found [A]	True Amount  B	Recovery %R	Control Limits %R	Flags				
Analytes		[~]	[D]	, , , ,					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120					
4-Bromofluorobenzene	0.0274	0.0300	- 91	80-120					

Lab Batch #: 872545

Sample: 429246-002 / SMP

Batch:

Matrix: Ground Water

Units: mg/L Date Analyzed: 10/18/11 02:44	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0287	0.0300	96	80-120				
4-Bromofluorobenzene	0.0315	0.0300	105 -	80-120				

Lab Batch #: 872545

Sample: 429246-003 / SMP

Batch: 1

Matrix: Ground Water

<b>Units:</b> mg/L <b>Date Analyzed:</b> 10/18/11 03:07	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0270	0.0300	90	80-120			
4-Bromofluorobenzene	0.0288	0.0300	96	80-120			

Lab Batch #: 872545

Sample: 429246-004 / SMP

Batch:

Matrix: Ground Water

Units: mg/L Date Analyzed: 10/18/11 03:29	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	•		[D]					
1,4-Difluorobenzene	0.0271	0.0300	90	80-120				
4-Bromofluorobenzene	0.0292	0.0300	· 97 ·	80-120				

Lab Batch #: 872545

Sample: 429246-005 / SMP

Batch:

Matrix: Ground Water

Units: mg/L Date Analyzed: 10/18/11 08:39 SURROGATE RECOVERY STUDY								
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount - [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			{D}	,			
1,4-Difluorobenzene		0.0260	0.0300	87	80-120			
4-Bromofluorobenzene		0.0266	0.0300	89	80-120			

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 429246,

**Project ID: 2006-142** 

Lab Batch #: 872545

Sample: 612816-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/17/11 20:17	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120				
4-Bromofluorobenzene	0.0281	0.0300	94	80-120				

Lab Batch #: 872545

**Sample:** 612816-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/17/11 18:45	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]		_			
1,4-Difluorobenzene	0.0284	0.0300	95	80-120				
4-Bromofluorobenzene	0.0305	0.0300	102	80-120				

Lab Batch #: 872545

Sample: 612816-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 10/17/11 19:08	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
	Analytes			[2]		,			
1,4-Difluorobenzene		0.0267	0.0300	89	80-120				
4-Bromofluorobenzene		0.0299	0.0300	100	80-120				

Lab Batch #: 872545

Sample: 429338-009 S / MS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 10/18/11 00:27	SURROGATE RECOVERY STUDY							
втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			[D]					
1,4-Difluorobenzene		0.0293	0.0300	98	80-120				
4-Bromofluorobenzene		0.0313	0.0300	104	80-120				

Lab Batch #: 872545

Sample: 429338-009 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 10/18/11 00:50	SURROGATE RECOVERY STUDY							
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			[D]					
1,4-Difluorobenzene		0.0285	0.0300	95	80-120				
4-Bromofluorobenzene		0.0310	0.0300	103	80-120				

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 429246

Analyst: ASA

Date Prepared: 10/15/2011

**Project ID: 2006-142** Date Analyzed: 10/17/2011

Lab Batch ID: 872545

Sample: 612816-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.0890	89	0.100	0.0978	98	9	70-125	25	
Toluene	<0.00200	0.100	0.0909	91	0.100	0.0984	98	8	70-125	.25	
Ethylbenzene	<0.00100	0.100	0.0941	94	0.100	0.102	102	8	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.187	94	0.200	0.205	103-	9	70-131	25	
o-Xylene	<0.00100	0.100	0.0958	96	0.100	0.104	104	8	71-133	25	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B] Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 429246

Project ID: 2006-142

Lab Batch ID: 872545

o-Xylene

**QC-Sample ID:** 429338-009 S

0.106

Matrix: Water

106

71-133

25

Date Analyzed: 10/18/2011

**Date Prepared:** 10/15/2011

< 0.00100

0.100

0.100

Batch #:

Analyst: ASA

Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	-	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	714444	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	0.00159	0.100	0.113	111	0.100	0.102	100	10	70-125	25	
Toluene	<0.00200	0.100	0.110	110	0.100	0.102	102	8	70-125	25	
Ethylbenzene	<0,00100	0.100	0.114	114	0.100	0.104	104	9	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.223	112	0.200	0.204	102	9	70-131	25	

0.115

115

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

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Argui	ijo					_										Proje	ct N	ame:	Lo	ving	ton	Gat	ther	ing	WTI				—
	Company Name	Basin Enviro	onmental Se	rvice T	echno	logies, LLC	·										_	ı	Proje	ect#	200	06-1	42_								
•	Company Address:	P. O. Box 30	)1				*		-	_					_		•	Pro	ject	Loc	Lea	Cou	nty,	NM							
	City/State/Zip:	Lovington, N	M 88260	· ·															1	°O#:	PA/	۱ <u>. ၂.</u>	Hen	<u>ry</u>							
	Telephone No:	(575)396-237	78				Fax No:		(57	5) 3	96-14	29					Rep	ort F	orm	at:	X	Stan	dard	l	Г	] TR	RP	ſ	] NF	PDES	,
	Sampler Signature:	Dakato	14 W91	d			e-mail:		bja	rgui	jo@t	asin	env.	com	<u> </u>			_	سبيي										<u> </u>		
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LAB # (lab use only)	FIEL	.D CODE		Beginning Depth	Ending Depth	COpate Sampled	Time Sampled	Field Filtered	Total #. of Containers	lce	HNO3	HCI HSO.	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other ( Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S≈Soil/Solid	NP=Non-Potable Specify Other	TX 1005 TX 10	s (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb H	Volatiles Semivolatiles	BTEX 80218/5030 og BTEX 8260		N.O.R.M.			1~1	Standard TAT 4 DAY
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03	Goff Dairy -	Ctr. Pivot E	Beg.	<u> </u>		10///2011	0900		3	X	$\Box$	×[	$\perp$		_	Ц	GW	4	$\perp$	$oldsymbol{oldsymbol{igl}}$	Ц	_	$\downarrow$	4	↓×	╄	Щ	4	$\bot$	$\downarrow \downarrow$	X,
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#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

#### Prelogin / Nonconformance Report - Sample Log-In

Client Plains		•			•		
Date/Time: 10/10/11 14 4	0		•				
Lab 10#: 479746				1			
Initials:							
	s	ample Receipt	Check	list		.•	
1. Samples on ice?				Blue	Water	No	
2. Shipping container in good condition	?			Yes	No	None	
3. Custody seals intact on shipping con	tainer (c	poler) and bottles?		Yes	No	N/A	
4. Chain of Custody present?			•	Yes	No		
5. Sample instructions complete on cha	in of cus	tody?		Yes	No		
6. Any missing / extra samples?				Yes	No		
7. Chain of custody signed when relinq	uished / ı	received?		Yes	No		
8. Chain of custody agrees with sample	label(s)?	<u> </u>		Yes	No		•
9. Container labels legible and intact?				Yes	No		
10. Sample matrix / properties agree with	th chain d	of custody?		Yes	No -		
11. Samples in proper container / bottle	?			Yes	No ·		
12. Samples property preserved?				Yes	No	N/A	,
13. Sample container intact?				Yes	No		
14. Sufficient sample amount for indica	ted test(s	;)?		Yes	No		
15. All samples received within sufficie	nt hold ti	me?	-	Yes	No		
16. Subcontract of sample(s)?				Yes	No	NÃ	
17. VOC sample have zero head space?	·			Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No.		Cooler 3 No.		Cooler 4 N	0	Cooler 5 No.	
ibs 30 °c ibs	°C	lbs	್ಲಿ	lbs	°C	lbs	°c
	None	conformance D	ocume	ntation			
Contact: Cor	ntacted b		0040	aa.	Deta/Times		
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Check all that apply: ☐ Cooling proce	ess has b	egun shortly after able by NELAC 5.5	sampling	event and	out of temper	rature	•

- □ Initial and Backup Temperature confirm out of temperature conditions
- □ Client understands and would like to proceed with analysis

## **Analytical Report 429406**

## for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry
Lovington Gathering WTI
2006-142
19-OCT-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

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





19-OCT-11

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

Reference: XENCO Report No: 429406

Lovington Gathering WTI
Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 429406. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 429406 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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## **Sample Cross Reference 429406**



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Goff Dairy - Ctr. Pivot End	W	10-10-11 16:00	•	429406-001



#### CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 429406

Report Date: 19-OCT-11

Date Received: 10/12/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-872647 BTEX by EPA 8021

SW8021BM

Batch 872647, Ethylbenzene, Toluene, m\_p-Xylenes, o-Xylene recovered above QC limits in the laboratory control sample. This is most likely due to analyst error. Samples affected are: 429406-001. The Laboratory Control Sample Duplicate were within QC

limits.



## Certificate of Analys. Summary 429406 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Oct-12-11 03:10 pm

Report Date: 19-OCT-11
Project Manager: Brent Barron II

Lab Id: 429406-001		
Analysis Requested Field Id: Goff Dairy - Ctr. Pivot End	· ·	
Pepth:		, ,
Matrix: GROUND WATER		
Sampled: Oct-10-11 16:00		
BTEX by EPA 8021		
Analyzed: Oct-18-11 16:30		
Units/RL: mg/L RL		
Benzene ND 0.00100	Ţ,	_
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.

