# AP - 96

# STAGE 2 WORKPLANS

Date:
August 20/0



August 6, 2010

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

RECEIVED

AIIC - 9 2010

Environmental Bureau Oil Conservation Division

RE:

Plains Pipeline, L.P. Lovington Gathering WTI

NMOCD Reference # 1R-838 / AP-96

Unit Letter H of Section 6, Township 17 South, Range 37 East

Lea County, New Mexico

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached *Amendment to Stage 2 Abatement Plan*, dated August 2010, for the Lovington Gathering WTI site. This site is located in Section 6 of Township 17 South, and Range 37 East of Lea County, New Mexico. This document details the site groundwater remediation activities performed to date and provides a proposed strategy for conducting future groundwater remediation activities.

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely,

Jason Henry

Remediation Coordinator

Plains Pipeline, L.P.

CC:

Larry Johnson, NMOCD, Hobbs Office

**Enclosure** 

### Basin Environmental Consulting, LLC

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### AMENDMENT TO STAGE 2 ABATEMENT PLAN

RECEIVED

PLAINS PIPELINE, L.P. (231735) Lovington Gathering WTI Lea County, New Mexico Plains SRS # 2006-142

AHG - 9 2010

Environmental Bureau
Oil Conservation Division

UNIT LTR "H" (SE/NE), Section 6, Township 17 South, Range 37 East Latitude 32° 51' 56.0" North, Longitude 103° 17' 07.2" West NMOCD Reference # 1RP-838 / AP-96

Prepared For:

Plains Pipeline, L.P. 333 Clay Street Suite 1600 Houston, Texas 77002

Prepared By:
Basin Environmental Consulting, LLC
2800 Plains Highway
Lovington, New Mexico 88260

August 2010

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### **APPENDICES**

Appendix A – Laboratory Analytical Reports Appendix B - Release Notification and Corrective Action (Form C-141)

### 1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P., (Plains), has prepared this Amendment to Stage 2 Abatement Plan in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 2010, requiring submittal of an Amended Stage 2 Abatement Plan by August 9, 2010. This Amendment to the Stage 2 Abatement Plan is intended to be viewed as a complete document with text, figures, tables, and appendices. This plan presents abatement options and proposed actions to address dissolved phase issues, as well as recent field activities and the results of the quarterly groundwater monitoring events. Site activities and remedial work are summarized in several letters and reports previously submitted to the NMOCD. Additional remedial actions and soil remediation activities conducted to advance the remedial site toward an NMOCD approved risked based closure will be addressed under a separate cover and submitted to the NMOCD upon completion. For reference, the Site Location Map is provided as Figure 1.

The legal description of the site is SE¼, NE¼ Section 6, Township 17 South, Range 37 East. The site latitude is 32° 51' 56.0" North and the site longitude is 103° 17' 07.2" West. On April 21, 2006, Basin responded to 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 6-mil plastic sheeting to mitigate hydrocarbon impact to the underlying soil. The Release Notification and Corrective Action (Form C-141) indicated approximately twelve (12) barrels of crude oil was released from the Plains pipeline and eight (8) barrels were recovered, resulting in a net loss of four (4) barrels of crude oil. The excavated area was fenced and is characterized by a Plains pipeline right-of-way adjacent to an idled Plains pump station; the release occurred in a pasture containing various oil and gas production facilities. The release resulted in a surface stain measuring approximately thirty (30) feet in length by twenty-seven (27) feet in width.

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

### 2.0 SUMMARY OF FIELD ACTIVITIES

In July 2006, a soil investigation was conducted to delineate the horizontal and vertical extent of the on-site hydrocarbon impact, eleven (11) soil borings were advanced to a depth of approximately 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 in October 2006, four (4) additional monitor wells (MW-4 through MW-7) were installed in November 2006. During the installation of the groundwater monitor wells (MW-4 through MW-7) there was no

visual evidence of PSH in any of the collected soil samples. The analytical results of groundwater sampling at monitor well MW-7 indicated additional monitor wells were required to fully delineate the down gradient boundary of the dissolved phase plume. Between February 7, 2007, and October 28, 2009, three (3) additional monitor wells (MW-8 through MW-10) were installed to further delineate the down gradient boundary of the dissolved phase plume. Details of the comprehensive soil and groundwater investigation were present to the NMOCD in the *Stage 1 and Stage 2 Abatement Plan*, dated August 2008.

### 3.0 GROUNDWATER MONITORING

The depth to groundwater at the Lovington Gathering WTI release site is approximately eighty-three (83) feet bgs. All site monitor wells are gauged and sampled on a quarterly basis. No PSH has been observed at any of the on-site monitor wells. Each well is monitored for the presence of PSH and depth to groundwater. All groundwater monitor wells are purged and sampled for dissolved phase BTEX constituents utilizing method EPA SW 846-8021B. Additionally, each monitor well is sampled annually for concentrations of poly aromatic hydrocarbons (PAH) compounds utilizing method EPA SW 846-8270C. Groundwater sampling methodology is described in Section 6.1 Groundwater Sampling of this Amendment to Stage 2 Abatement Plan. The quarterly groundwater monitoring data is complied and summarized in an *Annual Monitoring Report*, which is submitted to the NMOCD on April 1<sup>st</sup> of each year.

Monitor Well MW-1 was installed October 11, 2006, to a depth of approximately ninety (90) feet. It is located in a up gradient position approximately sixty (60) feet northwest of the release point. Quarterly sampling of monitor well MW-1 began in October 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since October 2006. Benzene concentrations have remained less than the NMOCD regulatory standard during each quarter with the exception of the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2008, when groundwater samples exhibited benzene concentrations of 0.020 mg/L and 0.035 mg/L, respectively. Benzene concentrations have remained below the laboratory method detection limit (MDL) and NMOCD regulatory standards during each of the last six (6) quarters. PAH concentrations were below the MDL for each constituent during the annually sampling events in 2008 and 2009. Please reference Table 2; Concentration of Benzene and BTEX in Groundwater, for a complete list of analytical results. Concentrations of Poly Aromatic Hydrocarbons (Semi-Volatile) Compounds in Groundwater are provided in Table 3.

Monitor Well MW-2 was installed October 11, 2006, to a depth of approximately ninety (90) feet. It is located in down gradient position approximately sixty (60) feet southeast the release point. Quarterly sampling of monitor well MW-2 began in October 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since October 2006. Benzene concentrations ranged from 0.928 mg/L during the 4<sup>th</sup> quarter of 2007 to 0.0023 mg/L during 2<sup>nd</sup> quarter of 2010. Benzene concentrations have remained below NMOCD regulatory standards during each of the last two (2) quarters. PAH concentrations were below the MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-3 was installed October 11, 2006, to a depth of approximately ninety (90) feet. It is located is a down gradient position approximately one hundred fifteen (115) feet southeast of the release point. Quarterly sampling of monitor well MW-3 began in October 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since October 2006. Benzene concentrations ranged from 6.60 mg/L during the 3<sup>rd</sup> quarter of 2006 to less than 0.0010 mg/L during the 4<sup>th</sup> quarter of 2009. Laboratory analytical results from the most recent quarterly sampling event indicated the benzene concentration was 0.0109 mg/L. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-4 was installed November 27, 2006, to a depth of approximately ninety (90) feet. It is located in an up and cross gradient position approximately one hundred twenty (120) feet west of the release point. Quarterly sampling of monitor well MW-4 began in December 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of benzene, toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since December 2006. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-5 was installed November 27, 2006 to a depth of approximately ninety (90) feet. It is located in an up and cross gradient position approximately one hundred ninety (190) feet east of the release point. Quarterly sampling of monitor well MW-5 began in December 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of benzene, toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since December 2006. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-6 was installed November 27, 2006, to a depth of approximately ninety (90) feet. It is located in a down gradient position approximately one hundred ninety (190) feet southeast of the release point. Quarterly sampling of monitor well MW-6 began in December 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since December 2006. Benzene concentrations have ranged from less than 0.001 mg/L during the 3<sup>rd</sup> quarter of 2006 through the 1<sup>st</sup> quarter of 2009 to 0.013 mg/L during the 4<sup>th</sup> quarter of 2009. Benzene concentrations have remained below the laboratory MDL during each of the last two (2) quarters. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-7 was installed November 28, 2006, to a depth of approximately ninety (90) feet. It is located in a down gradient position approximately two hundred sixty (260) feet southeast of the release point. Quarterly sampling of monitor well MW-7 began in December 2006. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since December of 2006. Benzene concentrations have ranged from 0.138 mg/L during the 2<sup>nd</sup> quarter of 2008 to less than 0.001 mg/L during each of

the last three (3) quarters. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-8 was installed February 7, 2007, to a depth of approximately ninety (90) feet. It is located in a down gradient position approximately three hundred eighty (380) feet east southeast of the release point. Quarterly sampling of monitor well MW-8 began in March 2007. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since March 2007. Benzene concentrations ranged from 0.568 mg/L during the 3<sup>rd</sup> quarter of 2008 to less than 0.0010 mg/L during each quarter of 2007, the 4<sup>th</sup> quarter of 2009 and the 1<sup>st</sup> quarter of 2010. Laboratory analytical results from the most recent quarterly sampling event indicated the benzene concentration was 0.0012 mg/L. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-9 was installed August 13, 2007, to a depth of approximately ninety (90) feet. It is located in a down gradient position approximately three hundred ninety (390) feet southeast of the release point. Quarterly sampling of monitor well MW-9 began in September 2007. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the NMOCD regulatory standard during each quarter since September 2007. Benzene concentrations ranged from 1.838 mg/L during the 3<sup>rd</sup> quarter of 2009 to less than 0.0010 mg/L during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2007, each quarter of 2008, the 1<sup>st</sup>, 2<sup>nd</sup> and 4<sup>th</sup> quarters of 2009. Laboratory analytical results from the most recent quarterly sampling event indicated the benzene concentration was 0.0421 mg/L. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling events in 2008 and 2009.

Monitor Well MW-10 was installed October 28, 2009, to a depth of approximately ninety (90) feet. It is located in a down gradient position approximately four hundred seventy (470) feet southeast of the release point. Quarterly sampling of monitor well MW-10 began in November 2009. Laboratory analytical results from quarterly groundwater sampling indicate concentrations of benzene toluene, ethylbenzene, m,p-xylenes and o-xylenes have remained less than the appropriate laboratory MDL and the NMOCD regulatory standard during each quarter since November 2009. PAH concentrations were below the laboratory MDL for each constituent during the annual sampling event in 2009. Monitor well MW-10 was also analyzed for concentrations of volatile organic compounds (VOCs) utilizing method EPA SW846 8260B, RCRA and NMWQCC Metals utilizing method EPA SW846-6020A, EPA 7470A, and anions/cations utilizing methods EPA SW375.4, 325.3, 310, 160.1 and SW846 6010B. Laboratory analytical results indicated concentrations of VOCs were below the laboratory MDL for each constituent. Laboratory analytical results indicated RCRA and NMWQCC metals were below the laboratory MDL for each constituent with the exception of chromium which had a concentration of 0.053 mg/L. Laboratory analytical results indicated anion/cation concentrations were below NMOCD regulatory standards with the exception of flouride, which had concentration of 9.27 mg/L. Please reference Table 4 Concentrations of Volatile Organic Compounds in Groundwater, Table 5 Concentrations of RCRA and NMWQCC Metals in Groundwater and Table 6 Concentrations of Anions/Cations in Groundwater for laboratory analytical results.

### 4.0 ABATEMENT OPTIONS

On May 27, 2010, the site monitor wells were gauged and sampled during the scheduled 2<sup>nd</sup> Quarter 2010 sampling event. The 2<sup>nd</sup> quarter groundwater gauging data was plotted and an inferred groundwater gradient map was constructed. The data indicates the groundwater gradient at the site is approximately 0.0019 feet/foot to the southeast as measured between monitor well MW-1 and MW-9. Please reference Table 2 for Groundwater Elevation Data and Figures 2A and 2B for the 2010 Inferred Groundwater Gradient Maps.

The release site is currently impacted by dissolved phase BTEX constituents in two (2) of the onsite monitor wells (MW-3 and MW-9). Currently, each of the ten monitor wells is gauged and sampled quarterly and monitor well MW-9 is gauged and manually pumped bi-weekly. Please reference the 2010 Groundwater Concentration Maps provided as Figures 3A and 3B.

Currently, the analytical results indicate the dissolved phase BTEX plume appears to be stable and horizontally delineated and no additional monitor well installations are anticipated at this time. Abatement of the impacted on-site groundwater is technically feasible utilizing the following technologies:

- Groundwater Pump and Treat System
- Air Sparging
- Monitored Natural Attenuation / Long Term Groundwater Monitoring
- Groundwater Pump and Disposal

Pump and Treat technology employs groundwater withdraw, combined with an air stripping system to remove dissolved BTEX constituents from the groundwater. Hydraulic conductivity values expected from the loose, unconsolidated sands found in the area should support a relatively expanded range of groundwater withdrawal rates. As the project matures, withdrawal rates are varied in response to shifting contaminant of concern concentration foci in an effort to maximize system utilization. The primary exclusion factors concerning this type of treatment technology are the extended length of system operation time required to achieve site cleanup goals and the large quantities of effluent produced requiring off-site disposal or injection back into the aquifer materials. Aerated effluent water could be injected back into the formation in up gradient locations to enhance aquifer-flushing action. The injected water would also carry oxygen to the subsurface, promoting biodegradation.

Air Sparging remediates the groundwater by stripping or volatilizing the BTEX constituents from the dissolved phase and increases in-situ biodegradation by the addition of oxygen to the impacted groundwater. As BTEX constituents are liberated from the aqueous phase and enter the gas phase, they migrate to the capillary fringe and subsequently the vadose zone. This treatment technique effectively removes BTEX constituents from the saturated and vadose zones and also restricts continued plume migration. A long-term groundwater monitoring program would be conducted to confirm plume stabilization and to monitor dissolved phase BTEX constituents. A single injection well pilot test is conducted to test the applicability of this remedial technology. A skid mounted compressor as well as vadose zone monitor wells are utilized for pilot testing purposes. The following in-situ parameters are monitored during pilot testing: soil gas

concentrations of BTEX constituents, soil gas pressure and groundwater level measurements. The following in-situ parameters are monitored after the air injection ceases: dissolved phase BTEX concentration, dissolved oxygen levels, temperature, and Redox potential/pH. Installations of injection wells across areas of effected groundwater are conducted incrementally to optimize the well field configuration. The 2-inch, schedule 40 PVC injection wells penetrate the saturated zone with approximately 5 feet of fully immersed 0.020-inch slotted pipe. Air compressors are utilized to generate the required air pressure for injection purposes. On the surface, the wells are piped to an activated carbon filtering system for effluent gas treatment prior to atmospheric discharge. A moisture knock out pot is installed down line of the effluent piping manifold to prevent moisture from entering the carbon treatment unit. Air Sparging generally consists of a compressor, pressure regulator, pressure gauges, flow meters, vacuum blower, and component isolation ball valves. In-situ system operating parameters which are monitored during system operation include: soil gas concentrations of BTEX constituents, injection well pressure and flow rate, weekly oxygen, carbon dioxide, nitrogen and methane concentrations and the pulsing frequency. Data derived from pilot testing is utilized to design the final system configuration.

Monitored Natural Attenuation / Long Term Groundwater Monitoring technology (NA/LT) relies on naturally occurring processes such as dispersion, diffusion, sorption and degradation (either biodegradation or abiotic processes such as hydrolysis), volatilization and dilution to control plume movement and destruction of dissolved phase hydrocarbons in the groundwater. Volatilization and diffusion are relatively unimportant in most non-clay groundwater systems; therefore, the main attenuation processes active are dispersion, sorption, degradation and dilution. Dispersion is subsurface mixing due to groundwater movement and aquifer heterogeneities. Vertical dispersion is not common at sites impacted with light non-aqueous phase liquids such as crude oil so this component may also be disregarded. Sorption is a nondestructive process in which hydrocarbon compounds are sorbed to the aguifer matrix, represented by a retardation factor. Sorption operates as an attenuation process by effectively reducing the mass available to the dissolved phase plume. Biodegradation involves chemical transformation of the hydrocarbon constituents into mineralized end products, for instance CO<sub>2</sub>, H<sub>2</sub>O and salts, by living organisms. Occasionally, metabolic activity does change the chemical form of the hydrocarbon constituents but does not conclude with mineralization; this is referred to as biotransformation. Of particular importance in this pathway of attenuation is the determination of whether the impacted area is controlled by either anaerobic or aerobic conditions. Aerobic conditions exist under relatively oxygen rich environments resulting in compounds being formed through the reaction of available oxygen and dissolved phase hydrocarbons transforming into H<sub>2</sub>O. Anaerobic conditions are relatively oxygen poor environments and result in transformations into nitrate, ferric iron, sulfate and carbon dioxide products. Dilution is mixing of the plume with groundwater flowing through the affected area. It becomes an important process in natural attenuation when the impacted groundwater enters a zone where significant surface recharge enters the impacted aquifer. Geochemical indicators and concentration migration rate calculations will be utilized to determine if dissolved phase hydrocarbons are susceptible to natural attenuation on a site-specific basis. NA/LT technologies can be combined with passive groundwater remediation technologies, such as Isoc® technology, which are designed to enhance natural attenuation of impacted groundwater.

Groundwater Pump and disposal technology consists of pumping impacted water from selected monitor wells in an effort to remove dissolved phase BTEX constituents from groundwater and mitigate the migration of the dissolved phase plume. This method of treatment employs groundwater withdraw and consist of using an electronic Grundfos® Pump to recover impacted groundwater. Monitor wells are gauged before, during and after pumping. Impacted water is pumped into a 500 gallon trailer mounted polystyrene tank and transported off-site to an NMOCD approved disposal facility. The primary exclusion factors concerning this method of treatment technology are the extended length of time required to achieve site cleanup goals and the large quantities of effluent produced which must be transported off-site to an approved disposal facility.

### 5.0 SUMMARY AND CONCLUSIONS

Currently, ten (10) monitor wells are located on site and two (2) monitor wells exhibited dissolved phase BTEX constituent concentrations in excess of the NMOCD regulatory standard during the last quarter. The laboratory analytical results indicate the dissolved phase BTEX plume appears to be stable and horizontally delineated and no additional monitor well installations are anticipated at this time.

Pumping and disposal technology conducted in conjunction with Monitored Natural Attenuation / Long Term Groundwater Monitoring is the most feasible treatment alternative at this time. Currently, pumping is conducted bi-weekly at the Lovington Gathering WTI release site and appears to be effective in controlling the down gradient migration of the dissolved phase plume. This treatment method consists of pumping and removing approximately one thousand (1,000) gallons of impacted water per week from selected monitor wells. The impacted groundwater is transported off-site to an NMOCD approved disposal facility. The release site will be monitored and sampled on a quarterly schedule and the data will be used to monitor the migration and natural attenuation of the dissolved phase plume. Activities and results from quarterly groundwater monitoring events will be compiled in the *Annual Monitoring Report* which will be submitted to the NMOCD by April 1<sup>st</sup> of each year.

### 6.0 QA/QC PROCEDURES

### 6.1 Groundwater Sampling

After purging the wells, groundwater samples are collected with a disposable Teflon sampler and polyethylene line by personnel wearing clean, disposable gloves.

Groundwater samples collected for BTEX analysis are placed in 40 ml glass VOA vials equipped with Teflon lined caps, which are provided by the analytical laboratory. The vials are filled to a positive meniscus, sealed, and visually checked to ensure the absence of air bubbles.

The filled containers are labeled and placed on ice in an insulated cooler. The cooler is sealed for transportation to the analytical laboratory. Proper chain-of-custody documentation is maintained throughout the sampling process.

The groundwater samples are analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- Poly Aromatic Hydrocarbons (PAH) in accordance with EPA Method SW 846-8270C
- Volatile Organic Carbons (VOCs) in accordance with EPA Method SW 846 8260B
- RCRA and NMWQCC Metals in accordance with EPA Methods SW846-6020A, SW 7470A
- Anions/Cations in accordance with EPA Methods SW375.4, 325.3, 310, 160.1 and SW 846-6010B

### 6.2 Decontamination of Equipment

Cleaning of drilling equipment is the responsibility of the drilling company. In general, the cleaning procedures consists of using high-pressure steam to wash the drilling and sampling equipment prior to drilling and prior to starting each boring. Prior to use, the sampling equipment is cleaned with Liqui-Nox® detergent and rinsed with distilled water.

### 6.3 Laboratory Protocol

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

### 7.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Amendment to Stage II Abatement Plan to the best of its ability. No other warranty, expressed or implied, is made or intended.

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

This report has been prepared for the benefit of Plains Pipeline, L.P. 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 Consulting, LLC and/or Plains Pipeline, L.P.

### **8.0 DISTRIBUTION:**

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New Mexico Energy, Minerals and Natural Resources Department

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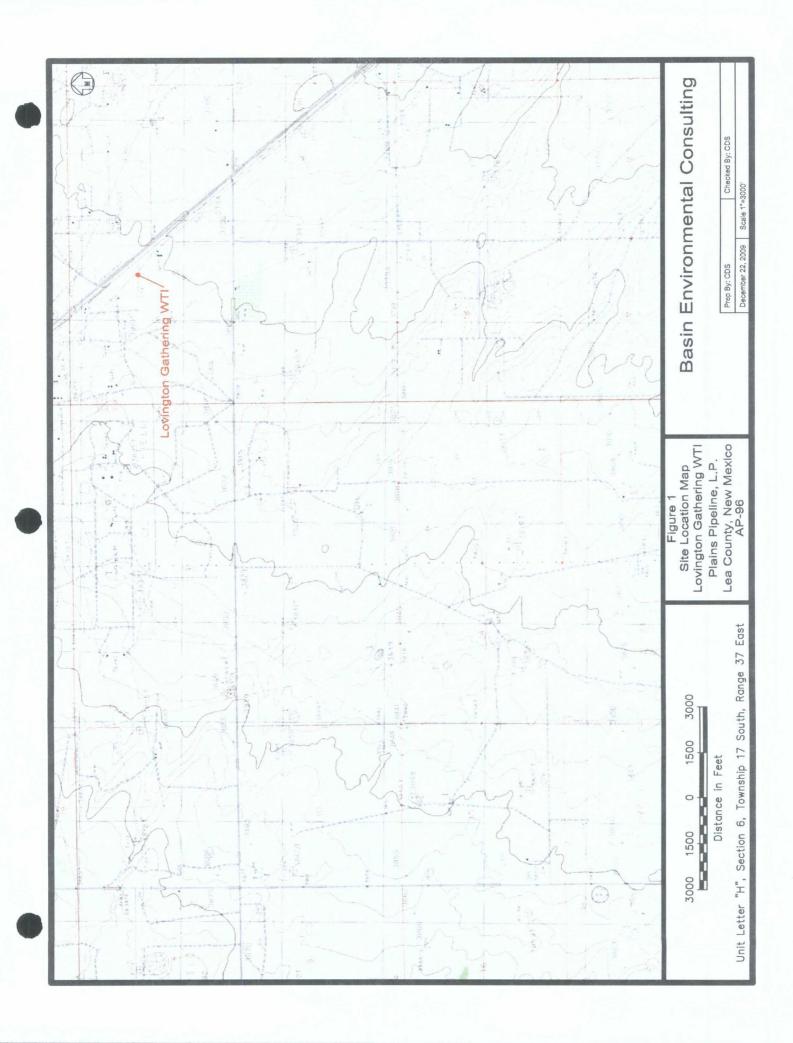
jhenry@paalp.com

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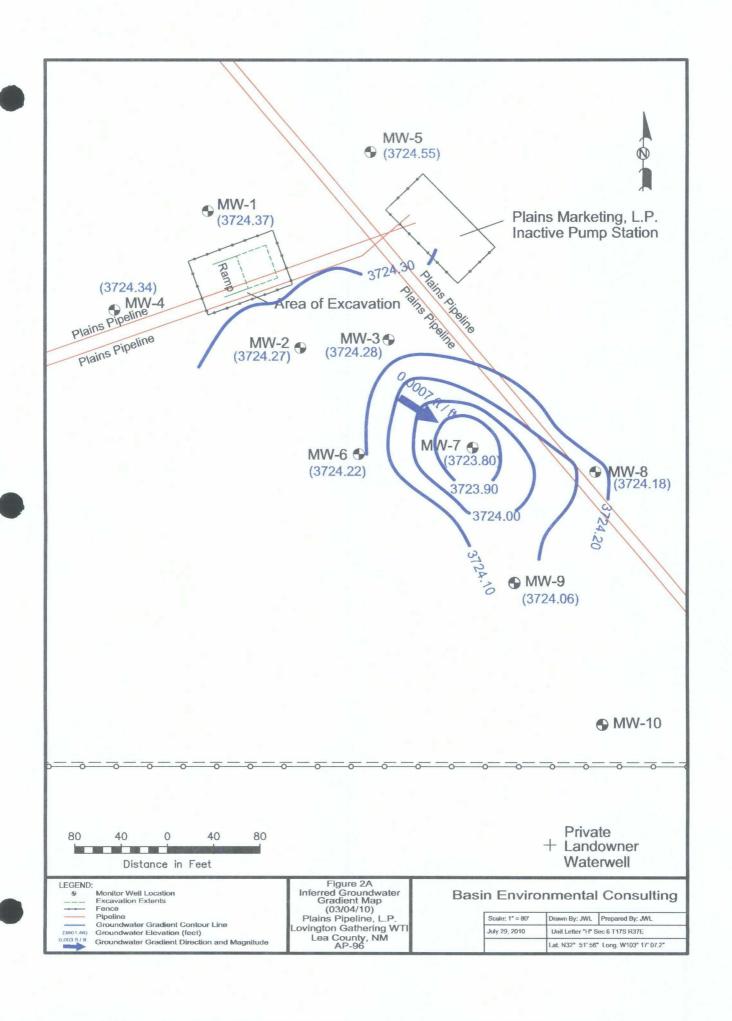
P.O. Box 381

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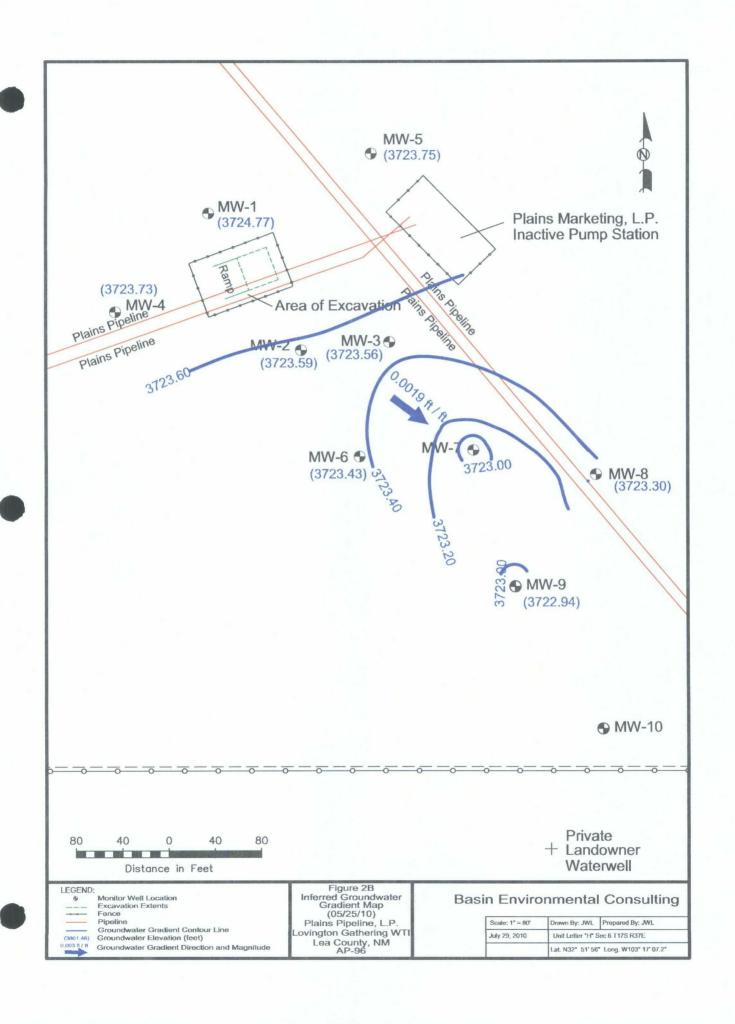
Figure 1
Site Location Map



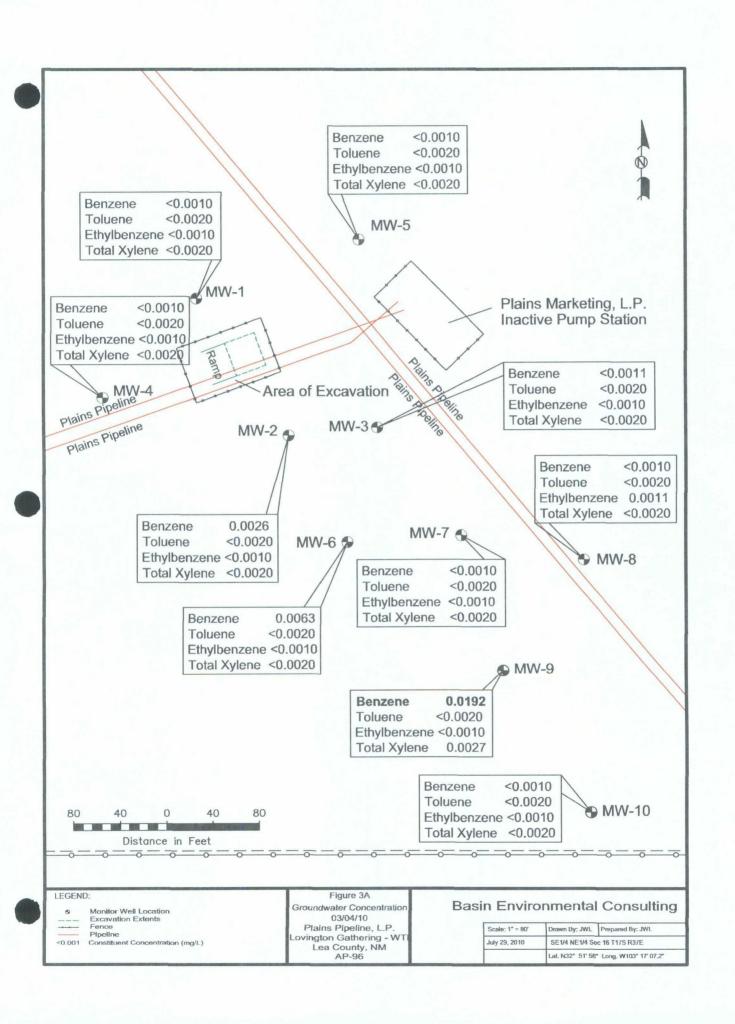
# Figure 2A Inferred Groundwater Gradient Map March 4, 2010



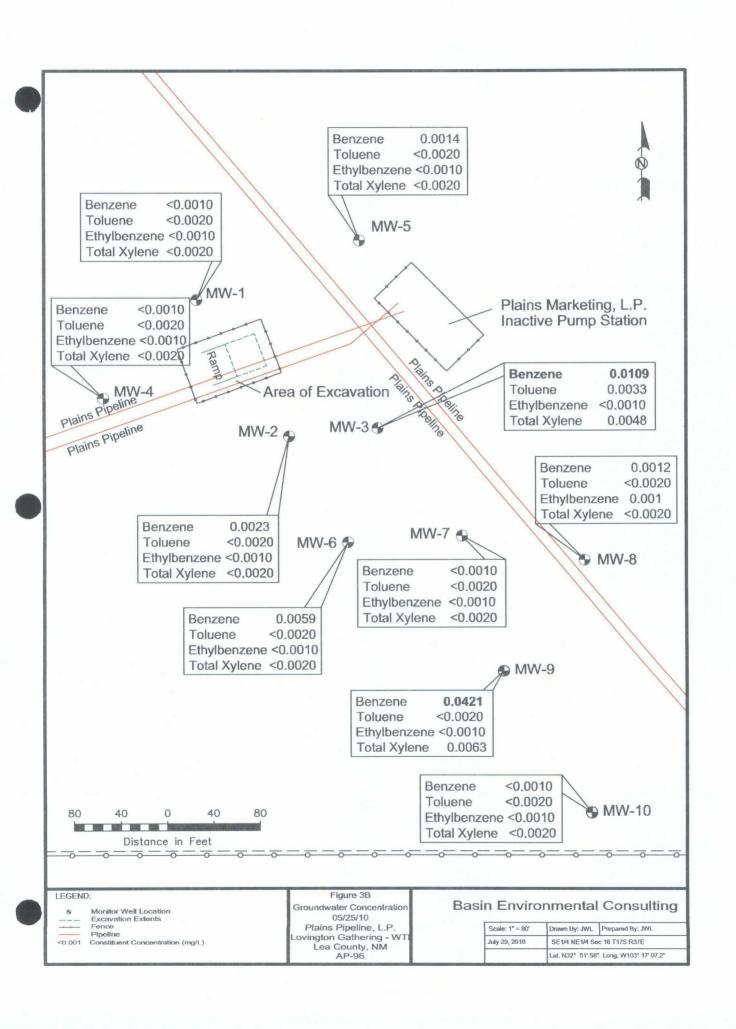
# Figure 2B Inferred Groundwater Gradient Map May 25, 2010



### Figure 3A Groundwater Concentration Map March 4, 2010



### Figure 3B Groundwater Concentration Map May 25, 2010



### Table 1 Groundwater Elevation Data

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	10/05/06	3,806.60	-	78.00	0.00	3,728.60
MW-1	12/28/06	3,806.60	-	78.00	0.00	3,728.60
MW-1	03/16/07	3,806.60	<u> </u>	79.50	0.00	3,727.10
MW-1	05/31/07	3,806.60	-	78.97	0.00	3,727.63
MW-1	09/25/07	3,806.60	-	80.16	0.00	3,726.44
MW-1	11/30/07	3,806.60	-	79.94	0.00	3,726.66
MW-1	03/11/08	3,806.60	-	79.82	0.00	3,726.78
MW-1	06/14/08	3,806.60	-	81.44	0.00	3,725.16
MW-1	09/17/08	3,806.60	ŀ	81.27	0.00	3,725.33
MW-1	12/02/08	3,806.60	-	81.05	0.00	3,725.55
MW-1	03/03/09	3,806.60	-	81.56	0.00	3,725.04
MW-1	06/18/09	3,806.60	-	82.95	0.00	3,723.65
MW-1	09/01/09	3,806.60	-	84.36	0.00	3,722.24
MW-1	12/18/09	3,806.60	-	83.00	0.00	3,723.60
MW-1	03/04/10	3,806.60	-	82.23	0.00	3,724.37
MW-1	05/25/10	3,806.60	-	82.83	0.00	3,723.77
				6.790 Trans		
MW-2	10/05/06	3,806.31	ł	77.94	0.00	3,728.37
MW-2	12/28/06	3,806.31	-	77.94	0.00	3,728.37
MW-2	03/16/07	3,806.31	ı	79.13	0.00	3,727.18
MW-2	05/31/07	3,806.31	-	78.82	0.00	3,727.49
MW-2	09/25/07	3,806.31	1	80.13	0.00	3,726.18
MW-2	11/30/07	3,806.31	-	79.88	0.00	3,726.43
MW-2	03/11/08	3,806.31	-	80.09	0.00	3,726.22
MW-2	06/14/08	3,806.31	•	81.73	0.00	3,724.58
MW-2	09/17/08	3,806.31	-	81.20	0.00	3,725.11
MW-2	12/02/08	3,806.31	-	80.92	0.00	3,725.39
MW-2	03/03/09	3,806.31	-	81.60	0.00	3,724.71
MW-2	06/18/09	3,806.31	-	83.22	0.00	3,723.09
MW-2	09/01/09	3,806.31	-	84.61	0.00	3,721.70
MW-2	12/18/09	3,806.31	-	82.90	0.00	3,723.41
MW-2	03/04/10	3,806.31	-	82.04	0.00	3,724.27
MW-2	05/25/10	3,806.31	-	82.72	0.00	3,723.59

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-3	10/05/06	3,806.19	-	77.85	0.00	3,728.34
MW-3	12/28/06	3,806.19	-	77.85	0.00	3,728.34
MW-3	03/16/07	3,806.19	-	79.13	0.00	3,727.06
MW-3	05/31/07	3,806.19	ı	78.73	0.00	3,727.46
MW-3	09/25/07	3,806.19		80.03	0.00	3,726.16
MW-3	11/30/07	3,806.19	-	79.77	0.00	3,726.42
MW-3	03/11/08	3,806.19	-	80.50	0.00	3,725.69
MW-3	06/14/08	3,806.19	-	81.72	0.00	3,724.47
MW-3	09/17/08	3,806.19	-	81.10	0.00	3,725.09
MW-3	12/02/08	3,806.19	-	80.79	0.00	3,725.40
MW-3	03/03/09	3,806.19	-	81.56	0.00	3,724.63
MW-3	06/18/09	3,806.19	-	83.25	0.00	3,722.94
MW-3	09/01/09	3,806.19	-	84.55	0.00	3,721.64
MW-3	12/18/09	3,806.19	<del>-</del>	82.76	0.00	3,723.43
MW-3	03/04/10	3,806.19	-	81.91	0.00	3,724.28
MW-3	05/25/10	3,806.19		82.63	0.00	3,723.56
						SAN PERSONAL PROPERTY.
MW-4	12/28/06	3,806.67	-	78.73	0.00	3,727.94
MW-4	03/16/07	3,806.67	-	79.17	0.00	3,727.50
MW-4	05/30/07	3,806.67	-	79.09	0.00	3,727.58
MW-4	09/25/07	3,806.67	_	80.35	0.00	3,726.32
MW-4	11/30/07	3,806.67	-	80.09	0.00	3,726.58
MW-4	03/11/08	3,806.67	-	79.95	0.00	3,726.72
MW-4	06/14/08	3,806.67	-	81.60	0.00	3,725.07
MW-4	09/17/08	3,806.67		81.41	0.00	3,725.26
MW-4	12/02/08	3,806.67	-	81.13	0.00	3,725.54
MW-4	03/03/09	3,806.67	-	81.67	0.00	3,725.00
MW-4	06/18/09	3,806.67	_	83.13	0.00	3,723.54
MW-4	09/01/09	3,806.67	-	84.54	0.00	3,722.13
MW-4	12/18/09	3,806.67	_	83.14	0.00	3,723.53
MW-4	03/04/10	3,806.67		82.33	0.00	3,724.34
MW-4	05/25/10	3,806.67	-	82.94	0.00	3,723.73
				67## <b>*</b>		

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-5	12/28/06	3,806.30	-	78.23	0.00	3,728.07
MW-5	03/16/07	3,806.30	-	78.79	0.00	3,727.51
MW-5	05/30/07	3,806.30	-	78.71	0.00	3,727.59
MW-5	09/25/07	3,806.30	-	79.89	0.00	3,726.41
MW-5	11/30/07	3,806.30	-	79.61	0.00	3,726.69
MW-5	03/11/08	3,806.30	-	79.61	0.00	3,726.69
MW-5	06/14/08	3,806.30	-	81.20	0.00	3,725.10
MW-5	09/17/08	3,806.30	-	80.96	0.00	3,725.34
MW-5	12/02/08	3,806.30	-	80.75	0.00	3,725.55
MW-5	03/03/09	3,806.30	-	81.33	0.00	3,724.97
MW-5	06/18/09	3,806.30		82.71	0.00	3,723.59
MW-5	09/01/09	3,806.30	-	84.07	0.00	3,722.23
MW-5	12/18/09	3,806.30	<u>-</u>	82.70	0.00	3,723.60
MW-5	03/04/10	3,806.30	_	81.95	0.00	3,724.35
MW-5	05/25/10	3,806.30	-	82.55	0.00	3,723.75
285 Met					Marie Carlos	
MW-6	12/28/06	3,806.08	-	78.42	0.00	3,727.66
MW-6	03/16/07	3,806.08	-	79.20	0.00	3,726.88
MW-6	05/30/07	3,806.08	-	78.75	0.00	3,727.33
MW-6	09/25/07	3,806.08	_	80.10	0.00	3,725.98
MW-6	11/30/07	3,806.08	-	79.73	0.00	3,726.35
MW-6	03/11/08	3,806.08	-	79.95	0.00	3,726.13
MW-6	06/14/08	3,806.08	-	82.01	0.00	3,724.07
MW-6	09/17/08	3,806.08	_	81.09	0.00	3,724.99
MW-6	12/02/08	3,806.08	-	80.77	0.00	3,725.31
MW-6	03/03/09	3,806.08	-	81.67	0.00	3,724.41
MW-6	06/18/09	3,806.08	-	83.48	0.00	3,722.60
MW-6	09/01/09	3,806.08	-	84.83	0.00	3,721.25
MW-6	12/18/09	3,806.08	<del>-</del>	82.75	0.00	3,723.33
MW-6	03/04/10	3,806.08	-	81.86	0.00	3,724.22
MW-6	05/25/10	3,806.08	-	82.65	0.00	3,723.43
				Action		

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-7	12/28/06	3,806.05	-	78.40	0.00	3,727.65
MW-7	03/16/07	3,806.05	_	79.35	0.00	3,726.70
MW-7	05/31/07	3,806.05	-	78.71	0.00	3,727.34
MW-7	09/25/07	3,806.05	-	80.09	0.00	3,725.96
MW-7	11/30/07	3,806.05	-	79.80	0.00	3,726.25
MW-7	03/11/08	3,806.05	-	80.32	0.00	3,725.73
MW-7	06/14/08	3,806.05	-	81.19	0.00	3,724.86
MW-7	09/17/08	3,806.05	<del>-</del>	81.08	0.00	3,724.97
MW-7	12/02/08	3,806.05	<del>-</del>	80.70	0.00	3,725.35
MW-7	03/03/09	3,806.05	-	81.75	0.00	3,724.30
MW-7	06/18/09	3,806.05	_	83.63	0.00	3,722.42
MW-7	09/01/09	3,806.05	-	84.91	0.00	3,721.14
MW-7	12/18/09	3,806.05	_	83.16	0.00	3,722.89
MW-7	03/04/10	3,806.05	**	82.25	0.00	3,723.80
MW-7	05/25/10	3,806.05		83.10	0.00	3,722.95
	The first of the second		Michigan Control	Silvania.		ARTH-ARTY
MW-8	03/16/07	3,805.89	-	78.78	0.00	3,727.11
MW-8	05/31/07	3,805.89	-	78.64	0.00	3,727.25
MW-8	09/25/07	3,805.89	<del>-</del>	80.03	0.00	3,725.86
MW-8	11/30/07	3,805.89	-	79.70	0.00	3,726.19
MW-8	03/11/08	3,805.89	-	80.16	0.00	3,725.73
MW-8	06/14/08	3,805.89	-	82.38	0.00	3,723.51
MW-8	09/17/08	3,805.89	-	80.97	0.00	3,724.92
MW-8	12/02/08	3,805.89	1	80.58	0.00	3,725.31
MW-8	03/03/09	3,805.89	-	81.79	0.00	3,724.10
MW-8	06/18/09	3,805.89		83.79	0.00	3,722.10
MW-8	09/01/09	3,805.89	_	84.98	0.00	3,720.91
MW-8	12/18/09	3,805.89		82.59	0.00	3,723.30
MW-8	03/04/10	3,805.89	-	81.71	0.00	3,724.18
MW-8	05/25/10	3,805.89	-	82.59	0.00	3,723.30
						3334