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

Job R

Brent Barron II Odessa Laboratory Manager



#### **Flagging Criteria**

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

**PQL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave. Phoenix, AZ 85040	(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 429406,

**Project ID: 2006-142** 

Lab Batch #: 872647

Sample: 429406-001 / SMP

Batch:

Matrix: Ground Water

Units: mg/L	<b>Date Analyzed:</b> 10/18/11 16:30	SU	RROGATE R	ECOVERY	STUDY	*
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]	•	
1,4-Difluorobenzene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0278	0.0300	93	· 80-120	

Lab Batch #: 872647

Sample: 612871-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 10/18/11 13:43	l st	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True . Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		''	[D]		·
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 872647

Sample: 612871-1-BKS / BKS

Batch:

Matrix: Water

<b>Units:</b> mg/L <b>Date Analyzed:</b> 10/18/11 12:13	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			ן ישן		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 872647

Sample: 612871-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/18/11 12:35	SU	RROGATE <sub>,</sub> RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			{D}		
1,4-Difluorobenzene	0.0252	0.0300	. 84	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

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

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 429406

Analyst: ASA

Date Prepared: 10/18/2011

**Project ID: 2006-142** 

Date Analyzed: 10/18/2011

Lab Batch ID: 872647

Sample: 612871-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	K/BLANK	SPIKE / E	BLANK S	PIKE DUPI	LICATE 1	RECOVI	ERY STUD	Y	
BTEX by EPA 8021	Blank . Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]			· ·	
Benzene	<0.00100	0.100	0.123	123	0.100	0.0958	96	25	70-125	25	
Toluene	<0.00200	0.100	0.127	. 127	0.100	0.0995	100	24	70-125	25	Н
Ethylbenzene	<0.00100	0.100	0.136	136	0.100	0.107	107	24	71-129	25	Н
m_p-Xylenes	<0.00200	0.200	0.275	138	0.200	0.218	109	23	70-131	25	Н
o-Xylene	<0.00100	0.100	0.134	134	0.100	0.108	108	21	71-133	25	Н

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

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

	Project Manager:	Ben J. Argu	ijo														_	P	rojec	t Na	me:	Lov	/ing	ton	Gat	her	ing	<u>wr</u>	<u> </u>			
	Company Name	Basin Envir	onmental Se	rvice T	echnol	ogles, LLC						_					_		P	rojed	:t #:	200	6-14	42						·		
	Company Address:	P. O. Box 30	01											,			_		Proj	ect L	.oc:	Lea	Cou	nty,	NM		<u>.                                    </u>					
	City/State/Zip:	Lovington, I	NM 88260									_					-			P	<b>) #</b> :	PA/	<u>۱- J.</u>	Hen	ry							
	Telephone No:	(575)396-23	78				Fax No:		<u>(57</u>	'5 <u>)</u> 3	96-1	429					· F	₹еро	rt Fo	rmat	ı: l	X ,	Stan	dard		Г	] TR	.RP		□ N	IPDE	S
	Sampler Signature:		15				e-mail:		bja	rgui	jo@	basi	inen	v.con	n																	_
lab use o	only)		_																$\vdash$			TC		Ana	lyze	For:	<del>_</del>	1		_	₌ ا	
ORDER	#: 42940	olo				₹,					Prese	rvatio	on & #	of Ca	ntaine	rs	М	atrix	-	_		TOT	-		-	X	-	1			48, 72 hrs	
LAB # (lab use only)		D CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	lce		HCI		NaOH Na.S.O.		(Specify)	tter SL=Sludge	GW = Groundwater S=Soil/Soild NP=Non-Potatha Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl., SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles Semivolatiles	BTEX 80216/5030 on BTEX 8260	RCI	N.O.R.M.			RUSH TAT (Pre-Schedule) 24, 48,	Standard TAT 4 DAY
	Goff Dairy -	Ctr. Pivot	End			10/10/11	1600		3	х		x					_	3W	Ť	Ì	Ŭ	Ì			T.	Х	_					х
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Relinquish	3/29		Date 19/0/11	7 ir	6	Received by:	unon	<u> </u>	w	~					10	1-12			Tim:	5	Cus Cus	tody tody	seal seal	s on s on	ner(s) cont cool	laine ler(s	er(s) ) .		· {	14500	Z Z	ا د:
Relinquish	ed par		Date	3:/	ne O	Received by:									.	Da	ite		Tim	e	Sam	ple by 8	Hand	De er/C	livere ient F UF	ed Rep.	?	,	(	Ex L	N N	Star
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#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of

#### Prelogin / Nonconformance Report - Sample Log-In

		•		
lient: Plaus	•			
hate/Time: 10/12/11 B 10			•	•
ab ID#: 429406			•	
nitials:				
Sample Receipt Che	ecklist			
. Samples on ice?	Blue	Water	No	
L Shipping container in good condition?	Yes	No	None	
. Custody seals intact on shipping container (cooler) and bottles?)	Yes	No_	NA	
. Chain of Custody present?	Yes	No		
. Sample Instructions complete on chain of custody?	Yes	No		
. Any missing / extra samples?	Yes	(No		
'. Chain of custody signed when relinquished / received?	Yes	No		
Chain of custody agrees with sample label(s)?	Yes	No		
). Container labels legible and intact?	Yes	No		
0. Sample matrix / properties agree with chain of custody?	Yes	No ·		
1. Samples in proper container / bottle?	Yes	No		
2. Samples properly preserved?	Yes	No	N/A	
3. Sample container intact?	Yes	No		
4. Sufficient sample amount for indicated test(s)?	Yes	No		
5. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	NUA	
17. VOC sample have zero head space?	Yes	No	N/A	
8. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	)	Cooler 5 No.	
ibs (, b) °C ibs °C ibs	°C lbs	°c	lbs	
Nonconformance Docu	mentation	, ,		
Contact: Contacted by:	<del></del>	Date/Time:_		·
Regarding:		· · · · · · · · · · · · · · · · · · ·		
<del></del>				
Corrective Action Taken:				
· · · · · · · · · · · · · · · · · · ·			<del> </del>	3, 4,

Check all that apply:

☐Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

☐Client understands and would like to proceed with analysis

## **Analytical Report 430928**

## for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry
Lovington Gathering WTI
2006-142
11-NOV-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

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





11-NOV-11

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

Reference: XENCO Report No: 430928

**Lovington Gathering WTI** 

Project Address: Lea County,NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 430928. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 430928 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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## **Sample Cross Reference 430928**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Goff Dairy - Ctr. Pivot Well	W	10-31-11 09:00	•	430928-001
Goff Dairy - Ctr. Pivot Beg.	W	10-31-11 09:05		430928-002
Goff Dairy - Ctr. Pivot End	W	10-31-11 09:10		430928-003
MW-10	W	10-31-11 11:00		430928-004
Goff Diary Well	<b>W</b> .	10-31-11.11:05		430928-005
JW Well	W	10-31-11 11:10		430928-006



#### CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 430928

Report Date: 11-NOV-11

Date Received: 11/04/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



# Certificate of Analy Summary 430928 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

**Project Name: Lovington Gathering WTI** 

Date Received in Lab: Fri Nov-04-11 08:40 am

Report Date: 11-NOV-11
Project Manager: Brent Barron II

								Project Ma	anager:	Brent Barron	11		
·	Lab Id:	430928-	001	430928-	002	430928-003		430928-	004	430928-0	005	430928-	-006
Analysis Degreeted	Field Id:	Goff Dairy - Ctr	. Pivot Wel	Goff Dairy - Ctr	. Pivot Beg.	. Goff Dairy - Ctr. Pivot End		MW-10		Goff Diary Well		JW W	eli
Analysis Requested	Depth:												
	Matrix:	WATI	ER.	WATE	ER	WATE	R ·	WATE	ER .	WATE	R	WATE	ER
:	Sampled:	Oct-31-11	09:00	Oct-31-11	09:05	Oct-31-11	09:10	Oct-31-11	11:00	Oct-31-11	11:05	Oct-31-11	11:10
BTEX by EPA 8021	Extracted:	Nov-10-11	12:55	Nov-10-11	12:55	Nov-10-11	12:55	Nov-10-11	12:55	Nov-10-11	12:55	Nov-10-11	1 12:55
•	Analyzed:	Nov-10-11	15:53	Nov-10-11	16:16	Nov-10-11	16:39	. Nov-10-11	17:02	Nov-10-11	17:25	Nov-10-11	17:48
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RĻ	mg/L	RL
Benzene		ND	0.00100	ND	0.00100	ND	0.00100	0.0530	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	0.00140	0.00100	ND	0.00100	· ND	0.00100
m_p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	0.0944	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	0.00222	0.00100	ND	0.00100	ND	0.00100
Xylenes, Total	:	. ND	0.00100	ND	0.00100	ND	0.00100	0.0966	0.00100	ND	0.00100	ND	0.00100
Total BTEX		ND	0.00100	ND	0.00100	ND	0.00100	0.151	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 Laboratorics. XENCO Laboratorics assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Brent Barron II Odessa Laboratory Manager



#### Flagging Criteria

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

BRL Below Reporting Limit.

**RL** Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

**POL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

^ NELAC or State program does not offer Accreditation at this time.

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Phone (281) 240-4280 4143 Greenbriar Dr. Stafford, TX 77477 (281) 240-4200 9701 Harry Hines Blvd, Dallas, TX 75220 (214) 902 0300 (214) 351-9139 5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335 2505 North Falkenburg Rd, Tampa, FL 33619 (813) 620-2000 (813) 620-2033 5757 NW 158th St, Miami Lakes, FL 33014 (305) 823-8500 (305) 823-8555 12600 West I-20 East, Odessa, TX 79765 (432) 563-1800 (432) 563-1713 6017 Financial Drive, Norcross, GA 30071 (770) 449-8800 (770) 449-5477 3725 E. Atlanta Ave, Phoenix, AZ 85040 (602) 437-0330



Project Name: Lovington Gathering WTI

Work Orders: 430928,

**Project ID: 2006-142** 

Lab Batch #: 874502

Sample: 430928-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 15:53	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0275	. 0.0300	92	80-120				
4-Bromofluorobenzene	0.0299	0.0300	100	80-120				

Lab Batch #: 874502

Sample: 430928-002 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 16:16	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		· .	[D]		
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 874502

Sample: 430928-003 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 16:39	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0266	0.0300	89	80-120				
4-Bromofluorobenzene	0.0262	0.0300	87	80-120				

Lab Batch #: 874502

Sample: 430928-004 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 17:02	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1,4-Difluorobenzene	0.0246	0.0300	82	80-120					
4-Bromofluorobenzene	0.0276	. 0.0300	92	80-120	,				

Lab Batch #: 874502

Sample: 430928-005 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 17:25	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes		•	[D]	1				
1,4-Difluorobenzene	0.0256	0.0300	85	80-120				
4-Bromofluorobenzene	0.0277	0.0300	92	80-120				

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits, data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 430928,

Project ID: 2006-142

Lab Batch #: 874502

Sample: 430928-006 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/10/11 17:48	21 Amount True Control		•		
ВТЕ	CX by EPA 8021	Found	Amount		Limits	Flags
	Analytes	, ,	'.'	[D]		
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	•	0.0279	0.0300	93	80-120	,

Lab Batch #: 874502

Sample: 613959-1-BLK / BLK'

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/10/11 15:08	SU	IRROGATE R	ECOVERY	Control Limits Flag			
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Limits	Flags		
	Analytes			[D]				
1,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0276	0.0300	92	80-120			
4-Bromofluorobenzene		0.0283	0.0300	94	80-120			

Lab Batch #: 874502

Sample: 613959-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 13:36	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		•	[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 874502

Sample: 613959-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 13:59	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Analytes			101					
1,4-Difluorobenzene	0.0286	0.0300	95	80-120				
4-Bromofluorobenzene	0.0300	0.0300	100	80-120				

Lab Batch #: 874502

**Sample:** 430734-001 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/10/11 19:18	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene .	0.0313	0.0300	104	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits, data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 430928,

Sample: 430734-001 SD / MSD

**Project ID: 2006-142** 

Batch: l Matrix: Water

Lab Batch #: 874502

SURROGATE RECOVERY STUDY Units: mg/L Date Analyzed: 11/10/11 19:42 True Control Amount BTEX by EPA 8021 Found Amount Recovery Limits Flags [B] %R %R [A] [D]**Analytes** 1,4-Difluorobenzene 0.0288 0.0300 80-120 96 4-Bromofluorobenzene 0.0316 0.0300 105 80-120

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 430928

Analyst: ASA

**Date Prepared:** 11/10/2011

**Project ID: 2006-142** 

**Date Analyzed:** 11/10/2011

Lab Batch ID: 874502

Sample: 613959-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021	Biank Sample Result [A]	Spike Added	Biank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	{E}	Result [F]	[G]				
Benzene	<0.00100	0.100	0.0945	95	0.100	0.0962	96	2	70-125	25	
Toluene	<0.00200	0.100	0.0993	99	0.100	0.101	101	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.107	107	0.100	0.110	110	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.218	109	0.200	0.223	112	2	70-131	25	
o-Xylene	<0.00100	0.100	0.107	107	0.100	0.110	110	3	71-133	25	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



## Form 3 - 1

## / MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 430928

**Project ID: 2006-142** 

Lab Batch ID: 874502

**QC- Sample ID:** 430734-001 S

Batch #:

Matrix: Water

Date Analyzed: 11/10/2011

**Date Prepared:** 11/10/2011

Analyst: ASA

Reporting Units: mg/L

Reporting Units: mg/L		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Analytes	[A]	[B]	[6]	[D]	[E]	Result [1]	[G]	"	7010	/ord D				
Benzene .	0.0662	0.100	0.146	80	0.100	0.153	87	. 5	70-125	25				
Toluene	0.0690	0.100	0.152	83	0.100	0.159	90	5	70-125	25				
Ethylbenzene	0.00873	0.100	0.101	92	0.100	0.106	97	5	71-129	25				
m_p-Xylenes	0.0105	0.200	0.196	93	0.200	0.205	97	4	70-131	25				
o-Xylene	0.00503	0.100	0.0982	93	0.100	0.102	97	4	71-133	25				

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*(C-F)/(C+F) Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

•	Project Manager:	Ben J. Arguijo			<del></del>												_	Pro	ect f	iame	: <u>Lo</u>	vin	gtor	n Ga	athe	ing	WT	<u> </u>			
	Company Name	Basin Environ	mental Ser	vice T	echnol	ogies, LLC											_		Proj	ect #	: <u>20</u>	06-	142								
	Company Address:	P. O. Box 301	. <u>.</u>														•••	Pr	ojec	t Loc	: <u>Le</u>	a Co	unty	, NN	1						
	City/State/Zip:	Lovington, NM	88260		-												_			PO#	: <u>PA</u>	<u> </u>	. Hei	nry							
	Telephone No:	(575)396-2378					Fax No:		(57	5) 39	96-14	129					Re	port	Form	nat:	X	Sta	ndar	d d		TR	≀RP		□ N	PDES	
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	Sampler Signature:	VYICUTO	<u> </u>			<del></del>	e-mail.		bjai	guij	own	asır	teriv	7.001				. [					An	alyz	e For:					1	
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LAB # (lab use only)	FIE	LD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	fotal #. of Containers	loe	HNO <sub>3</sub>	HCI	H <sub>2</sub> SO <sub>4</sub>	NaOH	None	Other (Specify)	DW=Drinking Water SL=Sludge GW ≈ Groundwater S=Soil/Solid	on-Potable	418.1 8015M	Cations (Ca, Mg, Na, K)	Anions (CI, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	RCI	N.O.R.M.			RUSH TAT (Pre-Schedule) 2	Standard TAT 4 DAY
<u> </u>		- Ctr. Pivot We	eli			10/31/2011	0900	Щ.	3	x		x		十		T	GV		1	+	Ť	Ü			,	_		П	$\top$		Х
02		- Ctr. Pivot Be				10/31/2011	0905		3	x		x	T	1		Τ	GV	v							7				$oxed{\mathbb{I}}$		х
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00	J\	W Well				10/31/2011	1110		3	Х		x					G۷	v		$\perp$					)	上		Ц	$\perp$		х
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Page 12 of 13

Final 1.000



#### XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

Page 1 of 1

#### Prelogin / Nonconformance Report - Sample Log-In

Dlaire		•		
Client: F (ALA) S	<del></del>			
Date/Time: ////// 5 90				
Lab ID#: 4507385	<del></del>			
Initials:				
Sample Re	ceipt Checklist	_		
1. Samples on ice?	Blu	e Water	No	
2. Shipping container in good condition?	Yes		None	
3. Custody seals intact on shipping container (cooler) and be	ottles? Yes	) No	N/A	
4. Chain of Custody present?	Ye	No		
5. Sample instructions complete on chain of custody?	( Ye	Na		
6. Any missing / extra samples?	Ye	No )		
7. Chain of custody signed when relinquished / received?	Ye	No No		
8. Chain of custody agrees with sample label(s)?	Ye	No No		
9. Container labels legible and intact?	Ye	No		····
10. Sample matrix / properties agree with chain of custody?	Ye	No No		
11. Samples in proper container / bottle?	Ye	No No		
12. Samples properly preserved?	Ye	s No	N/A	
13. Sample container intact?	Ye	s) No		
14. Sufficient sample amount for indicated test(s)?	Ye	No		
15. All samples received within sufficient hold time?	Ye	No		
16. Subcontract of sample(s)?	Ye	s No	(N/A)	
17. VOC sample have zero head space?	(Ye	s No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	. Coole	4 No.	Cooler 5 No.	
lbs 0.5 °C lbs °C	lbs °C	ibs °C	lbs	°(
Nonconforma	nce Documentatio	n ·		
Contact:Contacted by:		Date/Time:	•	
oonacted by.		Dater i line	<del></del> -	
Regarding:	<u>.</u>			
Corrective Action Taken:				
Control of Taken.		······································		<del></del>
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Check all that apply: 

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

- □ Initial and Backup Temperature confirm out of temperature conditions
- □Client understands and would like to proceed with analysis

# **Analytical Report 431401**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry
Lovington Gathering WTI
2006-142
23-NOV-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALII), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

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





23-NOV-11

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

Reference: XENCO Report No: 431401

Lovington Gathering WTI
Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 431401. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 431401 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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



# **Sample Cross Reference 431401**



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	11-09-11 11:45		431401-001
MW-3	W	11-09-11 12:50		431401-002
MW-4	$\mathbf{W}_{\cdot}$	11-09-11 11:25		431401-003
MW-5	W	11-09-11 12:35		431401-004
MW-6	W	11-09-11 12:55	•	431401-005
MW-7	. W	11-09-11 15:05		431401-006
MW-8	W	11-09-11 13:20		431401-007
MW-9	W	11-09-11 16:25		431401-008
MW-10	W	11-09-11 13:35		431401-009
Goff Dairy-Ctr. Pivot Well	W	11-09-11 14:00		431401-010
Goff Dairy-Ctr. Pivot Beg.	. W	11-09-11 14:20		431401-011
Goff Dairy-Ctr. Pivot End	W	11-09-11 14:40		431401-012
Goff Dairy Well	W	11-09-11 13:45		431401-013
JW Well	W	11-09-11 13:50		431401-014

#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 431401

Report Date: 23-NOV-11

Date Received: 11/11/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875271 BTEX by EPA 8021

SW8021BM

Batch 875271, Benzene recovered above QC limits in the Matrix Spike and Matrix Spike

Samples affected are: 431401-011, -012, -013, -007, -010, -014, -001, -002, -003, -004, -008, -

009.