### TABLE 1

### **GROUNDWATER ELEVATION DATA**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-9	09/25/07	3,806.02	_	80.38	0.00	3,725.64
MW-9	11/30/07	3,806.02	-	79.89	0.00	3,726.13
MW-9	03/11/08	3,806.02	-	80.69	0.00	3,725.33
MW-9	06/14/08	3,806.02	-	83.11	0.00	3,722.91
MW-9	09/17/08	3,806.02	+	81.19	0.00	3,724.83
MW-9	12/02/08	3,806.02	-	80.81	0.00	3,725.21
MW-9	03/03/09	3,806.02	-	82.29	0.00	3,723.73
MW-9	06/18/09	3,806.02	-	84.45	0.00	3,721.57
MW-9	09/01/09	3,806.02	-	85.61	0.00	3,720.41
MW-9	10/05/09	3,806.02	-	84.59	0.00	3,721.43
MW-9	12/18/09	3,806.02	-	82.90	0.00	3,723.12
MW-9	03/04/10	3,806.02	-	81.96	0.00	3,724.06
MW-9	05/25/10	3,806.02	-	83.08	0.00	3,722.94
MW-10	11/02/09	-	-	82.99	0.00	-
MW-10	12/18/09	-	-	82.94	0.00	-
MW-10	03/04/10	-	-	82.03	0.00	-
MW-10	05/25/10	-		83.44	0.00	_

# Table 2 Concentrations of Benzene and BTEX in Groundwater

TABLE 2

### **CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER**

SAMPLE				46-8021B, 50	
DATE	BENZENE	TOLUENE	ETHYL-	,	O-XYLENES
			BENZENE	XYLENES	
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
10/05/06	<0.001	< 0.001	<0.001	<0.001	<0.001
12/28/06	<0.001	<0.001	<0.001	<0.001	<0.001
03/16/07	<0.001	<0.001	<0.001	<0.001	<0.001
05/31/07	<0.001	<0.001	<0.001	<0.001	<0.001
09/25/07	<0.001	<0.001	<0.001	<0.002	<0.001
11/30/07	<0.001	<0.002	<0.001	<0.002	<0.001
03/11/08	<0.001	<0.002	<0.001	<0.002	<0.001
06/14/08	<0.001	<0.002	<0.001	<0.002	<0.001
09/17/08	0.020	<0.002	<0.001	<0.002	< 0.001
12/02/08	0.035	<0.002	<0.001	<0.002	<0.001
03/03/09	<0.001	<0.002	<0.001	<0.002	<0.001
06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
edisoni.	Service Constitution	TWILL SEE	e de la compa	Sept.	AUST TEXAST
10/05/06	0.010	<0.001	<0.001	<0.001	<0.001
12/28/06	0.161	<0.001	<0.001	0.024	<0.001
03/16/07	0.154	<0.001	<0.001	0.015	<0.001
05/31/07	0.005	<0.001	<0.001	<0.001	<0.001
09/25/07	0.050	<0.001	<0.001	0.003	<0.001
11/30/07	0.928	<0.001	<0.005	0.036	<0.005
03/11/08	0.095	<0.002	<0.001	0.0032	<0.001
06/14/08	0.003	<0.002	<0.001	<0.002	<0.001
09/17/08	0.159	<0.002	<0.001	0.004	<0.001
12/02/08	0.050	0.002	<0.001	0.007	0.001
03/03/09	0.036	<0.002	<0.001	0.0026	<0.001
06/18/09	0.0097	<0.0020	<0.0010	<0.0020	<0.0010
09/01/09	0.084	<0.0020	<0.0010	0.0083	<0.0010
12/18/09	0.0129	<0.0020	<0.0010	0.0095	<0.0010
03/04/10	0.0026	<0.0020	<0.0010	<0.0020	<0.0010
05/25/10	0.0023	<0.0020	<0.0010	<0.0020	<0.0010
1000	SARY PACE	1007 100	697 X 456	2022/00/2017	A region of the his
10/05/06	6.60	<0.001	<0.001	0.072	<0.001
12/28/06	1.02	<0.001	0.005	0.028	<0.001
03/16/07	1.48	<0.001	0.013	0.034	<0.001
05/31/07	1.66	0.010	0.034	0.029	0.012
09/25/07	0.494	0.023	0.020	0.014	0.007
11/30/07				0.141	0.074
03/11/08				0.066	0.139
					0.005
				L	<0.001
12/02/08	0.024	<0.002	<0.001	0.004	0.001
03/03/09		0.0305	0.0251	0.0173	0.0158
06/18/09	0.0031	<0.0020	<0.0010	<0.0020	<0.0010
09/01/09	0.0073	0.0033	<0.0010	0.0028	0.0015
12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
00/04/40	0.0011	<0.0020	<0.0010	<0.0020	<0.0010
03/04/10	0.0011	1 -0.0020	~0.0010	~0.0020	10.0010
	10/05/06 12/28/06 03/16/07 05/31/07 05/31/07 11/30/07 03/11/08 06/14/08 09/17/08 12/02/08 03/03/09 06/18/09 03/04/10 05/25/10 05/25/10 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 03/04/10 05/25/10 05/25/07 11/30/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/07 05/31/09 05/25/10	(mg/L) 10/05/06 <0.001 12/28/06 <0.001 03/16/07 <0.001 05/31/07 <0.001 05/31/07 <0.001 05/31/07 <0.001 11/30/07 <0.001 11/30/07 <0.001 03/11/08 <0.001 06/14/08 <0.001 09/17/08	(mg/L)         (mg/L)           10/05/06         <0.001	10/05/06   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001	10/05/06

### TABLE 2

### **CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER**

SAMPLE LOCATION	SAMPLE		METHODS	: EPA SW 8	46-8021B, 50	30
	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	<b>O-XYLENES</b>
				BENZENE	XYLENES	
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-4	12/28/06	<0.001	<0.001	<0.001	<0.001	< 0.001
	03/16/07	<0.001	<0.001	<0.001	<0.001	<0.001
	05/30/07	<0.001	0.001	<0.001	<0.001	<0.001
-	09/25/07	<0.001	0.001	<0.001	<0.002	<0.001
	11/30/07	<0.001	<0.002	<0.001	<0.002	<0.001
	03/11/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	<0.001	0.006	<0.001	<0.002	< 0.001
	03/03/09	<0.001	<0.002	<0.001	<0.002	<0.001
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
		20024-0	1000		A A Zado	Alexander St.
MW-5	12/28/06	<0.001	<0.001	<0.001	<0.001	<0.001
•	03/16/07	<0.001	<0.001	<0.001	<0.001	<0.001
	05/30/07	<0.001	<0.001	< 0.001	<0.001	< 0.001
	09/25/07	<0.001	<0.001	<0.001	<0.002	< 0.001
	11/30/07	<0.001	<0.002	<0.001	<0.002	<0.001
	03/11/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
• •	12/02/08	<0.001	<0.002	<0.001	<0.002	<0.001
	03/03/09	<0.001	<0.002	<0.001	<0.002	<0.001
	06/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	05/25/10	0.0014	<0.0020	< 0.0010	<0.0020	<0.0010
	CONTRACT OF	W 75 75	7777782556	778279737W	LX Y SANTO	\$600,865
MW-6	12/28/06	<0.001	<0.001	<0.001	<0.001	<0.001
	03/16/07	<0.001	< 0.001	<0.001	<0.001	<0.001
	05/30/07	<0.001	<0.001	<0.001	<0.001	<0.001
	09/25/07	<0.001	<0.001	<0.001	<0.002	<0.001
	11/30/07	<0.001	<0.002	<0.001	<0.002	<0.001
	03/11/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	<0.001	<0.002	<0.001	<0.002	<0.001
	09/17/08	<0.001	<0.002	<0.001	<0.002	<0.001
	12/02/08	<0.001	<0.002	<0.001	<0.002	<0.001
	03/03/09	<0.001	<0.002	<0.001	<0.002	<0.001
	06/18/09	0.0044	<0.0020	<0.0010	<0.0020	<0.0010
	09/01/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	12/18/09	0.013	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	0.0063	<0.0020	<0.0010	<0.0020	<0.0010
	05/25/10	0.0059	<0.0020	<0.0010	<0.0020	<0.0010
Land Control	WAY POLYCE	description.	500 OF TO	GAANG MARK	MARKET FOR	Acres Company

TABLE 2

### CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

SAMPLE LOCATION	SAMPLE		METHODS	EPA SW 8	46-8021B, 50	30
	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	O-XYLENES
			1	BENZENE	XYLENES	
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-7	12/28/06	0.047	<0.001	< 0.001	0.001	<0.001
	03/16/07	0.047	<0.001	<0.001	0.015	<0.001
	05/31/07	0.039	<0.001	<0.001	0.005	<0.001
	09/25/07	0.037	<0.001	<0.001	0.030	<0.001
	11/30/07	0.026	<0.002	<0.001	0.022	<0.001
	03/11/08	0.095	<0.002	<0.001	0.0032	<0.001
	06/14/08	0.138	<0.002	<0.001	0.016	<0.001
	09/17/08	0.353	<0.002	<0.001	0.003	<0.001
	12/02/08	0.036	<0.002	<0.001	0.003	0.002
	03/03/09	0.0775	<0.002	<0.001	0.0327	<0.001
	06/18/09	0.057	<0.0020	<0.0010	0.0329	<0.0010
	09/01/09	0.012	<0.0020	<0.0010	<0.0020	<0.0010
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
		2:368 w/37	346		To Buch	
MW-8	03/16/07	<0.001	<0.001	<0.001	<0.001	<0.001
	05/31/07	<0.001	<0.001	<0.001	<0.001	<0.001
	09/25/07	<0.001	<0.001	<0.001	<0.002	<0.001
	11/30/07	<0.001	<0.002	<0.001	<0.002	<0.001
	03/11/08	<0.001	<0.002	<0.001	<0.002	<0.001
	06/14/08	0.008	<0.002	<0.001	<0.002	<0.001
	09/17/08	0.568	<0.010	<0.005	<0.010	<0.005
	12/02/08	0.234	0.046	0.008	0.041	0.013
	03/03/09	0.0284	<0.002	<0.001	0.0068	<0.001
	06/18/09	0.0045	<0.0020	0.0016	0.0032	<0.0010
	09/01/09	0.0013	<0.0020	0.0011	0.0141	<0.0010
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	<0.0010	<0.0020	0.0011	<0.0020	<0.0010
76.7 (C.) (C.) (C.) (C.) (C.) (C.) (C.) (C.)	05/25/10	0.0012	<0.0020	0.001	<0.0020	<0.0010
***	a restrict the season to a section of		The state of the s	Tresident Co.	30000	1990 C.
MW-9	09/25/07	<0.001	<0.001	<0.001	<0.002	<0.001
	11/30/07 03/11/08	<0.001 <0.001	<0.002 <0.002	<0.001 <0.001	<0.002 <0.002	<0.001 <0.001
	06/14/08	<0.001	<0.002		<0.002	
	09/17/08	<0.001	<0.002	<0.001 <0.001	<0.002	<0.001 <0.001
	12/02/08	<0.001	<0.002	<0.001	<0.002	<0.001
	03/03/09	<0.001	<0.002	<0.001	<0.002	<0.001
	06/18/09	<0.001	<0.002	<0.001	<0.002	<0.001
	09/01/09	0.9717	0.0641	<0.0100	0.0867	0.0422
	09/10/09	1.838	<0.0200	<0.0100	0.0537	<0.0100
	10/05/09	0.985	<0.0200	<0.0100	0.0337	<0.0010
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	03/04/10	0.0192	<0.0020	<0.0010	0.0027	<0.0010
	05/25/10	0.0421	<0.0020	<0.0010	0.0063	<0.0010
	<u> </u>				0.0000	
MW-10	11/02/09	<0.005	<0.005	<0.005	<0.010	<0.005
	03/04/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
	05/25/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010
		The first many	Barrier St. S.	-0.0010		-0.0010
NMOCD CRITERIA	2 AMERICA - TOTAL A STATE	0.01	0.75	0.75		LENES 0.62
				L		

# Table 3 Concentrations of Poly Aromatic Hydrocarbons in Groundwater

CONCENTRATIONS OF POLY AROMATIC HYDROCARBONS (SEMI-VOLATILE) COMPOUNDS IN GROUNDWATER PLAINS PIPELINE, L.P. TABLE 3

LOVINGTON GATHERING WTI LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER AP-96

All water concentrations are reported in mg/L

	Ругепе		<0.00>	F.	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	No.	<0.005
			-				_		H	-								-	1	
	Рһепапŧһтепе		<0.00>		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	243	< 0.005	<0.005		<0.005	<0.005		<0.005
	Naphthalene		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
	Indeno[1,2,3-ed)pyrene	#00 O	<0.005		<0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
	Fluorene		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	< 0.005	<0.005		<0.005	<0.005		<0.005	<0.005	To San San	<0.005
	Fluoranthene	.000	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
01	Oibenz{a,h anthracene		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	10.00	<0.005
EPA SW846-8270C, 3510	Chrysene		<0.005	うな。	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
PA SW846-8270	Вепхо[k]Пиогапећеве		<0.005	F. W. W.	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	100	<0.005
EPA	Benzo[g,h,i]perylene		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	100	<0.005
E	Вепzо[b]Пиогапећеве	9	<0.005	W. W.	< 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	* 3.8	<0.005	<0.005		<0.005	<0.005		<0.005
	Benzo[a]pyrene	9	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N. O. H	<0.005	<0.005		<0.005	<0.005		<0.005
	Вепхо[а]аптhгасепе	*	<0.005	V 1800	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
	эпээвтийпА		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	( ) できる	<0.005	<0.005		<0.005
	уссияррұрдыс	- 000		1.00	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
	опэптрепэоА	2000	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		<0.005
	SAMPLE		11/02/09	S. Walley	12/02/08	12/18/09	12/02/08	12/18/09	12/02/08	12/18/09	12/02/08	12/18/09		12/02/08	12/18/09		12/02/08	12/18/09		12/02/08
SAMPLE !		V			MW-1	MW-1	MW-2	MW-2	MW-3	_ MW-3	MW-4	MW-4		MW-5	MW-5		9-MM	9-MM	ing or	MW-7

CONCENTRATIONS OF POLY AROMATIC HYDROCARBONS (SEMI-VOLATILE) COMPOUNDS IN GROUNDWATER TABLE 3

PLAINS PIPELINE, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-96

All water concentrations are reported in mg/L

	Pyrene	<0.005		<0.005	<0.005		<0.005	<0.005
	Рһепапітьепе	<0.005		<0.005	<0.005		<0.005	<0.005
	SneladitdaN.	<0.005		<0.005	<0.005		<0.005	<0.005
	Indenol 1,2,3-cd)pyrene	<0.005		<0.005	<0.005		<0.005	<0.005
	Fluorene	<0.005		<0.005	<0.005		<0.005	<0.005
	Fluoranthene	<0.005		<0.005	<0.005		<0.005	<0.005
0	Dibenz a,h anthracene	<0.005		<0.005	<0.005		<0.005	<0.005
EPA SW846-8270C, 3510	Сћгуѕепе	<0.005	******	<0.005	<0.005		<0.005	<0.005
SW846-8	Вепхо[k]Япогапthene	<0.005		<0.005	<0.005		<0.005	<0.005
EPA	Benzo[g,h,i]perylene	<0.005		<0.005	<0.005		<0.005	<0.005
	Benzo b}fluoranthene	<0.005		<0.005	<0.005		<0.005	<0.005
	Benzolalpyrene	<0.005		<0.005	<0.005		<0.005	<0.005
	Benzo a anthracene	<0.005		<0.005	<0.005		<0.005	<0.005
	эпээвтильА	<0.005		<0.005	<0.005		<0.005	<0.005
	Acenaphthylene	<0.005		<0.005	<0.005	100	<0.005	<0.005
	ənədiidqanəəA	<0.005		<0.005	<0.005		<0.005	<0.005
	SAMPLE	12/18/09		12/02/08	12/18/09		12/02/08	
	SAMPLE SAMPLE LOCATION DATE	MW-7		MW-8	MW-8	100	WM-9	MM-9

## Table 4 Concentrations of Volatile Organic Compounds in Groundwater

TABLE 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS PIPELINE, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-96
All water concentrations are in mg/L

-Shioroethane	<0.01	_
Chlorobenzene	<0.005	_
Carbon Tetrachloride	<0.005	J\gm 10.0
Carbon Disulfide	<0.05	-
tert-Butylbenzene	<0.005	-
sec-Butylbenzene	<0.005	-
n-Butylbenzene	<0.005	-
38TM	<0.005	-
enonstu8-S		-
Bromomethane	1	-
Bromoform	<0.005	-
Bromodichloromethane	<0.005	-
Bromochloromethane	<0.005	-
Bromobenzene	<0.005	-
Велхеле	<0.005	J\gm 10.0
Acrylonitrile		-
ənotəsA		-
Sample		ontaminant INMWQCC er standards 11.UU and 3.
Date Sampled	11/02/09	Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3-
	Acetone Acetone Acetone Bromochloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane Ac-Butylbenzene Ac-Butylbenzene Acet-Butylbenzene Carbon Disulfide Carbon Tetrachloride Carbon Tetrachloride	MW-10  Acetone  Acetone  Acetone  Acetone  Benzene  Benzene  Bromochloromethane  Bromodichloromethane  Bromodichloromethane  Bromodichloromethane  Bromodichloromethane  A-Butanone  A-But

Page 2 of 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS PIPELINE, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-96 TABLE 4

All water concentrations are in mg/L

	IO.	
cis-1,2-Dichloroethene	<0.005	J\gmf.0
1,1-Dichloroethene	<0.005	ച\քm &00.0
9nsdt9orold5iG-S,f	<0.005	J\gm 10.0
9nsrh9o1olr5iG-f,t	<0.005	J\gm &00.0
Dichlorodifluormethane	<0.005	-
ا بط-Dichlorobenzene	<0.005	-
9nəznədoroldəid-£,1	<0.005	-
9neznedo1old:2,l	<0.005	-
Dibromomethane (methylene bromide)	<0.005	-
9nsrl19omordid-2,1	<0.005	J\gm 1000.0
1,2-Dibromo-3- chloropropane	<0.005	-
Dibromochloromethane	<0.005 <0.005	-
p-Cymene(p- lsopropyltoluene)	<0.005	-
4-Chlorotoluene	<0.005	-
2-Chlorofoluene	<0.005	-
Chloromethane		-
m1o1o1oldD	<0.005	J\ <sub>B</sub> m1.0
Z-Chloroethyl vinyl ether	ļ.	-
Sample		Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3- 103.A.
Date Sampled	11/02/09	Maximum C Levels fron Drinking wat Sections 1-1

Page 3 of 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS PIPELINE, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-96 TABLE 4

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	Ŋ	MANAGE SECTION AND AND AND AND AND AND AND AND AND AN
1,1,1,2-Tetrachloroethane	<0.005	-
Styrene	<0.005	-
n-Propylbenzene	<0.005	
Naphthalene	<0.01	J\gm £0.0
4-Methyl-2-pentanone (MIBK)	-	•
Methylene chloride	<0.005	J\քmf.0
<b>lsobropylbenzene</b>	<0.005	-
2-Hexanone	,	-
Hexachlorobutadiene	<0.005	-
Ethylbenzene	<0.005	ച\gm &T.0
enaqorqoroldəiG-£,f-znsrt	<0.005	-
eis-1,3-Dichloropropene	<0.005	-
1,1-Dichloropropane	<0.005	-
2,2-Dichloropropane	<0.005	-
1,3-Dichloropropane	<0.005	-
1,2-Dichloropropane	<0.005 <0.005 <0.00	-
frans-1,2-Dichloroethene	<0.005	-
Sample Location	MW-10	Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3- 103.A.
Date Sampled	11/02/09	Maximum Contaminant Levels from NMWQCC Drinking water standard Sections 1-101.UU and 3

Page 4 of 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER PLAINS PIPELINE, LP LOVINGTON GATHERING WTI LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER AP-96

All water concentrations are in mg/L **TABLE 4** 

	ВI	
Vinyl Chloride	<0.00	J\gm 100.0
Vinyl Acetate	'	-
ənəlyX-q,m	<0.01	ŋ/ɓw
o-Xylene	<0.005	∑6.0 enslyX istoT
9nəznədlyhtəminT-Z,£,t	<0.005	•
1,2,4-Trimethylbenzene	<0.005	· •
ənsqorqoroldɔirΤ-ε,Σ,۱	<0.005	-
Frichlorofluoromethane	<0.005	-
Trichloroethene (TCE)	<0.005	J \gm 10.0
ensdteoroldpirT-2,1,1	<0.005	-
ansrtaoroldoinT-f,f,f	<0.005	∆\gm ∂0.0
1,2,4-Trichlorobenzene	<0.005	
ənəznədoroldɔiτΤ-ɛ,Δ,t	<0.005	-
Toluene	<0.005	J\gm &T.0
(PCE) (PCE)	<0.005	-
ansdieoroethane	<0.005 <0.005	∆\gm ≤0.0
Sample		ontaminant NMWQCC er standards 31.UU and 3-
Date Sampled	11/02/09	Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3-

## Table 5 Concentrations of RCRA and NMWQCC Metals in Groundwater

CONCENTRATIONS OF RCRA AND NAWQCC METALS IN GROUNDWATER

PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-96

All water concentrations are reported in mg/L

		Метешту	0.0001	.1\gm \$00.0
		əniZ	<0.003	J/gm 01
		Silver	<0.002	J\gm 20.0
		muinələ8	<0.003	J\gm 20.0
		Nickel	0.027	J\gm 2.0
		munəbdyloMi	<0.004	J\gm 0.1
		esonagnaM	0.017	Л∖ൠՠ Հ.0
	PA 7470A	bea-J	<0.002	J\gm 20.0
d in mg/L	EPA SW846-6020A, EPA 7470A	Ісои	0.82	J\gm 0.1
ns are report	PA SW846	Cobber.	<0.003	.մ/gm 0.f
All water concentrations are reported in mg/	EI	Cobalt	<0.005	J\gm 20.0
All water		Сһғотінт	0.053	1\Ձm 20.0
		Cadmium	<0.001	J\gm 10.0
		Вогоп	0.397	J\ym &7.0
		Barium	0.134	J\gm 0.1
		Arsenic	0.007	J\gm 1.0
		munimulA	0.908	J\gm 0.č
	SAMPLE SAMPLE LOCATION DATE		11/02/09	ntaminant M WQCC r tions 1- 103.A.
			MW-10	Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1- 101.UU and 3-103.A.

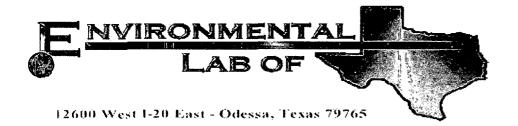
### Table 6 Concentrations of Anions/Cations in Groundwater

# TABLE 6 CONCENTRATIONS OF ANIONS/CATIONS IN GROUNDWATER PLAINS MARKETING, L.P. LOVINGTON GATHERING WTI LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER AP-96

Ill water concentrations are renorted in mol!

ı				<del>                                      </del>
		Flouride	9.27	J\gm
All water concentrations are reported in mg/L		Phosphate	<2.5	-
		Nitrate	2.14	J\gm 01
		Carbonate	<4.00	-
	EPA SW375.4, 325,3, 310, 160.1 SW846 6010B	Bicarbonate	126	-
	125,3, 310, 160.1	Sulfate	64.1	J\gm 009
	EPA SW375.4, 3	Chloride	24.9	7/gm 0ez
All water concer		Sodium	33.3	-
		Potassium	<12.5	•
		Magnesium	13.6	-
		Calcium	76.5	-
	SAMPLE SAMPLE	AMPLE SAMPLE DATE LOCATION		Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1- 101.UU and 3-103.A.
	SAMPLE DATE I		11/2/2009	Maximum Contamina Levels from NM WQC Drinking water standards Sections 1- 101.UU and 3-103.A.

### Appendix A Laboratory Analytical Reports



### Analytical Report

### **Prepared for:**

Camille Reynolds
Plains All American EH & S
1301 S. County Road 1150
Midland, TX 79706-4476

Project: Lovington Gathering WTI
Project Number: SRS: 2006-142
Location: Lea Co., NM

Lab Order Number: 6J06008

Report Date: 10/18/06

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-I	6J06008-01	Water	10/05/06 11:55	10-06-2006 14:00
MW-2	6J06008-02	Water	10/05/06 14:40	10-06-2006 14:00
MW-3	6J06008-03	Water	10/05/06 16:55	10-06-2006 14:00



Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (6J06008-01) Water	<del></del>			·					S-IN
Benzene	ND	0.0100	mg/L	10	EJ61608	10/17/06	10/17/06	EPA 8021B	
Toluene	ND	0.0100	н	11	n	a a	н		
Ethylbenzene	ND	0.0100	*	н	н	R	н	**	
Xylene (p/m)	ND	0.0100	"	"	"	"	n	n	
Xylene (o)	ND	0.0100		"	н	**	n	н	
Surrogate: a,a.a-Trifluorotoluene		81.5 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.2 %	80-	120	"	"	n	n	
MW-2 (6J06008-02) Water									
Benzene	0.0109	0.0100	mg/L	10	EJ61608	10/17/06	10/17/06	EPA 8021B	
Toluene	ND	0.0100			"	"	"	н	
Ethylbenzene	ND	0.0100	"	"	u		**	н	
Xylene (p/m)	ND	0.0100	"	**	ų	e	"	н	
Xylene (o)	ND	0.0100	"	*			"	•	
Surrogate: a,a,a-Trifluorotoluene		81.0 %	80-	120	"	"	"	"	
errogate: 4-Bromofluorobenzene		80.8 %	80-	120	n	"	"	"	
MW-3 (6J06008-03) Water								_	
Benzene	6.60	0.0250	mg/L	25	EJ61608	10/17/06	10/17/06	EPA 8021B	
Toluene	ND	0.0250	н	H	•		"	**	
Ethylbenzene	J [0.0144]	0.0250	н	и	"	"	17		
Xylene (p/m)	0.0723	0.0250	"	n		n	II.		
Xylene (o)	J [0.00948]	0.0250	"	11	н	u	*	п	
Surrogate: a,a,a-Trifluorotoluene		95.0 %	80-	120	"	n	"	"	
Surrogate: 4-Bromofluorobenzene		81.2 %	80-	120	"	"	"	"	

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control Environmental Lab of Texas

Environmental Lab of Texas										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ61608 - EPA 5030C (GC)										
Blank (EJ61608-BLK1)				Prepared: 1	0/16/06 A	nalyzed: 10	)/17/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	•							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	**							
Surrogate: a,a,a-Trifluorotoluene	32.4		ug/l	40.0		81.0	80-120			
Surrogate: 4-Bromofluorobenzene	33.9		"	40.0		84.8	80-120			
LCS (EJ61608-BS1)				Prepared: 1	0/16/06 A	nałyzed: 10	)/17/06			
Benzene	0.0482	0.00100	mg/L	0.0500		96.4	80-120			
Toluene	0.0428	0.00100	"	0.0500		85,6	80-120			
Ethylbenzene	0.0413	0.00100	n	0.0500		82.6	80-120			
Xylene (p/m)	0.0853	0.00100	"	0.100		85.3	80-120			
Xylene (o)	0.0409	0.00100	"	0.0500		81.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.7		ug/l	40.0		91.8	80-120			
Surrogate: 4-Bromofluorobenzene	42.8		"	40.0		107	80-120			,
libration Check (EJ61608-CCV1)				Prepared: 1	10/16/06 A	nalyzed: 10	)/17/06			
zene	50.4		ug/l	50.0		101	80-120			
 Toluene	43.5		н	50.0		87.0	80-120			
Ethylbenzene	41.4		н	50.0		82.8	80-120			
Xylene (p/m)	81.9		н	100		81.9	80-120			
Xylene (o)	40.3		н	50.0		80.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.7		"	40.0		84.2	80-120			
Surrogate: 4-Bromofluorobenzene	35.0		"	40.0		87.5	80-120			
Matrix Spike (EJ61608-MS1)	Sou	ırce: 6J12016-	01	Prepared: 1	0/16/06 A	nalyzed: 10	)/17/06			
Benzene	0.0518	0.00100	mg/L	0.0500	ND	104	80-120			
Toluene	0.0462	0.00100	"	0.0500	ND	92.4	80-120			
Ethylbenzene	0.0424	0.00100	"	0.0500	ND	84.8	80-120			
Xylene (p/m)	0.0932	0.00100	"	0.100	ND	93.2	80-120			
Xylene (o)	0.0432	0.00100	"	0.0500	ND	86.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.6		ug/l	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	39.6		"	40.0		99.0	80-120			

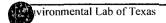
Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ61608 - EPA 5030C (GC)										
Matrix Spike Dup (EJ61608-MSD1)	Sou	rce: 6J12016-6	01	Prepared: 1	0/16/06 A	nałyzed: 10	/17/06			
Benzene	0.0500	0.00100	mg/L	0.0500	ND	100	80-120	3.92	20	
Toluene	0.0424	0.00100	10	0.0500	ND	84.8	80-120	8.58	20	
Ethylbenzene	0.0453	0.00100	**	0.0500	ND	90.6	80-120	6.61	20	
Xylene (p/m)	0.0807	0.00100	10	0.100	ND	80.7	80-120	14.4	20	
Xylene (0)	0.0412	0.00100		0.0500	ND	82.4	80-120	4.74	20	
Surrogate: a,a,a-Trifluorotoluene	33.8		ug/l	40.0		84.5	80-120			
Surrogate: 4-Bromofluorobenzene	34.7		"	40.0		86.8	80-120			





Duplicate

Dup

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds

### Notes and Definitions

S-INT Sample contains high levels of surfactants. DET Analyte DETECTED Analyte NOT DETECTED at or above the reporting limit ND Not Reported NR dry Sample results reported on a dry weight basis Relative Percent Difference RPD LCS Laboratory Control Spike Matrix Spike MS

Report Approved By:

Date:

10/18/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director La Tasha Cornish, Chemist Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Fax: (432) 687-4914

# Christian Lab of lexas

Basin Environmental Service Technologies, LLC

Ken Dutton

Project Manager:

Company Name

Lovington, NM 88260

Company Address: P.O. Box 301

(505) 441-2124

Telephone No: City/State/Zip:

Sampler Signature:

670008

(lab use only) ORDER #:

Odessa, Texas 79765 12600 West I-20 East

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Lovington Gathering WTI

Project Loc: Lea County, NM Project #: 2006-142

PO#, PAA/C, Reynolds

NPDES

X Standard

TRRP

Report Format:

e-mail: kdutton@basinenv.com

Fax No: (505) 396-1429

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Γ				Anions (Cl, SO4, CO3, HCO3)	힏
Γ				Cations (Ca, Mg, Na, K)	ſ
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N/A

FIELD CODE MW-1 MW-2 MW-3

N/A MA

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No. of Containers

Time Sampled

Date Sampled

Ending Depth

Beginning Depth

(Vino seu del) # 8A

TAT basbast2

Chlorides (EPA 300.0)

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	Custody seals on cooler(s)	001	10
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Sample Containers Intact?	VOCs Free of Headspace'		
	Sample Containers-Intact?		

by Sampter Client R by Courier? UP	Temperature Upon Re	
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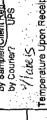
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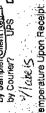
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Laboratory Comments:

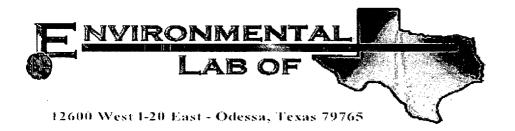
GW samples may contain Bariod Quickfoam, see attached MSDS sheet for chemical contents

Special Instructions:

inquished by:

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

Clie Plains P/L / Basin Env.		•		
Date/ Time: 10-06-06 @ 1400				
Lab ID#: 6 J06008				
Initials: JMM				
Sample Receipt	Checklist			
	1	·		Client Initials
#1 Temperature of container/ cooler?	Yes	<u>No</u>	2.0 °C	
#2 Shipping container in good condition?	Yes	No_		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No.	Not Present	
#5 Chain of Custody present?	(Yes)	<u>No</u>		
#6 Sample instructions complete of Chain of Custody?	Yes	No_	<u> </u>	
#7 Chain of Custody signed when relinquished/ received?	Yes	No	15 15	
#8 Chain of Custody agrees with sample label(s)?	(Tes	No No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody? #11 Containers supplied by ELOT?	(es)	No No		
#12 Samples in proper container/ bottle?	(Yes)	No	Can Dalaw	
#13 Samples properly preserved?	(Yes)	No	See Below See Below	
#14 Sample bottles intact?	Yes	No	See Below	
#15 Preservations documented on Chain of Custody?	Ves	No	<del> </del>	
#16 Intainers documented on Chain of Custody?	(Yes)	No		<u> </u>
#17 Sufficient sample amount for indicated test(s)?	Ves	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 VOC samples have zero headspace?	(Yes)	No	Not Applicable	
F TO VOO Octilpioo havo zoro hoodopaoo.	1 (103)	110	140t Applicable	
Variance Docur	nentation			
Contact: Contacted by:			Date/ Time:	
			•	
Regarding:		<del></del>		
		_		
Corrective Action Taken:			-	
				_
Check all that Apply: See attached e-mail/ fax				
Client understands and woul	d like to proc	eed with	analysis	
Cooling process had begun s	•		-	



### Analytical Report

### **Prepared for:**

Camille Reynolds
Plains All American EH & S
1301 S. County Road 1150
Midland, TX 79706-4476

Project: Lovington Gathering WTI
Project Number: SRS: 2006-142
Location: Lea County, NM

Lab Order Number: 6L29011

Report Date: 01/02/07

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-I	6L29011-01	Water	12/28/06 08:00	12-29-2006 14:00
MW-4	6L29011-02	Water	12/28/06 09:15	12-29-2006 14:00
MW-5	6L29011-03	Water	12/28/06 10:25	12-29-2006 14:00
MW-6	6L29011-04	Water	12/28/06 11:30	12-29-2006 14:00
MW-7	6L29011-05	Water	12/28/06 12:50	12-29-2006 14:00
MW-2	6L29011-06	Water	12/28/06 14:00	12-29-2006 14:00
MW-3	6L29011-07	Water	12/28/06 15:15	12-29-2006 14:00

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

Analyte	Result	Reporting Limit	Units	Diludas	Datab	Dranass	Ameline	Mathad	Note
MW-1 (6L29011-01) Water	Result		Oints	Dilution	Batch	Prepared	Analyzed	Method	NOU
Benzene	ND	0.00100	/I	<del></del>				EPA 8021B	
Toluene	J [0.000583]	0.00100	mg/L	1	EL63101	12/31/06	12/31/06	EFA 8021B	
Ethylbenzene	J [0.000383]	0.00100	,,					н	
Xylene (p/m)	0.00222	0.00100		n			n		
Xylene (o)	J [0.000796]	0.00100	ы	н	н	**	11	11	
Surrogate: a,a,a-Trifluorotoluene	[0.000.70]	99.2 %	80-	120	"	<i>n</i>	"	,,	
Surrogate: 4-Bromofluorobenzene		96.0 %	80-		"	"	"	u	
MW-4 (6L29011-02) Water									
Benzene	ND	0.00100	mg/L	1	EL63101	12/31/06	01/01/07	EPA 8021B	
Toluene	ND	0.00100	"	н	**	н		10	
Ethylbenzene	ND	0.00100	"	п	**	и		"	
Xylene (p/m)	ND	0.00100	**	н	**	•	"	,,	
Xylene (o)	ND	0.00100	n	и	н	"	н		
Surrogate: a,a,a-Trifluorotoluene		82.0 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	80-	120	n	"	"	"	
MW-5 (6L29011-03) Water									
Benzene	ND	0.00100	mg/L	!	EL63101	12/31/06	01/01/07	EPA 8021B	
Toluene	ND	0.00100	•	"	tt.	н	*1	Ħ	
Ethylbenzene	ND	0.00100	**	**	IF	*	**	H	
Xylene (p/m)	ND	0.00100	"	**	11	и	**	**	
Xylene (o)	ND	0.00100		"	**	н	**	**	
Surrogate: a,a,a-Trifluorotoluene		89.5 %	80-	120	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	80-	120	n	"	"	"	
MW-6 (6L29011-04) Water									
Benzene	ND	0.00100	mg/L	1	EL63101	12/31/06	01/01/07	EPA 8021B	
Toluene	ND	0.00100	•	"	10	*	11	11	
Ethylbenzene	ND	0.00100	n	н	11	н	11	"	
Xylene (p/m)	ND	0.00100	"	н	ff	н	**	"	
Xylene (o)	ND	0.00100		"	н	"	#	19	
Surrogate: a,a,a-Trifluorotoluene		90.5 %	80-	120	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	80-	120	"	"	"	"	

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-7 (6L29011-05) Water		•							
Benzene	0.0473	0.00100	mg/L	1	EL63101	12/31/06	01/01/07	EPA 8021B	
Toluene	J [0.000357]	0.00100	н			Ω	o o	n	
Ethylbenzene	J [0.000202]	0.00100	н	"		•	п	n .	
Xylene (p/m)	0.00130	0.00100	п	"	**	11	n	11	
Xylene (o)	ND	0.00100	n		н	11	н	n	
Surrogate: a,a,a-Trifluorotoluene		93.5 %	80-1	20	,,	"	"	n	
Surrogate: 4-Bromofluorobenzene		102 %	80-1	20	n	"	"	n	
MW-2 (6L29011-06) Water									
Benzene	0.161	0.00100	mg/L	l	EL63101	12/31/06	01/01/07	EPA 8021B	
Foluene	J [0.000389]	0.00100	•	н	н	n	н	ч	
Ethylbenzene	J [0.000242]	0.00100	"	н	п	P	н	**	
Xylene (p/m)	0.0248	0.00100	н	н	n	"	"	rt.	
Xylene (o)	ND	0.00100	n			"		n	
Surrogate: a,a,a-Trifluorotoluene		99.2 %	80-1	20	"	"	,,	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	80-1	20	"	"	n	n	
MW-3 (6L29011-07) Water									
Benzene	1.02	0.00500	mg/L	5	EL63101	12/31/06	01/01/07	EPA 8021B	
<b>Foluene</b>	J [0.00339]	0.00500	н	"		**	12	*1	
Ethylbenzene	0.00533	0.00500	н		n		11	*1	
Xylene (p/m)	0.0280	0.00500	"		н	"	11	н	
Xylene (o)	J [0.00479]	0.00500	*	,,	н	17	n	15	
Surrogate: a,a,a-Trifluorotoluene		82.0 %	80-1	20	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		91.5 %	80-1	20	"	"	n	n	

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control Environmental Lab of Texas

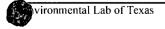
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL63101 - EPA 5030C (GC)										
Blank (EL63101-BLK1)				Prepared: 1	2/31/06 A	nalyzed: 01	/01/07			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	9							
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100	**							
Xylenc (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	36.1		ug/l	40.0		90.2	80-120			
Surrogate: 4-Bromofluorobenzene	37.0		"	40.0		92.5	80-120			
LCS (EL63101-BS1)				Prepared: 1	2/31/06 A:	nalyzed: 01	/01/07			
Benzene	0.0455	0.00100	mg/L	0.0500		91.0	80-120			
Toluene	0.0472	0.00100	,,	0.0500		94.4	80-120			
Ethy(benzene	0.0444	0.00100	**	0.0500		88.8	80-120			
Xylene (p/m)	0.0942	0.00100	"	0.100		94.2	80-120			
Xylene (o)	0.0439	0.00100	**	0.0500		87.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.2		ug/I	40.0		90.5	80-120		<u>-</u>	
Surrogate: 4-Bromofluorobenzene	43.5		"	40.0		109	80-120			
Mibration Check (EL63101-CCV1)				Prepared: 1	2/31/06 A:	nalyzed: 01	/01/07			
Zene	48.2		ug/l	50.0		96.4	80-120			
Toluene	49.3		**	50.0		98.6	80-120			
Ethylbenzene	56.4		"	50.0		113	80-120			
Xylene (p/m)	94.8			100		94.8	80-120			
Xylene (o)	45.3		"	50.0		90.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.8		'n	40.0		94.5	80-120			
Surrogate: 4-Bromofluorobenzene	44.1		"	40.0		110	80-120			
Matrix Spike (EL63101-MS1)	Sou	rce: 6L29005-	01	Prepared: 1	2/31/06 A	nalyzed: 01	/01/07			
Benzene	0.0470	0.00100	mg/L	0.0500	ND	94.0	80-120			
Toluene	0.0473	0.00100	n	0.0500	ND	94.6	80-120			
Ethylbenzene	0.0502	0.00100		0.0500	ND	100	80-120			
Xylene (p/m)	0.0959	0.00100	*	0.100	ND	95.9	80-120			
Xylene (o)	0.0441	0.00100	lr	0.0500	ND	88.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		ug/l	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.9		"	40.0		107	80-120			

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL63101 - EPA 5030C (GC)			0							
Matrix Spike Dup (EL63101-MSD1)	Sour	rce: 6L29005-	01	Prepared: 1	12/31/06 A	nalyzed: 01	/01/07			
Benzene	0.0461	0.00100	mg/L	0.0500	ND	92.2	80-120	1.93	20	
Toluene	0.0485	0.00100	,,	0.0500	ND	97.0	80-120	2.51	20	
Ethylbenzene	0.0527	0.00100	,	0.0500	ND	105	80-120	4.88	20	
Xylene (p/m)	0.0978	0.00100	н	0.100	ND	97.8	80-120	1.96	20	
Xylene (o)	0.0458	0.00100	н	0.0500	ND	91.6	80-120	3.78	20	
Surrogate: a,a,a-Trifluorotoluene	37.3		ug/l	40.0		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.6		"	40.0		106	80-120			



Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### **Notes and Definitions**

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

Duplicate

MS Matrix Spike

Dup

Report Approved By: Raland K Joub

Date:

1/2/2007

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.