The Laboratory Control Sample for Benzene is within laboratory Control Limits



# Certificate of Analy. Summary 431401 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Nov-11-11 01:15 pm

Report Date: 23-NOV-11

Project Manager: Brent Barron II

							I I Ujett Miz	mager.	DICIN DALIUN	11		
. Lab Id:	431401-	001	431401-	002	431401-0	003	431401-	004	431401-	005	431401-	006
Field Id:	. MW-	1	MW-	3	MW-4	4	MW-	5 .	· MW-	5	MW-	7
Depth:						·			•			
Matrix:	WATE	R	WATE	R	WATE	R	WATE	ER.	WATE	R	WATE	ER
Sampled:	Nov-09-11	11:45	Nov-09-11	12:50	Nov-09-11	11:25	Nov-09-11	12:35	Nov-09-11	12:55	Nov-09-11	15:05
Extracted:	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00	Nov-22-11	11:00	Nov-22-11	11:00
Analyzed:	Nov-20-11	23:52	Nov-21-11	00:15	Nov-21-11	00:38	Nov-21-11	01:01	Nov-22-11	14:22	Nov-22-11	14:45
Units/RL:	mg/L	RL	mg/L	RL	mg/L.	RL	mg/L	RL	mg/L	RL	mg/L	RL
	ND	0.00100	0.00211	0.00100	ND	0.00100	ND	0.00100	0.00356	0.00100	ND	0.00100
	ND	0:00200	, ND	0.00200	ND	0.00200	ND	0.00200	. ND	0.00200	ND	0.00200
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00200	0.00231	0.00200	ND	0.00200	ND	0.00200	0.0388	0.00200	ND	0.00200
	ND	0.00100	0.00114	0.00100	ND	0.00100	ND	0.00100	ND.	0.00100	ND	0.00100
	· ND	0.00100	0.00345	0.00100	· ND	0.00100	ND	0.00100	0.0388	0.00100	ND	0.00100
-	ND	0.00100	0.00556	0.00100	ND	0.00100	ND	0.00100	0.0424	0.00100	. ND	. 0.00100
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	Field Id: MW- Depth: Matrix: WATE Sampled: Nov-09-11 Extracted: Nov-18-11 Analyzed: Nov-20-11 Units/RL: mg/L ND ND ND ND ND ND	Field Id:   MW-1	Field Id:   MW-1   MW-    Depth:   WATER   WATER   WATER     Sampled:   Nov-09-11 11:45   Nov-09-11     Extracted:   Nov-18-11 15:00   Nov-18-11     Analyzed:   Nov-20-11 23:52   Nov-21-11     Units/RL:   mg/L   RL   mg/L     ND	Field Id:	Field Id:   MW-1   MW-3   MW-6	Field Id:         MW-1         MW-3         MW-4           Depth:         Matrix:         WATER         WATER         WATER           Sampled:         Nov-09-11 11:45         Nov-09-11 12:50         Nov-09-11 11:25           Extracted:         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00           Analyzed:         Nov-20-11 23:52         Nov-21-11 00:15         Nov-21-11 00:38         Mov-21-11 00:38           Units/RL:         mg/L         RL         mg/L         RL         mg/L         RL           ND         0.00100         0.00211         0.00100         ND         0.00100           ND         0.00200         ND         0.00200         ND         0.00200           ND         0.00200         0.00231         0.00200         ND         0.00200           ND         0.00100         0.00114         0.00100         ND         0.00100           ND         0.00100         0.00345         0.00100         ND         0.00100	Lab Id:	Lab Id:	Lab Id:         431401-001         431401-002         431401-003         431401-004         431401-003         MW-5         MW-6           Depth:         Matrix:         WATER         WATER <th< td=""><td>  Lab Id:</td><td>  Lab Id:   431401-001</td></th<>	Lab Id:	Lab Id:   431401-001

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

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

Ja or



#### Certificate of Analysis Summary 431401 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2006-142

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Nov-11-11 01:15 pm

Report Date: 23-NOV-11

Project Manager: Brent Barron II

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Lab Id:	431401-	007	431401-	800	431401-0	009	431401-	010	431401-	011	431401-	012
Field Id:	MW-8	3	MW-	9	MW-1	0	Goff Dairy-Ctr.	Pivot Well	Goff Dairy-Ctr.	Pivot Beg.	Goff Dairy-Ctr.	Pivot End
Depth:												
Matrix:	WATE	R	WATE	R	WATE	R .	WATE	R	WATE	R	WATE	ER
Sampled:	Nov-09-11	13:20	Nov-09-11	16:25	Nov-09-11	13:35	Nov-09-11	14:00	Nov-09-11	14:20	Nov-09-11	14:40
Extracted:	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00	Nov-18-11	15:00
Analyzed:	Nov-21-11	03:40	Nov-21-11	04:03	Nov-21-11	04:26	Nov-21-11	04:49	Nov-21-11	05:11	Nov-21-11	05:34
Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	ŖL	mg/L	RL	mg/L	RL
	ND	0.00100	0.00179	0.00100	ND	0:00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00200	0.00349	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00100	0.00349	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	ND	0.00100	0.00528	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed:	### Field Id: MW-8 ### Depth:    Matrix: WATE   Sampled: Nov-09-11   Extracted: Nov-18-11   Analyzed: Nov-21-11   Units/RL: mg/L   ND   ND   ND   ND   ND   ND   ND	MW-8   MW-8   MW-8   Matrix:   WATER   Nov-09-11 13:20	Field Id:         MW-8         MW-8           Depth:         WATER         WATER           Sampled:         Nov-09-11 13:20         Nov-09-11           Extracted:         Nov-18-11 15:00         Nov-18-11           Analyzed:         Nov-21-11 03:40         Nov-21-11           Units/RL:         mg/L         RL         mg/L           ND         0.00100         0.00179           ND         0.00200         ND           ND         0.00200         ND           ND         0.00200         0.00349           ND         0.00100         0.00349           ND         0.00100         0.00349	Field Id:         MW-8         MW-9           Depth:         WATER         WATER           Matrix:         WATER         WATER           Sampled:         Nov-09-11 13:20         Nov-09-11 16:25           Extracted:         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-21-11 04:03           Units/RL:         mg/L         RL         mg/L         RL           ND 0.00100         ND 0.00100         ND 0.00100         ND 0.00100           ND 0.00100         ND 0.00100         ND 0.00100           ND 0.00100         ND 0.00100         ND 0.00100           ND 0.00100         ND 0.00100         ND 0.00100           ND 0.00100         ND 0.00100         ND 0.00100	Field Id:         MW-8         MW-9         MW-1           Depth:         WATER         WATER         WATER         WATER           Sampled:         Nov-09-11 13:20         Nov-09-11 16:25         Nov-09-11           Extracted:         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-21-11 04:03         Nov-21-11 04:03	Field Id:         MW-8         MW-9         MW-10           Depth:         Watrix:         WATER         WATER         WATER         WATER           Sampled:         Nov-09-11 13:20         Nov-09-11 16:25         Nov-09-11 13:35         Nov-09-11 13:35           Extracted:         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00         Nov-18-11 15:00           Analyzed:         Nov-21-11 03:40         Nov-21-11 04:03         Nov-21-11 04:26           Units/RL:         mg/L         RL         mg/L         RL           ND         0.00100         0.00179         0.00100         ND         0.00100           ND         0.00200         ND         0.00200         ND         0.00200           ND         0.00100         ND         0.00100         ND         0.00200           ND         0.00100         ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100         ND         0.00100           ND         0.00100         ND         0.00100         ND         0.00100	Lab Id:         431401-007         431401-008         431401-009         431401-01           Field Id:         MW-8         MW-9         MW-10         Goff Dairy-Ctr.           Depth:         WATER         WATER	Lab Id:         431401-007         431401-008         431401-009         431401-010           Field Id:         MW-8         MW-9         MW-10         Goff Dairy-Ctr. Pivot Well           Depth:         WATER:         WATER         WATER	Lab Id:         431401-007         431401-008         431401-009         431401-010         60ff Dairy-Ctr.         Ctr.         Coff Dairy-Ctr.         Ctr.         Ctr.         Coff Dairy-Ctr.         Ctr.         Ctr.	Field Id:         MW-8         MW-9         MW-10         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Beg.           Depth:         Matrix:         WATER         W	Lab Id:         431401-007         431401-008         431401-009         431401-010         431401-011         60ff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Goff Dairy-Ctr. Pivot Well         Analyse         Mare         WATER         WATER

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

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

Brent Barron II Odessa Laboratory Manager



# Certificate of Analy. Summary 431401 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Nov-11-11 01:15 pm

Report Date: 23-NOV-11

				Project Manager: Brent Barron II	
	Lab Id:	431401-013	431401-014		
Analysis Requested	Field Id:	Goff Dairy Well	JW Well		
Anaiysis Kequesieu	Depth:				
•	Matrix:	WATER	WATER		
·	Sampled:	Nov-09-11 13:45	Nov-09-11 13:50		
BTEX by EPA 8021	Extracted:	Nov-18-11 15:00	Nov-18-11 15:00		
	Analyzed:	Nov-21-11 05:56	Nov-21-11 06:19		
•	Units/RL:	mg/L RL	mg/L RL		
Benzene		ND 0.00100	ND 0.00100		
Toluene		ND 0.00200	ND 0.00200		
Ethylbenzene		ND 0.00100	ND 0.00100	, and the second	-
m_p-Xylenes		ND 0.00200	ND 0.00200		
o-Xylene		ND 0.00100	ND 0.00100		
Xylenes, Total		ND 0.00100	ND 0.00100		٠,
Total BTEX		ND 0.00100	ND 0.00100		

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

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The OR



#### Flagging Criteria

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

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

**PQL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

^ NELAC or State program does not offer Accreditation at this time.

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Project Name: Lovington Gathering WTI

Work Orders: 431401,

Project ID: 2006-142.

Lab Batch #: 875271

Sample: 431401-001 / SMP

Matrix: Water Batch:

Units: mg/L Date Analyzed: 11	1/20/11 23:52 S	URROGATE R	ECOVERY	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	0.0263	0.0300	88	80-120	

Lab Batch #: 875271

Sample: 431401-002 / SMP

Batch: Matrix: Water

Units: mg/L Da	te Analyzed: 11/21/11 00:15	SU	RROGATE R	ECOVERY	STUDY	•
BTEX by	EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Anal	ytes			[D]		
1,4-Difluorobenzene		0.0269	. 0.0300	. 90	80-120	
4-Bromofluorobenzene	·	0.0264	0.0300	88	80-120	

Lab Batch #: 875271

Sample: 431401-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 11/21/11 00:38	SU	RROGATE RI	ECOVERY :	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
:	Analytes			[D]		
1,4-Difluorobenzene		0.0264	0.0300	88	80-120	
4-Bromofluorobenzene		0.0250	0.0300	83	80-120	

Lab Batch #: 875271

Sample: 431401-004 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/21/11 01:0	1 St	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		·
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	•
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 875271

Sample: 431401-007 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/21/11 03:40	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		1	[D]		
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	<u> </u>
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 431401,

**Project ID: 2006-142** 

Lab Batch #: 875271

Sample: 431401-008 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 11/21/11 04:03	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0265	. 0.0300	88	80-120		
4-Bromofluorobenzene	0.0268	0.0300	89	80-120		

Lab Batch #: 875271

Sample: 431401-009 / SMP

Batch:

Matrix: Water

Flags

80-120

80-120

Units: m	ıg/L	Date Analyzed: 11/21/11 04:26	SU	RROGATE RI	COVERY	STUDY	
	BTEX	by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	ı
	A	Analytes			[D]		

1,4-Difluorobenzene
4-Bromofluorobenzene

Lab Batch #: 875271

Sample: 431401-010 / SMP

Batch:

Matrix: Water

89

0.0300

0.0300

Units: mg/L Date Ar	alyzed: 11/21/11 04:49	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes				[D]			
l,4-Difluorobenzene		0.0276	0.0300	92	80-120	· · · · · · · · · · · · · · · · · · ·	
4-Bromofluorobenzene	,	0.0253	0.0300	84	80-120		

0.0276

0.0267

Lab Batch #: 875271

Sample: 431401-011 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/21/11 05:11	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0280	0.0300	93 ·	80-120		
4-Bromofluorobenzene	0.0260	0.0300	87	80-120		

Lab Batch #: 875271

Sample: 431401-012 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/21/11 05:34	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0282	0.0300	94	80-120	
4-Bromofluorobenzene		0.0267	0.0300	89	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 431401,

Lab Batch #: 875271

Sample: 431401-013 / SMP

Project ID: 2006-142

Matrix: Water Batch:

SURROGATE RECOVERY STUDY Date Analyzed: 11/21/11 05:56 Units: mg/L Amount True Control BTEX by EPA 8021 Found Amount Recovery Limits Flags [B] %R %R [A] [D]**Analytes** 1,4-Difluorobenzene 0.0282 0.0300 80-120

0.0264

4-Bromofluorobenzene Lab Batch #: 875271

Sample: 431401-014 / SMP

Batch: Matrix: Water

0.0300

80-120

SURROGATE RECOVERY STUDY Date Analyzed: 11/21/11 06:19 Units: mg/L Control Amount True BTEX by EPA 8021 Found Amount Recovery Limits Flags [B] %R %R [A] [D]**Analytes** 1.4-Difluorobenzene 0.0278 0.0300 93 80-120 4-Bromofluorobenzene 0.0264 0.0300 88 80-120

Lab Batch #: 875458

Sample: 431401-005 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/22/11 14:22		SURROGATE RECOVERY STUDY					
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0293	0.0300	98	80-120		
4-Bromofluorobenzene		0.0278	0.0300	93 :	80-120		

Lab Batch #: 875458

Sample: 431401-006 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/22/11 14:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		ļ	[D]	·	
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	•	0.0278	0.0300	93	80-120	

Lab Batch #: 875271

Sample: 614388-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 11/20/11 21:13	. SU	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	0.0256	0.0300	85	80-120			

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 431401,

Project ID: 2006-142

Lab Batch #: 875458

Sample: 614496-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/22/11 13:36		SURROGATE RECOVERY STUDY					
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analyt	es		. ,	[D]			
1,4-Difluorobenzene		0.0287	0.0300	96	80-120		
4-Bromofluorobenzene		0.0282	0.0300	94	80-120		

Lab Batch #: 875271

Sample: 614388-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	ECOVERY STUDY					
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0288	0.0300	96 · ·	80-120	
4-Bromofluorobenzene	: •	0.0285	0.0300	95	80-120	

Lab Batch #: 875458

**Sample:** 614496-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 11/22/11 12:03	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0278	0.0300	93	80-120		
4-Bromofluorobenzene		0.0277	0.0300	92	80-120		

Lab Batch #: 875271

Sample: 614388-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 11/20/11 20:05	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1,4-Difluorobenzene	-	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	

Lab Batch #: 875458

Sample: 614496-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/22/11 12:26	SU	RROGATE RI	ECOVERY S	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	0.0297	0.0300	99	80-120	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 431401,

Lab Batch #: 875271

Sample: 431400-001 S/MS

**Project ID: 2006-142** 

Matrix: Water Batch:

Units: mg/L Date Analyzed: 11/21/11 01:23	s   st	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 875458

Sample: 431537-004 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/22/11 17:48	l st	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			· [D]		
1,4-Difluorobenzene	0.0286	. 0.0300	95	80-120	
4-Bromofluorobenzene	0.0284	. 0.0300	95	80-120	

Lab Batch #: 875271

Sample: 431400-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 11/21/11 01:46	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			· [D]		
I,4-Difluorobenzene	0.0287	0.0300	. 96	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 875458

Sample: 431537-004 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/22/11 18:11	SU	RROGATE RI	ECOVERY S	STUDY	v
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



#### **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 431401

Analyst: ASA

**Date Prepared:** 11/18/2011

**Project ID: 2006-142** 

**Date Analyzed:** 11/20/2011

Lab Batch ID: 875271

Sample: 614388-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

#### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021  Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Bik. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	.0.100	0.104	104	0.100	0.111	111	7	70-125	25	
Toluene	<0.00200	0.100	0.103	103	0.100	0.112	112	8	70-125	25	
Ethylbenzene	<0.00100	0.100	0.106	106	0.100	0.115	115	8	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.204	102	0.200	0.222	111	8	70-131	25	
o-Xylene	<0.00100	0.100	0.105	105	0.100	0.114	114	8	71-133	· 25	-

Analyst: ASA

**Date Prepared:** 11/22/2011

Date Analyzed: 11/22/2011

Lab Batch ID: 875458

Sample: 614496-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

\_\_\_\_\_

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Units: mg/L											
BTEX by EPA 8021 Analytes	Blank Spike Spike Spike Spike Added Spike Result [A] [B] [C] [D] [E] Resu						Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.107	107	0.100	0.107	107	0	70-125	25	
Toluene	<0.00200	0.100	0.109	109	0.100	0.110	110	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.114	114	0.100	0.113	113	1	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.229	115	0.200	0.225	113	2	70-131	25	
o-Xylene	<0.00100	0.100	0.113	113	0.100	0.113	113	0	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 - N.

#### **MSD Recoveries**



**Project Name: Lovington Gathering WTI** 

Work Order #: 431401

**Project ID: 2006-142** 

Lab Batch ID: 875271

QC- Sample ID: 431400-001 S

Batch #:

Matrix: Water

**Date Analyzed:** 11/21/2011

Date Prepared: 11/18/2011

Analyst: ASA

Reporting	Units:	mg/L
-----------	--------	------

Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021  Analytes	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	%R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	[A]	[B]	0.190	[D]	(E) 0.100	0.188	[G]	1	70-125	25	X
Toluene	0.0197	0.100	0.190	124	0.100	0.188	124	0	70-125	25	<u> </u>
Ethylbenzene	0.0110	0.100	0.133	122	0.100	0.136	125	2	71-129	25	
m_p-Xylenes	0.0128	0.200	0.241	114	0.200	0.250	119	4	70-131	25	
o-Xylene	0.00594	0.100	0.126	120	0.100	0.127	121	1	71-133	25	

Lab Batch ID: 875458

**QC-Sample ID:** 431537-004 S

Batch #:

Matrix: Water

Date Analyzed: 11/22/2011

Date Prepared: 11/22/2011

Analyst: ASA

Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.00100	0.100	0.101	101	0.100	0.104	104	3	70-125	25	
Toluene	<0.00200	0.100	0.101	101	0.100	0.104	104	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.105	105	0.100	0.109	109	4	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.209	105	0.200	0.215	108	3	70-131	25	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.108	108	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

# inal 1.000

# Page 16 of 18

# **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

	Project Manager:	Ben J. Arguij	J. Arguijo															Pro	ject	Nar	ne:	<u>Lo</u>	vin	gto	n Ga	the	ing	WT	<u>.I                                    </u>					
	Company Name	Basin Enviro	nmental Ser	vice T	echnol	ogies, LLC														Pr	ojec	#: <u> </u>	200	) <u>6-1</u>	42									
	Company Address:	P. O. Box 301	<u> </u>		_														P	roje	ct L	oc: <u> </u>	Lea	Со	unty	, N <u>M</u>								_
	City/State/Zip:	Lovington, Ni	M 88260								_										PC	#: _	PA/	<u>4- J.</u>	. He	nry								
	Telephone No:	(575)396-2378	8				_ Fax No:		<u>(57</u>	75) 3	96-1	429						Re	port	For	mat	. [	X	Star	ndar	d	[	TR	≀RP			NPD	ES	
	Sampler Signature:	Dakerah	word			·	e-mail:		bja	rgu	ijo@	bas	iner	ıv.c	om				. ,							<u> </u>							_	
labaa	anh)	·	<del></del>																- 1				TC	10.	An	alyze	For:	_	_		_	$\dashv$	١	
lab use	onny) r#: <i>431401</i>									_	Pres	ervati	on &	# of	Conta	iners	1	Mati	ix	28		7	тот	AL:		#	12	-1					48, 72 hr	
AB # (lab use only)		_D CODE	<b>I</b>	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Fotal #. of Containers	l/Ce	HNO3	:		NaOH			acify)	DW=Drinking Water SL=Studge GW = Groundwater S=Soil/Solid	on-Potable Specify Other	418.1 8015M 801	TPH: TX 1005 TX 1006	Cations (Ca. Mg, Na, K)	Anions (Cl. SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	BTEX 8021B/5030 od BTEX 8260	RCI	N.O.R.M.		Fluoride	- 1	Standard TAT & DAY	Standard IAT 4 DAY
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# **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo	Arguijo												·		P	oje	t Na	me:	Lov	ving	<u>iton</u>	Gat	her	ing	WTI			·	
	Company Name	Basin Environmental Ser	vice T	echnol	ogies, LLC								•					P	roje	ct #:	200	6-1	42								
*	Company Address:	P. O. Box 301																Pro	ect l	.oc:	Lea	Cou	unty,	NM							
	City/State/Zip:	Lovington, NM 88260			·														P	O#:	PA#	٠ ١- J.	Hen	ry							
	Telephone No:	(575)396-2378				Fax No:		(57	75)	396-	1429					,	Repo	rt Fo	иma	t:	X	Stan	ndard			TR	RP	-		PDE	s
	Sampler Signature:	pakeran ward				e-mail:		bja	argu	uijo@	Dbas	Iner	1V.C	om										-		_				٠	
lab use	<u> </u>					•							_					F			τc	ı Pil	Ana	lyze	For:	$\overline{-}$		一	<del></del>	<b>T</b> .	]
-									_	<u> </u>		٠.	4 -61				Votein	L			TOT	AL:	#	丰	X				١.	72 hrs	
AB # (lab use only)	R#: 431401	LD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	Total #. of Containers	92	o,	HCi	H <sub>2</sub> SO <sub>4</sub>		O <sub>3</sub>		scify)	OW=Drinking Water SL=Sludge  GW = Groundwater S=Soi/Soid  TRIP-Non-Potable Specify Officer  X	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca. Mg, Na. K)	Anions (Cl. SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Semivolatiles	87EX 80218/5030 of BTEX 8260	ci	N.O.R.M.			RUSH TAT (Pre-Schedule) 24, 48,	Standard TAT 4 DAY
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#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: BOSIN	Env. / F	Plai	vnS			Ť		
Date/Time:	-11-11	3:14	<del>\</del>					
Lab ID#: 43/40	1							
Initials:	AF.							
		S	ample Receipt Cl	necki	ist			,
1. Samples on ice?					Blue	Water	No	
2. Shipping container in	good condition?	•	·		(Y96)	No	None	
3. Custody seals intact of	on shipping contair	er (co	ooler) and bottles		Yes	No	N/A	
4. Chain of Custody pres	sent?				Yes	No		
5. Sample instructions c	omplete on chain o	of cus	tody?		<b>─</b> res_	No ·		
6. Any missing / extra sa	imples?		· . •		Yes	No		
7. Chain of custody sign	ed when relinquisi	ned / r	eceived?	`.	(Yes)	No		
8. Chain of custody agre	es with sample lat	el(s)?	· <u> </u>	,	Yes	No		
9. Container labels legib	le and intact?	_			Yes	No		
10. Sample matrix / prop	erties agree with c	hain c	of custody?	, ,	Yes	No		
11. Samples in proper co	ontainer / bottle?				Yes	No	1	
12. Samples property pr	eserved?				Yes	No	N/A	
13. Sample container int	act?				Yes	No		
14. Sufficient sample an	nount for indicated	test(s	:)?		Yes	No		
15. All samples received	l within sufficient h	old tir	me?		Yes	No		
16. Subcontract of samp	ole(s)?				Yes	No	(N/A)	
17. VOC sample have ze	ro head space?				Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 N	0.	Cooler 5 No.	
lbs 5.5 °C	lbs	°င	ibs	°c	lbs	۰	lbs	°c
,		Nonc	onformance Doc	ume	ntation			
Contact:	Contac	ted by	v:		-	Date/Time:		•
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Corrective Action Taker	1:						·	
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Check all that apply:	condition a	ccepta	egun snortly after san able by NELAC 5.5.8.3 perature confirm out	.1.a.1.			rature	