12600 West F20 East Odessa, Texas 79765

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUESTS 12-563-1865 Phone: 432-563-1865 Paxs 79765

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### **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

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Cooling process had begun shortly after sampling event			d like to proce	eed with	analysis	
		Cooling process had begun	shortly after s	ampling	event	

A Xenco Laboratories Company

### Analytical Report

### **Prepared for:**

Camille Reynolds
Plains All American EH & S
1301 S. County Road 1150
Midland, TX 79706-4476

Project: Lovington Gathering WTI
Project Number: SRS: 2006-142
Location: Lea County, NM

Lab Order Number: 7C20004

Report Date: 03/28/07

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-8	7C20004-01	Water	03/16/07 10:56	03-20-2007 11:30
MW-I	7C20004-02	Water	03/16/07 11:30	03-20-2007 11:30
MW-4	7C20004-03	Water	03/16/07 11:55	03-20-2007 11:30
MW-5	7C20004-04	Water	03/16/07 13:10	03-20-2007 11:30
MW-6	7C20004-05	Water	03/16/07 14:10	03-20-2007 11:30
MW-7	7C20004-06	Water	03/16/07 14:50	03-20-2007 11:30
MW-2	7C20004-07	Water	03/16/07 15:25	03-20-2007 11:30
MW-3	7C20004-08	Water	03/16/07 16:20	03-20-2007 11:30

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-8 (7C20004-01) Water									
Benzene	ND	0.00100	mg/L	1	EC72109	03/21/07	03/22/07	EPA 8021B	
Toluene	ND	0.00100	n	u	n	"	н	**	
Ethylbenzene	ND	0.00100	•	n	н	"	H	"	
Xylene (p/m)	ND	0.00100	,	n		q		**	
Xylene (o)	ND	0.00100	•	н	"	n	u	"	
Surrogate: a,a,a-Trifluorotoluene		94.0 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	80-	120	"	"	"	"	
MW-1 (7C20004-02) Water									
Benzene	ND	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.00100	"	"	,,	,	n	*	
Ethylbenzene	ND	0.00100	4	"	**	u	"	н	
Xylene (p/m)	ND	0.00100	**	*	11	н	"	н	
Xylene (o)	ND	0.00100	"	"	"	H	"	"	
Surrogate: a.a.a-Trifluorotoluene		100 %	80-	120	,,	"	"	"	•
Syrrogate: 4-Bromofluorobenzene		87.2 %	80-	120 .	"	"	n	"	
MW-4 (7C20004-03) Water									
Benzene	ND	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.00100		**	19	н	17	**	
Ethylbenzene	ND	0.00100	"	**	**	Ħ	17	**	
Xylene (p/m)	ND	0.00100	"	"	10	н	**	н	
Xylene (o)	ND	0.00100	"	**	*	*	**	н	
Surrogate: a,a,a-Trifluorotoluene		98.6 %	80-	120	"	"	n	n	
Surrogate: 4-Bromofluorobenzene		81.6%	80-	120	n	n	"	n	
MW-5 (7C20004-04) Water									
Benzene	ND	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.00100	•	**	R	н	17	н	
Ethylbenzene	ND	0.00100		**	18	n		**	
Xylene (p/m)	ND	0.00100	,	**	10	м	н	u	
Xylene (o)	ND	0.00100		н	11	н	**	,	
Surrogate: a.a.a-Trifluorotoluene		97.4 %	80-	120	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.2 %	80-	120	n	"	"	"	

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds

Fax: (432) 687-4914

### Organics by GC Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-6 (7C20004-05) Water									
Benzene	ND	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.00100	"	**	H	tr	и	н	
Ethylbenzene	ND	0.00100	"	n	*	17	и	"	
Xylene (p/m)	ND	0.00100	*	*	n	"	и	**	
Xylene (o)	ND	0.00100	н	"	<b>"</b>	10	u	n	
Surrogate: a,a,a-Trifluorotoluene		97.8 %	80-	120	"	,,	"	n	
Surrogate: 4-Bromofluorobenzene		86.8 %	80-	120	"	"	"	n	
MW-7 (7C20004-06) Water									
Benzene	0.0479	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.00100	н	н	**	**	15	n	
Ethylbenzene	ND	0.00100	4	n	*1	H	n		
Xylene (p/m)	0.0152	0.00100	"	15	"	**	n	"	
Xylene (o)	ND	0.00100	*			n	"	**	
Surrogate: a,a,a-Trifluorotoluene		94.6 %	80-	120	"	"	"	"	
Syrogate: 4-Bromofluorobenzene		83.8 %	80-	120	"	"	"	"	
MW-2 (7C20004-07) Water									
Benzene	0.154	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Tolucne	ND	0.00100	n	н	н	"	п	н	
Ethylbenzene	ND	0.00100	11	**	н	"	н	*1	
Xylene (p/m)	0.0102	0.00100	**		*	"	н	н	
Xylene (o)	ND	0.00100	"	**	н	"	n	"	
Surrogate: a,a,a-Trifluorotoluene		96.8 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.6 %	80-	120	"	"	n	"	
MW-3 (7C20004-08) Water									
Benzene	1.48	0.0100	mg/L	10	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	ND	0.0100	17	"	n	•	"	11	
Ethylbenzene	0.0139	0.0100	**	"	н	11	н	**	
Xylene (p/m)	0.0341	0.0100	**	"	ų	**	ij	39	
Xylene (o)	J [0.00252]	0.0100	н	u	*	**	11	"	
Surrogate: a,a,a-Trifluorotoluene		88.6 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.4%	80-	120	"	"	n	,,	

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC72109 - EPA 5030C (GC)										
Blank (EC72109-BLK1)				Prepared: 0	)3/21/07 Ar	nalyzed: 03	/22/07		_	
Benzene	ND	0.00100	mg/L			·			=	
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00100	н							
Xylene (o)	ND	0.00100	н							
Surrogate: a,a,a-Trifluorotoluene	46.7		ug/l	50.0		93.4	80-120			
Surrogate: 4-Bromofluorobenzene	44.5		"	50.0		89.0	80-120			
LCS (EC72109-BS1)				Prepared: 0	)3/21/07 Ar	nalyzed: 03	/22/07			
Benzene	0.0580	0.00100	mg/L	0.0500		116	80-120			
Toluene	0.0596	0,00100		0.0500		119	80-120			
Ethylbenzene	0.0522	0.00100	•	0.0500		104	80-120			
Xylene (p/m)	0.119	0.00100		0.100		119	80-120			
Xylene (o)	0.0591	0.00100	,,	0.0500		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.5		ug/l	50.0		111	80-120		-	
Surrogate: 4-Bromofluorobenzene	50.6		n	50.0		101	80-120			
Mibration Check (EC72109-CCV1)				Prepared: (	)3/21/07 Aı	nalyzed: 03	3/22/07			
zene	56.7		ug/l	50.0		113	80-120			
Toluene	55.7		**	50.0		111	80-120			
Ethylbenzene	56.1		ч	50.0		112	80-120			
Xylene (p/m)	105		**	100		105	80-120			
Xylene (o)	58.8		**	50.0		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.6		"	50.0		95.2	80-120		_	
Surrogate: 4-Bromofluorobenzene	52.5		"	50.0		105	80-120			
Matrix Spike (EC72109-MS1)	Sou	rce: 7C19010-	01	Prepared: (	)3/21/07 Aı	nalyzed: 03	3/22/07			
Benzene	0.0563	0,00100	mg/L	0.0500	ND	113	80-120			
<b>Foluene</b>	0.0546	0.00100		0.0500	ND	109	80-120			
Ethylbenzene	0.0519	0.00100	,	0.0500	ND	104	80-120			
Xylene (p/m)	0,102	0.00100		0.100	0.00101	101	80-120			
Xylene (o)	0.0562	0.00100	11	0.0500	ND	112	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.2		ug/l	50.0		92.4	80-120		_	
Surrogate: 4-Bromofluorobenzene	49.1		"	50.0		98.2	80-120			

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC72109 - EPA 5030C (GC)										
Matrix Spike Dup (EC72109-MSD1)	Sou	rce: 7C19010-	01	Prepared: (	03/21/07 Aı	nalyzed: 03	5/22/07			
Benzene	0.0529	0.00100	mg/L	0.0500	ND	106	80-120	6.39	20	
Toluene	0.0520	0.00100		0.0500	ND	104	80-120	4.69	20	
Ethylbenzene	0.0536	0.00100		0.0500	ND	107	80-120	2.84	20	
Xylene (p/m)	0.0988	0.00100	"	0.100	0.00101	97.8	80-120	3.22	20	
Xylene (o)	0.0547	0.00100		0.0500	ND	109	80-120	2.71	20	
Surrogate: a,a,a-Trifluorotoluene	43.8		ug/l	50.0		87.6	80-120			
Surrogate: 4-Bromofluorobenzene	47.4		"	50.0		94.8	80-120			
··· ··································		0.0015		Prepared &	Analyzed:	03/26/07				
Blank (EC72601-BLK1)				Prepared &	k Analyzed:	03/26/07				
Benzene	ND	0.00100	mg/L							
Γoluene	ND	0,00100								
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	•							
Xylene (o)	ND	0.00100								
Surrogate: a,a,a-Trifluorotoluene	40.8		ug/l	50.0		81.6	80-120	-		
Syrrogate: 4-Bromofluorobenzene	40.6		"	50.0		81.2	80-120			
CS (EC72601-BS1)				Prepared &	Analyzed:	03/26/07				
Benzene	0.0442	0.00100	mg/L	0.0500		88.4	80-120	·····		
Toluene	0.0431	0.00100	**	0.0500		86.2	80-120			
Ethylbenzene	0.0419	0.00100	**	0.0500		83.8	80-120			
Xylene (p/m)	0.0890	0.00100	**	0.100		89.0	80-120			
Xylene (o)	0.0450	0.00100	47	0.0500		90.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.5		ug/l	50.0		81.0	80-120			
Surrogate: 4-Bromofluorobenzene	43.5		"	50.0		87.0	80-120			

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds

Fax: (432) 687-4914

### Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC72601 - EPA 5030C (GC)										
Calibration Check (EC72601-CCV1)				Prepared &	& Analyzed:	03/26/07				
Benzene	45.8		ug/l	. 50.0		91.6	80-120			
Toluene	44.4		"	50.0		88.8	80-120			
Ethylbenzene	45.9		"	50.0		91.8	80-120			
Xylene (p/m)	89.2		а	100		89.2	80-120			
Xylene (o)	45.9		ir	50.0		91.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.8		n	50.0		81.6	80-120			•
Surrogate: 4-Bromofluorobenzene	43.9		n	50.0		87.8	80-120			
Duplicate (EC72601-DUP1)	Sou	rce: 7C23001-	10	Prepared &	k Analyzed:	03/26/07				
Benzene	ND	0.00100	mg/L		ND				20	
Toluene	0.00353	0.00100	w		0.00330			6.73	20	
Ethylbenzene	0.000521	0.00100	**		0.000349			39.5	20	R
Xylene (p/m)	0.00502	0.00100	"		0.00430			15.5	20	
Xylene (o)	0.00123	0.00100	**		0.000981			22.5	20	R
Surrogate: a,a,a-Trifluorotoluene	41.0		ug/l	50.0		82.0	80-120			
Surrogate: 4-Bromofluorobenzene	42.4		n	50.0		84.8	80-120			
Matrix Spike (EC72601-MS1)	Sou	rce: 7C23001-	10	Prepared &	& Analyzed:	03/26/07				
zene	0.0449	0.00100	mg/L	0.0500	ND	89.8	80-120			
Toluene	0.0470	0.00100		0.0500	0.00330	87.4	80-120			
Ethylbenzene	0.0424	0.00100	**	0.0500	0.000349	84.1	80-120			
Xylene (p/m)	0.0924	0.00100	**	0.100	0.00430	88.1	80-120			
Xylene (o)	0.0464	0.00100	w	0.0500	0.000981	90.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.0		ug/l	50.0		80.0	80-120			
Surrogate: 4-Bromofluorobenzene	44.7		n	50.0		89.4	80-120			

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Notes and Definitions

R5 RPD is outside of historic values R4 Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information. DET Analyte DETECTED Analyte NOT DETECTED at or above the reporting limit ND NR Not Reported dry Sample results reported on a dry weight basis Relative Percent Difference LCS Laboratory Control Spike MS Matrix Spike Duplicate Dup

Report Approved By:

Date:

3/28/2007

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

## Erwironmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUES Odessa, Texas 79765 12600 West I-20 East

Fax: 432-563-1713

Phone: 432-563-1800

NPDES Project Name: LOVINGTON GATHERING WTI TRRP PO #: PAA - C. J. Reynolds Project Loc: Lea County, NM X Standard Project #: 2006-142 Report Format: kad@basinenv.com (505) 396-1429 e-mail: Fax No: PAGE 01 OF 01 Basin Environmental Service Technologies, LLC Lovington, NM 88260 (505) 441-2124 Company Address: P.O. Box 301 Ken Dutton Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: (lab use only)

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(Yino esu dei) # 84.)	FIELD CODE	rftqeQ gninnigeB	Ending Depth	belgms2 elsQ	belqms2 əmiT	Fleid Filtered	Totel #, of Contelners ice	нио <sup>2</sup>	н <sup>‡</sup> го <b>*</b> нсі <b>ДС</b> У	HOBN	None None	Other (Specify)	OW = Groundwaler S=Solveolid	Terlin Ogices Specify Office 801 801 801 801 801 801 801 801 801 801	8001 XT 8001 XT (H9T)	Cations (Ct, SO4, Atkalinity) Anions (Ct, SO4, Atkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg :	Voletiles Semivolatiles	BTEX 80218/6030 of BTEX 826	צכו	N.O.R.M.		RUSH TAT (Pre-Schedule) 24,	TAT bisbasi2
9	BW-8			16-Mar-07	1056		2 X		×				85	-		<b> </b>			-	×					×
78	MW-1			16-Mar-07	1130		2 X		×				ß₩							×					×
3	MW-4			16-Mar-07	1155	-	2 X		×				SW							×					×
3	MW-5			16-Mar-07	1310	-	7 ×		×				GW							×				and the same of	×
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### Environmental Lab of Texas

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Variance/ Corrective Action Report- Sample Log-In Date/ Time: \_ab ID # : nitials: Sample Receipt Checklist **Client Initials** Temperature of container/ cooler? (0 Yes No Shipping container in good condition? (Ces No Custody Seals intact on shipping container/ cooler? Yes No Not Present Custody Seals intact on sample bottles/ container? Xes No Not Present **Face** Chain of Custody present? No Sample instructions complete of Chain of Custody? **VES** No Chain of Custody signed when relinquished/ received? Yes No Chain of Custody agrees with sample label(s)? Yes No ID written on Cont./ Lid Container label(s) legible and intact? YOS No Not Applicable Xes 110 Sample matrix/ properties agree with Chain of Custody? No 111 Containers supplied by ELOT? yes, No 112 Samples in proper container/ bottle? YES No See Below 13 Samples properly preserved? <u>Yes</u> No See Below **86** 114 Sample bottles intact? No 15 Preservations documented on Chain of Custody? YES No Yeş Containers documented on Chain of Custody? No icient sample amount for indicated test(s)? 17 Yes No See Below 18 All samples received within sufficient hold time? Yes No See Below Subcontract of sample(s)? Yes No 19 Not Applicable VOC samples have zero headspace? Yes, No Not Applicable **Variance Documentation** 

ontact:	 Contacted by:	Date/ Time:	
egarding:			and the second s
prrective Action Taken:			, Principle of the Street of t
heck all that Apply:	See attached e-mail/ fax		
	Client understands and would like to proceed wit	h analysis	

Cooling process had begun shortly after sampling event

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### Analytical Report

### Prepared for:

Camille Reynolds
Plains All American EH & S
1301 S. County Road 1150
Midland, TX 79706-4476

Project: Lovington Gathering WTI
Project Number: SRS: 2006-142
Location: Lea County, NM

Lab Order Number: 7F06013

Report Date: 06/11/07

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476 Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4	7F06013-01	Water	05/30/07 14:00	06-06-2007 12:21
MW-5	7F06013-02	Water	05/30/07 14:50	06-06-2007 12:21
MW-6	7F06013-03	Water	05/30/07 15:45	06-06-2007 12:21
MW-8	7F06013-04	Water	05/31/07 09:20	06-06-2007 12:21
MW-1	7F06013-05	Water	05/31/07 10:15	06-06-2007 12:21
MW-2	7F06013-06	Water	05/31/07 10:55	06-06-2007 12:21
MW-7	7F06013-07	Water	05/31/07 11:50	06-06-2007 12:21
MW-3	7F06013-08	Water	05/31/07 12:30	06-06-2007 12:21

Plains All American EH & S 1301 S. County Road 1150 Gidland TX, 79706-4476 Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (7F06013-01) Water			···		<u> </u>				
Benzene	ND	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	0.00114	0.00100	U	"	"	н	11	n	
Ethylbenzene	ND	0.00100	**	**		н	ıı	н	
Xylene (p/m)	ND	0.00100	н	19	"	**	"	п	
Xylene (o)	ND	0.00100	н	"	н	**	"	n	
Surrogate: a,a,a-Trifluorotoluene		108 %	80-	120	"	"	"	п	
Surrogate: 4-Bromofluorobenzene		92.4 %	80-	120	"	"	"	н	
MW-5 (7F06013-02) Water									
Benzene	ND	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	J [0.000722]	0.00100	u		11	н	н	n	
Ethylbenzene	ND	0.00100	11	u		u	п	"	
Xylene (p/m)	ND	0.00100	**	"		n	н	•	
Xylene (o)	ND	0.00100	11	11	U	u	н	п	
Surrogate: a,a,a-Trifluorotoluene		109 %	80-	120	"	,,	"	n	
Surrogate: 4-Bromofluorobenzene		91.6 %	80-	120	"	n	"	"	
MW-6 (7F06013-03) Water									
Benzene	ND	0.00100	mg/L	l	EF70802	06/08/07	06/11/07	EPA 8021B	
Toluene	ND	0.00100	"	11	*	"	**		
Ethylbenzene	ND	0.00100	**	"	•	н	**	**	
Xylene (p/m)	ND	0.00100	"	"		и	11	19	
Xylene (o)	ND	0.00100	**	11	**	н	"	n	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-	120	"	n	n	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	80-		"	"	n	"	
MW-8 (7F06013-04) Water									
Benzene	ND	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	ND	0.00100	н		"	"	•	"	
Ethylbenzene	ND	0.00100	H	n	"	"	"	**	
Xylene (p/m)	ND	0.00100	*	"	"	**	"	н	
Xylene (o)	ND	0.00100	n	н	n	D	51		
Surrogate: a,a,a-Trifluorotoluene		110 %	80-	120	n	"	n	n .	
Surrogate: 4-Bromofluorobenzene		95.0 %	80-	120	"	"	"	n	

Plains All American EH & S 1301 S. County Road 1150 yidland TX, 79706-4476 Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

### **Environmental Lab of Texas**

l		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (7F06013-05) Water									
Benzene	ND	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	ND	0.00100	**	"	**	"	•	н	
Ethylbenzene	ND	0.00100	"	"	н	11	D	H	
Xylene (p/m)	ND	0.00100	н	w	"	W	u	н	
Xylene (o)	ND	0.00100	"	**		n	"	<b>H</b>	
Surrogate: a,a,a-Trifluorotoluene		109 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	80-	120	"	"	"	"	
MW-2 (7F06013-06) Water									
Benzene	0.00546	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	ND	0.00100	*	10	"	41	11	11	
Ethylbenzene	ND	0.00100		н	п	11	11	19	
Kylene (p/m)	ND	0.00100	М	н	n	IF.	н	н	
Xylene (o)	ND	0.00100	н	и	**	н	п	"	
Surrogate: a,a,a-Trifluorotoluene		116%	80-	120	"	H	"	,,	
Syrrogate: 4-Bromofluorobenzene		96.0 %	80-	120	"	"	"	"	
<b>9</b>									
MW-7 (7F06013-07) Water		· · · · · · · · · · · · · · · · · · ·							
Benzene	0.0395	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	ND	0.00100	#	"	**	*	n	"	
Ethylbenzene	ND	0.00100	**	"	11	и	н	n	
Xylene (p/m)	0.00534	0.00100	11	"	*	"	n	•	
Xylene (o)	ND	0.00100	"	n	n	н	"	•	
Surrogate: a,a,a-Trifluorotoluene		112 %	80-	120	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		97.8 %	80-	120	n	"	"	"	
MW-3 (7F06013-08) Water									
Benzene	1.66	0.00500	mg/L	5	EF70802	06/08/07	06/09/07	EPA 8021B	
Γoluene	0.0102	0.00500	"		н	10	н	**	
Ethylbenzene	0.0348	0.00500		н	н	**	**	,	
Xylene (p/m)	0.0296	0.00500	•	**	*1	n		n	
Xylene (o)	0.0122	0.00500	•	**	"	"	**	н	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-	120	"	n	"	"	-
Surrogate: 4-Bromofluorobenzene		92.4 %	80-	120	"	"	,,	,,	

Plains All American EH & S 1301 S. County Road 1150 Gidland TX, 79706-4476 Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control Environmental Lab of Texas

Amakuta	<b>.</b>	Reporting	,	Spike	Source	0/0-0	%REC	nee	RPD	M :
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF70802 - EPA 5030C (GC)						<del></del>				
Blank (EF70802-BLK1)				Prepared &	Analyzed:	06/08/07				
Benzene	ND	0.00100	mg/L			·				
Toluene	ND	0.00100	н							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	,,							
Xylene (o)	ND	0.00100	n							
Surrogate: a,a,a-Trifluorotoluene	54.1		ug/I	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	45.4		"	50.0		90.8	80-120			
LCS (EF70802-BS1)				Prepared &	Analyzed:	06/08/07				
Benzene	0.0548	0.00100	mg/L	0.0500		110	80-120			
Toluene	0.0556	0.00100		0.0500		111	80-120			
Ethylbenzene	0.0543	0.00100	**	0.0500		109	80-120			
Xylene (p/m)	0.101	0.00100	"	0.100		101	80-120			
Xylene (o)	0.0569	00100.0	**	0.0500		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	54.6		ug/l	50.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	51.7		"	50.0		103	80-120			
Dibration Check (EF70802-CCV1)				Prepared: 0	6/08/07 A	nalyzed: 06	/09/07			
zene	0.0576		mg/L	0.0500		115	80-120			
Toluene	0.0567		н	0.0500	•	113	80-120			
Ethylbenzene	0.0537		"	0.0500		107	80-120			
Xylene (p/m)	0.0999		**	0.100		99.9	80-120			
Xylene (o)	0.0573		n	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	57.9		ug/l	50.0		116	80-120			
Surrogate: 4-Bromofluorobenzene	53.0		"	50.0		106	80-120			
Matrix Spike (EF70802-MS1)	Sou	ırce: 7F06019-	03	Prepared: 0	6/08/07 A	nalyzed: 06	5/09/07			
Benzene	0.0598	0.00100	mg/L	0.0500	ND	120	80-120			
Toluene	0.0593	0.00100	n	0.0500	ND	119	80-120			
Ethylbenzene	0.0584	0.00100	**	0.0500	ND	117	80-120			
Xylene (p/m)	0.107	0.00100	н	0.100	ND	107	80-120			
Xylene (o)	0.0614	0.00100	**	0.0500	ND	123	80-120			
Surrogate: a,a,a-Trifluorotoluene	58.4		ug/l	50.0		117	80-120			
Surrogate: 4-Bromofluorobenzene	56.2		"	50.0		112	80-120			

Plains All American EH & S 1301 S. County Road 1150 idland TX, 79706-4476

Surrogate: 4-Bromofluorobenzene

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC - Quality Control

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF70802 - EPA 5030C (GC)										
Matrix Spike Dup (EF70802-MSD1)	Sour	ce: 7F06019-	03	Prepared: 0	06/08/07 A	nalyzed: 06	5/09/07			
Вепдепе	0.0565	0.00100	mg/L	0.0500	ND	113	80-120	6.01	20	
Toluene	0.0566	0.00100	**	0.0500	ND	113	80-120	5.17	20	
Ethylbenzene	0.0556	0.00100	n	0.0500	ND	111	80-120	5.26	20	
Xylene (p/m)	0.102	0.00100	•	0.100	ND	102	80-120	4.78	20	
Xylene (o)	0.0584	0.00100		0.0500	ND	117	80-120	5.00	20	
Surrogate: a,a,a-Trifluorotoluene	58.3		ug/l	50.0		117	80-120			

50.0

80-120

54.2



Plains All American EH & S 1301 S. County Road 1150 Sidland TX, 79706-4476 Project: Lovington Gathering WTI

Project Number: SRS: 2006-142 Project Manager: Camille Reynolds

### Notes and Definitions

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Date:

6/11/2007

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

Fax: (432) 687-4914

# Envioonmental Lab of Texas

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Odessa, Texas 79765 12600 West I-20 East

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

NPDES Project Name: LOVINGTON GATHERING WTI □ TRRP PO#: PAA - C. J. Reynolds Project Loc: Lea County, NM Report Format: X Standard Project #: 2006-142 PAGE 01 OF 01 Basin Environmental Service Technologies, LLC Lovington, NM 88260 Company Address: P. O. Box 301 Project Manager: Ken Dutton Company Name City/State/Zip:

e-mail: Fax No:

(505) 396-1429

(505) 441-2124

Telephone No:

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9			Semilyolatiles						, 41					Laboratory Comments: Sample Contdiners Intact?	VOCs Free of Headspace?	(S)	Custody seals on codier(s)	Sample Hand Delivered by Sampler/Client Rep.
Analyze			Volatiles								3 7	, i		E S	pea	Labels on container(s)	8	e e
		aS	Melals: As Ag Ba Cd Cr Pb Hg						21.4	ĵ.			7	3 🗟	T	in ta	0	ر قوم
TCLP:	TOTAL		SAR / ESP / CEC											6.2	9	38	e e	by Sampler
Ξ.	2,		Anions (Cl., SO4, Alkalinity)											o ag	S	385	8	a Si
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Temperature Upon Receipt:

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Service Services

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Relinquished by:



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

ient:	Plains					,
ate/ Time:	6.6.07	12.21				***
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itials:	al					
,						
		Sample Red	ceipt Checklist			
				. `	Client I	nitials
	ture of container/ co-	and the transfer of the property of the proper	Yes	No	45°C	
	container in good co		YES	No		
		oing container/ cooler?	Yes	No	Not Present	
4 Custody	Seals intact on samp	ole bottles/ container?	Yes	No	Not Present	
	Custody present?		Yes	No		
		of Chain of Custody?	Y es)	No		
		n relinquished/ received	Annual Street, or other Parties of the Street, Street, Street, Street, Street, Street, Street, Street, Street,	No		
8 Chain of	Custody agrees with	sample label(s)?	(es	No.	ID written on Cont./ Lid	
9 Containe	er label(s) legible and	I intact?	Yes	No.	Not Applicable	
10 Sample	matrix/ properties as	gree with Chain of Custo	dy? (es	No		
11 Contain	ers supplied by ELO	Τ?	Yes	No		
12 Sample	s in proper container	/ bottle?	Yes	No.	See Below	
13 mple:	s properly preserved	?	Yes	No	See Below	
	bottles intact?		Ve)s	No		
		on Chain of Custody?	Yes	No		
	ers documented on		(es	No		
		r indicated test(s)?	VQs	No	See Below	
		sufficient hold time?	Yes	No	See Below	
	tract of sample(s)?		Yes	No	Not Applicable	
	imples have zero he	adspace?	Yes	No	Not Applicable	
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### **Analytical Report 290458**

for

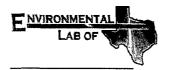
### PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Lovington Gathering WTI

2006-142

03-OCT-07



12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

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



03-OCT-07

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

Reference: XENCO Report No: 290458 **Lovington Gathering WTI** 

Project Address: Lea County, NM

### Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 290458. 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. 290458 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** 

Odessa Laboratory Director

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

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Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America



### **Sample Cross Reference 290458**

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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-9	W	Sep-25-07 10:00		290458-001
MW-4	W	Sep-25-07 10:50		290458-002
MW-5	W	Sep-25-07 11:35		290458-003
MW-6	W	Sep-25-07 12:15		290458-004
MW-8	W	Sep-25-07 13:40		290458-005
MW-1	W	Sep-25-07 14:24		290458-006
MW-2	W	Sep-25-07 15:07		290458-007
MW-7	W	Sep-25-07 15:42		290458-008
MW-3	W	Sep-25-07 16:15		290458-009



# Certificate of Analysic Summary 290458 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Contact: Camille Reynolds

Project Id: 2006-142

Project Location: Lea County, NM

Report Date: 03-OCT-07

Date Received in Lab: Fri Sep-28-07 01:45 pm

Project Manager: Brent Barron, II

					The formation of the first termination of the	ar francisco		
	Lab Id:	290458-001	290458-002	290458-003	290458-004	290458-005	290458-006	10
Ameliacie Danisadad	Field Id:	6-WM	MW-4	MW-5	9-MM	MW-8	MW-1	
Tunibus Weynesten	Depth:				_	_		
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Sep-25-07 10:00	Sep-25-07 10:50	Sep-25-07 11:35	Sep-25-07 12:15	Sep-25-07 13:40	Sep-25-07 14:24	:24
BTEX by FPA 8021B	Extracted:	Oct-02-07 16:30	Oct-02-07 16:30	Oct-02-07 16:30	Oct-02-07 16:30	Oct-02-07 16:30	Oct-02-07 16:30	:30
	Analyzed:	Oct-02-07 20:05	Oct-02-07 20:22	Oct-02-07 20:38	Oct-02-07 20:55	Oct-02-07 21:28	Oct-02-07 21:45	:45
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L	고
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.000.0
Toluene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0100.0
Ethylbenzene		0100'0 QN	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND (	0.0010
m,p-Xylene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ON	0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0010
Total Xylenes		ND	ΩN	QN	QN	ND	ND	
Total BTEX		ND	ND	QN	ND	ND	ND	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restants expressed throughout this analytical report presents the best judgemen 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.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

Brent Barron Odessa Laboratory Director



Contact: Camille Reynolds Project Location: Lea County, NM

**Project Id:** 2006-142

# Certificate of Analysis Summary 290458 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-28-07 01:45 pm

Project Manager: Brent Barron, II

Report Date: 03-OCT-07

	Lab Id:	290458-007	290458-008	290458-009	
Accelerate Dames of the	Field Id:	MW-2	MW-7	MW-3	
Analysis Requested	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Sep-25-07 15:07	Sep-25-07 15:42	Sep-25-07 16:15	
BTEX by FPA 8021B	Extracted:	Oct-02-07 16:30	Oct-02-07 16:30	Oct-03-07 10:16	
	Analyzed:	Oct-02-07 22:01	Oct-02-07 22:18	Oct-03-07 12:43	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.0503 0.0010	0.0370 0.0010	0.4943 0.0010	
Toluene		ND 0.0010	ND 0.0010	0.0239 0.0010	
Ethylbenzenc		ND 0.0010	ND 0.0010	0.0209 0.0010	
m,p-Xylene		0.0030 0.0020	0.0306 0.0020	0.0140 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	0.0071 0.0010	
Total Xylenes	,	0.003	0.0306	0.0211	
Total BTEX		0.0533	9790.0	0.5602	

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

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Brent Barron Odessa Laboratory Director

### XENCO Laboratories

### Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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Project Name: Lovington Gathering WTI

rk Order #: 290458

Lab Batch #: 705584

Sample: 290458-001 / SMP

Project ID: 2006-142

Batch: Matrix: Water

0.0300

Units: mg/L SURROGATE RECOVERY STUDY Amount Control BTEX by EPA 8021B Flags Found Amount Recovery Limits [B] %R %R [A] [D] **Analytes** 1,4-Difluorobenzene 0.0317 0.0300 106 80-120

0.0261

Lab Batch #: 705584

4-Bromofluorobenzene

Sample: 290458-001 S / MS

Batch: ì Matrix: Water

87

80-120

Units: mg/L	SU	RROGATE F	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 705584

Sample: 290458-001 SD / MSD

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	, , ,		[D]		
4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 705584

Sample: 290458-002 / SMP

Batch:

Matrix: Water

Units: mg/Ļ	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0317	0.0300	106	80-120		
4-Bromofluorobenzene	0.0253	0.0300	84	80-120		

Lab Batch #: 705584

Sample: 290458-003 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0316	0.0300	105	80-120		
4-Bromofluorobenzene	0.0255	0.0300	85	80-120		

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

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

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



Project Name: Lovington Gathering WTI

k Order #: 290458 Lab Batch #: 705584

Sample: 290458-004 / SMP

**Project ID: 2006-142** 

Matrix: Water Batch: 1

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Diffuorobenzene	0.0318	0.0300	106	80-120		
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	-	

Lab Batch #: 705584

Sample: 290458-005 / SMP

Batch: 1

Matrix: Water

Units: mg/L	su	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		'	[D]				
1,4-Difluorobenzene	0.0314	0.0300	105	80-120			
4-Bromofluorobenzene	0.0260	0.0300	87	80-120			

Lab Batch #: 705584

Sample: 290458-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found {A	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			ושו	ŀ		
4-Difluorobenzene	0.0317	0.0300	106	80-120		
4-Bromofluorobenzene	0.0263	0.0300	88	80-120		

Lab Batch #: 705584

Sample: 290458-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0313	0.0300	104	80-120		
4-Bromofluorobenzene	0.0261	0.0300	87	80-120		

Lab Batch #: 705584

Sample: 290458-008 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
			[D]			
1,4-Difluorobenzene	0.0304	0.0300	101	80-120		
4-Bromofluorobenzene	0.0269	0.0300	90	80-120		

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

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

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



Project Name: Lovington Gathering WTI

rk Order #: 290458

**Project ID: 2006-142** 

Lab Batch #: 705584

Sample: 500015-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L SURROGATE RECOVERY STU				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	0.0279	0.0300	93	80-120	

Lab Batch #: 705584

**Sample:** 500015-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	(*-1		(D)	/ • • • • • • • • • • • • • • • • • • •		
1,4-Difluorobenzene	0.0312	0.0300	104	80-120		
4-Bromofluorobenzene	0.0267	0.0300	89	80-120		

Lab Batch #: 705584

Sample: 500015-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0287	0.0300	96	80-120		
4-Bromofluorobenzene	0.0281	0.0300	94	80-120		

Lab Batch #: 705607

Sample: 290458-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0254	0.0300	85	80-120		
4-Bromofluorobenzene	0.0255	0.0300	85	80-120		

Lab Batch #: 705607

**Sample:** 500032-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	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	0.0261	0.0300	87	80-120	

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

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

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

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



**Project Name: Lovington Gathering WTI** 

rk Order #: 290458

**Project ID: 2006-142** 

Lab Batch #: 705607

**Sample:** 500032-1-BLK / BLK

Batch: 1 Matrix: Water

1

Units: mg/L	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	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

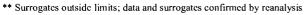
Lab Batch #: 705607

Sample: 500032-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE RI	ECOVERY S	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	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	



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

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



### BS / BS Kecoveries

## Project Name: Lovington Gathering WTI

Work Order #: 290458

Analyst: SHE Lab Batch ID: 705584

Sample: 500015-1-BKS

**Date Prepared:** 10/02/2007

Batch #: 1

02/2007

**Project ID:** 2006-142 Date Analyzed: 10/02/2007

Matrix: Water

Units: mg/L		BLAN	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
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		<u>[8]</u>	<u>D</u>	[0]	<u> </u>	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.1061	106	0.1	0.1072	107	-	70-125	25	
Toluene	QN	0.1000	0.1047	105	0.1	0.1058	901	-	70-125	25	
Ethylbenzene	QN	0.1000	0.1047	105	0.1	0,1061	901	-	71-129	25	
m,p-Xylene	QN	0.2000	0.2099	105	0.2	0.2123	901	1	70-131	25	
o-Xylene	ND	0.1000	0.1022	102	0.1	0.1033	103	1	71-133	25	

Analyst: SHE

Lab Batch ID: 705607

Date Prepared: 10/03/2007

Batch #: 1

Sample: 500032-1-BKS

Matrix: Water

Date Analyzed: 10/03/2007

Units: mg/L		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
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 Límits %R	Control Limits %RPD	Flag
Analytes		[8]	[2]	[0]	[E]	Result [F]	<u>[5]</u>				
Benzene	QN.	0.1000	0.0940	94	0.1	0.0948	95	-	70-125	25	
Toluene	QN	0.1000	0.0924	92	0.1	0.0928	93	0	70-125	25	
Ethylbenzene	Q.	0.1000	0.0918	92	0.1	0.0929	93	1	71-129	25	
m,p-Xylene	Q	0.2000	0.1832	92	0.2	0.1860	93	2	70-131	25	
o-Xylene	QN	0.1000	9680.0	06	0.1	0.0911	16	2	71-133	25	

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



### Form 3 - MSM MSD Recoveries

### Project Name: Lovington Gathering WTI

Work Order #: 290458

Lab Batch ID: 705584

Date Analyzed: 10/03/2007

**Project ID: 2006-142** 

Batch #:

SHE Analyst:

QC-Sample ID: 290458-001 S

Date Prepared: 10/02/2007

Matrix: Water

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	CE DUPLICA	TE REC	VERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]			<u>ē</u>	(E)		[5]				
Benzene	ND	0.1000	0.0935	94	0.1000	6960'0	26	3	70-125	25	
Toluenc	ND	0.1000	0.0915	65	0.1000	0.0941	94	2	70-125	25	
Ethylbenzene	ND	0.1000	0.2076	208	0.1000	0.2098	210	1	71-129	25	Х
m,p-Xylene	ND	0.2000	0.1795	06	0.2000	0.1814	16	1	70-131	25	
o-Xylene	ND	0.1000	7680.0	06	0.1000	0.0905	16	1	71-133	25	

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

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

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

		E				☐ NPDES	F	E	u n	AS (Newborns) TAT HEUR	×	×	×	×	×	×	× >	< ×		OO z z	<i>&amp;</i>	Š	o. 57
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	Phone: 432-563-1800 Fax: 432-563-1713	Project Name: LOVINGTON GATHERING WIT	106-142	a County, NM	PO#: PAA - C. J. Reynolds	X Standard TRRP	Acceptant Con-	$\mathbf{H}$	1	MOJEW MOJEW SOUTHORNIES SOUT	×	×	×	×	×	×	× ,	< ×			Labels on container(s) Custody seats on container(s) Custody seats on cooler(s)	Sample Hand Delivered by Sampler/Client Rep. ? by Counter? UPS DHL Fed	ĸ
Y RECORD AND		Project Name: LC	Project #: 2005-142	Project Loc: Les County, NM	PO #: PO	Report Format: X				Weight Schoolson  Weight Alba Police  Weight A	OW.	GW.	₩S	A,O	GW	- 86	A CA	**		Semple		SS.	Time [145
AIN OF CUSTOE	A East 1 79765						nenv.com		1.	HOEN CO <sub>C</sub> S <sub>2</sub> SO HONG (YESPECTY) PERMEN SILESPECTOMMEN STANGESONS WINNERS SILESPECTOMMEN		9	9	U	0	0	9 (	-			S.4 20 4.30	Date	9 - 28 - U7
3	12500 West 1-20 East Odessa, Texas 79765					(605) 396-1428	kdutton@basinenv.com		Preservation & # of Contaner	dual 8, of Comeiners floa HND, HSD, HSD, HSD,	×	2 X X	2 X X	z x	2 × ×	x x	×××	< ×			¥		Law
		. 01				Fax No:	e-mail:			belgma2 emiT beva87 biei	1000	1050	1135	1216	1340	1424	1607	1815			Thelina		The star
		PAGE 01 OF	ologies, LLC							beigmas also	25-Sep-07	26-Sep-07	25-Sep-07	25-Sep-07	25-Sep-07	25-Sep-07	25-Sep-07	25-Sep-07			Record Ly	Redered by:	Rocemed by ELO
Xas			ice Techn							ritqəO gninniges	$\vdash$	$\vdash$		-	-			-	-		1 3 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5	E.	S./
Environmental Lab of Texas		Project Manager. Ken Button	Company Name Basin Environmental Service Technologies, LLC	Company Address: P.O. Box 301	City/State/Zip: Lovington, NM 88280	Telephone No: (505) 441-2124	Sampler Signature: 3 June		2<10458	FIELD CODE	MW-9	MW-4	MW-5	MW-6	MW-8	MW-1	MW-2	MW-3		ctions:	Sale Ser Bar	Date	Duck Dolla Bot
Envir		Proj	Con	Cor	Ċ	Tele	Sem	(Jap use only)	ORDER #:	(Vino seu dai) 1 8A.	Ϊ	20	63	रु	ŝ	90	ره د	8		Special Instructions	Referrations by	Relinquished by:	Religioushed by

### **Environmental Lab of Texas**

Variance/ Corrective Action Re	port- Sample	e Log-Ir	1
client: Basin / Plains			
Date/ Time: 9-28-07 1.45			
ab10#: 290458			
nitials: <u>AL</u>			
Sample Receipt	Checklist		Client Initials
*1 Temperature of container/ cooler?	Yes	No	2.5 °C
2 Shipping container in good condition?	Yes	No	
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
5 Chain of Custody present?	Yes	No	11011103011
Sample instructions complete of Chain of Custody?	(es)	No	<del> </del>
7 Chain of Custody signed when relinquished/ received?	Yes	No	<del>                                     </del>
8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
9 Container label(s) legible and intact?	(es)	No	Not Applicable
10 Sample matrix/ properties agree with Chain of Custody?	X/es)	No	Not Applicable
11 Containers supplied by ELOT?	Xes	No	
12 Samples in proper container/ bottle?	Yes	No	C B-l
13 Samples properly preserved?	<b>1</b>	No	See Below
14 Sample bottles intact?	Xes	No	See Below
15 Preservations documented on Chain of Custody?	Tes	No	
· · · · · · · · · · · · · · · · · · ·			<del>                                     </del>
16 Containers documented on Chain of Custody?		No_	<del>                                     </del>
17 Sufficient sample amount for indicated test(s)?	1 <b>(ES</b> )	No	See Below
18 Ali samples received within sufficient hold time?	Yes	No	See Below
19 Subcontract of sample(s)?	Yes	No	Moi Applicable
20 VOC samples have zero headspace?	Yes	No	Not Applicable
Variance Docu  Contact: Contacted by:  Regarding:	mentation		Date/ Time:
Corrective Action Taken:			
Check all that Apply:  See attached e-mail/ fax Client understands and wou Coolling process had begun			

### **Analytical Report 293980**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: JIMMY BRYANT** 

Lovington Gathering WTI 2006-142

10-DEC-07



12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

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





10-DEC-07

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

Reference: XENCO Report No: 293980
Lovington Gathering WTI

Project Address: Lea County, NM

### JIMMY BRYANT:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 293980. 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. 293980 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 293980



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

Lovington Gathering WTI

Matrix	Date Collected	Sample Depth	Lab Sample Id
W	Nov-30-07 09:15		293980-001
W	Nov-30-07 10:35		293980-002
W	Nov-30-07 11:45		293980-003
W	Nov-30-07 12:40		293980-004
W	Nov-30-07 15:25		293980-005
W	Nov-30-07 11:10		293980-006
W	Nov-30-07 13:50		293980-007
W	Nov-30-07 14:30		293980-008
W	Nov-30-07 15:10		293980-009
	W W W W W	W Nov-30-07 09:15 W Nov-30-07 10:35 W Nov-30-07 11:45 W Nov-30-07 12:40 W Nov-30-07 15:25 W Nov-30-07 11:10 W Nov-30-07 13:50 W Nov-30-07 14:30	W Nov-30-07 09:15 W Nov-30-07 10:35 W Nov-30-07 11:45 W Nov-30-07 12:40 W Nov-30-07 15:25 W Nov-30-07 11:10 W Nov-30-07 13:50 W Nov-30-07 14:30



Contact: JIMMY BRYANT

Project Id: 2006-142

Project Location: Lea County, NM

# Certificate of Analysis Summary 293980 PLAINS ALL AMERICA SHEES, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Dec-04-07 12:45 pm Report Date: 10-DEC-07

Project Manager: Brent Barron, Il

						and formation and an arrangement	
	Lab Id:	293980-001	293980-002	293980-003	293980-004	293980-005	293980-006
Amolyais Doggad	Field Id:	6-WM	MW-4	MW-5	9-WM	MW-8	MW-1
Anniyas Nequesieu	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Nov-30-07 09:15	Nov-30-07 10:35	Nov-30-07 11:45	Nov-30-07 12:40	Nov-30-07 15:25	Nov-30-07 11:10
BTEX by FPA 8021B	Extracted:	Dec-05-07 11:19	Dec-05-07 11:19				
	Analyzed:	Dec-05-07 19:57	Dec-05-07 20:14	Dec-05-07 20:30	Dec-05-07 20:47	Dec-05-07 21:03	Dec-05-07 21:20
	Units/RL:	mg/L RL	mg/L RL				
Benzene		ND 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	ND 0.0010	ND 0.0010	0100.0 QN	ND 0.0010
Xylenes, Total		QN	QN	QN	ND	QN	QN
Total BTEX		ND	QN	QN	QN	ND	ND

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout it is analytical report represent the best, judgment of XEN/CO Laboratories. XEN/CO Laboratories assumes no responsibility and make 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 - Austin - Tampa - Miami - Latin America Since 1990

Brent Barron Odessa Laboratory Director



# Certificate of Analysis Summary 293980 PLAINS ALL AMERICS EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Contact: JIMMY BRYANT

Project 1d: 2006-142

Project Location: Lea County, NM

Date Received in Lab: Tue Dec-04-07 12:45 pm

Report Date: 10-DEC-07

Project Manager: Brent Barron, Il

					,
	Lab Id:	293980-007	293980-008	293980-009	
Association Description	Field Id:	MW-2	MW-7	MW-3	
Analysis Requesieu	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Nov-30-07 13:50	Nov-30-07 14:30	Nov-30-07 15:10	
BTEX by FPA 8021B	Extracted:	Dec-06-07 12:45	Dec-05-07 11:19	Dec-06-07 12:45	
	Analyzed:	Dec-06-07 16:10	Dec-05-07 21:53	Dec-06-07 17:01	-
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.9283 0.0050	0.0264 0.0010	5.937 0.0200	
Toluene		ND 0.0100	ND 0.0020	0.2786 0.0400	
Ethylbenzene		ND 0.0050	ND 0.0010	0.2732 0.0200	
m,p-Xylenes		0.010.0 996.0	0.0221 0.0020	0.1410 0.0400	
o-Xylene		ND 0.0050	ND 0.0010	0.0740 0.0200	
Xylenes, Total		0.0366	0.0221	0.215	
Total BTEX		0.9649	0.0485	6.7038	

This analytical report, and the entire data pushage it represents, has been made for your exclusive and confidential use. The interpresent one and restrict expressed throughout the analytical report present 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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Odessa Laboratory Director



### Flagging Criteria

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

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Project Name: Lovington Gathering WTI



rk Order #: 293980 Lab Batch #: 709873

Project ID: 2006-142

Sample: 293980-001 / SMP

Matrix: Water Batch:

Units: mg/L	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	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

Lab Batch #: 709873

Sample: 293980-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		]	[D]			
1,4-Difluorobenzene	0.0291	0.0300	97	80-120		
4-Bromofluorobenzene	0.0273	0.0300	91	80-120		

Lab Batch #: 709873

Sample: 293980-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			127	1	_	
4-Difluorobenzene	0.0291	0.0300	97	80-120		
4-Bromofluorobenzene	0.0267	0.0300	89	80-120		

Lab Batch #: 709873

Sample: 293980-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags	
Analytes	}	1	[D]			
1,4-Difluorobenzene	0.0318	0.0300	106	80-120		
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	<del></del>	

Lab Batch #: 709873

Sample: 293980-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0316	0.0300	105	80-120		
4-Bromofluorobenzene	0.0258	0.0300	86	80-120		

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

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



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



**Project Name: Lovington Gathering WTI** 



rk Order #: 293980 Lab Batch #: 709873

Sample: 293980-004 / SMP

**Project ID: 2006-142** Matrix: Water

Units: mg/L SURROGATE RECOVERY STUDY

SURROGATE RECOVERT STODI			SICDI		
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		(-1	[D]		
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 709873 Sample: 293980-005 / SMP Matrix: Water Batch: 1

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		'	[D]			
1,4-Difluorobenzene	0.0318	0.0300	106	80-120		
4-Bromofluorobenzene	0.0257	0.0300	86	80-120		

Lab Batch #: 709873 Sample: 293980-006 / SMP Matrix: Water Batch:

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		ļ	[D]			
4-Difluorobenzene	0.0317	0.0300	106	80-120		
4-Bromofluorobcnzene	0.0263	0.0300	88	80-120		

Lab Batch #: 709873 Sample: 293980-008 / SMP Matrix: Water Batch: 1

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	11	[-1	[D]			
1,4-Difluorobenzene	0.0299	0.0300	100	80-120		
4-Bromofluorobenzene	0.0254	0.0300	85	80-120		

Sample: 502210-1-BKS / BKS Lab Batch #: 709873 Batch: 1 Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		ļ '-'	[D]	, , , ,		
1,4-Difluorobenzene	0.0290	0.0300	97	80-120		
4-Bromofluorobenzene	0.0290	0.0300	97	80-120		

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

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



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



Project Name: Lovington Gathering WTI



rk Order #: 293980

Sample: 502210-1-BLK / BLK

**Project ID: 2006-142** 

Lab Batch #: 709873

Matrix: Water Batch: 1

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Diffuorobenzene	0.0315	0.0300	105	80-120		
4-Bromofluorobenzene	0.0260	0.0300	87	80-120		

Lab Batch #: 709873

Sample: 502210-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	()	1	(D)			
1,4-Difluorobenzene	0.0289	0.0300	96	80-120		
4-Bromofluorobenzene	0.0283	0.0300	94	80-120		

Lab Batch #: 710056

Sample: 293896-054 S / MS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0295	0.0300	98	80-120		
4-Bromofluorobenzene	0.0276	0.0300	92	80-120		

Lab Batch #: 710056

Sample: 293896-054 SD / MSD

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		. ,	[D]		
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 710056

Sample: 293980-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		ļ	[D]		
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

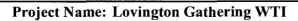
<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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



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







rk Order #: 293980

Lab Batch #: 710056

Sample: 293980-009 / SMP

**Project ID: 2006-142** Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	""	[2]	[D]		
1,4-Difluorobenzene	0.0338	0.0300	113	80-120	
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	

Lab Batch #: 710056

Sample: 502290-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	""	(2)	[D]		
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 710056

**Sample:** 502290-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			וטו		
4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 710056

Sample: 502290-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
BTEX by EPA 8021B  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	0.0273	0.0300	91	80-120	



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

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



### BS / BS Recoveries



### Project Name: Lovington Gathering WTI

Work Order #: 293980

Analyst: SHE

Lab Batch ID: 709873

Sample: 502210-1-BKS

Date Prepared: 12/05/2007

Project ID: 2006-142

Date Analyzed: 12/05/2007

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Durdieste	Blk. Spk Dup.	RPD %	Control Limits	Control Limits	Flag
Analytes	5	[B]	[5]	<u>a</u>	[a]	Result [F]	<u>5</u>	•	Ya.	TWO	
Benzene	QN	0.1000	9101.0	102	0.1	0.0964	96	5	70-125	25	
Toluenc	QN	0.1000	0.1021	102	0.1	0.0973	. 16	5	70-125	25	
Ethylbenzene	QN	0.1000	0.1050	105	0.1	0.1004	100	4	71-129	25	
m,p-Xylenes	ΩN	0.2000	0.2068	103	0.2	0.1977	66	4	70-131	25	
o-Xylene	QN	0.1000	0.1038	104	0.1	0.1000	100	4	71-133	25	

Analyst: SHE

Lab Batch ID: 710056

Date Prepared: 12/06/2007

Batch #: 1

Sample: 502290-1-BKS

Matrix: Water

**Date Analyzed:** 12/06/2007

Flag Control Limits %RPD 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 70-131 71-133 RPD Blk. Spk Dup. |G| 68 68 92 16 92 Blank Spike Duplicate Result [F] 0.1813 0.0889 0.0892 0.0924 0.0918 Spike Added 0.1 0.1  $\overline{\Xi}$ 0.1 0.2 0.1 Blank Spike %R [D] 87 87 68 16 90 0.0870 Blank Spike Result [C] 0.0872 0.0895 0.0907 0.1781 0.1000 0.1000 0.1000 0.2000 0.1000 Spike Added <u>B</u> Sample Result ₹ S ΩN ð S ND BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

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



## Form 3 - Max MSD Recoveries





Project Name: Lovington Gathering WTI

Work Order #: 293980 Lab Batch ID: 709873

Date Analyzed: 12/05/2007

QC-Sample ID: 293980-001 S Date Prepared: 12/05/2007

Matrix: Water Batch #:

Project ID: 2006-142

SHE Analyst:

Flag Limits %RPD Control 25 25 25 25 Control Limits %R 70-125 71-129 70-125 70-131 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 0 Spiked Dup. %R [G] 92 94 93 8 Spike Spiked Sample Added Result [F] 0.0944 0.1802 0.0925 0.0922 0.1000 0.1000 0.2000 0.1000 Œ Spiked Sample %R<u>a</u> 92 92 06 93 Spiked Sample Result 0.0934 0.0922 0.0919 0.1791 <u>5</u> Spike Added 0.1000 0.1000 0.2000 0.1000 <u>B</u> Parent Sample Result  $\overline{\mathbf{A}}$ 8 9 S ₽ Q BTEX by EPA 8021B Analytes Reporting Units: mg/L Ethylbenzene m,p-Xylenes Toluene Benzene

QC-Sample ID: 293896-054 S Date Prepared: 12/06/2007 Date Analyzed: 12/06/2007 Lab Batch ID: 710056

Analyst: SHE Batch #:

25

71-133

0

92

0.0917

0.1000

92

0.0917

0.1000

2

o-Xylene

Matrix: Water

0

Reporting Units: mg/L		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	3/MAT	RIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzenc	0.0054	0.1000	0.0859	81	0.1000	0980'0	81	0	70-125	25	
Toluene	QN	0.1000	0.0858	98	0.1000	0.0863	98	0	70-125	25	
Ethylbenzene	QN	0.1000	0.0892	68	0.1000	0.0900	06	-	71-129	25	
m,p-Xylenes	QN	0.2000	0.1740	87	0.2000	0.1758	88	_	70-131	25	
o-Xylene	QN	0.1000	0.0901	06	0.1000	0.0910	91	_	71-133	25	

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

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

Page 12 of 14

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

	F				O NPDES		and 2	( '89	AS (embensa-erg) TAT HEUR TAT Unsbridge	×	×	×	×	×	^	×				ž z O <sub>n</sub> o	2 Z Z	ZZ	9
0.0	Project Name: LOVINGTON GATHERING WTI		1						TANK UP AL					$\neg$			- (		4				7.4
AL YSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713	Ž.				. TRRP	- 1	-		MORM.	┝	-	-	-	$\dashv$			- +	+	$\dashv$	23 X		1	te.
5 8 8	뜀				ö	- "	ہا∟	10	BTEX SOSTB/S030 OF DIEX 82	×	×	×	×	×	×	×	×	×	$\dashv$	Laboratory Commonts: Sample Continers Infact? VOCs File of Headspace?	(S)	, c	į,
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Q 2	중		Project Loc: Lea County, NIA	ě				†	eestadov	1						1	寸	寸		Laboratory Commonts Sample Conteners Intak VOCs Fire of Headspor	abels on container(s) Justody seals on container	Sample Hand Delivered by Sempler/Clent Re	<u> </u>
Free	5	5	Ħ	7	. day	. 1	1	•6	Metals: As Ag Sa Cd Cr Pb Hg	1.								一		5 E T	300	27	3
<b>}</b> ~	€	Project #. 2006-142	8	¥	X Standard	- 1	TOTAL		9987638765C											<b>}</b> & ≥	8 8	note Hand D by Serplent	<b>a</b>
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3	Ken Dutton	Ť	SS. 2800 Plains Hwy	Lovingtor	(505) 441-2124	is in	18 7 5	45460	FIELD CODE	MW-9	MW-4	8W-6	MW-6	MW-8	MW-1	MW-2	MW-7	MW-3			17		Jan
Ellyll Clinicitial Lab Of 16Ag3	Project Manager:	Company Name	Company Address:	City/State/Zip:	Telephone No.	Sampler Signature:		,		and the second s										pecial instructions:	dbr.	zdby.	* Lak
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Environmental Lab of Texas Variance/ Corrective Action Report Sample Log-In

Menti Basin Enviro Marw	. :				
Date/Time: 12/04/07 12:45	'				
ab ID#: 1939&D	:				
nitials: and A	•				
	o de la cale				
Sample Receip	t Checklist		,	Client Initia	n) e
Temperature of container/ cooler?	VE8	. No	3.5°C	MORE MADE	٦
2 Shipping container in good condition?	Xes	No			٦
3 Custody Seals intact on shipping container/ cooler?	Yes	No.	-Not Present		7
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present		7
5 Chain of Custody present?	Ç¥es	No			7
6 Sample instructions complete of Chain of Custody?	₹es	No			7
7 Chain of Custody signed when relinquished/ received?	रहे	No.			1.
/8 Chain of Custody agrees with sample label(s)?'	ďes	No.	ID written on Cont./ Lid		7-
9 Container label(s) legible and intact?	//es	No.	Not Applicable		7 .
410. Sample matrix/ properties agree with Chain of Custody?	Yes	No			다 그
411 Containers supplied by ELOT?	269	No	1		7
#12 Samples in proper container/ bottle?	468	No	See Below	<u> </u>	┥ .
#13 Samples properly preserved?	Yes	No	Sée Below		7 .
14 Sample bottles intact?	(Yes	No		1	<b>⊣</b> .
#15 Preservations documented on Chain of Custody?	Yes	No			7
#16 Containers documented on Chain of Custody?	Yes	No	<del>                                     </del>	1	7
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	<del> </del>	$\dashv$
#18 All samples received within sufficient hold time?	(Yes)	- No	See Below	7.5	-
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	5-	-
#20 VOC samples have zero headspace?	(Yes)	No.	Not Applicable	1	
				,	<del>-</del>
Variance Doc	umentation	7		•	* ; "
Contact: Contacted by:			Date/ Time:		٠.
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Regarding:	14				
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Corrective Action Taken:					•
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Check all that Apply: See attached e-mail/ fax					
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Check all that Apply:  See attached e-mail/ fax Client understands and we Cooling process had begu					

## **Analytical Report 299636**

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lovington Gathering WTI 2006-142

19-MAR-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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19-MAR-08

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

Reference: XENCO Report No: 299636

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

## Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 299636. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 299636 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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## **Sample Cross Reference 299636**



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

Lovington Gathering WTI

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



Contact: Camille Reynolds Project Location: Lea County, NM

Project 1d: 2006-142

# Certificate of Analysis Summary 299636 PLAINS ALL AMERICAL SHESS, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Mar-14-08 12:10 pm Report Date: 19-MAR-08

Project Manager: Brent Barron, II

					Project Manager: Brent Barron, II	Sieili Barion, II	
	Lab Id:	299636-001	299636-002	299636-003	299636-004	299636-005	299636-006
A section Decree	Field Id:	MW-1	MW-4	MW-5	MW-6	MW-8	6-MM
Anaiysis Requesieu	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Mar-11-08 13:25	Mar-11-08 14:00	Mar-11-08 14:40	Mar-11-08 15:15	Mar-11-08 15:50	Mar-11-08 16:40
RTEX by EPA 8021B	Extracted:	Mar-17-08 08:42	Mar-17-08 08:42	Mar-17-08 08:42	Mar-17-08 08:42	Mar-17-08 08:42	Mar-17-08 08:42
ATTOO STATE OF STATE	Analyzed:	Mar-17-08 15:39	Mar-17-08 15:58	Mar-17-08 16:16	Mar-17-08 16:34	Mar-17-08 16:53	Mar-17-08 17:48
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.0010	ND 0.0010	ND 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 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Xylenes, Total		ND	QN	ND	ND	QN	ΩN
Total BTEX		ΩN	QN	QN	ND	ND	QN

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restinist expressed throughout this markinged reports the the study and the MENCO Laboratories. KENCO Laboratories assumes no responsibility and makes no varranty to the end use of the data bretchy presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Director



Contact: Camille Reynolds Project Location: Lea County, NM

Project Id: 2006-142

# Certificate of Analysis Summary 299636 PLAINS ALL AMERIC EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Mar-14-08 12:10 pm Report Date: 19-MAR-08

Project Manager: Brent Barron, II

	Lab Id:	299636-007	299636-008	299636-009	
Anning Dogwood	Field Id:	MW-2	MW-7	MW-3	
naisanhau sisinuw	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Mar-12-08 08:00	Mar-12-08 09:00	Mar-12-08 10:00	
BTEX hy FPA 8021B	Extracted:	Mar-17-08 08:42	Mar-17-08 08:42	Mar-18-08 10:28	
	Analyzed:	Mar-17-08 18:06	Mar-17-08 18:25	Mar-18-08 15:00	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.0955 0.0010	0.0437 0.0010	1.159 0.0050	
Toluene		ND 0.0020	ND 0.0020	0.1073 0.0100	
Ethylbenzene		ND 0.0010	ND 0.0010	0.1775 0.0050	
m,p-Xylenes		0.0032 0.0020	0.0150 0.0020	0.0662 0.0100	
o-Xylene		ND 0.0010	ND 0.0010	0.1393 0.0050	
Xylenes, Total		0.0032	0.015	0.2055	
Total BTEX		0.0987	0.0587	1.6493	

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

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Brent Barron Odessa Laboratory Director

## XENCO Laboratories

## **Flagging Criteria**

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

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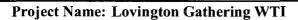
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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477







rk Order #: 299636

Lab Batch #: 717332

Sample: 299559-001 S / MS

**Project ID: 2006-142** 

Matrix: Water Batch:

Units: mg/L	SU	RROGATE R	ECOVERY S	STUDY -	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	11	121	[D]		
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 717332

Sample: 299559-001 SD / MSD

Matrix: Water Batch: 1

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	[75]	[5]	[D]	/•••	
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	

Lab Batch #: 717332

Sample: 299636-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 717332

Sample: 299636-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 717332

Sample: 299636-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

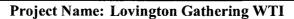
<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

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







rk Order #: 299636 Lab Batch #: 717332

Sample: 299636-004 / SMP

**Project ID: 2006-142** Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY

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

Lab Batch #: 717332

Sample: 299636-005 / SMP

Batch: 1

Batch: 1

Matrix: Water

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

Lab Batch #: 717332

Sample: 299636-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobenzene	0.0338	0.0300	113	80-120		

Lab Batch #: 717332

Sample: 299636-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	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	0.0310	0.0300	103	80-120		

Lab Batch #: 717332

Sample: 299636-008 / SMP

Batch: 1

Matrix: Water

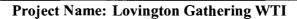
Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0310	0.0300	103	80-120		
4-Bromofluorobenzene	0.0328	0.0300	109	80-120		

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

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

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







rk Order #: 299636

**Project ID: 2006-142** 

Lab Batch #: 717332

Sample: 505989-1-BKS / BKS

Matrix: Water Batch: 1

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
I,4-Difluorobenzene	0.0303	0.0300	101	80-120		
4-Bromofluorobenzene	0.0355	0.0300	118	80-120		

Lab Batch #: 717332

**Sample:** 505989-1-BLK / BLK

Matrix: Water Batch: 1

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

Lab Batch #: 717332

Sample: 505989-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0302	0.0300	101	80-120		
4-Bromofluorobenzene	0.0330	0.0300	110	80-120		

Lab Batch #: 717545

Sample: 299636-009 / SMP

Batch: 1

Matrix: Water

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

Lab Batch #: 717545

**Sample:** 299685-002 S / MS

Batch: 1

Matrix: Water

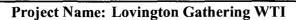
Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0339	0.0300	113	80-120		
4-Bromofluorobenzene	0.0360	0.0300	120	80-120		

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

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

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







rk Order #: 299636

Lab Batch #: 717545

Sample: 299685-002 SD / MSD

**Project ID:** 2006-142

Batch: 1 Matrix: Water

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

Lab Batch #: 717545

Sample: 506115-1-BKS/BKS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	11	[~]	[D]			
1,4-Difluorobenzene	0.0301	0.0300	100	80-120		
4-Bromofluorobenzene	0.0329	0.0300	110	80-120		

Lab Batch #: 717545

Sample: 506115-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0328	0.0300	109	80-120		
4-Bromofluorobenzene	0.0337	0.0300	112	80-120		

Lab Batch #: 717545

Sample: 506115-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0300	0.0300	100	80-120		
4-Bromofluorobenzene	0.0307	0.0300	102	80-120		



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

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B







## Project Name: Lovington Gathering WTI

Work Order #: 299636

Analyst: SHE

Lab Batch ID: 717332

**Date Prepared:** 03/17/2008

Date Analyzed: 03/17/2008 **Project ID: 2006-142** 

Matrix: Water

Batch #: 1 Sample: 505989-1-BKS

Flag Control Limits %RPD 25 22 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 71-133 70-131 RPD 4 Dup. [G] 102 8 8 6 97 Duplicate Result [F] 0.0942 0.1930 Blank Spike 0.1022 0.0943 0.0967 Spike Added 豆 0.2 0.1 0.1 5 0.1 Blank Spike %R [D] 100 100 107 86 86 Blank Spike Result [C] 0.0980 0.0979 0.2009 0.1073 0.1001 0.1000 0.1000 0.1000 0.1000 0.2000 Spike Added <u>B</u> Blank Sample Result ₹ S B S ΩN 8 BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluene

Analyst: SHE

Date Prepared: 03/18/2008

Date Analyzed: 03/18/2008

Lab Batch ID: 717545	Sample: 506115-1-BKS	KS	Batcl	Batch #: 1					Matrix: Water	Vater		
Units: mg/L			BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	ICATE 1	<b>ECOVE</b>	RY STUD	Y	
BTEX by EPA 8021B	A 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes			<u>8</u>	[C]	<u>[a]</u>	[9]	Result [F]	<u>5</u>	?			
Benzene		QN	0.1000	9880.0	68	0.1	0.0913	16	3	70-125	25	
Toluene		QN	0.1000	0.0883	88	0.1	0.0908	16	3	70-125	25	
Ethylbenzene		QN	0.1000	9060'0	16	0.1	0.0927	93	2	71-129	25	
m,p-Xylenes		QN	0.2000	0.1814	16	0.2	0.1850	93	2	70-131	25	
o-Xylene		QN	0.1000	0.0967	6	0.1	0.0982	86	2	71-133	25	

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 Relative Percent Difference RPD = 200\*[(D-F)/(D+F)]



## Form 3 - MS MSD Recoveries



Project Name: Lovington Gathering WTI

Project ID: 2006-142 Matrix: Water

Work Order #: 299636

Lab Batch ID: 717332

Batch #: QC-Sample ID: 299559-001 S

SHE

Flag %RPD Control Limits 25 25 25 25 25 Control Limits %R 70-125 70-125 71-129 70-131 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 4 9 2 S 9 Spiked Dup. G & R 2 85 8 88 6 Duplicate Spiked Sample Result [F] 0.0885 0.1753 0.0913 0.0839 0.0849 Spike Added 0.1000 0.2000 0.1000 0.1000 0.1000 Analyst: Sample Spiked 26 %**R** 82 88 94 93 Spiked Sample 0.0935 0.1856 0.0873 0.0893 Result 0.0971 Date Prepared: 03/17/2008 Spike Added 0.1000 0.2000 0.1000 0.1000 0.1000 Parent Sample Result 0.0054 Ω QN 2 8 Y BTEX by EPA 8021B Analytes Date Analyzed: 03/17/2008 Reporting Units: mg/L Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

Matrix: Water SHE Analyst: Batch #: QC-Sample ID: 299685-002 S Date Prepared: 03/18/2008

Lab Batch ID: 717545

Flag Limits %RPD Control 25 25 25 25 25 Control Limits %R 70-125 71-129 70-125 70-131 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD œ S Ś 3 4 Spiked Dup. %R [G] 83 84 89 88 92 Duplicate Spiked Sample Result [F] 0.0953 0.0838 0.0893 0.1758 0.0921 Spike Added 0.1000 0.2000 0.1000 0.1000 0.1000  $\Xi$ Spiked Sample <u>e</u> 11 80 85 85 88 Spiked Sample 0.0853 0.1693 Result 0.0889 0.0884 0.0801  $\overline{\Omega}$ Spike Added [B] 0.1000 0.1000 0.1000 0.2000 0.1000 Parent Sample Result 0.0120 ¥ g 8 S 9 BTEX by EPA 8021B Analytes Date Analyzed: 03/18/2008 Reporting Units: mg/L Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluenc

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

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

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

## **Environmental Lab of Texas**

Project Name: LOVINGTON GATHERING WTI CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
13800 West 1-20 East
Odessa, 1exas 19765
Fax: 432-563-1713 PO#: PAA · C. J. Raynolds
Report Format: X Standard Project Loc: Les County, NM Project #: 2006-142 PAGE 01 OF 01 Company Name Basin Environmental Service Technologies, LLC Lovington, NM 88260

Company Address: P. O. Box 301

Telephone No: City/State/Zip:

Project Manager: Ken Dutton

Telephone No: (509) 441-2124	7 00			Fax No:	8	(505) 396-1420	1730				Report Format:	orma tempo		X Standard	dard		TRRP		□ NPDES	DES
P	Kack We	B		e-mail:	젦	ŧ,	kdutton@basinenv.com	sinen	8	εl	1	ı		-	Analya	Analyze For		Ì		
	_										<u>.                                    </u>			ű	F	┝	L	L	F	1/4
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			11-Mar-08	1515	2	×	×		-	Ε	ΒW		-			Ĥ	×		_	×
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				i									Š	VOCs Free of Headspace?	f Head	Space	ę.	(J-6		z
1	Date Time	<u>e</u> (2	Received by:	d'allen	1				~	574 M	(5)	Time		Labels on container(s) Custody seals on container(s) Custody seals on coder(s)	ateine Is on o	(s) Xdair Ofer(s	(s)	300	· ·	zzz
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-	Cate	Ę	Received by ELOT:	The state of the s	- ا	ŀ			(4	8,1405	L =	Teme 7	Tem .	Temperature Upon Receipt:	Upon	Recei	븅	S.C	2	ပ္
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## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Plains				
Date/ Time:	3 14 08 12:10				
Lab ID#:	277636				
Initials:	al				
	Comple Besslut 6	Cha-1-11-4			
	Sample Receipt (	CHECKIIST		Client Initia	de
#1 Tempera	iture of container/ cooler?	Yes	No	5.0°C	י <sup>י</sup>
	container in good condition?	Yes	No		1
	Seals intact on shipping container/ cooler?	(es)	No	Not Present	1
	Seals intact on sample bottles/ container?	YES	No	Not Present	┥ .
	Custody present?	Yes	No	713,1103.11	1
	instructions complete of Chain of Custody?	Yes	No		ヿ
	Custody signed when relinquished/ received?	(9)	No		7
	Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	7
	er label(s) legible and intact?	Yes	No	Not Applicable	٦
#10 Sample	matrix/ properties agree with Chain of Custody?	Yes	No		7
	ers supplied by ELOT?	Yes	No		]
#12 Sample	s in proper container/ bottle?	Yeş	No	See Below	
	s properly preserved?	Yes)	No '	See Below	
	bottles intact?	Yes	No		]
	vations documented on Chain of Custody?	Yes	No		
	ners documented on Chain of Custody?	Yes	No		
	nt sample amount for indicated test(s)?	Y/es)	No	See Below	
	ples received within sufficient hold time?	Yes	No	See Below	
	ntract of sample(s)?	Yes	No		$\Box$
#20_VOC s	amples have zero headspace?	Yes	No	Not Applicable	
	Variance Docur	mentation			
Contact:	Contacted by:			Date/ Time:	
Regarding:					
Corrective A	ction Taken:				
Check all th	at Apply: See attached e-mail/ fax Client understands and wou Cooling process had begun				

## **Analytical Report 305940**

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lovington Gathering WTI 2006-142

19-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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



19-JUN-08

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

Reference: XENCO Report No: 305940

Lovington Gathering WTI
Project Address: Lea County, NM

## Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 305940. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 305940 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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## **Sample Cross Reference 305940**



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

Lovington Gathering WTI

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



Contact: Camille Reynolds Project Location: Lea County, NM

Project 1d: 2006-142

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

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Jun-16-08 05:05 pm Report Date: 19-JUN-08

Project Manager: Brent Barron, Il

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

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report present 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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Odessa Laboratory Director



Contact: Camille Reynolds

**Project Id:** 2006-142

Project Location: Lea County, NM

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

Project Name: Lovington Gathering WTI

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

Report Date: 19-JUN-08

Project Manager: Brent Barron, Il

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

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

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Brent Barron Odessa Laboratory Director

## XENCO Laboratorics

## Flagging Criteria

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

  The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- \* Outside XENCO'S scope of NELAC Accreditation

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11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



Project Name: Lovington Gathering WTI



rk Order #: 305940

Lab Batch #: 725775

**Project ID: 2006-142** 

Units: mo/L.

Sample: 305940-001 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0350	0.0300	117	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	i 

Lab Batch #: 725775

Sample: 305940-001 S / MS

Batch: 1

Matrix: Water

Units: mg/L	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	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 725775

Sample: 305940-001 SD / MSD

Batch: 1

1 Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4 Diffuoroborzene	0.0284	0.0300	95	80-120	
-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 725775

Sample: 305940-002 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE F	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0346	0.0300	115	80-120	_
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 725775

Sample: 305940-003 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

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



<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



Project Name: Lovington Gathering WTI



rk Order #: 305940 Lab Batch #: 725775

Sample: 305940-004 / SMP

**Project ID: 2006-142** 

Batch: 1

Matrix: Water

Units: mg/L	St	RROGATE R	ECOVERY:	STUDY	_
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	]	
1,4-Difluorobenzene	0.0341	0.0300	114	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 725775

Sample: 305940-005 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 725775

Sample: 305940-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	]	
4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 725775

Sample: 305940-007 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE F	RECOVERY	STUDY	_
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 725775

Sample: 305940-008 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	ļ	
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	80-120	

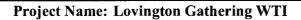
<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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



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







**Park Order #:** 305940

Lab Batch #: 725775

Sample: 305940-009 / SMP

**Project ID: 2006-142** 

Batch: 1 Matrix: Water

Units: mg/L	SU	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021B	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	0.0297	0.0300	99	80-120	

Lab Batch #: 725775

**Sample:** 510817-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	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	0.0328	0.0300	109	80-120	

Lab Batch #: 725775

Sample: 510817-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 725775

Sample: 510817-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

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



## BS / BS Recoveries



## Project Name: Lovington Gathering WTI

Work Order #: 305940

Analyst: SHE

Lab Batch ID: 725775

Sample: 510817-1-BKS

Date Prepared: 06/17/2008

Batch #: 1

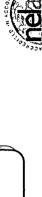
**Project ID:** 2006-142 **Date Analyzed:** 06/17/2008

Matrix: Water

Units: mg/L		BLAN	K/BLANK S	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
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>B</b> ]	[2]	<u>a</u>	E	Result [F]	<u>5</u>				
Benzene	ON	0.1000	0.0926	66	0.1	0.0827	83	Ξ	70-125	25	
Tolucne	QN	0.1000	0.0970	26	0.1	0.0853	85	13	70-125	25	
Ethylbenzene	QN	0.1000	0.1118	112	0.1	0.0979	86	13	71-129	25	
m,p-Xylenes	QN	0.2000	0.2288	114	0.2	0.2010	101	13	70-131	25	
o-Xylene	ND	0.1000	0.1153	\$11	0.1	0.1016	102	13	71-133	25	



## Form 3 - MMSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 305940 Lab Batch ID: 725775

Date Analyzed: 06/18/2008

QC-Sample ID: 305940-001 S Date Prepared: 06/17/2008

Analyst: SHE Batch #:

Matrix: Water

Project ID: 2006-142

Reporting Units: mg/L		X	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	RIX SPII	KE DUPLICA'	TE REC	OVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample Result (F)	Spiked Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes	[ <b>A</b> ]	(B)		<u> </u>	[ <u>E</u> ]		<u>5</u>			)   	
Benzene	ND	0.1000	0.0895	06	0.1000	0.0814	81	=	70-125	25	
Toluene	ND	0.1000	6160:0	92	0.1000	0.0835	84	6	70-125	25	
Ethylbenzene	ND	0.1000	0.1040	104	0.1000	0.0948	95	6	71-129	25	
m,p-Xylenes	ND	0.2000	0.2115	106	0.2000	0.1934	26	6	70-131	25	
o-Xylene	ND	0.1000	0.1090	109	0.1000	0.0995	100	6	71-133	25	

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

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

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

Ш 2	ironment	<b>Environmental Lab of Texas</b>	Ž.	as							Š	N.	SF C	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	207.	ECC	28	άND	ANA	7.75	SRE	700	12				
									8 2	100 W	12600 West I-20 East Odessa, Texas 7976\$	7976	± •9						<u>.                                    </u>	e X	5,5	Phone: 432-563-1800 Fax: 432-563-1713	713				
	Project Manager:	Curt Stanloy			4	PAGE 01 OF	10	ļ						١	Ē	oject	25	잌	Ž	Ĕ	5	퓜	Project Name: LOVINGTON GATHERING WT	*	ŀ		ı
	Company Name	Basin Environmental Service Technologies, LLC	al Service	100	gopou	98, LLC								ı		ā	yect	Project #: 2006-142	ģ	~	ļ						- 1
	Company Address:	P. O. Box 301											i	1		Proje	2	Project Loc: Lea County, NM	3	ž	2					Ì	
	City/State/Zip:	Lovington, NM 88260	9					-					ŀ	١			5	<u>اة</u>	Α.	2	PO#: PAA - C. J. Reynolds	.22			Į		ŧ
•	Telephone No:	(503) 441-2244	4				Fax No:	ল	33	(505) 396-1429	6		- 1	ŀ	Report Format:	8	nat:	×	X Standard	tard Tard		TRRP	ê.		☐ NPDES	SES	
	Sampler Signature:			M	Ş		e-mail:	이	stan	ley@	cstanley@basinenv.com	nen	8	٤١	ı	L	ı		-	1		l,	ı	1	ſ	Г	
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) # 8V1	FIEL	FIELD CODE	aujoeg	uussa	£ndin⊈	3 ateQ	8 emiT	Preside Fille	934	нио•	•оѕ'н	HQBN O <sub>4</sub> R <sub>4</sub> GN	BUON		12 - WJ			_		YOBINES	Hovima22	BTEX 8	июи				noun of
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## Environmental Lab of Texas

Variance/ Corrective Action Rep	ort- Sample	e Log-In		
Client: Basin Env. / Plains				
Date/ Time: 6:14:08 17:05				
Lab ID#: 305/140				
Initials:				
Sample Receipt	Checklist		Client Ini	tiala
#1 Temperature of container/ cooler?	Yes	No	3.5 °C	<u> </u>
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	_
#4 Custody Seals intact on sample bottles/ container?	Ves	No	Not Present	$\dashv$
#5 Chain of Custody present?	Yes	No	THE TRESCR	
#6 Sample instructions complete of Chain of Custody?	Yes	No	<del></del>	$\dashv$
#7 Chain of Custody signed when relinguished/ received?	YES	No		
#8 Chain of Custody agrees with sample label(s)?	Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(es)	No	Not Applicable	{
#10 Sample matrix/ properties agree with Chain of Custody?	x es	No	тос присаме	$\dashv$
#11 Containers supplied by ELOT?	Ves	No	<del> </del>	
#12 Samples in proper container/ bottle?	Yes.	No	See Below	$\dashv$
#13 Samples properly preserved?	res	No	See Below	$\dashv$
#14 Sample bottles intact?	T FES	No	Jee Below	
#15 Preservations documented on Chain of Custody?	Yes	No	<del> </del>	
#16 Containers documented on Chain of Custody?	Yes)	No	<del></del>	
#17 Sufficient sample amount for Indicated test(s)?	X/es)	No	See Below	$\dashv$
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	$\dashv$
#20 VOC samples have zero neauspace :	(168)	NO	Not Applicable	
Variance Docur	nentation			
Contact: Contacted by:			Date/ Time:	
Regarding:		- <u>-</u>		
		<del></del>		
Corrective Action Taken:				
Check all that Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun			-	
			-	

## **Analytical Report 312889**

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lovington Gathering WTI 2006-142

25-SEP-08





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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Page 1 of 14





25-SEP-08

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

Reference: XENCO Report No: 312889
Lovington Gathering WTI

Project Address: Lea County, NM

## Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 312889. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 312889 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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 312889**



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

Lovington Gathering WTI

Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
W	Sep-17-08 14:15		312889-001
W	Sep-17-08 14:45		312889-002
W	Sep-17-08 15:10		312889-003
W	Sep-17-08 15:30		312889-004
W	Sep-17-08 15:50		312889-005
W	Sep-17-08 16:15		312889-006
W	Sep-17-08 16:40	•	312889-007
W	Sep-17-08 17:00		312889-008
W	Sep-17-08 17:30		312889-009
	W W W W W	W Sep-17-08 14:15 W Sep-17-08 14:45 W Sep-17-08 15:10 W Sep-17-08 15:30 W Sep-17-08 15:50 W Sep-17-08 16:15 W Sep-17-08 16:40 W Sep-17-08 17:00	W Sep-17-08 14:15 W Sep-17-08 14:45 W Sep-17-08 15:10 W Sep-17-08 15:30 W Sep-17-08 15:50 W Sep-17-08 16:15 W Sep-17-08 16:40 W Sep-17-08 17:00



Contact: Camille Reynolds Project Location: Lea County, NM

Project 1d: 2006-142

# Certificate of Analysis Summary 312889 PLAINS ALL AMERIC EH&S, Midland, TX

Project Name: Lovington Gathering WTI

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

Report Date: 25-SEP-08

	ŀ				Project Manager: Brent Barron, II	Brent Barron, II	
	Lab Id:	312889-001	312889-002	312889-003	312889-004	312889-005	312889-006
Analysis Donnostod	Field Id:	MW-5	MW-I	MW-4	9-WM	6-WW	MW-2
naisanhay sistiniis	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Sep-17-08 14:15	Sep-17-08 14:45	Sep-17-08 15:10	Sep-17-08 15:30	Sep-17-08 15:50	Sep-17-08 16:15
BTEX by EPA 8021B	Extracted:	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08	Sep-22-08 16:08
	Analyzed:	Sep-23-08 01:37	Sep-23-08 01:59	Sep-23-08 02:22	Sep-23-08 02:45	Sep-23-08 03:07	Sep-23-08 03:30
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.0010	0.0200 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.1590 0.0010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0044 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes		QN	ND	ND	QN	ND	0.0044
Total BTEX		ND	0.02	QN	ND	QN	0.1634

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restine expressed throughout this analytical report represent the two ladgemen 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Director



Contact: Camille Reynolds Project Location: Lea County, NM

**Project Id:** 2006-142

# Certificate of Analysis Summary 312889 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-19-08 04:53 pm Report Date: 25-SEP-08

Project Manager: Brent Barron, II

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

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and resting expressed throughout the analytical report research the back lighterst of XRNCO Laboratories. XEXCO Laboratories assumes to responsibility and makes no warranty to the end use of the data hereby presented. Our flability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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## Flagging Criteria

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

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(770) 449-8800

(770) 449-5477



Project Name: Lovington Gathering WTI

rk Orders: 312889,

Project ID: 2006-142

Lab Batch #: 734916

Sample: 312880-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	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	0.0248	0.0300	83	80-120			

Lab Batch #: 734916

Sample: 312880-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	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	0.0252	0.0300	84	80-120			

Lab Batch #: 734916

Sample: 312889-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0360	0.0300	120	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 734916

Sample: 312889-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		ł	[D]	1			
1,4-Difluorobenzene	0.0330	0.0300	110	80-120			
4-Bromofluorobenzene	0.0226	0.0300	75	80-120	**		

Lab Batch #: 734916

Sample: 312889-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		ļ	[D]		
1,4-Difluorobenzene	0.0364	0.0300	121	80-120	**
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

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

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

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



Project Name: Lovington Gathering WTI

rk Orders: 312889,

**Project ID: 2006-142** 

Lab Batch #: 734916

Sample: 312889-004 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0365	0.0300	122	80-120	**	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120		

Lab Batch #: 734916

Sample: 312889-005 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
			[D]			
1,4-Difluorobenzene	0.0364	0.0300	121	80-120	**	
4-Bromofbjorohenzene	0.0262	0.0300	87	80-120		

Lab Batch #: 734916

Sample: 312889-006 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0254	0.0300	85	80-120		
4-Bromofluorobenzene	0.0147	0.0300	49	80-120	**	

Lab Batch #: 734916

Sample: 312889-008 / SMP

Batch:

Matrix: Water

Units: mg/L  BTEX by EPA 8021B  Analytes	SURROGATE RECOVERY STUDY					
	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	11	[	[D]			
1,4-Difluorobenzene	0.0217	0.0300	72	80-120	**	
4-Bromofluorobenzene	0.0095	0.0300	32	80-120	**	

Lab Batch #: 734916

Sample: 516098-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{ <b>D</b> ]			
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	<u> </u>	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120		

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

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



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



Project Name: Lovington Gathering WTI

rk Orders: 312889,

Project ID: 2006-142

Lab Batch #: 734916

Sample: 516098-1-BLK / BLK

Matrix: Water Batch:

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0362	0.0300	121	80-120	**	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120		

Lab Batch #: 734916

Sample: 516098-1-BSD / BSD

Batch: Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	11-1	(-)	[D]	,,,,,,		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	-	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120		

Lab Batch #: 735018

Sample: 312889-007 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		}	[D]			
4-Difluorobenzene	0.0262	0.0300	87	80-120		
4-Bromofluorobenzene	0.0105	0.0300	35	80-120	**	

Lab Batch #: 735018

Sample: 312889-009 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		}	[D]			
1,4-Difluorobenzene	0.0351	0.0300	117	80-120		
4-Bromofluorobenzene	0.0227	0.0300	76	80-120	**	

Lab Batch #: 735018

Sample: 312889-009 S / MS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	1	}	[D]	}	l	
1,4-Difluorobenzene	0.0294	0.0300	98	80-120		
4-Bromofluorobenzene	0.0259	0.0300	86	80-120		

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

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



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



Project Name: Lovington Gathering WTI

rk Orders: 312889,

**Project ID: 2006-142** 

Lab Batch #: 735018

Sample: 312889-009 SD / MSD

Batch: 1 Matrix: Water

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

Lab Batch #: 735018

Sample: 516175-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	<u> </u>	
4-Bromofluorobenzene	0.0248	0.0300	83	80-120		

Lab Batch #: 735018

**Sample:** 516175-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	(-3,	(~)	[D]	,,,	
4-Difluorobenzene	0.0370	0.0300	123	80-120	**
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 735018

**Sample:** 516175-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	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	0.0250	0.0300	83	80-120	

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 #: 312889

Lab Batch ID: 734916 Analyst: ASA

Sample: 516098-1-BKS

Date Prepared: 09/22/2008

**Project ID:** 2006-142 **Date Analyzed:** 09/22/2008

Matrix: Water

Batch #: 1

Units: mg/L		BLAN	K/BLANKS	SPIKE / E	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
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		[8]	[C]	[ <u>a</u>	[E]	Result [F]	ত্র				
Benzene	Q.	0.1000	0.1052	105	0.1	0.1034	103	2	70-125	25	
Toluene	Ω	0.1000	0.1005	101	0.1	0.0990	66	2	70-125	25	
Ethylbenzene	QZ	0.1000	0.1021	102	0.1	0.1002	001	2	71-129	25	
m,p-Xylenes	ΩN	0.2000	0.2121	106	0.2	0.2085	104	2	70-131	25	
o-Xylene	ND	0.1000	9960'0	76	0.1	0.0961	96	1	71-133	25	

Analyst: ASA

Lab Batch ID: 735018

Date Prepared: 09/23/2008

Batch #: 1

Sample: 516175-1-BKS

Matrix: Water

Date Analyzed: 09/23/2008

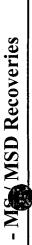
Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE R	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	BIK. Spk Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	Q.	0.1000	0.1034	103	0.1	0.1089	601	5	70-125	25	
Toluene	QN	0.1000	9660.0	100	0.1	0.1049	105	5	70-125	25	
Ethylbenzene	QN	0.1000	0.1016	102	0.1	0.1071	107	5	71-129	25	
m,p-Xylenes	ΩN	0.2000	0.2104	105	0.2	0.2220	111	5	70-131	25	
o-Xylene	Q.	0.1000	0.0948	95	0.1	0.1014	101	7	71-133	25	

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



### Form 3 - Man MSD Recoveries

Project Name: Lovington Gathering WTI





Work Order #: 312889

Lab Batch ID: 734916

Date Analyzed: 09/23/2008

QC-Sample ID: 312880-001 S

\_ Batch #:

Analyst:

**Date Prepared:** 09/22/2008

Matrix: Water ASA

**Project ID: 2006-142** 

eporting Units: mg/L		M	ATRIX SPIKI	/ MAT	XIX SPIE	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	<u>.</u>	<u> </u>	Added [E]	Kesuii [r]	<u>5</u>	<b>°</b>	%0K	%KFU	
Benzene	QN.	0.1000	0.0910	16	0.1000	0.1002	001	6	70-125	25	
Toluene	N ON	0.1000	0.0858	98	0.1000	0.0939	94	6	70-125	25	
Ethylbenzene	ND	0.1000	0.0855	98	0.1000	0.0936	94	6	71-129	25	
m,p-Xylenes	QN	0.2000	0.1770	68	0.2000	0.1937	97	6	70-131	25	
o-Xylene	ND	0.1000	0.0833	83	0.1000	0.0912	16	6	71-133	25	

**Date Analyzed:** 09/23/2008 Lab Batch ID: 735018

QC- Sample ID: 312889-009 S Date Prepared: 09/23/2008

Matrix: Water Analyst: ASA Batch #:

Reporting Units: mg/L		Σ	ATRIX SPIKI	/ MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	re reco	OVERY S	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0266	0.1000	0.1289	102	0.1000	0.1344	801	9	70-125	25	
Toluene	QN	0.1000	0.0979	86	0.1000	0.1012	101	3	70-125	25	
Ethylbenzene	QN	0.1000	0.0965	67	0.1000	0.1010	101	4	71-129	25	
m,p-Xylenes	0.0022	0.2000	0.2011	66	0.2000	0.2100	104	5	70-131	25	
o-Xylene	QN	0.1000	0.0926	93	0.1000	0.0972	76	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