Page 18 of 18

☐ Client understands and would like to proceed with analysis

Final 1.000

# **Analytical Report 433392**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry
Lovington Gathering WTI
2006-142
22-DEC-11

Collected By: Client



#### Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

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

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





22-DEC-11

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

Reference: XENCO Report No: 433392

**Lovington Gathering WTI**Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 433392. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 433392 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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

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



# **Sample Cross Reference 433392**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	12-14-11 08:58		433392-001
MW-10	W	12-14-11 09:25		433392-002
Goff Dairy - Ctr. Pivot Well	W	12-14-11 11:20		433392-003
Goff Dairy Well	W	12-14-11 12:45		433392-004

#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 433392

Report Date: 22-DEC-11

Date Received: 12/14/2011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-877549 BTEX by EPA 8021

SW8021BM

Batch 877549, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 433392-004,433392-003.



# Certificate of Analys Summary 433392 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Dec-14-11 04:15 pm

Report Date: 22-DEC-11

oject Education. Dea County, 1414								Project Ma	nager:	Brent Barron II	
	Lab Id:	433392-	001	433392-	002	433392-	003	433392-	004		_
Analysis Requested	Field Id:	MW-	9	MW-1	0 -	Goff Dairy - Ctr.	Pivot Well	Goff Dairy	Well		
Analysis Requesiea	Depth:							•			
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R		
	Sampled:	Dec-14-11	08:58	Dec-14-11	09:25	Dec-14-11	11:20	Dec-14-11	12:45		·
BTEX by EPA 8021	Extracted:	Dec-20-11	12:02	Dec-20-11	12:02	Dec-20-11	12:02	Dec-20-11	12:02		
	Analyzed:	Dec-20-11	15:46	Dec-20-11	16:08	Dec-20-11	16:31	Dec-20-11	16:56		
•	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Benzene		ND	0.00100	0.00846	0.00100	ND	0.00100	ND	0.00100		
Toluene :		ND	0.00200	0.00226	0.00200	ND	0.00200	ND	0.00200		
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.00100	0.00111	0.00100		
n_p-Xylenes		ND	0.00200	0.0261	0.00200	ND	0.00200	ND	0.00200		
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100		
Xylenes, Total		ND ND	0.00100	0.0261	0.00100	ND	0.00100	ND	0.00100		
Total BTEX		ND	0.00100	0.0368	0.00100	ND	0.00100	0.00111	0.00100		

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

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

Jobe of



## **Flagging Criteria**

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

MDL Method Detection Limit SDL

SDL Sample Detection Limit

LOD Limit of Detection

**POL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOO Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

^ NELAC or State program does not offer Accreditation at this time.

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Project Name: Lovington Gathering WTI

Work Orders: 433392,

Lab Batch #: 877549

Sample: 433392-001 / SMP

Batch: Matrix: Water

Project ID: 2006-142

<b>Date Analyzed:</b> 12/20/11 15:46	
W FPA 8021	Г

SU	RROGATE	RE	COVER	Y 5	STUD	Y
		Ī				

Omes. mg/b Date renaryzed: 12/20/11 15:10					
BTEX by EPA 8021	Amount Found - [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	. , .		[D]		
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0241	0.0300	80	80-120	·

Lab Batch #: 877549

Sample: 433392-002 / SMP

Batch:

Matrix: Water

Date	Analyzed:	12/20/11	16:08

Units: mg/L	Date Analyzed: 12/20/11 16:08	SURROGATE RECOVERY STUDY						
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]				
1,4-Difluorobenzene		0.0255	0.0300	85	80-120			
4-Bromofluorobenzene		0.0241	0.0300	80	80-120			

Lab Batch #: 877549

Sample: 433392-003 / SMP

Batch:

Matrix: Water

Units: mg/L	BTEX by EPA 8021  Amount Found Amount [B] Recovery %R %R [D]  Control Limits %R  Analytes  fluorobenzene  O.0246  O.0300  82  80-120					
BT	EX by EPA 8021	Found	Amount	,	Limits	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0246	0.0300	82	80-120	
4-Bromofluorobenzene		0.0216	0.0300	72	80-120	*

Lab Batch #: 877549

Sample: 433392-004 / SMP

Batch:

Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY Date Analyzed: 12/20/11 16:56 Amount True Control BTEX by EPA 8021 Found Recovery Limits Flags Amount [B] %R %R [A] [D]**Analytes** 0.0247 0.0300 80-120

4-Bromofluorobenzene Lab Batch #: 877549

1,4-Difluorobenzene

Sample: 615713-1-BLK / BLK

Batch:

0.0235

Matrix: Water

78

80-120

0.0300

Units: mg/L Date Analyzed: 12/20/11 14:45	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount , Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		; ,	[D]				
1,4-Difluorobenzene	0.0293	0.0300	98	80-120			
4-Bromofluorobenzene	0.0247	0.0300	82	80-120			

<sup>\*</sup> Surrogate outside of Laboratory QC limits

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 433392,

**Project ID: 2006-142** 

Lab Batch #: 877549

Sample: 615713-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 12/20/11 13:13	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery ·%R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0284	0.0300	95	80-120			
4-Bromofluorobenzene	0.0283	. 0.0300	94	80-120			

Lab Batch #: 877549

Sample: 615713-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/20/11 13:36	SURROGATE RECOVERY STUDY					
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
٠	Analytes		•	[D]			
1,4-Difluorobenzene		0.0317	0.0300	106 -	80-120		
4-Bromofluorobenzene		0.0292	0.0300	97	80-120		

Lab Batch #: 877549

**Sample:** 433392-001 S / MS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 12/20/11 19:36	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			,-,		
1,4-Difluorobenzene	•	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0275	0.0300	92	80-120	

Lab Batch #: 877549

Sample: 433392-001 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 12/20/11 19:58	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]		j.	
1,4-Difluorobenzene	0.0278	0.0300	93	80-120		
4-Bromofluorobenzene	0.0275	0.0300	92	80-120		

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 433392

Analyst: ASA

Toluene

Ethylbenzene

m p-Xylenes

o-Xylene

**Date Prepared:** 12/20/2011

**Project ID: 2006-142** 

Date Analyzed: 12/20/2011

4

4

3

Lab Batch ID: 877549

Sample: 615713-1-BKS

< 0.00200

< 0.00100

< 0.00200

< 0.00100

Batch #: 1

0.100

0.100

0.200

0.100

Matrix: Water

70-125

71-129

70-131

71-133

25

25

25

25

Units: mg/L		BLAN	K/BLANK S	PIKE / E	BLANK S	PIKE DUPI	ICATE 1	RECOVI	ERY STUD	Y	
BTEX by EPA 8021	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00100	0.100	0.101	101	0.100	0.104	104	3	70-125	25	

103

110

114

109

0.100

0.100

0.200

0.100

0.107

0.115

0.237

0.112

107

115

119

112

0.103

0.110

0.228

0.109

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 #: 433392

**Project ID: 2006-142** 

Lab Batch ID: 877549

QC- Sample ID: 433392-001 S

Batch #:

Matrix: Water

**Date Analyzed:** 12/20/2011

BTEX by EPA 8021

**Analytes** 

Date Prepared: 12/20/2011

Parent

Sample Result

[A]

< 0.00100

< 0.00200

< 0.00100 < 0.00200

< 0.00100

0.100

0.0981

98

0.100

ASA Analyst:

Reporting Units: mg/L

Benzene

Toluene

Ethylbenzene

m\_p-Xylenes

o-Xylene

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
,	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					
	0.100	0.0966	97	0.100	0.103	103	6	70-125	25						
	0.100	0.102	102	0.100	0.106	106	4	70-125	25						
	0.100	0.104	104	0.100	0.109	109	5	71-129	25						
	0.200	0.203	102	0.200	0.213	107	5	70-131	25						

0.103

5

103

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

13

# **Xenco Laboratories**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Arguijo			· ·						·					-	Pro	ojec	t Nai	ne: _	Lov	ing	<u>ton</u>	Gat	heri	ng	WT	<u> </u>			
	Company Name	Basin Environmental	Service T	echnol	ogies, LLC							_				_		Pı	ojec	t #:_	200	6-14	12								
-	Company Address:	P. O. Box 301				·										_	F	Proje	ect L	oc: ៉្	Lea	Cou	nty,	NM			•				
. •	City/State/Zip:	Lovington, NM 88260			,	•	,				-								PC	) #: <u> </u>	PAA	- J. j	Hen	ry							
	Telephone No:	(575)396-2378				Fax No:		(57	'5) 39	96-1	429					F	lepor	t Fo	rmat	. [	X s	Stand	dard			TR	RP			NPDE	s
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ORDE (Apo es	R#: ( ) -		Depth	t t	pald	peld		ntainers		rese	<b>د</b> ي ۸		GI CON			r SL≈Sludge	S=Soil/Solid Specify Other	8015M 8015B	05 TX 1006	Mg. Na. K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Ba Ca Cr ru ny se		5030 og BTEX 8260			-		×	
LAB # (lab use only)	FIE	LD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	lce	HNO <sub>3</sub>	Ha (3).	1250v4	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify	DW=Drinking M	GW = Groundwater NP=Non-Potable	TPH: 418.1	TPH: TX 1005	Cations (Ca, Mg, Na,	Anions (Cl. S(	SAR / ESP / CEC	Merais: As Ag	Semivolatiles	BTEX 8021B/	RCI	Ņ.O.R.M.			RUSH TAT	Standard TAT 4 DAY
OL		MW-9			12/14/2011	17:22		3	X		x		$\perp$			٢	W	L		_		$\perp$			Х				$\perp$		x
9D	· .	// W-10			12/14/2011	01.65		3	×		<u>x</u>	$\perp$	$\perp$		Щ	٩	w						$\perp$	上	X				$\bot$		х
03	Goff Dairy	- Ctr. Pivot Well			12/14/2011	11:00		3	×	_	x.	$\downarrow$		┖	L	9	W	_	Ц	4	1		$\perp$	$\perp$	X		Ш	$\Box$	$\perp$	丄	X
Od	Goff	Dairy Well		ļ	12/14/2011	12:45		3	X		X	$\downarrow$	$\bot$	<u> </u>	$\sqcup$	9	W	L		_	4	_	$\downarrow$	┷	X	Ш	Ш	$\dashv$	$\bot$	丄	X
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#### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance R	eport - Samp	ie Log-in		
client: basin / Plains				
Date/Time: 12.14.11 /6.15	•			
Lab ID#: 4333972				
Initials:	·.			,
Sample Receipt C	Checklist			
1. Samples on ice?	Blue	< Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	CY26	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	Nõ		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		,
9. Container labels legible and intact?	. (Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	CYES	No	N/A	
13. Sample container intact?	Tes	No		
14. Sufficient sample amount for indicated test(s)?	<b>∑</b>	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(NA)	
17. VOC sample have zero head space?	Tes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 N	lo.	Cooler 5 No.	
Ibs 5.0 °C Ibs °C Ibs	°C lbs	s °C	lbs	°c
Nonconformance Do	cumentation			
Contact: Contacted by:		Date/Time:		
Regarding:				
				•
Corrective Action Taken:				<del> </del>
				<del> </del>
	·		· · · · · ·	
Check all that apply: Cooling process has begun shortly after sa		out of tempe	rature	

☐ Initial and Backup Temperature confirm out of temperature conditions ☐ Client understands and would like to proceed with analysis

CUSTODY SEAL

Quality Environmental Containers 800-255-3950 • 304-255-3900

# **Analytical Report 433651**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI

2006-142

27-DEC-11

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALII), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

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

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

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





27-DEC-11

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

Reference: XENCO Report No: 433651

Lovington Gathering WTI

Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 433651. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 433651 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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



# **Sample Cross Reference 433651**



# PLAINS ALL AMERICAN EH&S, Midland, TX

Lovington Gathering WTI

Sample Id	Matrix	Date Collected Sample Dept	th Lab Sample Id
MW-10	W	12-15-11 14:45	433651-001



#### CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 433651

Report Date: 27-DEC-11

Date Received: 12/19/2011

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

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

SW8270C

Batch 877812, Nitrobenzene-d5 recovered above QC limits Data confirmed by re-analysis.

Samples affected are: 615639-1-BKS.

Terphenyl-D14 recovered above QC limits Data confirmed by re-analysis. Samples affected are:

615639-1-BLK,433651-001.

SW8270C

Batch 877812, Acenaphthylene recovered above QC limits in the laboratory control sample. Samples affected are: 433651-001.

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



# Certificate of Analy Summary 433651 PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id: 2006-142** 

Project Location: Lea County, NM

Contact: Jason Henry

**Project Name: Lovington Gathering WTI** 

Date Received in Lab: Mon Dec-19-11 10:50 am

Report Date: 27-DEC-11
Project Manager: Brent Barron II

					 Project Manager:	Dient Danon II	
	Lab Id:	433651-0	01	·			
Analysis Requested	Field Id:	MW-10	)				-
Anatysis Requested	Depth:				,		
	Matrix:	WATER	ι ,	•			
	Sampled:	Dec-15-11 1	4:45				
SVOA PAHs List	Extracted:	Dec-20-11	15:24				
SUB: TX104704215	Analyzed:	Dec-23-11 1	13:05				
	Units/RL:	mg/L	RL				
Acenaphthene		ND	0.0102				
Acenaphthylene		· ND	0.0102				
Anthracene		ND	0.0102				
Benzo(a)anthracene		ND	0.0102				
Benzo(a)pyrene		ŅD	0.0102				
Benzo(b)fluoranthene		ND	0.0102				
Benzo(k)fluoranthene		ND	0.0102				
Benzo(g,h,i)perylene	•	ND ·	0.0102				
Chrysene		ND	0.0102				
Dibenz(a,h)anthracene .		ND	0.0102				
Fluoranthene		ND	0.0102				
Fluorene		ND	0.0102				
Indeno(1,2,3-c,d)Pyrene		ND	0.0102		•		
1-Methylnaphthalene .		ND	0.00510				
2-Methylnaphthalene		ND	0.0102				
Naphthalene		ND	0.0102				
Phenanthrene		ND	0.0102				
Pyrene		ND	0.0102				

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

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

Brent Barron II Odessa Laboratory Manager



#### **Flagging Criteria**

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

MDL Method Detection Limit SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

^ NELAC or State program does not offer Accreditation at this time.

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

Certified and approved by numerous States and Agencies.

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

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Phone Fax 4143 Greenbriar Dr. Stafford, TX 77477 (281) 240-4200 (281):240-4280 9701 Harry Hines Blvd, Dallas, TX 75220 (214) 902 0300 (214) 351-9139 5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335 2505 North Falkenburg Rd, Tampa, FL 33619 (813) 620-2000 (813) 620-2033 5757 NW 158th St, Miami Lakes, FL 33014 (305) 823-8500 (305) 823-8555 12600 West I-20 East, Odessa, TX 79765 (432) 563-1800 (432) 563-1713 6017 Financial Drive, Norcross, GA 30071 (770) 449-8800 (770) 449-5477 3725 E. Atlanta Ave, Phoenix, AZ 85040 (602) 437-0330



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 433651,

Lab Batch #: 877812

Sample: 433651-001 / SMP

Project ID: 2006-142

Matrix: Water Batch: 1

SURROGATE RECOVERY STUDY Date Analyzed: 12/23/11 13:05 Units: mg/L Amount True Control **SVOA PAHs List** Found Amount Recovery Limits Flags %R %R [B] [A] [D] Analytes 2-Fluorobiphenyl 102 0.0520 0.0510 44-117 2-Fluorophenol 0.0230 0.0510 45 30-100 Nitrobenzene-d5 0.0527 0.0510 103 46-111 Phenol-d6 0.0126 0.0510 15-94 25 Terphenyl-D14 0.0653 0.0510 128 46-126 2,4,6-Tribromophenol 0.0535 0.0510 105. 48-117

Lab Batch #: 877812

Sample: 615639-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 12/23/11 08:25	SU	RROGATE R	RECOVERY	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	1 mary tes	0.0538	0.0500	108	44-117	
2-Fluorophenol		0.0460	0.0500	92	30-100	
Nitrobenzene-d5		0.0539	0.0500	108	46-111	
Phenol-d6		0.0424	0.0500	85	15-94	
Terphenyl-D14		0.0654	0.0500	131	46-126	**
2,4,6-Tribromophenol		0.0445	0.0500	89	48-117	

Lab Batch #: 877812

Sample: 615639-1-BKS/BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 12/23/11	08:48 SU	RROGATE R	RECOVERY	STUDY,	
SVOA PAHs List  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.0572	0.0500	114	44-117	
2-Fluorophenol	0.0476	0.0500	95	30-100	
Nitrobenzene-d5	0.0558	0.0500	112	46-111	**
Phenol-d6	0.0472	0.0500	94	15-94	
Terphenyl-D14	0.0580	0.0500	116	46-126	
2,4,6-Tribromophenol	0.0518	0.0500	104	48-117	

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

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 433651,

**Project ID: 2006-142** 

Lab Batch #: 877812

Sample: 615639-1-BSD / BSD

Batch: 1 N

Matrix: Water

Units: mg/L	Date Analyzed: 12/23/11 09:12	SU	RROGATE R	ECOVERY :	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
2-Fluorobiphenyl	•	0.0540	0.0500	108	44-117	
2-Fluorophenol		0.0451	0.0500	90	30-100	
Nitrobenzene-d5		0.0530	0.0500	106	46-111	
Phenol-d6		0.0450	0.0500	90	15-94	
Terphenyl-D14		0.0557	0.0500	• 111	46-126	
2,4,6-Tribromophenol .		0.0495	. 0.0500	99	48-117	