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

**Environmental Lab of Texas** 

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

and ST. (4). AS (almostice, and) TAT H2UR TAT brishnat? □ NPDES Project Name: LOVINGTON GATHERING WTI Phone: 432-563-1800 Fax: 432-563-1713 TRRP MRO.V 9-19-08 16-53 Temperature Upon Receipt: BTEX 80216/5030 or BTEX 8260 PO#: PAA - C. J. Reynolds Project Loc: Lea County, NM Report Format: X Standard Project #: 2006-142 030192318A8 9 9 9 9 3 3 3 3 ĕ 먪 aq2 ) rantO kdutton@basinenv.com O'S'EN 12600 West I-20 East Odessa, Texas 79765 HOGN HCI (505) 396-1429 901 × × Fax No: e-mail: 1510 1530 1550 1640 1445 1700 1730 baldme2 amiT J- RIAKWAN 9/17/2008 9/17/2008 9/17/2008 9/17/2008 9/17/2008 9/17/2008 9/17/2008 9/17/2008 Received by. Basin Environmental Service Technologies, LLC <u>136</u> Sampler Signature: Lovington, NM 88260 Company Address: P. O. Box 301 Project Manager: Curt Stanley 7381K FIELD CODE MW4 MW-6 6-WM MW-1 MW-2 MW-8 WW-7 Company Name City/State/Zip: Telephone No: peciel Instructions: eanquished by: ORDER #: 8 8 ō ₹ છ

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

	Tariana John Salle Nation Property Cample Log-III
Olient:	Basin Em. Phins
Date/ Time:	919.08 16:53
Lab ID#;	31 2889
Initials:	<u>ar</u>
	Sample Receipt Checklist

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

### Variance Documentation

Contact:	 Contacted by:	Date/ Time:
Corrective Action Taken:		
Check all that Apply:	See attached e-mail/ fax Client understands and would like to proceed Cooling process had begun shortly after samp	•

### **Analytical Report 319271**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lovington Gathering WTI 2006-142

09-DEC-08





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

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

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

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

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





09-DEC-08

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

Reference: XENCO Report No: 319271

Lovington Gathering WTI
Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 319271. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 319271 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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### **Sample Cross Reference 319271**



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

Lovington Gathering WTI

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



### Certificate of Analysis Summary 319271 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lovington Gathering WTI

**Project Id:** 2006-142

D- ::-1 D- :--4

Date Received in Lab:

Dec-03-08 09:17 am

Contact: Daniel Bryant
Project Location: Lea County, NM

Report Date: Project Manager:

Brent Barron, II

09-DEC-08

	Lab Id:	319271-	001	319271-	002	319271-	003	319271-0	004
Analysis Requested	Field Id:	MW-5		MW-4		MW-6	,	MW-9	
	Depth:						)		
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Dec-02-08	08:35	Dec-02-08	08:55	Dec-02-08	09:25	Dec-02-08	09:45
BTEX by EPA 8021B	Extracted:	Dec-04-08	16:05	Dec-04-08	16:05	Dcc-04-08	16:05	Dec-04-08	16:05
<b>5</b> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Analyzed:	Dec-05-08	03:24	Dec-05-08	03:47	Dec-05-08	04:11	Dec-05-08	04:34
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.0010	ND	0.0010	ND	0.0010	ND '	0.0010
Toluene		ND	0.0020	0.0062	0.0020	ND	0.0020	ND	0.0020
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
m,p-Xylenes		ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
o-Xylene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total Xylenes		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total BTEX		ND	0.0010	0.0062	0.0010	ND	0.0010	ND	0.0010
SVOA PAHs List by EPA 8270C  Extracted: Analyzed:		Dec-04-08	10:33	Dec-04-08	10:36	Dcc-04-08	10:39	Dec-04-08	10:42
Analyzed:		Dec-04-08	21:06	Dec-04-08	21:50	Dec-04-08	22:34	Dec-04-08	23:18
SVOA PARIS LIST DY EPA 82/0C		mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Acenaphthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Accnaphthylene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
p(a)anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
o(a)pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(b)fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(k)fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(g,h,i)perylene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chrysene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Dibenz(a,h)Anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluorene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Indeno(1,2,3-c,d)Pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
I-Methylnaphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
2-Methylnaphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Naphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Phonanthrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005

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Brent Barron



### Certificate of Analysis Summary 319271 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lovington Gathering WTI

Project Id: 2006-142

Date Received in Lab:

Dec-03-08 09:17 am

Contact: Daniel Bryant

Report Date:

09-DEC-08

Project Location: Lea County, NM

Project Manager: Brent Barron, II

	Lab Id:	319271-0	005	319271-0	006	319271-0	007	319271-0	008
Analysis Requested	Field Id:	MW-1		MW-3		MW-2		MW-8	
	Depth:								ı
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Dec-02-08	10:10	Dec-02-08	10:30	Dec-02-08	12:40	Dec-02-08	13:00
BTEX by EPA 8021B	Extracted:	Dec-04-08	16:05	Dec-04-08	16:05	Dec-04-08	16:05	Dec-04-08	16:05
DIEA by EIA 6021D	Analyzed:	Dec-05-08	04:58	Dec-05-08	05:21	Dec-05-08	05:45	Dec-05-08	12:01
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		0.0358	0.0010	0.0249	0.0010	0.0503	0.0010	0.2345	0.0050
Toluene		ND	0.0020	ND	0.0020	0.0026	0.0020	0.0468	0.0100
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0010	0.0085	0.0050
m,p-Xylenes		ND	0.0020	0.0040	0.0020	0.0073	0.0020	0.0419	0.0100
o-Xylene		ND	0.0010	0.0019	0.0010	0.0014	0.0010	0.0135	0.0050
Total Xylenes		ND	0.0010	0.0059	0.0010	0.0087	0.0010	0.0554	0.0050
Total BTEX		0.0358	0.0010	0.0308	0.0010	0.0616	0.0010	0.3452	0.0050
SVOA PAHs List by EPA 8270C  Extracted: Analyzed:		Dec-04-08	10:45	Dec-04-08	10:48	Dec-04-08	10:51	Dec-04-08	10:54
SVOA PAHS List by EPA 82/0C  Analyzed:		Dec-05-08	00:02	Dec-05-08	00:47	Dec-05-08	02:47	Dec-05-08	03:31
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Acenaphthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Acenaphthylene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
o(a)anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
o(a)pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(b)fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(k)fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzo(g,h,i)perylene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chrysene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Dibenz(a,h)Anthracene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluoranthene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Fluorenc		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Indeno(1,2,3-c,d)Pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
1-Methylnaphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
2-Methylnaphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Naphthalene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Phenanthrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005
Pyrene		ND	0.005	ND	0.005	ND	0.005	ND	0.005

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### Certificate of Analysis Summary 319271 PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lovington Gathering WTI

**Project Id:** 2006-142

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

Contact: Daniel Bryant
Project Location: Lea County, NM

Report Date: 09-DEC-08
Project Manager: Brent Barron, 11

	Lab Id:	319271-0	09		
Analysis Requested	Field Id:	MW-7			
•	Depth:				
	Matrix:	WATER	١		
	Sampled:	Dec-02-08 I	3:15	}	
BTEX by EPA 8021B	Extracted:	Dcc-05-08 1	2:55		
BIEA Dy EFA 6021B	Analyzed:	Dec-06-08 (	05:31		
	Units/RL:	mg/L	RL		
Benzene	·	0.0364	0.0010		-
Toluene		ND	0.0020		-
Ethylbenzene		ND	0.0010		-
m,p-Xylenes		0.0039	0.0020		
o-Xylene		0.0025	0.0010		-
Total Xylenes		0.0064	0.0010		
Total BTEX		0.0428	0.0010		
SVOA PAHs List by EPA 8270C	Extracted:	Dcc-04-08 1	10:57		
SVOATAIIS LIST BY ETA 6270C	Analyzed:	Dec-05-08 (	04:16		
	Units/RL:	mg/L	RL		
Accnaphthene		ND	0.005		
Acenaphthylene		ND	0.005		
Anthracene		ND	0.005		
o(a)anthracene		ND	0.005		
o(a)pyrcnc		ND	0.005		
Bcnzo(b)fluoranthene		ND	0.005		
Benzo(k)fluoranthene		ND	0.005		
Benzo(g,h,i)perylene		ND	0.005		
Chrysene		ND	0.005		
Dibenz(a,h)Anthracene		ND	0.005		
Fluoranthene		ND	0.005		
Fluorene		ND	0.005		
Indeno(1,2,3-c,d)Pyrene		ND	0.005		
I-Methylnaphthalene		ND	0.005		
2-Methylnaphthalene		ND	0.005		
Naphthalene .		ND	0.005		
Phenanthrene	_	ND	0.005		
Pyrene	_	ND	0.005		<u> </u>

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Brent Barron



### Flagging Criteria





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

  The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
  - K Sample analyzed outside of recommended hold time.

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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

rk Orders: 319271,

Project ID: 2006-142

Lab Batch #: 742525

Sample: 319271-001 / SMP

Matrix: Water Batch:

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

Lab Batch #: 742525

Sample: 319271-001 S / MS

Batch: Matrix: Water

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

Lab Batch #: 742525

Sample: 319271-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene	0.0277	0.0300	92	80-120		
4-Bromofluorobenzene	0.0283	0.0300	94	80-120		

Lab Batch #: 742525

Sample: 319271-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0347	0.0300	116	80-120		
4-Bromofluorobenzene	0.0206	0.0300	69	80-120	**	

Lab Batch #: 742525

Sample: 319271-003 / SMP

Batch: 1

Matrix: Water

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

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

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

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



Project Name: Lovington Gathering WTI

rk Orders: 319271,

Project ID: 2006-142

Lab Batch #: 742525

Sample: 319271-004 / SMP

Matrix: Water Batch:

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Diffuorobenzene	0.0332	0.0300	111	80-120		
4-Bromofluorobenzene	0.0202	0.0300	67	80-120	**	

Lab Batch #: 742525

Sample: 319271-005 / SMP

Matrix: Water Batch: 1

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

Lab Batch #: 742525

Sample: 319271-006 / SMP

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
4-Difluorobenzene	0.0203	0.0300	68	80-120	**	
4-Bromofluorobenzene	0.0209	0.0300	70	80-120	**	

Lab Batch #: 742525

Sample: 319271-007 / SMP

Batch: 1

Matrix: Water

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

Lab Batch #: 742525

Sample: 319271-008 / SMP

Batch: 1

Matrix: Water

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



Project Name: Lovington Gathering WTI

rk Orders: 319271,

Project ID: 2006-142

Lab Batch #: 742525

**Sample:** 520624-1-BKS / BKS

Batch: 1 Matrix: Water

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

Lab Batch #: 742525

**Sample:** 520624-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	[1	12,	[D]			
1,4-Difluorobenzene	0.0336	0.0300	112	80-120		
4-Bromofluorobenzene	0.0280	0.0300	93	80-120		

Lab Batch #: 742525

**Sample:** 520624-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	(1-2)	(5)	[D]			
4-Difluorobenzene -Bromofluorobenzene	0.0303	0.0300	101	80-120		
4-Bromofluorobenzene	0.0290	0.0300	97	80-120		

Lab Batch #: 742793

Sample: 319271-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Diffuorobenzene	0.0306	0.0300	102	80-120		
4-Bromofluorobenzene	0.0174	0.0300	58	80-120	*	

Lab Batch #: 742793

42793

**Sample:** 319397-002 S / MS

Batch: 1

Matrix: Water

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

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

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



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



Project Name: Lovington Gathering WTI

rk Orders: 319271,

Project ID: 2006-142

Lab Batch #: 742793

Sample: 319397-002 SD / MSD

Batch:

Matrix: Water

Units: mg/L	RROGATE RECOVERY STUDY				
BTEX by EPA 8021B	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	0.0181	0.0300	60	80-120	*

Lab Batch #: 742793

Sample: 8406040-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	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	0.0263	0.0300	88	80-120		

Lab Batch #: 742793

Sample: 8406040-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			[D]			
4-Difluorobenzene 4-Bromofluorobenzene	0.0336	0.0300	112	80-120		
4-Bromofluorobenzene	0.0178	0.0300	59	80-120	*	

Lab Batch #: 742793

Sample: 8406040-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]		·	
1,4-Difluorobenzene	0.0299	0.0300	100	80-120		
4-Bromofluorobenzene	0.0265	0.0300	88	80-120		

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

**Mrk Orders:** 319271,

**Project ID: 2006-142** 

Lab Batch #: 742468

Sample: 319271-001 / SMP

Batch: 1 Matrix: Water

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

Lab Batch #: 742468

Sample: 319271-002 / SMP

Batch: 1

1 Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY					
SVOA PAHs List by EPA 8270C  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
2-Fluorobiphenyl	0.027	0.050	74	42.116		
z-riaorooipiichyi	0.037	0.050	74	43-116		
2-Fluorophenol	0.019	0.050	38	21-100		
Nitrobenzene-d5	0.033	0.050	66	35-114		
Phenol-d6	0.012	0.050	24	10-94	-	
erphenyl-D14	0.037	0.050	74	33-141		
2,4,6-Tribromophenol	0.046	0.050	92	10-123		

Lab Batch #: 742468

Sample: 319271-003 / SMP

Batch: 1

Matrix: Water

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

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

rk Orders: 319271,

**Project ID: 2006-142** 

Lab Batch #: 742468

Sample: 319271-004 / SMP

Batch: Matrix: Water

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

Lab Batch #: 742468

Sample: 319271-005 / SMP

Batch: 1

Matrix: Water

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

Lab Batch #: 742468

Sample: 319271-006 / SMP

Batch: 1

Matrix: Water

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

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

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

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

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



**Project Name: Lovington Gathering WTI** 

rk Orders: 319271,

**Project ID: 2006-142** 

Lab Batch #: 742468

Sample: 319271-007 / SMP

Batch: 1

Matrix: Water

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

Lab Batch #: 742468

Sample: 319271-008 / SMP

Batch: 1

Matrix: Water

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

Lab Batch #: 742468

Sample: 319271-009 / SMP

Batch: 1

Matrix: Water

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



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

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



Project Name: Lovington Gathering WTI

rk Orders: 319271,

**Project ID: 2006-142** 

Lab Batch #: 742468

**Sample:** 520591-1-BKS / BKS

Batch: 1 Matrix: Water

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

Lab Batch #: 742468

**Sample:** 520591-1-BLK / BLK

Batch: 1

Matrix: Water

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

Lab Batch #: 742468

Sample: 520591-1-BSD / BSD

Batch:

Matrix: Water

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



### BS / BS Recoveries



## Project Name: Lovington Gathering WTI

Work Order #: 319271

Analyst: BHW

Sample: 520624-1-BKS Lab Batch ID: 742525

Date Prepared: 12/04/2008 Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 12/05/2008

Matrix: Water

Units: mg/L		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	ECOVE	RY STUD	Y	
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		<u>a</u>	[c]	[ <u>Q</u> ]	[E]	Result [F]	<u>[5]</u>	-			
Benzene	QN	0.1000	0.1003	001	0.1	0.1030	103	3	70-125	25	
Toluene	ΩN	0.1000	0.0928	93	0.1	0.0953	95	3	70-125	25	
Ethylbenzene	ΩN	0.1000	0.0994	66	0.1	0.1027	103	3	71-129	25	
m,p-Xylenes	QN	0.2000	0.1998	100	0.2	0.2061	£01	3	70-131	25	
o-Xylene	QN	0.1000	0.0951	95	0.1	0.0978	86	3	71-133	25	

Analyst: ASA

Date Prepared: 12/05/2008

Date Analyzed: 12/06/2008

Sample: 8406040-1-BKS	3KS	Batcl RI AN	Batch #: 1  RI ANK / RI ANK SPIKE / RI ANK SPIKE DIIDI ICATE RECOVERY STIIDY	PIKE / B	SXIVATI	PIKE DIEP	ICATE	Matrix: Water	Vater RV STIID	>	
										,	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[ <u>*</u>		Result	%R		Duplicate	%R	%	%R	%RPD	0
		<u>B</u>	<u>[C</u>	[ <u>0</u> ]	<u>a</u>	Result [F]	<u>5</u>				
	QN	0.1000	0.1089	601	0.1	0.1100	110	-	70-125	25	
	QN	0.1000	0.0995	001	0.1	0.1002	100	1	70-125	25	
	Ð	0.1000	0.1041	104	0.1	0.1055	901	-	71-129	25	
	QN	0.2000	0.2083	104	0.2	0.2109	105	1	70-131	25	
	ND	0.1000	1660'0	66	0.1	0.1006	101	2	71-133	25	

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







## Project Name: Lovington Gathering WTI

Work Order #: 319271

Analyst: KAN

Sample: 520591-1-BKS Lab Batch ID: 742468

**Date Prepared:** 12/04/2008

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 12/04/2008

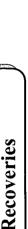
Matrix: Water

Units: mg/L		BLAN	K/BLANK S	SPIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	λ	
SVOA PAHs List by EPA 8270C	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	BIK. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>₹</u>	<u>8</u>	Kesult [C]	<u>5</u> %	Œ	Duplicate Result [F]	¥ ⊡	%	× %	%RPD	
Acenaphthene	QN	0.050	0.046	92	0.05	0.048	96	4	54-114	25	
Acenaphthylene	ON	0.050	0.046	92	0.05	0.048	96	4	53-113	25	
Anthracene	QN	0.050	0.048	96	0.05	0.050	100	4	56-116	25	
Benzo(a)anthracene	GN	0.050	0.047	94	0.05	0.049	86	4	59-116	25	
Вепго(а)рутепс	QN.	0.050	0.050	100	0.05	0.052	104	4	58-118	25	
Benzo(b)fluoranthene	QN	0.050	0.049	86	0.05	0.052	104	9	54-123	25	
Benzo(k)fluoranthene	QN	0.050	0.050	100	0.05	0.052	104	4	52-122	25	
Benzo(g,h,i)perylene	QN	0.050	0.050	100	0.05	0.052	104	4	47-129	25	·
Chrysene	QN	0.050	0.047	94	0.05	0.049	86	4	58-116	25	
Dibenz(a,h)Anthracenc	QN.	0.050	0.050	100	0.05	0.051	102	2	46-131	25	
Fluoranthene	QN	0.050	0.049	86	0.05	0.051	102	4	55-120	25	
Fluorene	QN	0.050	0.049	86	0.05	0.050	100	2	56-114	25	
Indeno(1,2,3-c,d)Pyrene	QN	0.050	0.051	102	0.05	0.053	106	4	44-132	25	
1-Mcthylnaphthalene	QN	0.050	0.046	92	0.05	0.048	96	4	47-113	25	
2-Methylnaphthalene	QN	0.050	0.051	102	0.05	0.054	801	9	57-106	25	Н
Naphthalene	QN	0.050	0.045	06	0.05	0.048	96	9	53-110	25	
Phenanthrene	ND	0.050	0.048	96	0.05	0.050	001	4	56-116	25	
Pyrene	QN	0.050	0.048	96	0.05	0.050	100	4	57-119	25	

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



### Form 3 - May MSD Recoveries





Project Name: Lovington Gathering WTI

Lab Batch ID: 742525 Work Order #: 319271

QC- Sample ID: 319271-001 S Date Prepared: 12/04/2008

Batch #:

Matrix: Water ---

Project ID: 2006-142

Date Analyzed: 12/05/2008

BHW Analyst:

Reporting Units: mg/L		M	ATRIX SPIK	E/MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result Sample IC] %R	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[6]				
Benzene	ND	0.1000	0.1021	102	0.1000	0.1026	103	1	70-125	25	
Toluene	ND	0.1000	0.0927	93	0.1000	0960'0	96	3	70-125	25	
Ethylbenzene	ND	0.1000	0.0972	- 62	0.1000	0.1059	901	6	71-129	25	
m,p-Xylenes	ND	0.2000	0.1954	86	0.2000	0.2025	101	3	70-131	25	
o-Xylene	ND	0.1000	0.0945	95	0.1000	0.0987	66	4	71-133	25	

Date Analyzed: 12/06/2008 Lab Batch ID: 742793

Batch #: QC-Sample ID: 319397-002 S **Date Prepared:** 12/05/2008

Matrix: Water Analyst: ASA

Flag × × × Limits %RPD 25 25 25 25 25 Control Limits %R 70-125 71-129 70-131 71-133 70-125 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD Spiked Dup. %R [G] 99 11 64 65 62 Duplicate Spiked Sample Result [F] 0.1308 0.1500 0.0655 0.0653 0.0617 Spike Added 0.1000 0.1000 0.2000 0.1000 0.1000  $\Xi$ Spiked Sample Spiked Result Sample %R [0] 62 63 73 2 9 0.1467 0.0643 0.0636 0.1267 0.0596 <u>5</u> Spike Added [B] 0.1000 0.1000 0.1000 0.2000 0.1000 Parent Sample Result [A] 0.0014 0.0733 S QN ΩR BTEX by EPA 8021B Analytes Reporting Units: mg/L Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

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)/F

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

Environ	nmental	<b>Environmental Lab of Texas</b>	exa	ທ						CHA	N OF	CUS	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	500	7D A	AGN	NAL	SIS	REGU	EST				
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Project	Project Manager: Curt	Curt Stanley			PAGE 01 OF	10		- 1					ū	a)ect	Name	Š	ingto	ē	Project Name: Lovington Gathering WTI	I.				1
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City/State/Zip:	•	Lovington, NM 88260													õ	¥.	PO #: PAA - D.M. Bryant	Bryar	-			ŀ		1
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(lab use only)		}		_										$\perp$	1	ţ	L.	Analyze For:	<u>.</u>	F	t	ŀ	•	
ORDER #:	319271	_						à	i de	Presentation & end Container	1000	24	Valen	耳	۱ŀ	TOTAL		$\dagger\dagger$	K				4 7 Y	
(4)								+	-				PATIO AIDS FIRSTINS - TO PERMISSE TO	ASTON N	9001 X.		as BH quir		0028 X3TE				ndedel 24. 40	r
lno esu del)			ning Depth	8 Debtu	baloms2	belqms2	of Contamers amber, 2 VOA's				50	(Ajmeds)	inniang Water 5 Fraundwater 5 Priparagie spi	(S188 1.81)	TX 1005 T (Ca.Mg Ha.k	(CL SO4. Asta	ya ya ga ca c Sa \ CEC	e e e e e e e e e e e e e e e e e e e	OSIBNODO O	n	0728		TAT (Pre-Scho	TAT bis
# 8 <b>Y</b> 7	FIELD CODE	JOE	Begin	nlbn3	Dste		Fight Fi	60)	HCI HMO <sup>2</sup>	HOTN OS!H	,2,5M enoM		cm - c	Hall	H9TT Cations	<b>SNORA</b>		Volation Semino		10 P.	HVd			num c
oi	MW-5				12/2/2008	835	3	×	×				GW.					_	×		×			×
10	MW-4				12/2/2008	855	9	×	×				δW		$\vdash$			<u> </u>	×		×			×
6,0	9-WW				12/2/2008	925	-	×	×				<b>₹</b>		-			Н	×		×	I	_	×
70	WW-9				12/2/2008	945	~	×	×				8					$\dashv$	×		×			×
0,2	MW-1				12/2/2008	1010	6	×	×		$\exists$		₹		$\dashv$	$\exists$		$\dashv$	×		×	$\Box$		×
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01	MW-2				12/2/2008	1240	က	×	×			コ	ΑS		-		$\exists$		×	$\Box$	×		$\hat{\exists}$	×
જી	MW-8				12/2/2008	1300	~	×	×				ð					$\dashv$	×	4	×		$\hat{\exists}$	×
б	MW-7				12/2/2008	1315	9	×	×		$\exists$	$\dashv$	₹		4	士	7	$\dashv$	×	$\dashv$	×		1	×
				1			4	7	$\dashv$		$\exists$	╛				1	٦.	Ⅎ		4	-	$\exists$	$\exists$	7
Special instructions:	ý <u>á</u>														<b>3 %</b> S	orato richa C Ca Fra	Laboratory Comments Sample Containers Intect? VOCs Free of Headspace?	ament an Inta sadspe	() () () () () () () () () () () () () (	T.	<b>33</b> 0	ð	8 <sub>2 z</sub>	<u>```</u>
X permutal X	1. 6.	Date (7)	٦,		Received by:							Oate	_	Ime	٥٥٤	atody s	contain eats or	(s) eq.	Labels on container(s) Custody seals on container(s)		<del>00</del>		<b>z z</b> (	
Relinquished by:		Œ.	: -	Ę	Raceived by.							Date		Time	3 8	Post I	Sample Hand Delivered by Sample Hand Delivered by Samplen Clark Hand				9zz } ≻(9;0)	· _ ^	9zz	
Relinquished by.		Date	<u> </u>	e .	Received by ELOT	On the Open					+	10.5	Sale   Sale		т <u>ё</u>	py CV	Dy Couner UPS Temperature Upon Receipt:	5 <b>&amp;</b>		- \ • 5		•	e စို့ပ	

### **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Eliv. Planes				
Date/ Time: 12 (23/03 9/17)				
Lab ID#: 317271				
Initials: ANG				
,				
Sample Receipt	Checklist			
The Tarrant of Associated Associated	Yes	No		t initials
#1 Temperature of container/ cooler?  #2 Shipping container in good condition?	(Yes	No	2.C - °C	
#2 Shipping container in good condition?  #3 Custody Seals intact on shipping container (cooler)	Yes	No	Not Present	
	Yes	No		
	Yes	No	Not Present	
#5 Chain of Custody present? #6 Sample instructions complete of Chain of Custody?		No	<del></del>	
	Yes	No	<del></del>	
#7 Chain of Custody signed when relinquished/ received?	Yes	No	10	
#8 Chain of Custody agrees with sample label(s)?		No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	<del></del> i
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No	<del> </del>	<del></del>
#11 Containers supplied by ELOT?	Tes		<del>    _   _   _   _   _   _   _   _</del>	
#12 Samples in proper container/ bottle?	(Yes:	No No	See Below	
#13 Samples properly preserved?			See Below	——
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Yes	No	ļ	
#16 Containers documented on Chain of Custody?	Yes	No	<del>                                     </del>	
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18 All samples received within sufficient hold time?	YES	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	<b>≱</b> 4€3	No	Not Applicable	
Variance Docu	mentation			
Contact: Contacted by:		•	Date/ Time:	
Regarding:				
Corrective Action Taken:				
Charles II that Analys				
Check all that Apply:  See attached e-mail/ fax Client understands and wou Cooling process had begun			•	

### **Analytical Report 326509**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

10-MAR-09





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

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

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

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

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





10-MAR-09

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

Reference: XENCO Report No: 326509
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 326509. 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. 326509 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 326509**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-5	W	Mar-03-09 08:00		326509-001
MW-4	W	Mar-03-09 09:00		326509-002
MW-6	W	Mar-03-09 10:00		326509-003
MW-9	W	Mar-03-09 11:00		326509-004
MW-1	W	Mar-03-09 12:00		326509-005
MW-3	W	Mar-03-09 13:00		326509-006
MW-2	W	Mar-03-09 14:00		326509-007
MW-7	W	Mar-03-09 15:00		326509-008
MW-8	W	Mar-03-09 16:00		326509-009

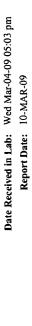


Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysic Summary 326509 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Brent Barron, II Project Manager:



					Project Manager: Brent Barron, II	srent Barron, 11		
	Lab Id:	326509-001	326509-002	326509-003	326509-004	326509-005	326509-006	
And Louis Donnardod	Field Id:	MW-5	MW-4	9-MM	4-WM	MW-1	MW-3	
maisanhau sissimuv	Depth:							
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	-
	Sampled:	Mar-03-09 08:00	Mar-03-09 09:00	Mar-03-09 10:00	Mar-03-09 11:00	Mar-03-09 12:00	Mar-03-09 13:00	
BTEX by FPA 8021B	Extracted:	Mar-09-09 13:00	Mar-09-09 13:00	Mar-09-09 13:00	Mar-09-09 13:00	Mar-09-09 13:00	Mar-09-09 13:00	
	Analyzed:	Mar-10-09 00:42	Mar-10-09 01:22	Mar-10-09 01:45	Mar-10-09 02:15	Mar-10-09 02:43	Mar-10-09 04:12	-0
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L F	RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	1.367 0.0	0.0050
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0305 0.0	0.0100
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0251 0.0	0.0050
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0173 0.0	0.0100
o-Xylenc		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0158 0.0	0.0050
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0331 0.0	0.0050
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	1.4557 0.0	0.0050

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The iteraprations and restins expressed throughout this analytical report represent the best, digneren 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.

Since 1990

Brent Barron Odessa Laboratory Director



Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 326509 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Wed Mar-04-09 05:03 pm 10 MAD 00 Donout Date

Project Location: Lea County, NM					Report Date: 10-MAR-09	
					Project Manager: Brent Barron, Il	., 11
	Lab Id:	326509-007	326509-008	326509-009		
Laborated Daniel	Field Id:	MW-2	MW-7	MW-8		
Analysis Aequesieu	Depth:					
	Matrix:	WATER	WATER	WATER		
	Sampled:	Mar-03-09 14:00	Mar-03-09 15:00	Mar-03-09 16:00		
BTEX by EPA 8021B	Extracted:	Mar-09-09 13:00	Mar-09-09 13:00	Mar-09-09 13:00		
	Analyzed:	Mar-10-09 04:32	Mar-10-09 04:58	Mar-10-09 05:20		
	Units/RL:	mg/L RL	mg/L RL	mg/L RL		
Benzene		0.0356 0.0010	0.00775 0.0010	0.0284 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		0.0026 0.0020	0.0327 0.0020	0.0068 0.0020		
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010		
Total Xylenes		0.0026 0.0010	0.0327 0.0010	0.0068 0.0010		
Total BTEX		0.0382 0.0010	0.1102 0.0010	0.0352 0.0010		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential tase. The interpretations and restaints expressed throughout his analytical report present 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. Since 1990

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### **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.
  - \* 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
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



**Project Name: Lovington Gathering WTI** 

**Prk Orders**: 326509,

**Project ID: 2006-142** 

Lab Batch #: 751977

Sample: 526053-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 03/09/09 22:21	SU	RROGATE RI	ECOVERY	STUDY	_
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	()	121	[D]	, , , ,	
1,4-Difluorobenzene		0.0317	0.0300	106	80-120	
4-Bromofluorobenzene		0.0289	0.0300	96	80-120	

Lab Batch #: 751977

**Sample:** 526053-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 03/	/09/09 22:41	Su	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1,4-Difluorobenzene		0.0313	0.0300	104	80-120	
4-Bromofluorobenzene		0.0291	0.0300	97	80-120	

Lab Batch #: 751977

Sample: 526053-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/09/09 23:37	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 751977

Sample: 326509-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/10/09 00:42	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	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 751977

Sample: 326509-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/10/09 01:22	SU	RROGATE R	ECOVERY:	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[2]		
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

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

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

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



Project Name: Lovington Gathering WTI

rk Orders: 326509,

Lab Batch #: 751977

Sample: 326509-003 / SMP

Project ID: 2006-142

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 01:45	SU	RROGATE R	ECOVERY	STUDY				
ВТЕ	X by EPA 8021B	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		0.0288	0.0300	96	80-120				

Lab Batch #: 751977

Sample: 326509-004 / SMP

Batch: 1

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 02:15	SURROGATE RECOVERY STU		Y STUDY				
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			{D}				
1,4-Difluorobenzene		0.0267	0.0300	89	80-120			
4-Bromofluorobenzene		0.0277	0.0300	92	80-120			

Lab Batch #: 751977

Sample: 326509-005 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 02:43	SURROGATE RECOVERY STUDY					
вте	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
,4-Difluorobenzene	Timely too	0.0266	0.0300	89	80-120		
4-Bromofluorobenzene		0.0286	0.0300	95	80-120		

Lab Batch #: 751977

Sample: 326509-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 04:12	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		0.0301	0.0300	100	80-120		
4-Bromofluorobenzene		0.0199	0.0300	66	80-120	*	

Lab Batch #: 751977

Sample: 326509-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 04:32	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	Allalytes	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

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

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

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



Project Name: Lovington Gathering WTI

rk Orders: 326509,

Project ID: 2006-142

Lab Batch #: 751977

#: 751977 Sample: 326509-008 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 04:58	SU	RROGATE R	ATE RECOVERY STUDY				
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]				
1,4-Difluorobenzene		0.0286	0.0300	95	80-120			
4-Bromofluorobenzene		0.0282	0.0300	94	80-120			

Lab Batch #: 751977

Sample: 326509-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/10/09 05:20	SU	RROGATE R	RECOVERY	COVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0259	0.0300	86	80-120				
4-Bromofluorobenzene	0.0269	0.0300	90	80-120				



<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B All results are based on MDL and validated for QC purposes.









Project Name: Lovington Gathering WTI

Work Order #: 326509

Analyst: ASA

Lab Batch ID: 751977

Sample: 526053-1-BKS

Date Prepared: 03/09/2009

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 03/09/2009

Date Analyzed: 03/09/2009 Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
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		<u>æ</u>	[ <u>C</u> ]	[a]	<u>a</u>	Result [F]	<u>5</u>				•
Benzene	ΩN	0.1000	0.1086	601	0.1	0.1084	108	0	70-125	25	
Toluene	ΩN	0.1000	0.1047	105	0.1	0.1072	107	2	70-125	25	
Ethylbenzene	QN	0.1000	0.1015	102	0.1	0.1079	801	9	71-129	25	
m,p-Xylenes	ND	0.2000	0.2115	901	0.2	0.2257	113	9	70-131	25	
o-Xylene	QN	0.1000	0.1054	105	0.1	0.1123	112	9	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

NPDES 3. 07 Phone: 432-563-1800 Fax: 432-553-1713 Project Name: Lovington Gathering WTI TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST S 409 17 03 Temperature Upon Receipt Project Loc: Lea County, NM PO #: PAA- J. Henry Report Format: X Standard Project #: 2006-142 232/483/8V cibryant@basin-consulting.com GW GW Š Š Š 8 Ğ. 8 Date 12600 West I-20 East Odessa, Texas 79765 Occes HOW (505) 395-1428 FONH 2 Lane Responsement Fax No: 99 <u>1</u> 1200 1300 0800 1400 1500 Project Manager: Camille Bryant / C. UPT STALLET 3/3/2009 3/3/2009 3/3/2009 3/3/2009 373/2009 3/3/2009 3/3/2009 3/3/2009 Received by: eceived by: Basin Environmental Service Technologies, LLC 3/4/cg 1703 ւրժօղ: Ծայք **Environmental Lab of Texas** Ogio Lovington, NM 88260 Sampler Signature Last Sk. Company Address: P. O. Box 301 376509 FIELD CODE MW4 MW-6 MW-9 MW-1 MW-3 MW.7 Company Name City/State/Zip: Telephone No: ORDER #: 8 58 S S ō

## Environmental Lab of Texas

	Variance/ Corrective Action Rep					
Client:	Bosin Env. Plains					
Date/ Time;	The second secon					
Lab ID # ;	326509		•			
Initials:	(AL-					
	Sample Receipt C	Checklist			Client Initials	
#1 Tempe	erature of container/ cooler?	(Yes)	No.	20 .0	1	٠.
#2 Shippi	ng container in good condition?	(Yes?	· · No	Carlotter Contraction		
#3 Custoo	dy Seals Intact on shipping container/ cooler?	Yes	- No	CNot Present	7	
#4 Custoo	dy Seals intact on sample bottles/ container?	(Yes)	No	Not Present		
#5 Cháin	of Custody present?	(Yes)	No			-•
#6 Sampl	le instructions complete of Chain of Custody?	(es)	No		1 2	120
#7 Chain	of Custody signed when relinquished/ received?	(Ves)	No	437.5	8 J. J. 14	. '
#8 Chain	of Custody agrees with sample label(s)?	(Yes)	No	JD written on Cont./ Lid		
#9 Contai	iner label(s) legible and intact?	Yes	No	Not Applicable		*
#10 Sámp	ole matrix/ properties agree with Chain of Custody?	(Yes)	No	The second second		7
#11 Conta	iners supplied by ELOT?	(es)	No.		1 24 22	
#12 Samp	oles în proper container/ bottle? "	(Yes)	No	See Below	7 \ 1	
#13 Samp	oles properly preserved?	(Yes)	No.	See Below		
#14 Samp	ple bottles intact?	(Yes)	No	14.		
#15 Prese	ervations documented on Chain of Custody?	(Yes	No	1 1 1 2 2 2		
#16 Conta	ainers documented on Chain of Custody?	(Yes	No.			
#17 Suffic	tient sample amount for indicated test(s)?	CYes	No	See Below		
#18 All sa	imples received within sufficient hold time?	(Yes	No	See Below	77 77 7	
#19 Subc	ontract of sample(s)?	Yes	No.	(Not Applicable)		
#20 VOC	samples have zero headspace?	(Yes)	No	Not Applicable		
	Variance Docum	ențation				
Contact:	Contacted by:		-	Date/ Time:		
Regarding:						
						~
Corrective	Action Taken:			4 . *		
***************************************						
			•••			-
			<del></del>		1	
					<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	,
Check affit	that Apply: See attached e-mail/ fax					

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

## **Analytical Report 335947**

for

## PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

24-JUN-09





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

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

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

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





24-JUN-09

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

Wildiana, 171 77700

Reference: XENCO Report No: 335947

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 335947. 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. 335947 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 335947**



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



Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	Jun-18-09 09:00		335947-001
MW-2	W	Jun-18-09 09:30		335947-002
MW-3	W	Jun-18-09 10:00		335947-003
MW-4	W	Jun-18-09 10:30		335947-004
MW-5	W	Jun-18-09 11:00		335947-005
MW-6	W	Jun-18-09 11:30		335947-006
MW-7	W	Jun-18-09 12:00		335947-007
MW-8	W	Jun-18-09 12:30		335947-008
MW-9	W	Jun-18-09 13:00		335947-009





Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID:

2006-142

Report Date: 24-JUN-09

Work Order Number: 335947

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763334 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763334, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 335947-002,335947-009,335947-004,335947-005,335947-006,335947-001,335947-003.

Batch 763334, 4-bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 532422-1-BLK



Project Location: Lea County, NM Contact: Jason Henry **Project Id:** 2006-142

## Certificate of Analysis Summary 335947 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Jun-19-09 08:40 am

Report Date: 24-JUN-09

Brent Barron II Project Manager:

					Project Manager: Brent Barron, II	frent Barron, 11	
	Lab Id:	335947-001	335947-002	335947-003	335947-004	335947-005	335947-006
Lating Donnal	Field Id:	MW-1	MW-2	MW-3	MW-4	MW-5	9-MM
Amaiysis requesteu	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Jun-18-09 09:00	Jun-18-09 09:30	Jun-18-09 10:00	Jun-18-09 10:30	Jun-18-09 11:00	Jun-18-09 11:30
RTEX by EPA 8021B	Extracted:	Jun-23-09 16:00	Jun-23-09 16:00	Jun-23-09 16:00	Jun-23-09 16:00	Jun-23-09 16:00	Jun-23-09 16:00
	Analyzed:	Jun-23-09 17:35	Jun-23-09 17:56	Jun-23-09 18:18	Jun-23-09 18:39	Jun-23-09 19:01	Jun-23-09 19:22
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.0010	0.0007 0.0010	0.0031 0.0010	ND 0.0010	ND 0.0010	0.0044 0.0010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		ND 0.0010	0.0097 0.0010	0.0031 0.0010	ND 0.0010	ND 0.0010	0.0044 0.0010

This analytical report, and the entire data puckage it represents, has been made for your exclusive and confidential use. The interpretations and restalls expensed throughout this analytical report present the best judgment of XENCO Laboratories. 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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Odessa Laboratory Director



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

## Certificate of Analysis Summary 335947 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI



Date Received in Lab: Fri Jun-19-09 08:40 am

Report Date: 24-JUN-09

Project Manager: Brent Barron, II

	Lab Id:	335947-007	335947-008	335947-009	
Analysis Donnestod	Field Id:	MW-7	MW-8	6-WM	
Analysis Requesieu	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Jun-18-09 12:00	Jun-18-09 12:30	Jun-18-09 13:00	
BTEX by EPA 8021B	Extracted:	Jun-23-09 16:00	Jun-23-09 16:00	Jun-23-09 16:00	
	Analyzed:	Jun-23-09 19:44	Jun-23-09 20:05	Jun-23-09 21:09	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.0570 0.0010	0.0045 0.0010	ND 0.0010	
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0010	0.0016 0.0010	ND 0.0010	
m,p-Xylenes		0.0329 0.0020	0.0032 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	
Total Xylenes		0.0329 0.0010	0.0032 0.0010	ND 0.0010	
Total BTEX		0.0000 0.0010	0.0093 0.0010	ND 0.0010	

This analytical report, and the entire data puckage it represents, has been made for your exclusive and confidential use. The distancement of an extractions and response of the configuration of the state expressed throughout this analytical report present 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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Odessa Laboratory Director



## Flagging Criteria



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

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Project Name: Lovington Gathering WTI

rk Orders: 335947, Lab Batch #: 763334

Sample: 532422-1-BKS / BKS

**Project ID: 2006-142** 

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 15:26	st	JRROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763334

Sample: 532422-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 15:47	Su	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	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		0.0316	0.0300	105	80-120	

Lab Batch #: 763334

Sample: 532422-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 16:30	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
.4-Difluorobenzene	Analytes	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene		0.0190	0.0300	63	80-120	*

Lab Batch #: 763334

Sample: 335947-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 17:35	SU	RROGATE R	ECOVERY	STUDY	
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	0.0210	0.0300	70	80-120	*

Lab Batch #: 763334

Sample: 335947-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 17:56	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0204	0.0300	68	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

rk Orders: 335947,

Lab Batch #: 763334

Sample: 335947-003 / SMP

**Project ID: 2006-142** 

Batch: Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 18:18	SU	RROGATE RE	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0251	0.0300	84	80-120	
4-Bromofluorobenzene		0.0213	0.0300	71	80-120	*

Lab Batch #: 763334

Sample: 335947-004 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 18:39	SU	RROGATE R	ECOVERY	STUDY	
BTEX 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	0.0223	0.0300	74	80-120	*

Lab Batch #: 763334

Sample: 335947-005 / SMP

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 06/23/09 19:01	SU	RROGATE RI	ECOVERY S	STUDY	-91
вте	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
,4-Difluorobenzene		0.0258	0.0300	86	80-120	
4-Bromofluorobenzene		0.0226	0.0300	75	80-120	*

Lab Batch #: 763334

Sample: 335947-006 / SMP

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 06/23/09 19:22	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0259	0.0300	86	80-120	
4-Bromofluorobenzene		0.0214	0.0300	71	80-120	*

Lab Batch #: 763334

Sample: 335947-007 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 19:44	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0261	0.0300	87	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

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



Project Name: Lovington Gathering WTI

prk Orders: 335947,

Lab Batch #: 763334

Sample: 335947-008 / SMP

**Project ID: 2006-142** 

Matrix: Water Batch:

Units: mg/L Date Analyzed: 06/23/09 20:05	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 763334

Sample: 335947-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 21:09	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	1		[D]	}	
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0221	0.0300	74	80-120	*

Lab Batch #: 763334

**Sample:** 335947-007 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/24/09 00:01	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 763334

Sample: 335947-007 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/24/09 (	00:23 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  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	0.0314	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

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







Project Name: Lovington Gathering WTI

Work Order #: 335947

Analyst: ASA

Lab Batch ID: 763334

Date Pre Sample: 532422-1-BKS B

**Date Prepared:** 06/23/2009 **Batch** #: 1

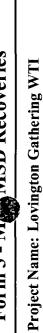
**Project ID:** 2006-142 **Date Analyzed:** 06/23/2009

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
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]	<u>[</u>	[ <u>Q</u> ]	Ξ	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.1067	107	0.1	0.1046	105	2	70-125	25	
Toluene	QN	0.1000	0.1040	104	0.1	0.1019	102	2	70-125	25	
Ethylbenzene	QN	0.1000	0.1098	110	0.1	0.1083	801	-	71-129	25	
m,p-Xylenes	QN	0.2000	0.2200	110	0.2	0.2170	109	_	70-131	25	
o-Xylene	QN	0.1000	0.1041	104	1.0	0.1035	104	-	71-133	25	









Work Order #: 335947

Lab Batch ID: 763334

Date Analyzed: 06/24/2009

QC-Sample ID: 335947-007 S Date Prepared: 06/23/2009

Batch #: 1 Analyst: ASA

Matrix: Water

Project ID: 2006-142

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	RIX SPII	CE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample S Result S [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	S	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[8]		[ <u>Q</u> ]			[5]				
Вепгепе	0.0570	0.1000	0.1607	104	0.1000	0.1625	106	1	521-02	25	
Toluene	QN	0.1000	9060'0	16	0.1000	0.0916	92	1	70-125	25	
Ethylbenzene	QN	0.1000	0,0943	94	0.1000	0.0949	95	1	71-129	25	
m,p-Xylenes	0.0329	0.2000	0.2355	101	0.2000	0.2378	102	1	70-131	25	
o-Xylene	ND	0.1000	0.0904	90	0.1000	0.0911	91	1	71-133	25	

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

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

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

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CHAIN OF LOS FOUT RECORD AND ANALYSIS REQUEST 1420 East 782-563-1713 Fax: 432-563-1713	Project Name: Lovington Gathering WTI				TRRP		-		KORM			-	-	-	-	$\dashv$	+	-	-	ķ.	2	4		
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	Camille Bryant	Basin Envir	S: P. O. Box 301	Lowington, NM 88260	(575)605-7210	C.		ーであっ	FIELD CODE	MW-1	MW-2	MW-3	MW-4	MW-5	MW.6	MW.7	MW8	MW.9			B	)		,
	Project Maneger:	Company Name	Company Address:	City/State/Zip:	Telephone No:	Sampler Signature:	0	<u>۱</u>	T.			,								fuctions:	e Com	J.	0	***************************************
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## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

			•			
Client:	Plains / Basin					
Date/ Time:	06-19-09 C 0840					
Lab ID #:	<u>335947</u>					
Initials:	JMF					
	Sample Receipt (	Checklist				
	<u></u>				Cilent Initial	.s 7
	ature of container/ cooler?	(Yes	No	c کارا °C		4
	container in good condition?	(Yes)	No			4
	Seals intact on shipping container/ cooler?	Yes	No:	Not Present		4
	Seals intact on sample bottles/ container?/lobel	(Yes)	No	Not Present		
#5 Chain o	f Custody present?	(Yes	No.		<u> </u>	_
#6 Sample	instructions complete of Chain of Custody?	CYES?	No	•	<u> </u>	١
#7 Chain o	f Custody signed when relinquished/ received?	(Yes)	No:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
#8 Chain o	f Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid		1.
	er label(s) legible and intact?	(Ves)	No	Not Applicable		1
	matrix/ properties agree with Chain of Custody?	(Yes)	No		-	1
	ners supplied by ELOT?	(Yes)	No		<del>                                     </del>	1
		(Yes )	No	Can Dalaus	<del> </del>	4 .
	es in proper container/ bottle?	1	~	See Below	<del></del>	┥ ・・
)	es properly preserved?	(Yes)	No	See Below	ļ	4
	e bottles intact?	CYes	No	<u> </u>	ļ	4
	vations documented on Chain of Custody?	Y69-	No:	-		
#16 Contain	ners documented on Chain of Custody?	Y89	> No			
#17 Sufficie	ent sample amount for indicated test(s)?	(Yes)	No	See Below		.[
#18 All san	ples received within sufficient hold time?	AES.	No	See Below	1	7
	ntract of sample(s)?	Yes	No	(Not Applicable)		7
	amples have zero headspace?	(Yes)	No	Not Applicable	1	1
<u> </u>	ongres have zero neocopoco.	1 (100)		1.00.1.100.000.0		_1
	Variance Docum	nentation				
		•		•*		,
Contact:	Contacted by:			Date/ Time:		
			5.5	•		
Regarding:						·
·		<del></del>	·		<del></del>	
Corrective A	action Taken:				•	
Concoure	icioti i angli.					
			• •	•		
<del></del>	······································			<del></del>		
		<u>.</u>				
Check all th						
	Client understands and would					
	Cooling process had begun :	shortly after	sampling	event		

## **Analytical Report 343328**

for

## PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

08-SEP-09





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87428), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)





08-SEP-09

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

Reference: XENCO Report No: 343328
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 343328. 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. 343328 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 343328**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-5	W	Sep-01-09 08:30		343328-001
MW-4	W	Sep-01-09 09:15		343328-002
MW-6	W	Sep-01-09 09:50		343328-003
MW-9	W	Sep-01-09 10:25		343328-004
MW-1	W	Sep-01-09 11:05		343328-005
MW-2	W	Sep-01-09 11:30		343328-006
MW-8	W	Sep-01-09 12:05		343328-007
MW-7	W	Sep-01-09 12:35		343328-008
MW-3	W	Sep-01-09 13:05		343328-009





Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID:

2006-142

Report Date: 08-SEP-09

Work Order Number: 343328

Date Received: 09/03/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-771027 BTEX-MTBE EPA 8021B

SW8021BM

Batch 771027, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by reanalysis. Samples affected are: 536990-1-BLK,343328-006,343328-008,343328-003,343328-009,343328-001,343328-002. Matrix interference is suspected in sample surrogate failures. 4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 343218-001 S and 343218-001 SD

Batch: LBA-771296 BTEX-MTBE EPA 8021B

SW8021BM

Batch 771296, 4-Bromofluorobenzene recovered below QC limits Matrix Interference is suspected in sample surrogate failures. Samples affected are: 537136-1-BLK,343328-004.343328-005. Data confirmed by re-analysis for sample 343328-005.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Jummary 343328 PLAINS ALL AMERICANTH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Sep-03-09 01:50 pm Report Date: 08-SEP-09

Project Manager: Brent Barron, II

					Toloce Manager. Drein Darroll, III	transfer of the same of the sa	
	Lab Id:	343328-001	343328-002	343328-003	343328-004	343328-005	343328-006
Audioic Dogwood	Field Id:	MW-5	MW4	9-MM	6-WM	MW-1	MW-2
naisanhay sistinuv	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Sep-01-09 08:30	Sep-01-09 09:15	Sep-01-09 09:50	Sep-01-09 10:25	Sep-01-09 11:05	Sep-01-09 11:30
BTEX by EPA 8021B	Extracted:	Sep-03-09 14:38	Sep-03-09 14:38	Sep-03-09 14:38	Sep-04-09 15:00	Sep-04-09 15:00	Sep-03-09 14:38
	Analyzed:	Sep-03-09 15:48	Sep-03-09 16:07	Sep-03-09 16:25	Sep-05-09 21:39	Sep-05-09 16:07	Sep-03-09 17:21
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	0.9717 0.0100	ND 0.0010	0.0842 0.0010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	0.0641 0.0200	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0100	ND 0.0010	ND 0.0010
m,p-Xylencs		ND 0.0020	ND 0.0020	ND 0.0020	0.0867 0.0200	ND 0.0020	0.0083 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	0.0422 0.0100	ND 0.0010	ND 0.0010
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	0.11289 0.0100	ND 0.0010	0.0083 0.0010
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	1.1647 0.0100	ND 0.0010	0.0925 0.0010

Odessa Laboratory Manager Brent Barron, II

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This analytical roport, and the entire data package it represents, has been made for your exclusive and confidential use. The interprateations and results expressed introgenent this analytical report represent in the best indepent of XENCO Laboratories. XENCO Laboratories assumes no exponsibility and matees no warranty to the end use of the data bereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Jummary 343328 PLAINS ALL AMERICAN TH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu Sep-03-09 01:50 pm Report Date: 08-SEP-09

Project Manager: Brent Barron, II

					Toloca manageri eranomi m
	Lab Id:	343328-007	343328-008	343328-009	
Analysis Dogwested	Field Id:	MW-8	MW-7	MW-3	
naisan hay sistimuv	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Sep-01-09 12:05	Sep-01-09 12:35	Sep-01-09 13:05	
BTEX by EPA 8021B	Extracted:	Sep-03-09 14:38	Sep-03-09 14:38	Sep-03-09 14:38	
	Analyzed:	Sep-03-09 17:39	Sep-03-09 17:57	Sep-03-09 18:16	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		0.0013 0.0010	0.0120 0.0010	0.0073 0.0010	
Toluene		ND 0.0020	ND 0.0020	0.0033 0.0020	
Ethylbenzene		0.0011 0.0010	ND 0.0010	ND 0.0010	
m,p-Xylenes		0.0141 0.0020	ND 0.0020	0.0028 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	0.0015 0.0010	
Total Xylenes		0.0141 0.0010	ND 0.0010	0.0043 0.0010	
Total BTEX		0.0165 0.0010	0.0120 0.0010	0.0149 0.0010	

This analytical report, and the cutire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expected 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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Odessa Laboratory Manager Brent Barron, II



## **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
- \* Outside XENCO's scope of NELAC Accreditation.

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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
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Lovington Gathering WTI

ork Orders: 343328,

Lab Batch #: 771027

Sample: 536990-1-BKS / BKS

Project ID: 2006-142

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 09:41	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	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0350	0.0300	117	80-120	

Lab Batch #: 771027

Sample: 536990-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 09:59	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 771027

Sample: 536990-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 10:36	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		1	[D]		
,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0115	0.0300	38	80-120	*

Lab Batch #: 771027

Sample: 343218-001 S / MS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 13:22	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	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		0.0369	0.0300	123	80-120	*

Lab Batch #: 771027

Sample: 343218-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 14:34	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0313	0.0300	104	80-120	
4-Bromofluorobenzene		0.0372	0.0300	124	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

ork Orders: 343328, Lab Batch #: 771027

Sample: 343328-001 / SMP

Project ID: 2006-142

Matrix: Water Batch: 1

<b>Units:</b> mg/L <b>Date Analyzed:</b> 09/03/09 15:48	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		ļ	[D]		
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0162	0.0300	54	80-120	*

Lab Batch #: 771027

Sample: 343328-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 16:07	St	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]	:	
1,4-Difluorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0.0163	0.0300	54	80-120	*

Lab Batch #: 771027

Sample: 343328-003 / SMP

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 09/03/09 16:	25 <b>SU</b>	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			ושו		
,4-Difluorobenzene	0.0280	0.0300	93	80-120	<u> </u>
4-Bromofluorobenzene	0.0153	0.0300	51	80-120	*

Lab Batch #: 771027

**Sample:** 343328-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 17:21	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]	1	
1,4-Difluorobenzene		0.0296	0.0300	99	80-120	
4-Bromofluorobenzene		0.0202	0.0300	67	80-120	*

Lab Batch #: 771027

Sample: 343328-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/	/03/09 17:39 <b>SU</b>	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	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

**Orders**: 343328,

Lab Batch #: 771027

Sample: 343328-008 / SMP

**Project ID: 2006-142** 

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY Date Analyzed: 09/03/09 17:57 Units: mg/L Amount True Control BTEX by EPA 8021B Found Recovery Limits Flags Amount [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0275 0.0300 92 80-120 0.0205 80-120 4-Bromofluorobenzene 0.0300

Lab Batch #: 771027

Sample: 343328-009 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 18:16	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	0,0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0175	0.0300	58	80-120	*

Lab Batch #: 771296

Sample: 537136-1-BKS / BKS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/05/09 14:52	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 771296

Sample: 537136-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 15:11	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	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		0.0350	0.0300	117	80-120	

Lab Batch #: 771296

Sample: 537136-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 15:48	SU	RROGATE R	ECOVERY :	STUDY	
втех	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0133	0.0300	44	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

rk Orders: 343328,

Project ID: 2006-142

Lab Batch #: 771296

Sample: 343328-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 09/05/09 16:07	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	}	
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0179	0.0300	60	80-120	**

Lab Batch #: 771296

Sample: 343328-004 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/05/09	21:39 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0183	0.0300	61	80-120	*

Lab Batch #: 771296

**Sample:** 343498-012 S / MS

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/05/09 22:34	SU	RROGATE RE	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 771296

Sample: 343498-012 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 09/05/09 22:53	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	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		0.0330	0.0300	110	80-120	

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



## BS / BSD kecoveries



Project Name: Lovington Gathering WTI

Work Order #: 343328

Analyst: ASA

Lab Batch ID: 771027

**Date Prepared:** 09/03/2009

Batch #: 1

Sample: 536990-1-BKS

**Project ID:** 2006-142 **Date Analyzed:** 09/03/2009

Matrix: Water

RI ANK /BI ANK SPIKF / RI ANK SPIKF DIIPI ICATE RECOVERY STIIDY I/om

Units: mg/L		DECEM	DEALTA DEALTH STINE / BLANK STINE DOTLICATE NECOVERT STODI	rine/ D	LAINING	INE DOLL	CAIE	ECOVE	TOIS IN	1	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>v</u>	[8]	Kesuit [C]	 	<u>a</u>	Dupincare Result [F]	¥ 5	,	X%	%KPD	
Benzene	ND	0.1000	0.1023	102	0.1	8660'0	001	2	70-125	25	
Toluene	ND	0.1000	0.0982	86	0.1	0.0956	96	3	70-125	25	
Ethylbenzene	ND	0.1000	0.1093	109	0.1	0.1071	107	2	71-129	25	
m,p-Xylenes	QN	0.2000	0.2292	115	0.2	0.2240	112	2	70-131	25	
o-Xylene	QN	0.1000	0.1065	107	0.1	0.1040	104	2	71-133	25	

Date Prepared: 09/04/2009 Sample: 537136-1-BKS

Analyst: ASA

Batch #: 1

Matrix: Water

**Date Analyzed:** 09/05/2009

Lab Batch ID: 771296 Sample: 537136-1-BKS	1-BKS	Batcl	Batch #: 1					Matrix: Water	Vater		
Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / E	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes		<b>8</b>	[2]	<u>e</u>	亘	Result [F]	<u>5</u>				
	QN	0.1000	0.0981	86	0.1	0.1047	105	7	70-125	25	
	QN	0.1000	0.0941	94	0.1	0.1006	101	7	70-125	25	
Ethylbenzene	QN	0.1000	0.1048	105	0.1	0.1124	112	7	71-129	25	
m,p-Xylenes	QN	0.2000	0.2192	110	0.2	0.2333	117	9	70-131	25	
	QN	0.1000	0.1025	103	0.1	0.1103	110	7	71-133	25	

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



## Form 3 - MS MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 343328

Lab Batch ID: 771027

Date Analyzed: 09/03/2009 Reporting Units:

QC-Sample ID: 343218-001 S **Date Prepared:** 09/03/2009

ASA . Analyst:

Matrix: Water Batch #:

**Project ID: 2006-142** 

eporting Units: mg/L		M	ATRIX SPIKI	3 / MATI	RIX SPIF	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1000	0.0950	95	0.1000	0.1022	102	7	70-125	25	
Toluene	QN	0.1000	0.0916	92	0.1000	0.0983	86	7	70-125	25	
Ethylbenzene	QN	0.1000	0.1034	103	0.1000	0.1104	110	7	71-129	25	
m,p-Xylenes	ND	0.2000	0.2147	107	0.2000	0.2288	114	9	70-131	25	
o-Xylene	ND	0.1000	1660'0	100	0.1000	0.1073	101	7	71-133	25	

QC-Sample ID: 343498-012 S Date Prepared: 09/04/2009 Date Analyzed: 09/05/2009 Lab Batch ID: 771296

Matrix: Water ASA Analyst: Batch #:

Reporting Units: mg/L		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/ MATI	XIX SPIF	CE DUPLICAT	TE REC	VERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[ <b>y</b> ]	[ <u>B</u> ]		ē	<u> </u>		<u>5</u>				·····
Benzene	0.0738	0.1000	0.1737	100	0.1000	0.1715	86	-	70-125	25	
Toluene	ND	0.1000	0.0904	06	0.1000	0.0881	88	3	70-125	25	
Ethylbenzene	ND	0.1000	9960'0	26	0.1000	0.0954	95	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.2006	001	0.2000	0.1992	100	1	70-131	25	
o-Xylene	QN	0.1000	0.0940	94	0.1000	0.0929	93	1	71-133	25	

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

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

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

Project Manager   Contribution   State Environmental Soviet Technologian, LC   Company Address 200 Discussion   Company Address 20		ļ		į		SES	.,		कुम ट.	V '81	1 TAT bisb		×	×	×	×	×	×	×	×			2 2 2	Ô:		1 1
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Project Manager. Curt Stanley PAGE 01-OF 01  Company Name Basin Eurotroinnental Service Technologies, LLC  Company Address: 2800 Plaine May  City/State/Zip: Louinigton, MA 88260  Telephone No. 1579; 441-2244  Sampler Signature, A.J. 2244  Telephone No. 1579; 441-2244  Telepho	11 - 21 - 21 - 21 - 21 - 21 - 21 - 21 -					. ***	383		-	8								+			-	100	-		٠.	
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Project Manager: Curt Stanley Compeny Name Basin Environmental Sovice Technol Compeny Address: Zibo Platna Hwy City/State/Zip: Lovington, MN 88-260 Telephone No: (575) 441-224 Sampler Signafure 7-10 Cope Sampler Signafure 7-10 Cope Sampler Signafure 7-10 Cope Special Instructions: MWW-8 MWW-1		PAGE 01-C	ogles, LLC		-		P. DS				poldmag oរ្យ	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009			Received by.	Onesignation in	to nonemore	Received by ELC
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## Environmental Lab of Texas

variance/ Corrective Act	ion web	ou- samp	ie rog-in			
client: Plains / Basin Env		The September 2				
Date/Time: 9.3.09 13:50		. 4:				
Lab ID#: 343378	4					
Initials: AL						
, and the same of	\$1					
Sample R	eceipt (	Checklist				
					Client Initials	3
#1 Temperature of container/ cooler?	1	(Yes)	No	5.1 °C		
#2 Shipping container in good condition?	73. 75	Yes	No			
#3 Custody Seals intact:on shipping container/ cooler?	114	Yes	No	(Not Present)		l
#4 Custody Seals intact on sample bottles/ container?	ł já	(Yes	. No	Not Present		
#5 Chain of Custody present?	6.1	(Yes)	No			1 .
#6 Sample instructions complete of Chain of Custody?	5.5	(Yes)	No		Ĭ.	
#7 Chain of Custody signed when relinquished/ receive	d?	(Yes)	. No		3.7 %	
#8 Chain of Custody agrees with sample label(s)?.	*	(Yes)	No	iD written on Cont./ Lid		
#9 Container label(s) legible and intact?		(Yes)	No	Not Applicable		
#10 Sample matrix/ properties agree with Chain of Cust	ody?	Yes	No			200
#11 Containers supplied by ELOT?		(Yes)	No			
#12 Samples in proper container/ bottle?		(Yes)	No.	See Below	1	. :
#13 Samples properly preserved?	1	Yes	No	See Below	1	3.
#14 Sample bottles intact?	F 15	(Yes)	No		+	
#15 Preservations documented on Chain of Custody?	<del></del>	(Yes)	No		1	1
#16. Containers documented on Chain of Custody?"		(Yes)	No	<del></del>	+	1
#17 Sufficient sample amount for indicated test(s)?		Yes	No	See Below	+	1
#18 All samples received within sufficient hold time?		(Yes)	No	See Below		
#19 Subcontract of sample(s)?		Yes.	No	Not Applicable	<del></del>	1.
#20 VOC samples have zero headspace?		Yes	No	Not Applicable	<del> </del>	1
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Variance	Docum	nentation			*	, č
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Regarding:	1 1					
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Corrective Action Taken:	. i.					
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Check all that Apply: See attached e-mail	/tay			•		
Client understands a	4 5	d like to pro	ceed with	analysis		
Cooling process had						
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## **Analytical Report 344353**

for

## PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

16-SEP-09





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)





16-SEP-09

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

Reference: XENCO Report No: 344353
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 344353. 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. 344353 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 344353**



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

Lovington Gathering WTI

Sample IdMatrixDate CollectedSample DepthLab Sample IdMW-9WSep-10-09 09:40344353-001

## CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID:

2006-142

Report Date: 16-SEP-09

Work Order Number: 344353

Date Received: 09/11/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-772597 BTEX-MTBE EPA 8021B

SW8021BM

Batch 772597, 4-Bromofluorobenzene recovered below QC limits sample Data confirmed by reanalysis. Matrix Interference is suspected in sample surrogate failures. Samples affected are: 537880-1-BLK,344353-001. QC samples were not reanalyzed.



## Certificate of Analysi ummary 344353 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-11-09 04:35 pm

Project Manager: Brent Barron, II Report Date: 16-SEP-09

	Lab Id:	344353-001	
Analysis Dannastad	Field Id:	MW-9	
Thursday Ned acsien	Depth:		
	Matrix:	WATER	
	Sampled:	Sep-10-09 09:40	
BTEX by EPA 8021B	Extracted:	Sep-15-09 14:30	
	Analyzed:	Sep-16-09 02:38	
	Units/RL:	mg/L RL	
Benzene		1.838 0.0100	
Toluene		ND 0.0200	
Ethylbenzene		ND 0.0100	
m,p-Xylenes		0.0537 0.0200	
o-Xylene		ND 0.0100	
Total Xylenes		0.0537 0.0100	
Total BTEX		1.892 0.0100	

This analytical report, and the entire data package it represents, has been made for your exclasive 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Manager Brent Barron, II



### **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
- \* Outside XENCO's scope of NELAC Accreditation.

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(361) 884-0371	(361) 884-9116
	(281) 240-4200 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500 (432) 563-1800



Project Name: Lovington Gathering WTI

ork Orders: 344353,

Project ID: 2006-142

Lab Batch #: 772597

Sample: 537880-1-BKS / BKS

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 09/15/09 22:37	St	RROGATE R	ECOVERY	STUDY 	
BTEX by EPA 8021B	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	0.0310	0.0300	103	80-120	

Lab Batch #: 772597

**Sample:** 537880-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/15/09 22:55	l st	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		0.0300	0.0300	100	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	

Lab Batch #: 772597

Sample: 537880-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/15/09 2	23:32 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0145	0.0300	48	80-120	*

Lab Batch #: 772597

Sample: 344353-001 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/16/09 02:38	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0307	0.0300	102	80-120	
4-Bromofluorobenzene		0.0208	0.0300	69	80-120	**

Lab Batch #: 772597

Sample: 344338-003 S / MS

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/16/09 05:41	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	Analytes	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene		0.0319	0.0300	106	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

results are based on MDL and validated for QC purposes.



Project Name: Lovington Gathering WTI

**Orders**: 344353,

**Project ID: 2006-142** 

Lab Batch #: 772597

Sample: 344338-003 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 09/16/09 06:00	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0351	0.0300	117	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

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







Project Name: Lovington Gathering WTI

Work Order #: 344353

Analyst: ASA Lab Batch ID: 772597

Sample: 537880-1-BKS

Date Prepared: 09/15/2009 Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 09/15/2009

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Resuit	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	[C]	[ <u>a</u> ]	[3]	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.1069	107	0.1	0.1062	901	-	70-125	25	
Toluene	QN	0.1000	0,1012	101	0.1	0.1007	101	0	70-125	25	
Ethylbenzene	QN	0.1000	0.1095	110	0.1	0.1110	==	1	71-129	25	
m,p-Xylenes	QN	0.2000	0.2246	112	0.2	0.2248	112	0	70-131	_ 25	
o-Xylene	QN	0.1000	0.1069	107	0.1	0.1064	901	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 - McMMSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 344353

**Project ID: 2006-142** 

Lab Batch ID: 772597	QC-Sample ID: 344338-003 S	344338-	003 S	Bai	Batch #:	1 Matrix	Matrix: Water				
Date Analyzed: 09/16/2009	Date Prepared: 09/15/2009	09/15/20	600	An	Analyst:	ASA					
Reporting Units: mg/L		N N	ATRIX SPIKI	E/MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	VERY S	TUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked 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	QN	0.1000	0.0930	93	0.1000	0.1047	105	12	70-125	25	
Toluene	QN	0.1000	0.0879	88	0.1000	0.0993	66	12	70-125	25	
Ethylbenzene	QN	0.1000	0.0970	6	0.1000	0.1103	110	13	71-129	25	
m,p-Xylenes	ND	0.2000	0.1977	66	0.2000	0.2248	112	13	70-131	25	
o-Xylenc	QN	0.1000	0.0930	93	0.1000	0.1066	107	4	71-133	25	

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

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

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

Texas	Project Name: Lovington Gathering WT1	Basin Environmental Service Technologies, LLC	Project Loc. Les County, RM	PO #: PAA-J. Henry	Fax No: (503) 396-1429 Report Farmati: X Standard TRRPP NPDES	Ly Joy C. L. Coperagnet costanley@basin-consulting.com	CCIP: XT XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	05	SZE XOLER PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO GE  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO LE PO  ANGEN PO  AN	ellons (da, lag	9/10/2009 0940 3 X X X						Laboratory Comments:		The process of the party of the		alto Irrae Nacouved Ur.
Environmental Lab of Texas	Project Manager: Curt Stanley	Company Name Basin Environmenta	Company Address: P.O. Box 301	City/State/Zip: Lovington, NM 88260		Sampler Signature:	A Company of the Comp	ORDER # 504355	(Auo.	agn Qei) a gw		A. de		1. Sec. 1. Sec			Special instructions:	8	るという。	Kefingutshed sy. Date	

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

itials: au					
Sample Receipt	Checklist				
				Client Iniția	is
Temperature of container/ cooler?	(Yes)	No	3,6 °C	·	]
2 Shipping container in good condition?	(Yes)	No			
3 Custody Seals intact on shipping container/ cooler?	· Yes	No	Not Presend		1
Custody Seals intact on sample bottles/ container?	(Yes)	.No	Not Present		4
5 Chain of Custody present?	(Yes)	No.		<u> </u>	<b>-</b>
Sample instructions complete of Chain of Custody?	(Yes)	No		· - ·	4
7 Chain of Custody signed when relinquished/ received?	(Yes)	No	ļ	-	4
B Chain of Custody agrees with sample label(s)?	(Yes)	No.	ID written on Cont./ Lid	<u></u>	4
9 Container label(s) legible and intact?	(Yes)	No	Not Applicable		<b>-</b> :
10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No			4 .
11 Containers supplied by ELOT?	(Yes)	No.		<del> </del>	
12 Samples in proper container/ bottle?  13 Samples properly preserved?	(Yes)	No No	See Below		-  `
13 Samples properly preserved? 14 Sample bottles intact?	(Yes)	No	See Below	77	
15 Preservations documented on Chain of Custody?	Yes	No		ļ	-
16 Containers documented on Chain of Custody?	Yes	No		<del>                                     </del>	-
	(Yes)	No			-
17 Sufficient sample amount for indicated test(s)?  18 All samples received within sufficient hold time?	(Yes)	No	See Below	-	- 1
19 Subcontract of sample(s)?	Yes	No	Sec Below	ļ	-
20 VOC samples have zero headspace?	Yes	No	Not Applicable  Not Applicable	<del> </del>	-
20 YOO Samples nave 2010 meadapades	1 763	1 110	1 Not Applicable	<del></del>	٠٠٠ المنا
Variance Docum	nentation	•			•
Contact: Contacted by:	*******		Date/ Time:		
3	• .				* -
Regarding:	·····				
Corrective Action Taken:					
Corrective Action Taken.					
	***************************************		***************************************		
Check all that Apply: See attached e-mail/ fax	,				
Client understands and would	d like to pro	ceed with	analysis		
Cooling process had begun :	shortly after	sampling	event		

### **Analytical Report 347203**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

09-OCT-09





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AAL11), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)





09-OCT-09

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

Reference: XENCO Report No: 347203
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 347203. 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. 347203 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 347203**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-9	W	Oct-05-09 11:00		347203-001

### **CASE NARRATIVE**



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID:

2006-142

Report Date: 09-OCT-09

Work Order Number: 347203

Date Received: 10/06/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-775966 BTEX-MTBE EPA 8021B

SW8021BM

Batch 775966, 1,4-Difluorobenzene recovered above QC limits . Matrix interferences is

suspected; data confirmed by re-analysis

Samples affected are: 347203-001.

Batch: LBA-776140 BTEX-MTBE EPA 8021B

None



### Certificate of Analysis Summary 347203 PLAINS ALL AMERICAL EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Oct-06-09 09:13 am

Project Manager: Brent Barron, II Report Date: 09-OCT-09

	Lab Id:	347203-001		
Analysis Domostad	Field Id:	9-WW		
Amulysis Ned nesteu	Depth:			
	Matrix:	WATER		
	Sampled:	Oct-05-09 11:00		
BTEX by EPA 8021B	Extracted:	Oct-06-09 15:00		
	Analyzed:	Oct-06-09 23:27		
	Units/RL:	mg/L RL		
Benzene		0.9850 D 0.1000		
Toluene		ND 0.0020		
Ethylbenzene	-	ND 0.0010		
m,p-Xylenes		0.0442 0.0020		المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية
o-Xylene		ND 0.0010		
Total Xylenes		0.0442 0.0010		
Total BTEX		1.029 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 treport 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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Odessa Laboratory Manager

Brent Barron, II



### 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
- \* 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** 

ork Orders: 347203,

Lab Batch #: 775966

Project ID: 2006-142

Sample: 539833-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/06/09 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	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 775966

Sample: 539833-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 10/06/09 20:38	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		0.0297	0.0300	99	80-120		
4-Bromofluorobenzene		0.0300	0.0300	100	80-120		

Lab Batch #: 775966

Sample: 539833-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 10/06/09 21:20	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
,4-Difluorobenzene		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	

Lab Batch #: 775966

Sample: 347203-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 10/06/09 23:27	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0408	0.0300	136	80-120	**
4-Bromofluorobenzene	0.0248	0.0300	83	80-120	

Lab Batch #: 775966

**Sample:** 346642-006 S / MS

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 10/07/09 05:46	SU	RROGATE R	ECOVERY:	STUDY	
ВТЕ	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			(-1		
1,4-Difluorobenzene		0.0304	0.0300	101	80-120	
4-Bromofluorobenzene		0.0314	0.0300	105	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



Project Name: Lovington Gathering WTI

ork Orders: 347203,

Project ID: 2006-142

ab Batch #: 775966

Sample: 346642-006 SD / MSD

Batch: Matrix: Water

Units: mg/L Date Analyzed: 10/07/09 06:07	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]	1			
1,4-Difluorobenzene	0.0303	0.0300	101	80-120			
4-Bromofluorobenzene	0.0319	0.0300	106	80-120			

Lab Batch #: 776140

**Sample:** 539963-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 10/07/09 09:09	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		0.0302	0.0300	101	80-120		
4-Bromofluorobenzene		0.0302	0.0300	101	80-120		

Lab Batch #: 776140

Sample: 539963-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 10/07/09 09:30	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
,4-Difluorobenzene	0.0301	0.0300	100	80-120			
4-Bromofluorobenzene	0.0293	0.0300	98	80-120			

Lab Batch #: 776140

Sample: 539963-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 10/07/09 10:12 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	**

Lab Batch #: 776140

Sample: 347203-001 / DL

Batch: 1

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 10/07/09 19:13	SU	RROGATE RE	COVERY S	STUDY	
	y EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
AI	larytes			[2]		
1,4-Difluorobenzene		0.0269	0.0300	90	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

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



**Project Name: Lovington Gathering WTI** 

**Orders**: 347203,

Lab Batch #: 776140 Sample: 347183-001 S / MS

Project ID: 2006-142

Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY Units: mg/L Date Analyzed: 10/07/09 19:55 True Amount Control BTEX by EPA 8021B Found Amount Recovery Limits Flags %R [B] [A] %R [D]**Analytes** 1,4-Difluorobenzene 0.0295 0.0300 98 80-120 4-Bromofluorobenzene 0.0307 0.0300 102 80-120

Lab Batch #: 776140 Sample: 347183-001 SD / MSD Batch: 1 Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 10/07/09 20:16	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes	<u> </u>		[D]		
1,4-Difluorobenzene		0.0296	0.0300	99	80-120	
4-Bromofluorobenzene		0.0305	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

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



### BS / BS Recoveries



### Project Name: Lovington Gathering WTI

Work Order #: 347203

Analyst: ASA

Lab Batch ID: 775966

**Project ID: 2006-142** 

Date Analyzed: 10/06/2009 Matrix: Water

**Date Prepared:** 10/06/2009 Batch #: 1 Sample: 539833-1-BKS

Flag %RPD Limits 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 71-133 70-131 RPD 0 0 0 Blk. Spk Dup. |G| 92 8 92 <u>=</u> 86 Duplicate Result [F] Blank Spike 0.0915 0.0903 0.2013 0.0983 0.0921 Spike Added  $\Xi$ 0.1 0.1 0.1 0.2 0.1 Spike %R (D) 100 92 06 92 86 0.0903 0.0917 0.2002 Spike Result 0.0919 0.0975 Blank  $\overline{\mathbf{c}}$ 0.1000 0.1000 0.1000 0.2000 0.1000 Spike Added <u>B</u> Sample Result ξ ΔN S S ξ ₹ BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

Date Prepared: 10/07/2009

Batch #: 1

Lab Batch ID: 776140

Analyst: ASA

Matrix: Water

Date Analyzed: 10/07/2009

Flag Control Limits %RPD 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-125 70-125 71-129 70-131 71-133 RPD 0 0 Blk. Spk Dup. 103 4 93 95 66 Spike Duplicate Result [F] Blank 0.0942 0.0928 0.0945 0.2069 0.0991 Spike Added 0.1 0.2  $\Xi$ 0.1 0.1 0.1 Blank Spike %R [D] 92 94 103 66 93 0.0918 0.0940 Blank Spike Result 0.2064 0.0990 0.0931  $\overline{\mathbf{c}}$ 0.1000 0.1000 0.2000 0.1000 Spike Added 0.1000<u>B</u> Sample Result Blank 呈 Ω. QN B ₹ ð Sample: 539963-1-BKS BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluene

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



### Form 3 - MS MSD Recoveries





Work Order #: 347203

Lab Batch ID: 775966

Date Analyzed: 10/07/2009

Batch #:

Project ID: 2006-142

QC-Sample ID: 346642-006 S Date Prepared: 10/06/2009

Matrix: Water Analyst: ASA

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	MAT.	RIX SPII	KE DUPLICA	TE REC	OVERY !	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1000	0.0827	. 83	0.1000	0.0900	06	8	70-125	25	
Toluene	ND	0.1000	0.0817	82	0.1000	0.0888	68	8	70-125	25	
Ethylbenzene	QN	0.1000	0.0818	82	0.1000	0.0893	68	6	71-129	25	
m,p-Xylenes	QN	0.2000	0.1784	68	0.2000	0.1951	86	6	70-131	25	
o-Xylene	QN	0.1000	0.0859	98	0.1000	0.0949	95	10	71-133	25	

Date Analyzed: 10/07/2009 Lab Batch ID: 776140

QC-Sample ID: 347183-001 S Date Prepared: 10/07/2009

Matrix: Water ASA Analyst: Batch #:

Flag Limits %RPD Control 25 25 25 25 25 Control Limits %R 70-125 70-125 71-129 70-131 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 0 0 0 Spiked Dup. %R [G] 80 98 84 80 8 Duplicate Spiked Sample Result [F] 0.0802 96/0.0 0.1728 0.0801 0.0836 Spike Added 0.1000 0.1000 0.1000 0.2000 0.1000  $\Xi$ Spiked Sample %<u>R</u> 80 80 80 87 84 Spiked Sample Result 0.0800 0.0795 0.0802 0.1743 0.0844  $\overline{\Omega}$ Spike Added [B] 0.1000 0.2000 0.1000 0.1000 0.1000 Parent Sample Result [A] 2 S ND ΩN N Q BTEX by EPA 8021B Analytes Reporting Units: mg/L Ethylbenzene m,p-Xylenes o-Xylene Toluene Benzene

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

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

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

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### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Lab ID # :	347203					
nitials:	<u>al</u>					
	Sample Receipt	Checklist				
		· · · · · · · · · · · · · · · · · · ·		·		t initials
1 Temperature of con		(Yes)	No	5.1	° C	
2 Shipping container		(Yes)	No			
	t on shipping container/ cooler?	Yes	No No	₫ dvot Presen		
	t on sample bottles/ container?		No	Not Presen	<u> </u>	
5 Chain of Custody pi 6 Sample instructions	complete of Chain of Custody?	West (	No	<u> </u>	<del> </del> -	
	gned when relinquished/received?	Yes	No	<del> </del>	<del></del>	
	grees with sample label(\$)?	Yes	- No	1		· · ·
9 Container label(s) le		(Yes)	No	iD written on Con		
	perties agree with Chain of Custody?	(Yes)	No	Not Applicat		
111 Containers supplie		Tres	-No			-
112 Samples in proper		বিভি	No	See Below		
13 Samples properly		West	No	See Below		
114 Sample bottles into		- Ves	No.	See Below		
	umented on Chain of Custody?	(Yes)	No:	<del> </del>		
**************************************	ented on Chain of Custody?	rves	No	<u> </u>		
	amount for indicated test(s)?	Mes	: No	See Below	<del></del>	
	ed within sufficient hold time?	(Yes)	No	See Below		
#19 Subcontract of san		Yes.	No 2	MOT Applicat	····	
#20 VOC samples have		(Yes)	No	Not Applicat		
	·	4	***************************************	110/11/20/000		، استنب
	Variance Docu	mentation				
Contact:	Contacted by:			Date/ Time:		
***************************************			-		*****	
Regarding:						
				**************************************		······································
Corrective Action Taken	ε					
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Check all that Apply:	See attached e-mail/ fax					
	Client understands and wou					
	Cooling process had begun	shortly after	sampling	event		
	73.			وارائي داده	and the	
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### **Analytical Report 350679**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

11-NOV-09





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87428), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)





11-NOV-09

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

Reference: XENCO Report No: 350679
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 350679. 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. 350679 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 350679**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-10	W	Nov-02-09 09:00		350679-001

Version: 1.014





Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID:

2006-142

Work Order Number: 350679

Report Date: 11-NOV-09

Date Received: 11/03/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-780311 Determination of Inorganic Anions In Water By Ion

E300MI

Batch 780311, Chloride, Fluoride recovered above QC limits in the Matrix Spike.

Samples affected are: 350679-001.

The Laboratory Control Sample for Chloride , Fluoride is within laboratory Control Limits

E300MI

Batch 780311, Nitrate as N RPD is outside the QC limit. This is most likely due to sample non-

homogeneity.

Samples affected are: 350679-001.

Batch: LBA-780340 Alkalinity by SM2320B

None

Batch: LBA-780359 Mercury by SW-846 7470A

SW7470A

Batch 780359, Mercury recovered below QC limits in the Matrix Spike and Matrix Spike

Duplicate.

Samples affected are: 350679-001.

The Laboratory Control Sample for Mercury is within laboratory Control Limits

Batch: LBA-780428 Metals per ICP by SW846 6010B

None

### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142 Work Order Number: 350679 Report Date: 11-NOV-09 Date Received: 11/03/2009

Batch: LBA-780438 Metals by EPA 200.8

SW6020

Batch 780438, Boron and Iron RPD is outside the QC limit. This is most likely due to sample

non-homogeneity.

Samples affected are: 350103-015, 350679-001.

### SW6020

Batch 780438, Zinc recovered below QC limits in the Matrix Spike Duplicate. Aluminum recovered above QC limits in the Matrix Spike. Boron recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 350679-001.