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

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

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



Project Name: Lovington Gathering WTI

Work Order #: 433651

Analyst: MCH
Lab Batch ID: 877812

**Date Prepared:** 12/20/2011

**Project ID: 2006-142** 

**Date Analyzed:** 12/23/2011

Sample: 615639-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPI	ICATE	RECOVI	ERY STUD	Y	
SVOA PAHs List Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Biank Spike Duplicate Result [F]	Bik. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.0100	0.0500	0.0548	110	0.0500	0.0537	107	2	27-132	31	
Acenaphthylene	. <0.0100	0.0500	0.0549	. 110 -	. 0.0500	0.0533	. 107 .	3 .	- 46-108.	25	Н
Anthracene	<0.0100	0.0500	0.0504	101	0.0500	0.0494	99	2'	47-145	. 25	
Benzo(a)anthracene	<0.0100	0.0500	0.0515	103	.0.0500	0.0506	101	. 2	33-143	25	
Benzo(a)pyrene	<0.0100	0.0500	0.0510	102	0.0500	0.0510	102	0	65-135	25	
Benzo(b)fluoranthene	<0.0100	0.0500	0.0506	101	0.0500	0.0479	96	5	24-159	25	;
Benzo(k)fluoranthene	<0.0100	0.0500	0.0478	96	0.0500	0.0494	99	3	25-125	25	
Benzo(g,h,i)perylene	<0.0100	0.0500	0.0472	94	0.0500	0.0464	93	2	65-135	25	
Chrysene	<0.0100	0.0500	0.0542	108	0.0500	0.0530	106	2	65-135	25	
Dibenz(a,h)anthracene	< 0.0100	0.0500	0.0538	108	0.0500	0.0533	107	. 1	50-125	25	
Fluoranthene	<0.0100	0.0500	0.0523	105	0.0500	0.0513	103	2	47-125	25	
Fluorene	<0.0100	0.0500	0.0540	108	0.0500	0.0525	105	3 .	48-139	25	
Indeno(1,2,3-c,d)Pyrene	<0.0100	0.0500	0.0541	108	0.0500	0.0535	107	· 1	27-160	25	
Naphthalene	< 0.0100	0.0500	0.0504	101	0.0500	0.0490	98	3	26-175	25	
Phenanthrene	<0.0100	0.0500	0.0476	95	0.0500	0.0464	93	3	65-135	25	
Pyrene	<0.0100	0.0500	0.0524	105	0.0500	0.0513	103	2	23-152	- 31	

Relative Percent Difference RPD = 200\*[(C-F)/(C+F)]Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

	Project Manager:	Ben J. Argui	ijo			·												Pr	ojec	t Na	me:	Lo	/ing	ton	Gatl	neri	ng V	ΝTΙ					_
	Company Name	Basin Enviro	onmental Ser	vice T	echno	logies, LLC											_		Pr	ojec	t#:	200	6-14	42			· 						
	Company Address:	P. O. Box 30	1 .				-										_	ı	Proje	ect L	.oc:	Lea	Cou	ınty,	, NM								_
	City/State/Zip:	Lovington, N	IM 88260														_			P	O #: ַ	PAA	۱- <u>J.</u>	Hen	ıry							. •	_
	Telephone No:	(575)396-237	78				Fax No:		(57	'5) 3 <sup>,</sup>	96-1	429					F	Repor	t Fo	rma	t:	X	Stan	daro	t		TRE	RP.		ı []	NPDE	ΞS	
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lab use					1													,	E			TOT	LP:	Ī	T T	X				T			
CAB # (lab use only)	R#: 4330	<i>0</i> 2)		g Depth	epth	Sampled	pejdu	0	Containers		Prese	rvatio	on & #	of Go	ntaine		Water SL≃Studge	dwater S=Soil/Solid . xiria	.1 8015M 8015B	TX 1005 TX 1006	a, Mg, Na, K)	SO4, Alkalinity)	- 1	Metats: As Ag Ba Cd Cr Pb Hg Se	68	BTEX 80218/5030 or BTEX 8260					VI (Pra.Schedule) 24 48		TAL & UAT
LAB # (la	FIEL	D CODE		Beginning Depth	Ending Depth	Date Sar	Time Sampled	Field Filtered	Total # of Containers	62)	HNO <sub>3</sub>	HCi	H <sub>S</sub> SO,	NaOH Na.S.O.	None	Other (Specify)	OW≃Drinking	GW = Groundwater	TPH: 418.1	TPH: TX	Cations (Ca, Mg,	Anions (Cl, SO4,	SAR / ESP / CEC	Metats: As	Volatiles Semivolatiles	BTEX 8021	RCI	РАН		Fluoride	AT HRIIO	NOCE 1	Standar
01	M	IW-10				12/15/2011	1445		1	X			_		$\perp$	_	_	3W				_	$\perp$	$\dashv$	<del> </del>	1		х	$\vdash$	$\dashv$	4	+	
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#### **XENCO Laboratories**

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

## Prelogin / Nonconformance Report - Sample Log-In

Client: Busin	Pla	ins	3					
Date/Time: 12	11 91	10.	<b>T</b>					
Lab ID#:	433651							
Initials:	AC							
		. Sa	ample Receipt	Checki	list			
1. Samples on ice?					Blue	Water	No	
2. Shipping container in	good condition?				(Yes)	No	None	
3. Custody seals intact of	on shipping conta	inet (co	oler) and bottles?		(Yes)	No	WALL	
4. Chain of Custody pre-	sent?				Yes	No		
5. Sample instructions of	omplete on chair	of cust	ody?	·	(Yes)	No		
6. Any missing / extra sa	amples?				Yes	No:		
7. Chain of custody sign	ned when relinqui	shed / re	eceived?		(Yes)	No .		
8. Chain of custody agre	es with sample l	abel(s)?	#1.# p 4		Yes	No	·	
9. Container labels legit					Yes	No		
10. Sample matrix / prop	erties agree with	chain o	f custody?		Yes	No ·		
11. Samples in proper c	ontainer / bottle?				Yes	No		
12. Samples properly pr	eserved?				(Yes	No	N/A	
13. Sample container in					Yes	. No		
14. Sufficient sample an	nount for indicate	d test(s	)?		Yes	No		
15. All samples received	within sufficient	hold tin	ne?		€YeY	No		
16. Subcontract of samp					Yes	No	N/A	
17. VOC sample have ze					Yes	No	(N/A)	
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 No	•	Cooler 5 No.	. '
lbs ( °C	lbs	°c	lbs	°C	lbs	°c	lbs	°C
	<del>-</del> " "	None	onformance D	ocuma	ntation			
Cantact	Comb			ocume		D-4-65		
Contact:	Conta	acted by	<del></del>		F	Date/Time:_		<del></del> ·
Regarding:			•					
Corrective Action Taker	1:							
			· .		····			
							<del></del>	
Check all that apply:	Cooling process	has be	gun shortly after	ampling	event and o	ut of temper	ature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

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

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

# State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003 ubmit 2 Copies to appropriate

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

#### Release Notification and Corrective Action

	OPERATOR		ll 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.		
		1 Louise 1	3
	ON OF RELEASE		
	h/South Line   Feet from	the East/West Line	County
H 6 17S 37E			Lea
			<u> </u>
Latitude_32° 51' 56.0"	Longitude 103° 17'	07.2"	<del></del>
NATUR	E OF RELEASE		
Type of Release Crude Oil	Volume of Release 12	barrels Volume F	Lecovered 8 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occ		Hour of Discovery
W Y	4-21-2006 @ 13:00	. 4-21-200	
Was Immediate Notice Given?  ⊠ Yes □ No □ Not Require	If YES, To Whom? d Pat Caperton		22232425262
By Whom? Camille Reynolds	<u> </u>	006 6 15.25	(3)
Was a Watercourse Reached?	Date and Hour 4-21-2006 @ 15:35  If YES, Volume Impacting the Watercourse.		
☐ Yes ⊠ No	ii 123, Volume impa	cung the watercourse.	100 M
			181 181 181 181 181 181 181 181 181 181
If a Watercourse was Impacted, Describe Fully.*			1º Cha
		•	15 600
			4
	·		\? <sub>\(\lambda\)</sub> .
scribe Cause of Problem and Remedial Action Taken Internal corros	ion while purging the line i	resulted in release of swe	et crude oil. The line has been
purged. The line is an idle 6-inch steel gathering line. The pressure on The sweet crude has an H <sub>2</sub> S content of <10 ppm. The line was approxi	me une was approximately	/ 50 psi and the gravity of	the sweet crude oil was 34.
pp	and of the second of the second	nease point.	
			·
Describe Area Affected and Cleanup Action Taken.* The impacted soi	11m0 eventuated and ata also	iladiaa alaadia Aasial ii	
approximately 1,500 ft <sup>2</sup> .	was excavated and stockp	neo on plastic. Aeriai ex	tent of surface impact was
I hereby certify that the information given above is true and complete to	the hest of my knowledge	and understand that num	WOOD - I - I
i regulations an operators are reduited to tebout and/or the centain telesci	: DOUDCATIONS and perform	corrective actions for sal	acces which may and a
public licalul of the environment. The acceptance of a C-141 report by	the NMOCD marked as "R	inal Deport does not set	Anna Alice and annual (1981) 1881
i should from operations thave fatied to adequately investigate and remed	SIE COnfamination that noc	a a throat to amound are a	:
or the environment. In addition, NMOCD acceptance of a C-141 repor federal, state, or local laws and/or regulations.	does not relieve the opera	tor of responsibility for c	ompliance with any other
	OII CONSERVATION DIVISION		
lam ( nomina Karanalda	OIL CONSERVATION DIVISION		
Signature any fille 1 regulables			
Printed Name: Camille Reynolds	Approved by District Supervisor:		
Title: Remediation Coordinator	Approval Date:	Expiration	Date:
T		1 Expiration	vaiv.
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:		
: 4/26/2006 Phone:505-441-			Attached