The Laboratory Control Sample for Aluminum, Zinc, Boron is within laboratory Control Limits

Batch: LBA-780540 VOAs by SW-846 8260B

None

Batch: LBA-780919 SVOAs by SW-846 8270C

None



## Certificate of Analysic Summary 350679 PLAINS ALL AMERICAN TH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am

Report Date: 11-NOV-09

Brent Barron, II Project Manager:

	Lab Id:	350679-001	-  -	
	Field 1d.	MW-10		
Analysis Reanested	1 1614 14.	O I - M IAI		
	Depth:			
	Matrix:	WATER		
	Sampled:	Nov-02-09 09:00	00:6	
Alkalinity by SM2320B	Extracted:			
	Analyzed:	Nov-03-09 15:25	5:25	
	Units/RL:	mg/L	RL	
Alkalinity, Bicarbonate (as CaCO3)		126 4.00	4.00	
Alkalinity, Total (as CaCO3)		126	4.00	
Alkalinity, phenolphthalcin		QN	4.00	
Alkalinity, Carbonate (as CaCO3)		ND	4.00	
Determination of Inorganic Anions In	Extracted:			
Water By Ion	Analyzed:	Nov-04-09 11:19	1:19	
	Units/RL:	mg/L	귉	
Fluoride		9.27	2.00	
Chloride		24.9	5.00	
Sulfate		64.1	5.00	
Nitrate as N		2.14 0.500	0.500	
Ortho-Phosphate		ND	2.50	

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

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

Version: 1.014

Since 1990

Odessa Laboratory Manager Brefft Barron, II

Page 6 of 38



## Certificate of Analysis ummary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI



Date Received in Lab: Tue Nov-03-09 10:22 am Report Date: 11-NOV-09

Project Manager: Brent Barron, II

	Lab Id:	350679-001
	Field Id:	017MW
Analysis Requested	Depth:	
	Matrix:	WATER
	Sampled:	Nov-02-09 09:00
Inductively Coupled Plasma Atomic	Extracted:	Nov-05-09 09:20
Emission Spectroscopy Mass	Analyzed:	Nov-05-09 15:55
SUB: T104704215-08B-TX	Units/RL:	mg/L RL
Aluminum		0.008 0.010
Arsenic		0.007 0.002
Barium		0.134 0.005
Boron		0.397 0.010
Cadmium		ND 0.001
Chromium		l
Cobalt		ND 0.005
Copper		
Iron		0.820 0.150
Lead		ND 0.002
Manganese		i
Molybdenum		ND 0,004
Nickel		
Selenium		ND 0.003
Silver		ND 0.002
Zinc		ND 0.003
Mercury by SW-846 7470A	Extracted:	Nov-04-09 11:00
	Analyzed:	Nov-05-09 11:44
	Units/RL:	mg/L RL
Mercury		0.0001 0.0001

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 manifyical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no exponsibility and makes no warranty to the end use of the data breely presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.014

Final Ver. 1.000

Odessa Laboratory Manager

Brefit Barron, II

Page 7 of 38



# Certificate of Analysis Summary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am

Project Manager: Brent Barron, II Report Date: 11-NOV-09

	Lab Id:	350679-001			
Analysis Roanostod	Field Id:	MW-10			
marcan har sichmitz	Depth:			 	
	Matrix:	WATER			
	Sampled:	Nov-02-09 09:00			
Metals per ICP by SW846 6010B	Extracted:				
	Analyzed:	Nov-05-09 13:02	_		
	Units/RL:	mg/L RL			
Calcium		76.5 2.50			
Magnesium		13.6 0.250			
Potassium		ND 12.5			
Sodium		33.3 12.5			

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# Certificate of Analysis Summary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI



Date Received in Lab: Tue Nov-03-09 10:22 am

Report Date: 11-NOV-09

Project Manager: Brent Barron, II

S Requested         Field Id:         MW-10           Depth:         Matrix:         WATER           Sampled:         Nov-02-09 0         Odd 10           by SW-846 8270C         Extracted:         Nov-02-09 0           by SW-846 8270C         Extracted:         Nov-02-09 0           Contiss/RL:         mg/L         ND           ND         ND         ND           e         ND         ND           e         ND         ND           e         ND         ND           e         ND           e         ND           e         ND           e         ND           her         ND           her         ND           her         ND           hylether         ND           enol         ND           hylether         ND           nylether         ND		Lab Id:	350679-001
bepth:         Matrix:         WATER           Sampled:         Nov-02-09 0         O4704215-08B-TX         Analyzed:         Nov-05-09 0           by SW-846 8270C         Extracted:         Nov-05-09 0         O4704215-08B-TX         Analyzed:         Nov-05-09 0           c. Aminobenzene)         ND         ND         ND           c. Aminobenzene)         ND         ND           d. Analyzed:         ND         ND           c. Aminobenzene)         ND         ND           d. Analyzed:         ND         ND           c. Aminobenzene)         ND         ND           d. Analyzene         ND         ND           d. Analyzene         ND         ND <tr< th=""><th>Analysis Reanested</th><th>Field Id:</th><th>MW-10</th></tr<>	Analysis Reanested	Field Id:	MW-10
by SW-846 8270C         Extracted:         Nov-02-09 0           by SW-846 8270C         Extracted:         Nov-02-09 0           04704215-08B-TX         Analyzed:         Nov-09-09 1           c. Aminobenzene)         ND           de         ND           c. Aminobenzene)         ND           de         ND           de <th></th> <th>Depth:</th> <th></th>		Depth:	
by SW-846 8270C         Extracted:         Nov-02-09 0           04704215-08B-TX         Analyzed:         Nov-09-09 1           04704215-08B-TX         Inits/RL:         mg/L         ND           Inits/RL:         mg/L         ND		Matrix:	WATER
by SW-846 8270C  04704215-08B-TX  Analyzed: Nov-05-09 0  Linis/RL: mg/L  ND  ND  ND  ND  ND  ND  ND  ND  ND  N		Sampled:	Nov-02-09 09:00
04704215-08B-TX         Analyzed:         Nov-09-09 1           Linits/RL:         mg/L           ND         ND           Hear         ND           Halate         ND           Halate         ND           Halate         ND           Senol         ND           Senol         ND           Sheet         ND           Halate         ND           Sheet	SVOAs by SW-846 8270C	Extracted:	Nov-05-09 08:16
the control of the co	SUB: T104704215-08B-TX	Analyzed:	Nov-09-09 12:29
be e ND e e ND e e ND e e ND c		Units/RL:	
In Description         In Description           In Section         In Section           I	Acenaphthene		
e, Aminobenzene)  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Acenaphthylene		
ND   ND   ND   ND   ND   ND   ND   ND	Aniline (Phenylamine, Aminobenzene)		l
ND   ND   ND   ND   ND   ND   ND   ND	Anthracene		1
be the component of the	Benzo(a)anthracene		1
be methane	Benzo(a)pyrene		
the control of the co	Benzo(b)fluoranthene		
the characteristics of the characteristics of	Benzo(k)fluoranthene		
ND	Benzo(g,h,i)perylene		
ate	Benzoic Acid		
nuchane         ND           ther         ND           thalate         ND           thalate         ND           enol         ND           thalate         ND           the         ND           ND         ND           ND         ND           ND         ND           ND         ND	Benzyl Butyl Phthalate		
her ND  1) other ND  1) other ND  1) other ND  2) other ND  4) other ND  5	bis(2-chloroethoxy) methane		
thalate ND chalate ND	bis(2-chloroethyl) ether		
thalate ND enol ND enol ND  sylether ND ND ND nyl Ether ND ND ne ND ND ND ND ND ND ND ND ND ND ND ND ND N	bis(2-chloroisopropyl) ether		
enol ND enol ND  ND  ND  ND  ND  ND  ND  ND  ND  ND	bis(2-ethylhexyl) phthalate		
enol	4-Bromophenyl-phenylether		
ND ND NJ Ether ND ND ND ND ND ND ND ND ND ND ND ND ND	4-chloro-3-methylphenol		
nyl Ether ND ND ne ND ND ND ND ND ND ND ND ND ND ND ND ND	4-Chloroaniline		
ND ND ND ND ND ND ND ND ND ND ND ND ND N	2-Chloronaphthalene		
ND ND ND ND ND ND ND ND ND ND	2-Chlorophenol		
ON SE SE SE SE SE SE SE SE SE SE SE SE SE	4-Chlorophenyl Phenyl Ether		
on ND ND ND	Chrysene		
QN QN	Dibenz(a,h)anthracene		
QN	Dibenzofuran		
	di-n-Butyl Phthalatc		ND 0.005

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# Certificate of Analysis Summary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am

Report Date: 11-NOV-09

Project Manager: Brent Barron, II

	Lab Id:	350679-001
Analysis Romostod	Field Id:	MW-10
	Depth:	
	Matrix:	WATER
	Sampled:	Nov-02-09 09:00
SVOAs by SW-846 8270C	Extracted:	Nov-05-09 08:16
SUB: T104704215-08B-TX	Analyzed:	Nov-09-09 12:29
	Units/RL:	mg/L RL
1,2-Dichlorobenzene		ND 0.010
1,3-Dichlorobenzene		ND 0.010
1,4-Dichlorobenzene		ND 0.010
3,3-Dichlorobenzidine		ND 0.010
2,4-Dichlorophenol		ND 0.010
Diethyl Phthalate		ND 0.005
· Dimethyl Phthalate		ND 0.005
2,4-Dimethylphenol		ND 0,010
4,6-dinitro-2-methyl phenol		ND 0,010
2,4-Dinitrophenol		ND 0,010
2,4-Dinitrotoluene		ND 0.010
2,6-Dinitrotoluene		ND 0,010
di-n-Octyl Phthalate		ND 0,005
Fluoranthene		ND 0,005
Fluorene		ND 0,005
Hexachlorobenzene		ND 0.010
Hexachlorobutadiene		ND 0.010
Hexachlorocyclopentadiene		ND 0.010
Hexachloroethane		ND 0.010
Indeno(1,2,3-c,d)Pyrene		ND 0.005
Isophorone		ND 0.010
2-Methylnaphthalene		ND 0.005
2-methylphenol		1
3&4-Methylphenol		ND 0.010
Naphthalene		ND 0.005

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## Certificate of Analysis Summary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI



Date Received in Lab: Tue Nov-03-09 10:22 am

Project Manager: Brent Barron, II Report Date: 11-NOV-09

	rao Ia:	350679-001
Analysis Pannastad	Field Id:	MW-10
naisan hay sistinut	Depth:	
	Matrix:	WATER
	Sampled:	Nov-02-09 09:00
SVOAs by SW-846 8270C	Extracted:	Nov-05-09 08:16
SUB: T104704215-08B-TX	Analyzed:	Nov-09-09 12:29
	Units/RL:	mg/L RL
2-Nitroaniline		ND 0.010
3-Nitroaniline		ND 0,010
4-Nitroaniline		ND 0,020
Nitrobenzene		ND 0,010
2-Nitrophenol		ND 0,010
4-Nitrophenol		ND 0,010
N-Nitrosodi-n-Propylamine		ND 0.010
N-Nitrosodiphenylamine		ND 0.010
Pentachlorophenol		ND 0,010
Phenanthrenc		ND 0.005
Phenol		ND 0.010
Pyrene		ND 0.005
Pyridine		ND 0.010
1,2,4-Trichlorobenzene		ND 0.010
2,4,5-Trichlorophenol		ND 0.010
2,4,6-Trichlorophenol		ND 0.010

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# Certificate of Analysic Summary 350679 PLAINS ALL AMERICA, EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am

Project Manager: Brent Barron, II Report Date: 11-NOV-09

	Lab Id:	350679-001
Analysis Ronnostod	Field Id:	MW-10
massamhan sischmite	Depth:	
	Matrix:	WATER
	Sampled:	Nov-02-09 09:00
VOAs by SW-846 8260B	Extracted:	Nov-05-09 14:05
SUB: T104704295-08-TX	Analyzed:	Nov-05-09 15:29
	Units/RL:	mg/L RL
Benzene		ND 0.005
Bromobenzene		ND 0.005
Bromochloromethane		ND 0.005
Bromodichloromethane		ND 0.005
Bromoform		ND 0.005
Methyl bromide		ND 0.005
MTBE		ND 0.005
n-Butylbenzene		ND 0.005
Sec-Butylbenzene		ND 0.005
tert-Butylbenzene		ND 0.005
Carbon Tetrachloride		ND 0.005
Chlorobenzenc		ND 0.005
Chloroethane		
Chloroform		
Methyl Chloride		ND 0.010
2-Chlorotoluene		ND 0.005
4-Chlorotoluene		ND 0.005
p-Cymene (p-Isopropyltoluene)		
Dibromochloromethane		ND 0.005
1,2-Dibromo-3-Chloropropane		ND 0.005
1,2-Dibromoethane		ND 0.005
Methylene bromide		ND 0.005
1,2-Dichlorobenzene		ND 0.005
1,3-Dichlorobenzenc		
1,4-Dichlorobenzene		ND 0.005

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Odessa Laboratory Manager Brefft Barron, II



Project Id: 2006-142
Contact: Jason Henry
Project Location: Lea County, NM

# Certificate of Analysis Summary 350679 PLAINS ALL AMERICAS EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am Report Date: 11-NOV-09

Project Manager: Brent Barron, II

	Lab Id:	350679-001	
Assertation Description	Field Id:	MW-10	
Anatysis Nequesieu	Depth:		
	Matrix:	WATER	
	Sampled:	Nov-02-09 09:00	
VOAs by SW-846 8260B	Extracted:	Nov-05-09 14:05	
SUB: T104704295-08-TX	Analyzed:	Nov-05-09 15:29	
	Units/RL:	mg/L RL	
Dichlorodifluoromethane		ND 0.005	
1,1-Dichlorocthane		ND 0.005	
1,2-Dichloroethane			
1,1-Dichloroethene	**	ND 0.005	
cis-1,2-Dichloroethylene		ND 0.005	
trans-1,2-dichloroethylene		ND 0.005	
1,2-Dichloropropane		ND 0.005	
1,3-Dichloropropane		ND 0.005	
2,2-Dichloropropane		ND 0.005	
1,1-Dichloropropene			
cis-1,3-Dichloropropene		ND 0.005	
trans-1,3-dichloropropene		ND 0.005	
Ethylbenzene		ND 0.005	
Hexachlorobutadiene		ND 0.005	
isopropylbenzene		ND 0.005	
Methylene Chloride		ND 0.005	
Naphthalene			
n-Propylbenzene			
Styrene		ND 0.005	
1,1,1,2-Tetrachloroethane		ND 0.005	
1,1,2,2-Tetrachloroethane		ND 0.005	
Tetrachloroethylene		ND 0.005	
Toluene		ND 0.005	
1,2,3-Trichlorobenzene		ND 0.005	
1,2,4-Trichlorobenzene		ND 0.005	

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# Certificate of Analysis Summary 350679 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI



Date Received in Lab: Tue Nov-03-09 10:22 am

Report Date: 11-NOV-09

Ш	
Brent Barron,	
Project Manager:	

	Lab Id:	350679-001	_
Analysis Ponnostod	Field Id:	: MW-10	
naisan hay sistinut	Depth:		
	Matrix:	: WATER	
	Sampled:	: Nov-02-09 09:00	
VOAs by SW-846 8260B	Extracted:		
SUB: T104704295-08-TX	Analyzed:	: Nov-05-09 15:29	
	Units/RL:		
1,1,1-Trichloroethane		ND 0.005	
1,1,2-Trichloroethane		ND 0.005	
Trichloroethylene		ND 0.005	
Trichlorofluoromethane		ND 0.005	
1,2,3-Trichloropropane		ND 0.005	
1,2,4-Trimethylbenzene		ND 0.005	
1,3,5-Trimethylbenzene		ND 0.005	
o-Xylene		ND 0.005	
m,p-Xylene		ND 0.010	
Vinyl Chloride		ND 0.002	

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### 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
  - \* 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 Lanc, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

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Project Name: Lovington Gathering WTI

rk Orders: 350679, ab Batch #: 780919

**Sample:** 542398-1-BLK / BLK

**Project ID:** 2006-142

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 11/05/09 13:34	SU	RROGATE R	RECOVERY	STUDY	
SVOA	s by SW-846 8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
2-Fluorobiphenyl		0.047	0.050	94	43-116	
2-Fluorophenol		0.039	0.050	78	21-100	
Nitrobenzene-d5		0.044	0.050	88	35-114	
Phenol-d6		0.029	0.050	58	10-94	
Terphenyl-D14		0.055	0.050	110	33-141	
2,4,6-Tribromophenol		0.048	0.050	96	10-123	

Lab Batch #: 780919

Sample: 542398-1-BKS / BKS

Batch: 1

Matrix: Water

SU	RROGATE R	ECOVERY :	STUDY	
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
ļ		IDI		
0.045	0.050	90	43-116	
0.034	0.050	68	21-100	
0.044	0.050	88	35-114	
0.024	0.050	48	10-94	
0.052	0.050	104	33-141	
0.048	0.050	96	10-123	
	Amount Found [A] 0.045 0.034 0.044 0.024 0.052	Amount Found [A] True Amount [B]  0.045 0.050  0.034 0.050  0.044 0.050  0.024 0.050  0.052 0.050	Amount Found [A]         True Amount [B]         Recovery %R [D]           0.045         0.050         90           0.034         0.050         68           0.044         0.050         88           0.024         0.050         48           0.052         0.050         104	Found [A]         Amount [B]         Recovery %R [D]         Limits %R           0.045         0.050         90         43-116           0.034         0.050         68         21-100           0.044         0.050         88         35-114           0.024         0.050         48         10-94           0.052         0.050         104         33-141

Lab Batch #: 780919

Sample: 542398-1-BSD / BSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 11/05/09 14:50	SU	RROGATE R	RECOVERY	STUDY	
SVOAs by SW-846 8270C  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.048	0.050	96	43-116	
2-Fluorophenol	0.035	0.050	70	21-100	
Nitrobenzenc-d5	0.046	0.050	92	35-114	
Phenol-d6	0.026	0.050	52	10-94	_
Terphenyl-D14	0.054	0.050	108	33-141	
2,4,6-Tribromophenol	0.051	0.050	102	10-123	

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

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



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<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

Batch:

rk Orders: 350679, Lab Batch #: 780919

Sample: 350679-001 / SMP

Project ID: 2006-142
Matrix: Water

SURROGATE RECOVERY STUDY Units: mg/L Date Analyzed: 11/09/09 12:29 Amount True Control SVOAs by SW-846 8270C Found Amount Recovery Limits Flags [A] [B] %R %R **Analytes** [D] 2-Fluorobiphenyl 0.044 88 43-116 0.050 2-Fluorophenol 0.021 0.050 42 21-100 Nitrobenzene-d5 0.040 0.050 80 35-114 Phenol-d6 0.011 0.050 22 10-94 Terphenyl-D14 0.049 0.050 98 33-141 2,4,6-Tribromophenol 0.047 0.050 94 10-123

Lab Batch #: 780540 Sample: 542495-1-BLK / BLK Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 11:26	SU	RROGATE R	ECOVERY	STUDY	<u></u>
VOAs	by SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	Analytes	0.0496	0.0500	99	74-124	
		0.0496	0.0500	99	74-124	_
Dibromofluoromethane		0.0458	0.0500	92	75-131	
1,2-Dichloroethane-D4		0.0464	0.0500	93	63-144	
Toluene-D8		0.0514	0.0500	103	80-117	

ab Batch #: 780540 Sample: 542495-1-BKS / BKS Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 14:42	SU	RROGATE R	ECOVERY	STUDY	
VOAs	by SW-846 8260B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	Titlary to 5	0.0472	0.0500	94	74-124	_
Dibromofluoromethane		0.0424	0.0500	85	75-131	
1,2-Dichloroethane-D4		0.0464	0.0500	93	63-144	
Toluene-D8		0.0520	0.0500	104	80-117	

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

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



Version: 1.014

<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** 

rk Orders: 350679, Lab Batch #: 780540

Sample: 350679-001 / SMP

**Project ID: 2006-142** 

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/05/09 15:29	SU	RROGATE R	ECOVERY	STUDY	
VOAs by SW-846 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			וטו	ļ	
4-Bromofluorobenzene	0.0487	0.0500	97	74-124	
Dibromofluoromethane	0.0436	0.0500	87	75-131	
1,2-Dichloroethane-D4	0.0448	0.0500	90	63-144	•
Toluene-D8	0.0522	0.0500	104	80-117	

Lab Batch #: 780540 Sample: 350679-001 S / MS Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 17:17	SU	RROGATE R	ECOVERY	STUDY	
VOAs	by SW-846 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			[D]		
4-Bromofluorobenzene		0.0494	0.0500	99	74-124	
Dibromofluoromethane		0.0425	0.0500	85	75-131	
1,2-Dichloroethane-D4		0.0435	0.0500	87	63-144	
Toluene-D8		0.0509	0.0500	102	80-117	

Lab Batch #: 780540 Sample: 350679-001 SD / MSD Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 17:39	SU	RROGATE R	ECOVERY	STUDY	
VOA	s by SW-846 8260B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		1
4-Bromofluorobenzene		0.0501	0.0500	100	74-124	
Dibromofluoromethane		0.0432	0.0500	86	75-131	-
1,2-Dichloroethane-D4		0.0438	0.0500	88	63-144	
Toluene-D8		0.0506	0.0500	101	80-117	

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

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



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<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 #: 350679 Project ID: 2006-142

 Lab Batch #: 780340
 Sample: 780340-1-BKS
 Matrix: Water

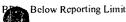
 Date Analyzed: 11/03/2009
 Date Prepared: 11/03/2009
 Analyst: WRU

Reporting Units: mg/L BLANK /BLANK SPIKE RECOVERY STUDY Batch #: Blank Spike Alkalinity by SM2320B Spike Limits Result Added Spike Flags [A] [B] Result %R %R **Analytes** [D] [C]Alkalinity, Total (as CaCO3) ND 170 170 100 80-120

Lab Batch #: 780438Sample: 542412-1-BKSMatrix: WaterDate Analyzed: 11/05/2009Date Prepared: 11/05/2009Analyst: HAT

Reporting Units: mg/L Batch #: BLANK /BLANK SPIKE RECOVERY STUDY Blank Spike Blank Blank Control **Inductively Coupled Plasma Atomic Emission Sp** Result Added Spike Spike Limits Flags **[A]** {**B**} Result %R %R **Analytes** [C] [D] ND 0.200 0.171 86 75-125 Aluminum ND 0.050 0.051 102 75-125 Arsenic ND 0.050 0.055 110 75-125 Barium 0.020 0.022 Boron 0.015 110 75-125 ND 0.020 0.022 110 75-125 Cadmium ND 0.050 0.049 98 75-125 hromium balt ND 0.050 0.050 100 75-125 ND 0.050 0.051 102 75-125 Copper ND 0.200 0.200 75-125 Iron 100 ND 0.050 0.049 98 75-125 Lead Manganese ND 0.050 0.050 100 75-125 ND Molybdenum 0.050 0.053 106 75-125 ND 0.050 0.049 98 75-125 Nickel ND 0.050 0.054 108 75-125 Selenium 0.022 ND 0.020 110 75-125 Silver 0.050 Zinc ND 0.051 102 75-125

Blank Spike Recovery [D] = 100\*[C]/[B]
All results are based on MDL and validated for QC purposes.



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Project Name: Lovington Gathering WTI

work Order #: 350679

Project ID:

2006-142

Lab Batch #: 780311

**Sample:** 780311-1-BKS

Matrix: Water

**Date Analyzed:** 11/04/2009

**Date Prepared:** 11/04/2009

Analyst: LATCOR

Reporting Units: mg/L Bat	tch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
Determination of Inorganic Anions In Water By	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]		[C]	[D]	/6K	
Fluoride	ND	2.50	2.43	97	90-110	
Chloride	ND	10.0	10.3	103	90-110	
Sulfate	ND	11.0	11.2	102	90-110	
Nitrate as N	ND	2.00	2.00	100	90-110	
Ortho-Phosphate	ND	1.60	1.69	106	90-110	

Blank Spike Recovery [D] = 100\*[C]/[B]All results are based on MDL and validated for QC purposes.



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**Project Name: Lovington Gathering WTI** 

k Order #: 350679

**Project ID:** 

2006-142

Lab Batch #: 780540

Sample: 542495-1-BKS

Matrix: Water

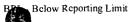
**Date Analyzed:** 11/05/2009

**Date Prepared:** 11/05/2009

Analyst: JEA

Date Analyzed: 11/05/2009	Date Prepared: 11/05/20	009	Analyst	: JEA		
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY S	TUDY
VOAs by SW-846 8260B  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.050	0.047	94	66-142	
Bromobenzene	ND	0.050	0.045	90	75-125	
Bromochloromethane	ND	0.050	0.046	92	73-125	
Bromodichloromethane	ND	0.050	0.046	92	75-125	
Bromoform	ND	0.050	0,046	92	75-125	
Methyl bromide	ND	0.050	0.049	98	70-130	
MTBE	ND	0.050	0.050	100	65-135	
n-Butylbenzene	ND	0.050	0.052	104	75-125	
See-Butylbenzene	ND	0.050	0.052	104	75-125	
tert-Butylbenzene	ND	0.050	0.052	104	75-125	
Carbon Tetrachloride	ND	0.050	0.052	104	62-125	
Chlorobenzene	ND	0.050	0.048	96	60-133	
Chloroethane	ND	0.050	0.049	98	70-130	
Chloroform	ND	0.050	0.047	94	74-125	-
hyl Chloride	ND	0.050	0.043	86	70-130	
2-Chlorotolucne	ND	0.050	0.049	98	73-125	
4-Chlorotolucne	ND	0.050	0.048	96	74-125	
p-Cymene (p-Isopropyltoluene)	ND	0.050	0.052	104	75-125	
Dibromochloromethane	ND	0.050	0.047	94	73-125	
1,2-Dibromo-3-Chloropropanc	ND	0.050	0.054	108	59-125	
Methylene bromide	ND	0.050	0.050	100	69-127	
1,2-Dichlorobenzene	ND	0.050	0.048	96	75-125	
1,3-Dichlorobenzene	ND	0.050	0.048	96	75-125	
1,4-Dichlorobenzene	ND	0.050	0.048	96	75-125	
Dichlorodifluoromethane	ND	0.050	0.046	92	70-130	
1,1-Dichlorocthane	ND	0.050	0.044	88	72-125	
1,2-Dichloroethane	ND	0.050	0.046	92	68-127	
1,1-Dichloroethene	ND	0.050	0.046	92	59-172	
cis-1,2-Dichloroethylene	ND	0.050	0.047	94	75-125	
trans-1,2-dichloroethylene	ND	0.050	0.044	88	75-125	
1,2-Dichloropropane	. ND	0.050	0.043	86	74-125	
1,3-Dichloropropane	ND	0.050	0.046	92	75-125	<u> </u>
	1 275		1 0045			

Blank Spike Recovery [D] = 100\*[C]/[B] All results are based on MDL and validated for QC purposes.



2,2-Dichloropropane

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75-125

ND

0.050

0.043





Project Name: Lovington Gathering WTI

Work Order #: 350679

Project ID:

2006-142

Lab Batch #: 780540

Sample: 542495-1-BKS

Matrix: Water

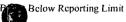
**Date Analyzed:** 11/05/2009

**Date Prepared:** 11/05/2009

Analyst: JEA

Reporting Units: mg/L	Batch #: 1		BLANK SPI		OVERYS	TUDY
VOAs by SW-846 8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1-Dichloropropene	ND	0.050	0.045	90	75-125	
cis-1,3-Dichloropropene	ND	0.050	0.045	90	74-125	
trans-1,3-dichloropropene	ND	0.050	0.046	92	66-125	
Ethylbenzene	ND	0.050	0.051	102	75-125	
Hexachlorobutadiene	ND	0.050	0.052	104	75-125	
isopropylbenzene	ND	0.050	0.052	104	75-125	
Methylene Chloride	ND	0.050	0.038	76	75-125	
Naphthalene	ND	0.050	0.044	88	75-125	
n-Propylbenzene	ND	0.050	0.053	106	75-125	
Styrene	ND	0.050	0.050	100	75-125	
1,1,1,2-Tetrachloroethane	ND	0.050	0.048	96	72-125	
1,1,2,2-Tetrachloroethane	ND	0.050	0.047	94	74-125	
Tetrachloroethylene	ND	0.050	0.051	102	71-125	l
uenc	ND	0.050	0.049	98	59-139	
,3-Trichlorobenzene	ND	0.050	0.045	90	75-137	-
1,2,4-Trichlorobenzene	ND	0.050	0.045	90	75-135	
1,1,1-Trichloroethane	ND	0.050	0.044	88	75-125	
1,1,2-Trichloroethane	ND	0.050	0.045	90	75-127	
Trichloroethylene	ND	0.050	0.047	94	62-137	
Trichlorofluoromethane	ND	0.050	0.048	96	67-125	
1,2,3-Trichloropropane	ND	0.050	0.046	92	75-125	
1,2,4-Trimethylbenzene	ND	0.050	0.050	100	75-125	
1,3,5-Trimethylbenzene	ND	0.050	0.051	102	70-125	
o-Xylene	· ND	0.050	0.050	100	75-125	<u> </u>
m,p-Xylene	ND	0.100	0.101	101	75-125	
Vinyl Chloride	ND	0.050	0.044	88	75-125	

Blank Spike Recovery [D] = 100\*[C]/[B]
All results are based on MDL and validated for QC purposes.



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### BS / BSI Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: LATCOR

Lab Batch ID: 780359

Batch #: 1 Sample: 542392-1-BKS

Date Prepared: 11/04/2009

**Project ID:** 2006-142 **Date Analyzed:** 11/05/2009 Matrix: Water

Units: mg/L		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
Mercury by SW-846 7470A	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		<u>B</u>	[c]	[a]	[ <u>a</u> ]	Result [F]	[6]				
Mercury	ND	0.0010	0.0010	100	0.001	0.0009	06	11	75-125	20	

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

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## Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: KAN

Lab Batch ID: 780919

Sample: 542398-1-BKS

Date Prepared: 11/04/2009

Batch #: 1

Date Analyzed: 11/05/2009 Project ID: 2006-142

Matrix: Water

Units: mg/L		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
SVOAs by SW-846 8270C	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		<u>8</u>	<u></u>	<u>a</u>	<u> </u>	Result [F]	<u>ច</u>				
Acenaphthene	QN	0.050	0.042	84	0.05	0.044	88	5	27-132	31	
Acenaphthylene	QN	0.050	0.042	84	0.05	0.045	06	7	46-108	25	
Aniline (Phenylamine, Aminobenzene)	QN	0.050	0.038	9/	0.05	0.040	08	5	5-115	25	
Anthracene	Q.	0.050	0.043	98	0.05	0.045	06	5	47-145	25	
Benzo(a)anthracene	Ð	0.050	0.041	82	0.05	0.044	88	7	33-143	25	
Benzo(a)pyrene	Q.	0.050	0.044	88	0.05	0.046	92	4	65-135	25	
Benzo(b)fluoranthene	QN	0.050	0.045	06	0.05	0.049	86	6	24-159	25	
Benzo(k)fluoranthene	QN	0.050	0.044	88	0.05	0.045	06	2	25-125	25	
Benzo(g,h,i)perylene	Q	0.050	0.049	86	0.05	0.053	901	8	65-135	25	
Benzoic Acid	QN	0.150	0.091	19	0.15	060'0	09	_	30-115	40	
Benzyl Butyl Phthalate	QN	0.050	0.047	94	0.05	0.049	86	4	65-135	25	
bis(2-chloroethoxy) methane	QN	0.050	0.039	78	0.05	0.041	82	5	54-188	25	
bis(2-chloroethyl) ether	QN	0.050	0.037	74	0.05	0.039	78	5	65-135	25	
bis(2-chloroisopropyl) ether	QN	0.050	0.037	74	0.05	0.039	81	5	65-135	25	
bis(2-ethylhexyl) phthalate	QN	0.050	0.041	82	0.05	0.043	98	5	8-158	25	
4-Bromophenyl-phenylether	QN	0.050	0.046	76	90'0	0.050	001	8	65-135	25	
4-chloro-3-methylphenol	QN	0.050	0.044	88	0.05	0.047	64	7	16-129	33	
4-Chloroaniline	QN	0.050	0.050	100	0.05	0.051	102	2	9-128	25	
2-Chloronaphthalene	QN	0.050	0.042	84	0.05	0.045	06	7	65-135	25	
2-Chlorophenol	QN	0.050	0.041	82	0.05	0.044	88	7	911-91	40	

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

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### BS / BSK-Recoveries



## Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: KAN

Lab Batch ID: 780919

Units: mg/L

Sample: 542398-1-BKS

Date Prepared: 11/04/2009

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 11/05/2009

Matrix: Water

SVOAs by SW-846 8270C	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	₹	[ <u>B</u> ]	[C]	[0]	<u> </u>	Dupneate Result [F]	ğ <u>5</u>	<b>0</b> /	70 K	70KFD	
4-Chlorophenyl Phenyl Ether	QN	0.050	0.046	92	0.05	0.048	96	4	65-135	25	
Chrysene	Q	0.050	0.046	92	0.05	0.048	96	4	65-135	25	
Dibenz(a,h)anthracene	QN	0.050	0.047	94	0.05	0.050	100	9	50-125	25	
Dibenzofuran	QN.	0.050	0.045	06	0.05	0.048	96	9	52-125	25	
di-n-Butyl Phthalate	QN	0.050	0.042	84	0.05	0.045	06	7	49-135	50	
1,2-Dichlorobenzene	ND	0.050	0.042	84	0.05	0.044	88	5	65-135	25	
1,3-Dichlorobenzene	QN	0.050	0.042	84	0.05	0.044	88	5	65-135	25	
1,4-Dichlorobenzene	QN	0.050	0.041	82	0.05	0.044	88	7	19-121	28	
3,3-Dichlorobenzidine	ND	0.050	0.041	82	0.05	0.036	72	13	12-147	25	
2,4-Dichlorophenol	ND	0.050	0.045	06	0.05	0.048	96	9	65-135	25	
Diethyl Phthalate	QN	0.050	0.044	88	0.05	0.047	94	7	37-125	90	
Dimethyl Phthalate	QN	0.050	0.043	98	0.05	0.046	92	7	25-175	90	
2,4-Dimethylphenol	QN	0.050	0.039	78	0.05	0.041	82	5	32-119	25	
4,6-dinitro-2-methyl phenol	QN	0.050	0.044	88	0.05	0.047	94	7	2-181	25	
2,4-Dinitrophenol	QN	0.050	0.043	98	0.05	0.044	88	2	65-135	25	
2,4-Dinitrotoluenc	ND	0.050	0.045	06	0.05	0.049	86	6	22-135	38	
2,6-Dinitrotoluene	QN	0.050	0.044	88	0.05	0.047	94	7	49-122	38	
di-n-Octyl Phthalate	ND	0.050	0.044	88	0.05	0.047	94	7	43-134	50	
Fluoranthene	QN	0.050	0.041	82	0.05	0.043	98	S	47-125	25	
Fluorene	ND	0.050	0.044	88	0.05	0.047	94	7	48-139	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

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### BS / BSI Recoveries



## Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: KAN

Lab Batch ID: 780919

Sample: 542398-1-BKS

Date Prepared: 11/04/2009

Batch #: 1

Date Analyzed: 11/05/2009 **Project ID: 2006-142** Matrix: Water

Units: mg/L											
SVOAs by SW-846 8270C	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	Ξ.	<u>B</u>	[C]	[0]	<u>e</u>	Result [F]	<u>ড</u>				
Hexachlorobenzene	QN	0.050	0.047	94	0.05	0.050	100	9	46-133	25	
Hexachlorobutadiene	QN	0.050	0.046	92	0.05	0.048	96	4	44-125	25	
Hexachlorocyclopentadiene	QN	0.050	0.044	88	0.05	0.046	92	4	41-125	25	
Hexachloroethane	QN	0.050	0:039	78	0.05	0.041	82	5	25-153	25	
Indeno(1,2,3-c,d)Pyrene	QN	0.050	0.046	92	0.05	0.049	86	9	27-160	25	
Isophorone	QN	0.050	0.041	82	0.05	0.043	98	5	26-175	25	
2-Methylnaphthalene	QN	0.050	0.046	92	0.05	0.048	96	4	25-175	25	
2-methylphenol	QN	0.050	0.039	28	0.05	0.041	82	5	14-176	25	
3&4-Methylphenol	Ω	0.100	0.065	99	0.1	890.0	89	5	14-176	25	
Naphthalene	QN	0.050	0.042	84	0.05	0.045	06	7	26-175	25	
2-Nitroaniline	QN	0.050	0.042	84	0.05	0.044	88	5	65-135	25	
3-Nitroaniline	QN	0.050	0.051	102	0.05	0.052	104	2	65-135	25	
4-Nitroaniline	QN	0.050	0.059	118	0.05	0.061	122	3	65-135	25	
Nitrobenzene	QN	0.050	0.040	80	0.05	0.043	98	7	65-135	25	
2-Nitrophenol	QN	0.050	0.044	88	0.05	0.047	94	7	65-135	25	
4-Nitrophenol	QN	0.050	0.025	95	0.05	0.028	95	11	10-80	50	
N-Nitrosodi-n-Propylamine	QN	0.050	0.036	72	50.0	0.036	72	0	22-134	38	
N-Nitrosodiphenylamine	QN	0.050	0.051	102	0.05	0.055	011	8	2-196	25	
Pentachlorophenol	ND	0.050	0.035	0.2	0.05	0.036	72	3	17-117	50	
Phenanthrene	QN	0.050	0.042	84	0.05	0.044	88	5	65-135	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

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## Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: KAN

Lab Batch ID: 780919

Units: mg/L

Sample: 542398-1-BKS

Date Prepared: 11/04/2009

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 11/05/2009 Matrix: Water

SVOAs by SW-846 8270C	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	•	[ <u>B</u> ]	<u>[</u>	<u>a</u>	Œ	Result [F]	<u>ত</u>				
Phenol	QN	0.050	0.026	52	0.05	0.029	58	=	12-110	25	į
Pyrene	QN	0.050	0.050	100	0.05	0.052	104	4	23-152	31	
Pyridine	QN	0.050	0.018	36	0.05	0.019	38	5	98-91	28	
1,2,4-Trichlorobenzene	QN	0.050	0.044	88	0.05	0.047	94	7	20-124	28	
2,4,5-Trichlorophenol	QN	0.050	0.043	98	0.05	0.045	06	5	65-135	25	
2,4,6-Trichlorophenol	QN	0.050	0.043	98	0.05	0.046	92	7	65-135	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

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### Form 3 - MS Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 350679

QC-Sample ID: 350679-001 S

Date Analyzed: 11/04/2009 Date Prepared: 11/04/2009

**Project ID:** 2006-142

Analyst: LATCOR

Batch #: 1

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Fluoride	9.27	20.0	33.4	121	90-110	Х
Chloride	24.9	100	137	112	90-110	Х
Sulfate	64.1	110	173	99	90-110	
Nitrate as N	2.14	20.0	22.9	104	90-110	
Ortho-Phosphate	ND	20.0	19.8	99	90-110	

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

BRI Relow Reporting Limit

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## Form 3 - MMSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch ID: 780438

Date Analyzed: 11/05/2009

QC-Sample ID: 350103-001 S Date Prepared: 11/05/2009

Batch #: Analyst:

HAT

Project ID: 2006-142

Matrix: Water

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	RIX SPIF	CE DUPLICA	TE RECO	VERY S	STUDY		
Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Aluminum	0.550	0.200	908.0	128	0.200	0.751	101	24	75-125	25	×
Arsenic	0.012	0.050	0.057	06	0.050	0.056	88	2	75-125	25	
Barium	0.037	0.050	0.087	001	0.050	980.0	86	2	75-125	25	
Boron	4,99	0.020	5.64	3250	0.020	5.41	2100	43	75-125	25	XF
Cadmium	QN	0.020	0.017	85	0.020	0.017	85	0	75-125	25	
Chromium	QN	0.050	0.047	94	0.050	0.046	95	2	75-125	25	
Cobalt	ND	0.050	0.045	06	0.050	0.044	88	2	75-125	25	
Copper	QN	0.050	0.045	06	0.050	0.043	98	5	75-125	25	
Iron	0.320	0.200	0.510	95	0.200	0.510	56	0	75-125	25	
Lead	0.002	0.050	0.051	86	0.050	0.049	94	4	75-125	25	
Manganese	0.029	0.050	0.078	86	0.050	0.075	65	9	75-125	25	
Molybdenum	0.026	0.050	0.075	86	0.050	0.074	96	2	75-125	25	
Nickel	QN	0.050	0.044	88	0.050	0.043	98	2	75-125	25	
Selenium	900.0	0.050	0.046	80	0.050	0.045	28	3	75-125	25	
Silver	QN	0.020	0.016	80	0.020	0.016	08	0	75-125	25	
Zinc	0.004	0.050	0.042	9/	0.050	0.041	74	3	75-125	25	×

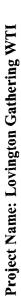
Matrix Spike Percent Recovery [D] = 100\*(C-A)BRelative Percent Difference RPD = 200\*(C-F)/(C+F)

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

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









Work Order #: 350679

Lab Batch ID: 780359

Batch #:

**Project ID: 2006-142** 

Lab Batch ID: 780359	QC-Sample ID: 350336-001 S	350336	-001 S	Ba	Batch #:	1 Matrix: Water	x: Water				
Date Analyzed: 11/05/2009	Date Prepared: 11/04/2009	11/04/20	600	An	afyst: I	Analyst: LATCOR					
Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA	TE RECO	VERY S	STUDY		
Mercury by SW-846 7470A	Parent Sample		Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dun.	RPD	Control Control Limits Limits	Control	Flag
Analytes	Result [A]	Added [B]	[C] %R Added Result [F] [D] [E]	%R [D]	Added [E]	Result [F]		%	%R	%RPD	
Метешу	QN	0.0010	0.0010 0.0007	70	70 0.0010	0.0007	70	70 07	75-125	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

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



### Form 3 - Mc MSD Recoveries



### Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch ID: 780540

Date Analyzed: 11/05/2009

**QC- Sample ID:** 350679-001 S **Date Prepared:** 11/05/2009

Matrix: Water

Project ID: 2006-142

Batch #: 1
Analyst: JEA

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MAT	RX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
VOAs by SW-846 8260B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesun [A]	Added [B]	<u>5</u>	<u>5</u> E	Added [E]	Kesult [F]	% <u>5</u>	%	<b>x</b> %	%RPD	·
Benzene	ΩN	0.050	0.045	8	0.050	0.045	06	0	66-142	21	
Bromobenzene	ΩN	0.050	0.047	94	0.050	0.047	94	0	75-125	20	
Bromochloromethane	ND	0.050	0.048	96	0.050	0.048	96	0	73-125	20	
Bromodichloromethane	QN	0.050	0.044	88	0.050	0.044	88	0	75-125	20	
Bromoform	Q.	0.050	0.044	88	0.050	0.049	86	=	75-125	20	
Methyl bromide	QN	0.050	0.047	98	0.050	0.049	86	4	70-130	20	
MTBE	ND	0.050	0.049	86	0.050	0.048	96	2	65-135	20	
n-Butylbenzene	ND	0.050	0.048	96	0.050	0.050	100	4	75-125	20	
Sec-Butylbenzene	QN	0.050	0.048	%	0.050	0.050	001	4	75-125	20	
tert-Butylbenzene	ND	0.050	0.049	86	0.050	0.051	102	4	75-125	20	
Carbon Tetrachloride	ND	0.050	0.044	88	0.050	0.045	06	2	62-125	20	
Chlorobenzene	ND	0.050	0.047	94	0.050	0.048	96	2	60-133	21	
Chloroethane	ND	0.050	0.045	06	0.050	0.045	06	0	70-130	20	
Chloroform	ND	0.050	0.047	94	0.050	0.048	96	2	74-125	20	
Methyl Chloride	ΩN	0.050	0.042	84	0.050	0.043	98	2	70-130	20	
2-Chlorotoluene	ND	0.050	0.050	100	0.050	0.050	100	0	73-125	20	
4-Chlorotoluene	ND	0.050	0.048	96	0.050	0.049	86	2	74-125	20	
p-Cymene (p-Isopropyltoluene)	ND	0.050	0.048	96	0.050	0.051	102	9	75-125	20	
Dibromochloromethane	QN	0.050	0.046	92	0.050	0.046	92	0	73-125	20	
1,2-Dibromo-3-Chloropropane	ND	0.050	0.052	101	0.050	0.051	102	2	59-125	28	
Methylene bromide	ND	0.050	0.046	92	0.050	0.050	100	∞	69-127	23	
1,2-Dichlorobenzene	ND	0.050	0.049	86	0.050	0.050	100	2	75-125	20	
1,3-Dichlorobenzene	ND	0.050	0.048	96	0.050	0.049	86	2	75-125	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

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

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### Form 3 - Man MSD Recoveries

### Project Name: Lovington Gathering WTI

QC-Sample ID: 350679-001 S

Date Analyzed: 11/05/2009 Lab Batch ID: 780540 Work Order #: 350679

Reporting Units: mg/L

JEA Batch #:

Matrix: Water

Project ID: 2006-142

Analyst: Date Prepared: 11/05/2009

Flag Control Limits %RPD 20 20 20 2 20 20 20 20 23 20 20 20 20 20 20 35 20 20 Control Limits 75-125 75-125 74-125 71-125 75-125 70-130 59-172 75-125 75-125 74-125 75-125 74-125 75-125 75-125 75-125 75-125 75-125 72-125 72-125 68-127 75-125 66-125 75-125 %R RPD 0 0 0 6 9 ∞ 4 Spiked Dup. |GR | 100 102 9 102 98 96 96 98 9 82 84 88 8 96 82 86 86 86 2 92 2 8 86 Duplicate Spiked Sample Result [F] 0.048 0.048 0.048 0.043 0.045 0.049 0.049 0.049 0.046 0.050 0.042 0.044 0.043 0.047 0.049 0.050 0.049 0.047 0.041 0.043 0.041 0.051 0.051 Spike Added 0.050 Spiked Sample %R [D] 96 84 78 96 96 84 88 80 84 88 92 4 92 96 96 92 86 96 90 90 84 84 86 Spiked Sample Result 0.048 0.042 0.048 0.044 0.046 0.046 0.046 0.039 0.042 0.048 0.042 0.042 0.044 0.040 0.042 0.047 0.048 0.048 0.049 0.049 0.048 0.045 0.045 Spike Added 0.050 8 Parent Sample Result 9 ¥ S S ₽ Ð Ð 2 Š S B Ð ND 見 ₽ £ ND ₽ 8 Ν ₽ 2 2 VOAs by SW-846 8260B Analytes trans-1,2-dichloroethylene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane trans-1,3-dichloropropene Dichlorodifluoromethane cis-1,2-Dichlorocthylene cis-1,3-Dichloropropene Hexachlorobutadiene 1,4-Dichlorobenzene 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene 1,2-Dichloropropane Tetrachloroethylene 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene Methylene Chloride isopropylbenzene n-Propylbenzene Ethylbenzene Naphthalene Styrene

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

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

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

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### Form 3 - MMM MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch ID: 780540

Date Analyzed: 11/05/2009 Reporting Units: mg/L

QC-Sample ID: 350679-001 S

Date Prepared: 11/05/2009

Matrix: Water

**Project ID: 2006-142** 

Batch #: 1
Analyst: JEA

VOAs by SW-846 8260B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	"	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[</u>	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	,
Toluene	QN	0.050	0.046	92	0.050	0.048	96	4	59-139	21	
1,2,3-Trichlorobenzene	ND	0.050	0.047	94	0.050	0.050	100	9	75-137	20	
1,2,4-Trichlorobenzene	QN	0.050	0.046	92	0.050	0.050	001	8	75-135	20	
1,1,1-Trichloroethane	QN	0.050	0.041	82	0.050	0.042	84	2	75-125	20	
1,1,2-Trichloroethane	QN	0.050	0.045	06	0.050	0.046	92	2	75-127	20	
Trichloroethylene	ND	0.050	0.045	06	0.050	0.044	88	2	62-137	24	
Trichlorofluoromethanc	QN	0.050	0.041	82	0.050	0.042	84	2	67-125	20	
1,2,3-Trichloropropane	QN	0.050	0.046	92	0.050	0.046	92	0	75-125	20	
1,2,4-Trimethylbenzene	QN	0.050	0.049	86	0.050	0.051	102	4	75-125	20	
1,3,5-Trimethylbenzene	QN	0.050	0.049	86	0.050	0.052	104	9	70-125	20	
o-Xylene	QN	0.050	0.046	92	0.050	0.049	86	9	75-125	20	
m,p-Xylenc	QN	0.100	0.095	95	0.100	0.097	26	2	75-125	20	
Vinyl Chloride	QN	0.050	0.041	82	0.050	0.043	98	5	75-125	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

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



### **Sample Duplicate Recovery**



**Project Name: Lovington Gathering WTI** 

Work Order #: 350679

Lab Batch #: 780340 Project ID: 2006-142

 Date Analyzed:
 11/03/2009
 Date Prepared:
 11/03/2009
 Analyst:
 WRU

 QC- Sample ID:
 350089-001 D
 Batch #:
 1
 Matrix:
 Water

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/L Alkalinity by SM2320B Control Parent Sample Sample Duplicate RPD Limits Result Flag Result %RPD [A] [**B**] Analyte Alkalinity, phenolphthalein ND ND NC 20 Alkalinity, Total (as CaCO3) 94.0 96.0 2 20 Alkalinity, Carbonate (as CaCO3) ND ND NC 20 Alkalinity, Bicarbonate (as CaCO3) 20 ND ND NC

Lab Batch #: 780311

 Date Analyzed: 11/04/2009
 Date Prepared: 11/04/2009
 Analyst: LATCOR

 QC- Sample ID: 350679-001 D
 Batch #: 1
 Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Fluoride	9.27	9.54	3	20	
Chloride	24.9	23.8	5	20	
Sulfate	64.1	65.8	3	20	
Nitrate as N	2.14	1.12	63	20	F
Ortho-Phosphate	ND	ND	NC	20	

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

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### **Sample Duplicate Recovery**



Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch #: 780438

Analyzed: 11/05/2009 Date Prepared: 11/05/2009

**Project ID:** 2006-142 **Analyst:** HAT

**Date Analyzed:** 11/05/2009 **QC- Sample ID:** 350103-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L SAMPLE JUPLICATE RECOVERY

Reporting Cints: 115/2	L	Oztivii DE	DULLIO	THE REC	OTENT
Inductively Coupled Plasma Atomic Emission Spectroscopy Mass Spectrometry Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Aluminum	0.550	0.669	20	20	
Arsenic	0.012	0.014	15	20	
Barium	0.037	0.039	5	20	
Boron	4.99	5.58	11	20	
Cadmium	ND	ND	NC	20	
Chromium	ND	ND	NC	20	
Cobalt	ND	ND	NC	20	
Соррег	ND	ND	NC	20	
Iron	0.320	0.400	22	20	F
Lcad	0.002	ND	NC	20	
Manganese	0.029	0.032	10	20	
Mołybdenum	0.026	0.027	4	20	
Nickel	ND	ND	NC	20	
Sclenium	0.006	0.006	0	20	
Silver	ND	ND	NC	20	
Zinc	0.004	0.004	0	20	

Lab Batch #: 780428

**Date Analyzed:** 11/05/2009

**Date Prepared:** 11/05/2009

Analyst: LATCOR

QC-Sample ID: 350679-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Metals per ICP by SW846 6010B Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Calcium	76.5	73.5	4	25	
Magnesium	13.6	12.7	7	25	
Potassium	ND	ND	NC	25	
Sodium	33.3	29.8	11	25	

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Version: 1.014

## E ronmental Lab of Texas



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West L20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

NPDES ENRY TAT (Pre-Schedule) 24, 48, 72 hrs Brosporte EOH Project Name: Lovington Gathering WTI AMANGCC Metata (see Attached) TRRP BIEX 8054@\2030 OLBEX 8560 Analyze For Project Loc: Lea County, NAM PO #: PAA - J. Henry **VOCs Free of Head** X Standard Project #: 2006-142 1848: As Ag Ba Cd Cr Po Hg Se SAR / ESP / CEC Anions (Cl. SO4. Alkalinity) ations (Ca. Mg. Na. K) Report Format: 9001 XT 2001 XT :Hd. 89108 **80129**6 1.811 cdstanley@basin-consulting.com shequy on eldichort-now one-duuqua maca. 21-200 ෂ Other ( Spediy) <sub>C</sub>O<sub>S</sub>S<sub>S</sub>BN HOEN **'**05<sup>2</sup>H (575) 396-1429 HCI 70 7/10 HAD SOMILED + 108 2 - 500.MI | LAM 1084 otal #, of Containers Fax No: C.L. Perfavor Demail: 900 belgma2 amiT 11/02/09 Received by: Basin Environmental Service Technologies, LLC belgme2 stsQ uqjuð Debty E peginning Depth Lovington, NM 88260 (575)605-7210 Company Address: P.O. Box 301 Curt Stanley 350079 FIELD CODE MW-10 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: special instructions (lab use only) ORDER # (Vino esu dei) # &A. ō

YACI 4 TAT bashness

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<u>-</u>

Temperature Upon Receipt:

10:22

11.3.09

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Relinquished by:

Oate

Received by:

### NMOCD - Analytical Parameters for Initial Groundwater Sampling (3-12-08)

Rield Parameters

specific conductance

pH temperature depth to water

### General Chemistry

Calcium

Magnesium Potassium

Sodium Chloride

Suifate

Bicarbonate Alkalinity Carbonate Alkalinity Nitrate

Phosphate Fluoride

### RCRA Metals

Arsenic

Barium

Cadmium

Chromium

Lead

Mercury Selenium

Silver

### Additional WOCC Metals

Copper

iron Manganese

Zinc Aluminum

Boron

Cobalt

Molybdenum Nickel

All compounds listed in U.S. EPA SW-846 Methods: 8260 (VOCs) & 8270 (SVOCs)

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### Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In Client: Basin Env. Plains Date/ Time: 11-3-09 10:22 Lab ID#: 350079 Initials: AL

### Sample Receipt Checklist

				Client In	nitials
#1	Temperature of container/ cooler?	(Yes)	No	1.1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	<b>⊘</b> 2€€	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	iD written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Tes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#20	Samples properly preserved?	Yes	No	See Below	
***	Sample bottles intact?	Yes	No		
#15		Tes	No		
#16	Containers documented on Chain of Custody?	(Yes	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	(es)	No	Not Applicable	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

### **Variance Documentation**

Contact:		Contacted by:		Date/ Time:	
Regarding: 16		Subbed	to Xenco-Hou	iston, voc su	bleed to
Corrective Action	Taken:				
Check all that Ap	eply:		x would like to proceed with gun shortly after sampling	-	

### **Analytical Report 356497**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

29-DEC-09





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)





29-DEC-09

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

Reference: XENCO Report No: 356497
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 356497. 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. 356497 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 356497**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-5	W	Dec-18-09 10:45		356497-001
MW-1	W	Dec-18-09 11:30		356497-002
MW-4	W	Dec-18-09 12:15		356497-003
MW-6	W	Dec-18-09 13:00		356497-004
MW-3	W	Dec-18-09 14:30		356497-005
MW-7	W	Dec-18-09 15:15		356497-006
MW-8	W	Dec-18-09 16:00		356497-007
MW-2	W	Dec-18-09 16:45		356497-008
MW-9	W	Dec-18-09 17:30		356497-009

### **CASE NARRATIVE**



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142 Work Order Number: 356497 Report Date: 29-DEC-09 Date Received: 12/21/2009

### Sample receipt non conformances and Comments:

None

### Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-787254 SVOA PAHs List by SW-846 8270C

None

Batch: LBA-787355 BTEX by EPA 8021

SW8021BM

Batch 787355, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is

suspected; data not confirmed by re-analysis

Samples affected are: 356497-007.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 356497 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Dec-21-09 05:13 pm

Brent Barron. II Report Date: 29-DEC-09 Project Manager:

					rroject manager: Dient Dallon, in	Signi Dalloll, II	
	Lab Id:	356497-001	356497-002	356497-003	356497-004	356497-005	356497-006
Analysis Donnastad	Field Id:	MW-5	MW-1	WW-4	9-WM	MW-3	MW-7
naisantay yedneyen	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Dec-18-09 10:45	Dec-18-09 11:30	Dec-18-09 12:15	Dcc-18-09 13:00	Dec-18-09 14:30	Dec-18-09 15:15
BTEX by EPA 8021	Extracted:	Dec-21-09 17:30	Dec-21-09 17:30	Dec-21-09 17:30	Dec-21-09 17:30	Dec-21-09 17:30	Dec-21-09 17:30
	Analyzed:	Dec-24-09 12:57	Dec-24-09 13:20	Dec-24-09 13:42	Dec-24-09 14:05	Dec-24-09 15:14	Dec-24-09 15:37
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	0.0130 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 0.0010	ND 0.0010	ND 0.0010	ND 0,0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0,0020	ND 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	0100'0 QN	0100.0 QN	ND 0.0010	ND 0.0010
Xylenes, Total		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	0.0130 0.0010	ND 0.0010	ND 0.0010

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Project Id: 2006-142
Contact: Jason Henry
Project Location: Lea County, NM

# Certificate of Analysis ummary 356497 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Dec-21-09 05:13 pm

Report Date: 29-DEC-09
Project Manager: Brent Barron, II

	ļ				I I Olece Manager . Diene Parion, in	of City and Course of the		
	Lab Id:	356497-001	356497-002	356497-003	356497-004	356497-005	356497-006	
Analysis Daningtod	Field Id:	MW-5	MW-I	MW-4	9-MW	MW-3	WW-7	
Anaiyas Nequesica	Depth:							
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Dec-18-09 10:45	Dec-18-09 11:30	Dec-18-09 12:15	Dec-18-09 13:00	Dec-18-09 14:30	Dec-18-09 15:15	15
SVOA PAHs List	Extracted:	Dec-23-09 11:36	Dec-23-09 11:39	Dec-23-09 11:42	Dec-23-09 11:45	Dec-23-09 11:48	Dec-23-09 11:51	51
SUB: T104704215-08B-TX	Analyzed:	Dec-24-09 15:46	Dec-24-09 16:23	Dec-24-09 17:01	Dec-24-09 17:40	Dec-24-09 18:17	Dec-24-09 18:56	26
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L	RL
Accnaphthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Acenaphthylene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ΩN	0.005
Benzo(a)anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ΩN	0.005
Benzo(a)pyrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Benzo(b)fluoranthenc		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Benzo(k)fluoranthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Benzo(g,h,i)perylene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Chrysene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Dibenz(a,h)anthracene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	QN	0.005
Fluoranthene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Fluorene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Indeno(1,2,3-c,d)Pyrene	!	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
1-Methylnaphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
2-Methylnaphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Naphthalene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Phenanthrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005
Pyrene		ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND	0.005

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Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis ummary 356497 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Dec-21-09 05:13 pm

Project Manager: Brent Barron, II Report Date: 29-DEC-09

					and of the managers of the common, in
	Lab Id:	356497-007	356497-008	356497-009	
Analysis Dannach	Field Id:	MW-8	MW-2	6-WW	
Analysis nequesieu	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Dec-18-09 16:00	Dec-18-09 16:45	Dec-18-09 17:30	
BTEX by EPA 8021	Extracted:	Dec-21-09 17:30	Dec-21-09 17:30	Dec-21-09 17:30	
	Analyzed:	Dec-24-09 15:59	Dec-24-09 16:22	Dec-24-09 16:45	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Benzene		ND 0.0010	0.0129 0.0010	ND 0.0010	
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0010	0100'0 QN	
m,p-Xylenes		ND 0.0020	0.0095 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	01000 ON	
Xylenes, Total		ND 0.0010	0.0095 0.0010	ND 0.0010	
Total BTEX		ND 0.0010	0.0224 0.0010	ND 0.0010	

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Odessa Laboratory Manager

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Project Id: 2006-142
Contact: Jason Henry
Project Location: Lea County, NM

# Certificate of Analysis ummary 356497 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Mon Dec-21-09 05:13 pm

Report Date: 29-DEC-09

Project Manager: Brent Barron, II

Analysis Requested  Analysis Requested  Depth: Matrix: Sampled: Sampled: SUB: T104704215-08B-TX  Analyzed:		MW-8	MW-2		6-WM	
Ex SS						
		TER	WATER	····-	WATER	
		Dec-18-09 16:00	Dec-18-09 16:45	45	Dec-18-09 17:30	
		Dec-23-09 11:54	Dec-23-09 11:57	57	Dec-23-09 12:00	
		Dec-24-09 19:33	Dec-24-09 20:11	11	Dec-24-09 20:48	
Units/RL:	: mg/L		mg/L	RL	mg/L RL	
Acenaphthene	QN	D 0.005	O QN	0.005	ND 0.005	
Acenaphthylene	Z	ND 0.005	O QN	0.005	ND 0.005	
Anthracene	ON.	D 0.005	O QN	0.005	ND 0.005	
Benzo(a)anthracene	Z	ND 0.005	O QN	0.005	ND 0.005	
Benzo(a)pyrene	QN	D 0.005	O QN	0.005	ND 0.005	
Benzo(b)fluoranthene	DN		O QN	0.005	ND 0.005	
Benzo(k)fluoranthene	QN	D 0.005	O QN	0.005	ND 0.005	
Benzo(g,h,i)perylene	QN	D 0.005	O QN	0.005	ND 0.005	
Chrysene	Z	ND 0.005	O QN	0.005	ND 0.005	
Dibenz(a,h)anthracene	QN	D 0.005	O QN	0.005	ND 0.005	
Fluoranthene	QX	D 0.005	O QN	0.005	ND 0.005	
Fluorene	Z	ND 0.005	ND O	0.005	ND 0.005	
Indeno(1,2,3-c,d)Pyrene	QN	D 0.005	ND O	0.005	ND 0.005	
1-Methylnaphthalene	QN	D 0.005	ND O	0.005	ND 0.005	
2-Methylnaphthalene	Z	ND 0.005	ND 0	0.005	ND 0.005	
Naphthalene	Z	ND 0.005	ND 0	0.005	ND 0.005	
Phenanthrene	QN	D 0.005	ND 0	0.005	ND 0.005	
Pyrene	ON	D 0.005	ND ON	0.005	ND 0.005	

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### **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
- \* 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

rk Orders: 356497, Lab Batch #: 787355

Sample: 546427-1-BKS / BKS

**Project ID: 2006-142** 

Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 12/24/09 08:46	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[10]	ł	
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0,0296	0.0300	99	80-120	

**Sample:** 546427-1-BSD / BSD Matrix: Water Lab Batch #: 787355 Batch: 1

Units: mg/L Date Analyzed: 12/24/09 09:09	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	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Sample: 546427-1-BLK / BLK Lab Batch #: 787355 Matrix: Water Batch:

Units: mg/L Date Analyzed: 12/24/09 10:17	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 787355 Sample: 356497-001 / SMP Matrix: Water Batch:

Units: mg/L Date Analyzed: 12/24/09 12:57	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	}	ì	[D]		
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 787355 Sample: 356497-002 / SMP Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 12/24/09 13:20	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	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0307	0,0300	102	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



Project Name: Lovington Gathering WTI

rk Orders: 356497,

Lab Batch #: 787355

**Project ID:** 2006-142

Sample: 356497-003 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/	/24/09 13:42 <b>SU</b>	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	0.0270	0.0300	90	80-120			
4-Bromofluorobenzene	0.0318	0.0300	106	80-120			

Lab Batch #: 787355 Sample: 356497-004 / SMP Batch: 1 Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 12/24/09 14:05	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		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0308	0.0300	103	80-120	

Lab Batch #: 787355 Sample: 356497-005 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 15	5:14 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found {A}	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 787355 Sample: 356497-006 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 15:37 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		0.0254	0.0300	85	80-120	
4-Bromofluorobenzene		0.0295	0.0300	98	80-120	

Lab Batch #: 787355 Sample: 356497-007 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 15:5	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0208	0.0300	69	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

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



Project Name: Lovington Gathering WTI

rk Orders: 356497,

Lab Batch #: 787355

Sample: 356497-008 / SMP

**Project ID: 2006-142** 

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 16:22	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0276	0.0300	92	80-120		
4-Bromofluorobenzene	0.0298	0.0300	99	80-120		

Lab Batch #: 787355

Sample: 356497-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 16:45 SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0267	0.0300	89	80-120		
4-Bromofluorobenzene	0.0308	0.0300	103	80.120		

Lab Batch #: 787355

Sample: 356194-011 S / MS

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 19:01	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
,4-Difluorobenzene	0.0310	0.0300	103	80-120			
4-Bromofluorobenzene	0.0296	0.0300	99	80-120			

Lab Batch #: 787355

**Sample:** 356194-011 SD / MSD

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 19:24	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0305	0.0300	102	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



Project Name: Lovington Gathering WTI

rk Orders: 356497, Project ID: 2006-142
Lab Batch #: 787254 Sample: 546283-1-BLK / BLK Batch: 1 Matrix: Water

SURROGATE RECOVERY STUDY Date Analyzed: 12/24/09 13:52 Units: mg/L Amount True Control **SVOA PAHs List** Recovery Limits Flags Found Amount %R %R [A] [B] [D]**Analytes** 2-Fluorobiphenyl 0.036 72 43-116 0.050 2-Fluorophenol 0.024 0.050 48 21-100 Nitrobenzene-d5 0.037 74 35-114 0.050 Phenol-d6 0.015 0.050 30 10-94 Terphenyl-D14 0.043 0.050 86 33-141 2,4,6-Tribromophenol 0.037 0.050 74 10-123

Lab Batch #: 787254 Sample: 546283-1-BKS / BKS Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 14:30	SURROGATE RECOVERY STUDY						
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
2-Fluorobiphenyl		0.025	0.050	50	43-116			
2-Fluorophenol		0.024	0.050	48	21-100			
Nitrobenzene-d5		0.024	0.050	48	35-114			
Phenol-d6		0.013	0.050	26	10-94	-		
Ferphenyl-D14		0.025	0.050	50	33-141			
2,4,6-Tribromophenol		0.022	0.050	44	10-123			

Lab Batch #: 787254 Sample: 546283-1-BSD / BSD Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 15:08	SURROGATE RECOVERY STUDY					
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
2-Fluorobiphenyl		0.037	0.050	74	43-116		
2-Fluorophenol		0.024	0.050	48	21-100		
Nitrobenzene-d5		0.038	0.050	76	35-114		
Phenol-d6		0.018	0.050	36	10-94		
Terphenyl-D14		0.041	0.050	82	33-141		
2,4,6-Tribromophenol		0.038	0.050	76	10-123		
L, 1,0 -111010ophonor		0.050	1 0.050	1 /6	10-123		

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



Project Name: Lovington Gathering WTI

**Orders**: 356497,

Lab Batch #: 787254

Sample: 356497-001 / SMP

Project ID: 2006-142

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 15:46	SU	RROGATE RI	ECOVERY	STUDY	
SV	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.037	0.050	74	43-116	
2-Fluorophenol		0.022	0.050	44	21-100	
Nitrobenzene-d5		0.039	0.050	78	35-114	
Phenol-d6		0.011	0.050	22	10-94	
Terphenyl-D14		0.042	0.050	84	33-141	
2,4,6-Tribromophenol		0.040	0.050	80	10-123	

Lab Batch #: 787254

Sample: 356497-002 / SMP

7-002 / SMP **Batch**:

tch: | Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 16:23	SU	RROGATE R	RECOVERY	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
2-Fluorobiphenyl		0.036	0.050	72	43-116	•
2-Fluorophenol		0.021	0.050	42	21-100	
Nitrobenzene-d5		0.038	0.050	76	35-114	
Phenol-d6		0.010	0.050	20	10-94	
erphenyl-D14		0.042	0.050	84	33-141	
2,4,6-Tribromophenol		0.040	0.050	80	10-123	

Lab Batch #: 787254

Sample: 356497-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 17:01	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		0.037	0.050	74	43-116	
2-Fluorophenol		0.021	0.050	42	21-100	1
Nitrobenzene-d5		0.038	0.050	76	35-114	
Phenol-d6		0.011	0.050	22	10-94	
Terphenyl-D14		0.044	0.050	88	33-141	
2,4,6-Tribromophenol		0.039	0.050	78	10-123	
			I .	1	1	1

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

rk Orders: 356497,

ab Batch #: 787254

Project ID: 2006-142

Sample: 356497-004 / SMP

Batch: Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 17:40	SU	RROGATE R	ECOVERY	STUDY	
SVOA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	1	
2-Fluorobiphenyl	0.041	0.050	82	43-116	
2-Fluorophenol	0.024	0.050	48	21-100	
Nitrobenzene-d5	0.041	0.050	82	35-114	
Phenol-d6	0.011	0.050	22	10-94	
Terphenyl-D14	0.048	0.050	96	33-141	
2,4,6-Tribromophenol	0.047	0.050	94	10-123	

Lab Batch #: 787254

Sample: 356497-005 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 12/2	4/09 18:17	SU	RROGATE R	ECOVERY S	STUDY	
SVOA PAHs List		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
2-Fluorobiphenyl		0.035	0.050	70	43-116	,
2-Fluorophenol		0.021	0.050	42	21-100	
Nitrobenzene-d5		0.036	0.050	72	35-114	
Phenol-d6		0.012	0.050	24	10-94	
Cerphenyl-D14		0.041	0.050	82	33-141	
2,4,6-Tribromophenol		0.037	0.050	74	10-123	

Lab Batch #: 787254

Sample: 356497-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 18:56	SU	RROGATE R	RECOVERY	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			(D)		
2-Fluorobiphenyl		0.035	0.050	70	43-116	
2-Fluorophenol		0.021	0.050	42	21-100	
Nitrobenzene-d5	-	0.035	0.050	70	35-114	
Phenol-d6		0.012	0.050	24	10-94	
Terphenyl-D14		0.043	0.050	86	33-141	
2,4,6-Tribromophenol		0.043	0.050	86	10-123	
			1	1		4

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

ork Orders: 356497,

\_ab Batch #: 787254

**Project ID: 2006-142** 

Sample: 356497-007 / SMP

Matrix: Water Batch:

Units: mg/L Date A	<b>Analyzed:</b> 12/24/09 19:33	SU	RROGATE R	ECOVERY S	STUDY	
SVOA PAH Analyte		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.033	0.050	66	43-116	_
2-Fluorophenol		0.021	0.050	42	21-100	==
Nitrobenzene-d5		0.035	0.050	70	35-114	
Phenol-d6		0.011	0.050	22	10-94	<u> </u>
Terphenyl-D14		0.038	0.050	76	33-141	
2,4,6-Tribromophenol		0.041	0.050	82	10-123	<u> </u>

Lab Batch #: 787254

Sample: 356497-008 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 20:11	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		0.038	0.050	76	43-116	
2-Fluorophenol		0.022	0.050	44	21-100	_
Nitrobenzene-d5		0.040	0.050	80	35-114	
Phenol-d6		0.013	0.050	26	10-94	
erphenyl-D14		0.044	0.050	88	33-141	
2,4,6-Tribromophenol		0.050	0.050	100	10-123	

Lab Batch #: 787254

Sample: 356497-009 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 20:48	SU	RROGATE R	ECOVERY	STUDY	
sv	OA PAHs List Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.047	0.050	94	43-116	
2-Fluorophenol		0.026	0.050	52	21-100	
Nitrobenzene-d5		0.049	0.050	98	35-114	
Phenol-d6		0.013	0.050	26	10-94	
Terphenyl-D14		0.057	0.050	114	33-141	
2,4,6-Tribromophenol		0.055	0.050	110	10-123	

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 #: 356497

Analyst: ASA

Lab Batch ID: 787355

Sample: 546427-1-BKS

**Date Prepared:** 12/21/2009

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 12/24/2009

Date Analyzed: 12/24/2009 Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY 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]	BIK. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1000	0.1105	111	0.1	0.1144	114	3	70-125	25	
Toluene	QN	0.1000	0.1095	110	0.1	0.1140	114	4	70-125	25	
Ethylbenzene	QN	0.1000	0.1076	108	0.1	0.1126	113	5	71-129	25	
m,p-Xylenes	QV	0.2000	0.2202	110	0.2	0.2302	115	4	70-131	25	
o-Xylene	QN	0.1000	0.1144	114	0.1	0.1188	119	4	71-133	25	

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



## BS / BSE Recoveries



## Project Name: Lovington Gathering WTI

Work Order #: 356497

Analyst: KAN

Lab Batch ID: 787254

Date Prepared: 12/23/2009 Sample: 546283-1-BKS

Batch #: 1

Matrix: Water

Date Analyzed: 12/24/2009 **Project ID: 2006-142** 

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	CATE I	RECOVE	RY STUD	Y	
SVOA PAHs List	Blank Sample Result	Spike Added	Blank Spike Posmit	Blank Spike	Spike Added	Blank Spike Durdicete	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Æ	<b>[8</b> ]		<u>[a]</u>	<u> </u>	Result [F]	<u>5</u>	?	<b>1</b> 0/	a wo	
Acenaphthene	QN	0.050	0.038	9/	0.05	0.040	08	5	27-132	31	
Acenaphthylcne	QN.	0.050	0.038	9/	0.05	0.040	80	5	46-108	25	
Anthracene	QN	0.050	0.039	82	0.05	0.041	82	5	47-145	25	
Benzo(a)anthracene	QN	0.050	0.040	08	0.05	0.042	84	5	33-143	25	
Benzo(a)pyrene	QN	0.050	0.041	82	0.05	0.043	98	5	65-135	25	
Benzo(b)fluoranthene	QN	0.050	0.042	84	0.05	0.046	92	6	24-159	25	
Benzo(k)fluoranthene	QN	0.050	0.042	84	0.05	0.044	88	5	25-125	25	
Benzo(g,h,i)perylenc	ND	0.050	0.040	. 08	0.05	0.043	98	7	65-135	25	
Chrysene	ND	0.050	0.037	74	0.05	0.039	28	5	65-135	25	
Dibenz(a,h)anthracene	QN	0.050	0.042	84	50'0	0.045	06	7	50-125	25	
Fluoranthene	QN	0.050	0.040	80	0.05	0.043	98	7	47-125	25	
Fluorenc	QN	0.050	0.040	08	0.05	0.042	84	5	48-139	25	
Indeno(1,2,3-c,d)Pyrene	ND	0.050	0.042	84	0.05	0.045	06	7	27-160	25	
Naphthalene	QV.	0.050	0.036	72	0.05	0.039	8.2	8	26-175	25	
Phenanthrene	ND	0.050	0.039	81	0.05	0.041	82	5	65-135	25	
Рутспе	ND	0.050	0.040	08	0.05	0.042	84	5	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



## Form 3 - Man MSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 356497

QC-Sample ID: 356194-011 S Date Prepared: 12/21/2009 Date Analyzed: 12/24/2009 Lab Batch ID: 787355

Matrix: Water \_ Batch #:

**Project ID: 2006-142** 

Analyst: ASA

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MAT	RIX SPIF	KE DUPLICA'	TE REC	VERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	9880.0	68	0.1000	0.0882	88	0	70-125	25	
Toluene	QN	0.1000	9980'0	87	0.1000	0.0853	85	2	70-125	25	
Ethylbenzene	QN	0.1000	0.0858	98	0.1000	0.0825	83	4	71-129	25	
m,p-Xylenes	QN	0.2000	0.1738	87	0.2000	0.1545	77	12	70-131	25	
o-Xylene	QN	0.1000	0.0925	93	0.1000	0.0862	98	7	71-133	25	

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

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

Page 19 of 21

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

## Erronmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Name: Lovington Gathering WTI

Project Loc: Lea County, NM

Project #: 2005-142

Basin Environmental Service Technologies, LLC

Camille Bryant

Project Manager:

Company Name

Lovington, NM 88260

City/State/Zip:

Company Address: P.O. Box 301

PO#: PAA- J. Henry

□ NPDES

TRRP

X Standard

Report Format:

YAC & TAT brebnete z z z z **(**)z FedEx Lone Star ပ္ SUSH TAT (Pro-Schedule) 24, 48, 72 hrs و ന് (0758) NA9 × × × × × × × × M.A.O. 뒴 3C Temperature Upon Receipt BTEX 80218/5030 or BTEX 8260 VOCs Free of Headspace? by Samplen Client Rep by Courier? OPS SOUTENOVIEWS sejnejo, Netats: As Ag Ba Cd Cr Pb Hg Se nions (Cl. SO4, Alkalinity) Cettons (Cs. Mg. Na. K) 300! XT 2001 XT Hd. E **ACTUO** MS108 1713 SDECHY OTH aldeton-non-a cibryant@basin-consulting.com **₹ ₹ ₹ ₹ ₹** ₹ ₽ ₹ ₹5 12-21-09 Sase Date Офец ( Specify) COLZEGN HOSN OSZH (505) 396-1429 HC(3) 4000 BICSS <sup>E</sup>ONH (١)٢ مسهدر واوي 90 × × × otal #. of Containers bend Filtered かな Fax No: Cerrolaterii: 1045 1130 1215 1300 1430 1515 1600 1645 1730 Time Sampled Karre Received by ELOT 12/18/2009 12/18/2009 12/18/2009 12/18/2009 12/18/2009 12/18/2009 12/18/2009 12/18/2009 12/18/2009 Received by: Received by: Date Sampled guqiud Debtu Ê gegluujug Debgy 2012 器 (575) 605-7210 PIELD CODE **2** × × 9-MW MW-3 MW-7 MA-8 MW-2 7570457 Sampler Signature Telephone No: Special Instructions: Relinquished by: (lab use only ORDER #: S E 3 S 20 (yino esu disi) \* &A.  $\mathcal{Q}$ 

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

Client:	Plains /Basin Env.				
Date/ Time:	· •			•	
Lab ID#:	356497				
Initials:	JMF				
	Sample Receipt (	Checklist			Client initials
#1 Tempera	ture of container/ cooler?	(Yes)	No	ع° ي ي:3	
#2 Shipping	container in good condition?	₹ <b>9</b> \$>	No		
	Seals intact on shipping container/ cooler?	Yes	<u>No</u>	Not Present	
	Seals intact on sample bottles/ container? / revels	(Yes)	No	Not Present	
	Custody present?	Yes	No		<u> </u>
	nstructions complete of Chain of Custody?	Yes	No		<del> </del>
	Custody signed when relinquished/ received?	Yes	<u>No</u>		<del>                                     </del>
	Custody agrees with sample label(s)?	Yes	<u>No</u>	ID written on Cont./ Lid	<del> </del>
	er label(s) legible and intact?	(Pes)	<u>No</u>	Not Applicable	<del>                                     </del>
	matrix/ properties agree with Chain of Custody?	Yes	No No		<del> </del>
	ers supplied by ELOT?	(Yes)	No No	Con Dalaw	<del> </del>
	s in proper container/ bottle? s properly preserved?	(Yes)	No	See Below	<del> </del>
	bottles intact?	Yes	No	See Below	<del> </del>
	ations documented on Chain of Custody?	Yes	No		
	ers documented on Chain of Custody?	Yes	No	l	<del> </del>
	nt sample amount for indicated test(s)?	Yes	No	See Below	<del> </del>
	ples received within sufficient hold time?	Yes	No	See Below	<del>  </del>
	tract of sample(s)?	Yes	No	Not Applicable	Xerxo-Houston-PA
	imples have zero headspace?	(Yes)	No	Not Applicable	
	Variance Docum	nentation			
Contact:	Contacted by:	<del></del>		Date/ Time:	
Regarding:					
Corrective A	ction Taken:				
Check all the	at Apply:  See attached e-mail/ fax  Client understands and woul			=	

## **Analytical Report 364844**

for

## PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

15-MAR-10





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)





15-MAR-10

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

Reference: XENCO Report No: 364844

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 364844. 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. 364844 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 364844**



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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-10	W	Mar-04-10 08:30		364844-001
MW-5	W	Mar-04-10 09:15		364844-002
MW-4	W	Mar-04-10 10:00		364844-003
MW-1	W	Mar-04-10 10:45		364844-004
MW-6	W	Mar-04-10 11:30		364844-005
MW-3	W	Mar-04-10 12:15		364844-006
MW-7	W	Mar-04-10 13:00		364844-007
MW-8	W	Mar-04-10 13:45		364844-008
MW-2	W	Mar-04-10 14:30		364844-009
MW-9	W	Mar-04-10 15:30		364844-010



## CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 364844

Report Date: 15-MAR-10 Date Received: 03/09/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-798019 BTEX by EPA 8021

SW8021BM

Batch 798019, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is

suspected; data not confirmed by re-analysis

Samples affected are: 364819-001 S,364819-001 SD,364844-003,364844-004,364844-

005,364844-007,364844-009,364844-010,364844-002,364844-001,364844-006.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 364844 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Mar-09-10 08:25 am

Brent Barron II Report Date: 15-MAR-10 Project Manager.

					Project Manager: Dicht Dalton, II	Dieni Darron, II		
	Lab Id:	364844-001	364844-002	364844-003	364844-004	364844-005	364844-006	9
A see See See See See See	Field Id:	MW-10	MW-5	MW-4	MW-1	9-WM	MW-3	
Analysis Requesied	Depth:							
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Mar-04-10 08:30	Mar-04-10 09:15	Mar-04-10 10:00	Mar-04-10 10:45	Mar-04-10 11:30	Mar-04-10 12:15	2:15
BTEX by EPA 8021	Extracted:	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15	3:15
	Analyzed:	Mar-11-10 13:46	Mar-11-10 15:08	Mar-11-10 15:29	Mar-11-10 15:50	Mar-11-10 16:11	Mar-11-10 16:31	5:31
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L	RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0063 0.0010	0.0011	0.0010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	QN	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	QN	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	QN	0.0020
o-Xylenc		ND 0.0010	ND 0.0010	01000 ON	0100'0 QN	0100'0 QN	ND	0.0010
Xylenes, Total		0100'0 QN	ND 0.0010	ND 0.0010	0100'0 QN	0100'0 QN	QN	0.0010
Total BTEX		ND 0.0010	ND 0.0010	0100'0 QN	ND 0.0010	0.0063 0.0010	0.0011 0.0010	0.000.0

Odessa Laboratory Manager Brent Barron, II

Page 5 of 14

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Since 1990

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpartations and results expressed throughout this analytical report repressed the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and mates 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.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 364844 PLAINS ALL AMERICA EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Mar-09-10 08:25 am Report Date: 15-MAR-10

Project Manager: Brent Barron, II

						(	
	Lab Id:	364844-007	364844-008	364844-009	364844-010		
Associate December	Field Id:	MW-7	MW-8	MW-2	6-WM		
raisanhay sishuw	Depth:						
	Matrix:	WATER	WATER	WATER	WATER		
	Sampled:	Mar-04-10 13:00	Mar-04-10 13:45	Mar-04-10 14:30	Mar-04-10 15:30		
BTEX by EPA 8021	Extracted:	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15	Mar-10-10 08:15		
	Analyzed:	Mar-11-10 16:52	Mar-11-10 17:13	Mar-11-10 17:34	Mar-11-10 17:54		
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Benzene		0100'0 QN	ND 0.0010	0.0026 0.0010	0.0192 0.0010		
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020		
Ethylbenzene		ND 0,0010	0.0011 0.0010	ND 0.0010	ND 0.0010		
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	0.0027 0.0020		
o-Xylene		ND 0.0010	ND 0.0010	0100'0 QN	ND 0.0010		
Xylenes, Total		ND 0.0010	0100.0 QN	ND 0.0010	0.0027 0.0010		
Total BTEX		ND 0.0010	0.0011 0.0010	0.0026 0.0010	0.0219 0.0010		

Odessa Laboratory Manager Brent Barron, II

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Final Ver. 1.000

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## 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
- \* Outside XENCO's scope of NELAC Accreditation.

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Project Name: Lovington Gathering WTI

prk Orders: 364844,

Lab Batch #: 798019

Sample: 552928-1-BKS / BKS

**Project ID: 2006-142** 

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 03/11/10 08:55	SU	RROGATE R	RECOVERY	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0314	0.0300	105	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 798019

**Sample:** 552928-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/11/1	10 09:15 SU	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	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 798019

Sample: 552928-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 03/11/10 10:18	SU	RROGATE R	ECOVERY	STUDY	
ВТ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
,4-Difluorobenzene		0.0286	0.0300	95	80-120	
4-Bromofluorobenzene		0.0273	0.0300	91	80-120	

Lab Batch #: 798019

Sample: 364844-001 / SMP

Batch:

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 03/11/10 13:46	SU	RROGATE R	ECOVERY S	STUDY	
ВТЕ	EX 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		0.0210	0.0300	70	80-120	*

Lab Batch #: 798019

Sample: 364844-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 03/11/10 15:08	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	0.0271	0.0200		90 120	
		0.0300	90	80-120	
4-Bromofluorobenzene	0.0187	0.0300	62	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

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



Project Name: Lovington Gathering WTI

rk Orders: 364844,

Sample: 364844-003 / SMP

Project ID: 2006-142

Cab Batch #: 798019 Matrix: Water Batch: 1

Units: mg/L Date Analyzed: 03/11/10 15:29	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	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0218	0.0300	73	80-120	*

Lab Batch #: 798019 **Sample:** 364844-004 / SMP Matrix: Water Batch: 1

Units: mg/L	Date Analyzed: 03/11/10 15:50	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0282	0.0300	94	80-120	
4-Bromofluorobenzene		0.0188	0.0300	63	80-120	*

**Sample:** 364844-005 / SMP Lab Batch #: 798019 Matrix: Water Batch:

Units: mg/L Date Analyzed: 03/11/10 16:11	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0205	0.0300	68	80-120	*

Lab Batch #: 798019 Sample: 364844-006 / SMP Batch: Matrix: Water

Units: mg/L Date Analyzed: 03/11/10 16:31	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	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0191	0.0300	64	80-120	*

Lab Batch #: 798019 Sample: 364844-007 / SMP Batch: 1 Matrix: Water

Units: mg/L	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	. 0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0210	0.0300	70	80-120	*

Page 9 of 14

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



Project Name: Lovington Gathering WTI

🔊 rk Orders : 364844,

Project ID: 2006-142

Lab Batch #: 798019 Sample: 364844-008 / SMP Matrix: Water Batch:

Units: mg/L Date Analyzed: 03/11/10 17:13	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	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0244	0.0300	81	80-120	

Lab Batch #: 798019 Sample: 364844-009 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 03/11/10 17:34	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	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0179	0.0300	60	80-120	*

Matrix: Water Lab Batch #: 798019 Sample: 364844-010 / SMP Batch: 1

Units: mg/L Date Analyzed: 03/11/10 17:54	SU	RROGATE RI	COVERY S	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
.4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0204	0.0300	68	80-120	*

Lab Batch #: 798019 **Sample:** 364819-001 S / MS Matrix: Water Batch:

Units: mg/L Date Analyzed: 03/11/10 18:36	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	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0202	0.0300	67	80-120	*

Lab Batch #: 798019 Sample: 364819-001 SD / MSD Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 03/11/10 18:56	SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[2]		
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0211	0.0300	70	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 #: 364844

Analyst: ASA

Lab Batch ID: 798019

Sample: 552928-1-BKS

Date Prepared: 03/10/2010

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 03/11/2010

Matrix: Water

Units: mg/L		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY 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	-	<u>B</u>	[C]	<u>a</u>	E	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.0924	95	0.1	0880	88	5	70-125	25	
Toluene	QN	0.1000	0.0920	92	0.1	0980.0	98	7	70-125	25	
Ethylbenzene	QN	0.1000	0.0924	92	0.1	0.0883	88	5	71-129	25	
m,p-Xylcnes	QN	0.2000	0.1846	65	0.2	0.1769	88	4	70-131	25	
o-Xylene	ND	0.1000	0.0905	16	0.1	0.0849	85	9	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







Project Name: Lovington Gathering WTI

Lab Batch ID: 798019 Work Order #: 364844

Date Analyzed: 03/1

QC-Sample ID: 364819-001 S

Batch #:

1 Matrix: Water

Project ID: 2006-142

Date Prepared: 03/10/2010 Analyst: ASA	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY
/11/2010	J/g

keporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MAT	RIX SPIF	TE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample S Result S [C]	Spiked Sample %R	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
		<u>.</u>									
Benzene	ND	0.2000	0.1476	74	0.2000	0.1640	82	11	70-125	25	
Toluene	ND	0.2000	0.1455	73	0.2000	0.1642	82	12	70-125	25	
Ethylbenzene	ND	0.2000	0.1477	74	0.2000	0.1709	85	15	71-129	25	
m,p-Xylenes	ND	0.4000	0.2933	73	0.4000	0.3413	85	15	70-131	25	
o-Xylene	ND	0.2000	0.1442	72	0.2000	0.1660	83	14	71-133	25	

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

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

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

## Envenmental Lab of Texas

Phone: 432-563-1800 Fax: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East

Odessa, Texas 79765

O NPOES Project Name: Lovington Gathering WT TRRP Project Loc: Lea County, NM PO#: PAA - J. Henry X Standard Project #: 2006-142 Report Format: cstanley@basinenv.com (505) 396-1429 e-mail: Fax No: PAGE 01 OF 01 Basin Environmental Service Technologies, LLC Lovington, NM 88260 (505) 441-2244 Company Address: P. O. Box 301 Project Manager: Curt Stanley Sampler Signature: Company Name Telephone No: City/State/Zip:

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1		÷	されてい	FIELD CODE	MW-10	MW-5	MW-4	MW-1	MW-6	MW-3	MW-7	MW-8	MW-2	MW-9			
		-	3	FIEL	<b>\</b>	*	3	<b>E</b>	\$	*	\$	=	2	3			$\mathcal{X}$
		0	$\cap$										ļ			M	十
															Special Instructions:		1/2
	e only	•	**		<b> </b>		-	-	ļ.	_	$\vdash$		-	-	Fig.	Helinguished by	and A
	(lab use only)	<u>.</u>	ORDER #:	LAB # (kab use only)	ō	0/20	ટ્ર	ड	K	3	10	E	3	\$ 5	Specia		Relinquished by:
٠	_					•					_						

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3/9/10 08:75 Temperature Upon Receipt.

Relinquished by

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

	ASUSTICEN COLLECTIAS WOTOLL KE	bore semble	t mb-		il i	
Client.	Basin Environmental				[ ] 12   14   15   16	
Date/ Time:	3/9/10 8:25					
Lab ID#:	304844					
initials:	. 18					
	Sample Receipt	Checidist			Sent Int	iels
#1 Temper	rature of container/ cooler?	Y	No	O °C		
	g container in good condition?	(Yes)	No		! ;	
#3 Custod	y Seals intact on shipping container/ cocler?	Yes	No	Not Present		
	y Seals intact on sample bottles/ container?	(Yes)	No	Not Present	j	
	of Custody present?	(Y68)	No		:	
#6 Sample	instructions complete of Chain of Custody?	Yes	No			
#7 Chain c	of Custody signed when relinquished/ received?	Yes	No			
	of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	•	
	ner label(s) legible and intact?	(Yes)	No	Not Applicable		П
	le matrix properties agree with Chain of Custody?	(Yes)	No			П
	iners supplied by ELOT?	Yes	No			$\sqcap$
	les in proper container/ bottle?	CYCO	No	See Below	7	П
	les properly preserved?	Yes	No	See Below	1	$\sqcap$
	le bottles intact?	(Yes)	No			17
	rvations documented on Chain of Custody?	(Yes)	No		<del>                                     </del>	11
	iners documented on Chain of Custody?	Yes	No	<del></del>	<del> </del>	<del>   </del>
	lent sample amount for indicated test(s)?	Yes	No	See Below	<del> </del>	<del>†</del> -{
	mples received within sufficient hold time?	Yes	No	See Below	<del> </del>	<del>1</del>
	ontract of sample(s)?	Yes	No	(Not Applicable		+1
	samples have zero headspace?	(700)	No	Not Applicable	<del> </del> -	╁┤ .
FEG   100	CENTIFICO MOVO ZERO PROCESSADOR		140	( story debroaries		+-
Contact	Contacted by:  #4) labels as Scals	umentation	•	Date/ Time:		
Regarding:	1/ laters as the					1
Corrective .	Action Taken:					
<del></del>				<u> </u>		<del>-                                    </del>
			<del></del>			<del></del>
Check all t	that Apply:  See attached e-mail/ fax  Client understands and wo  Cooling process had begu					

## **Analytical Report 374687**

for

## PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lovington Gathering WTI 2006-142

03-JUN-10





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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (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: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)





03-JUN-10

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

Reference: XENCO Report No: 374687
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 374687. 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. 374687 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 374687**



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

Lovington Gathering WTI

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-5	W	May-25-10 09:00		374687-001
MW-1	W	May-25-10 09:45		374687-002
MW-4	W	May-25-10 10:45		374687-003
MW-10	W	May-25-10 11:30		374687-004
MW-7	W	May-25-10 12:45		374687-005
MW-8	W	May-25-10 13:00		374687-006
MW-3	W	May-25-10 14:15		374687-007
MW-2	W	May-25-10 15:00		374687-008
MW-6	W	May-25-10 15:30		374687-009
MW-9	W	May-25-10 16:15		374687-010



## CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lovington Gathering WTI



Project ID:

2006-142

Work Order Number: 374687

Report Date: 03-JUN-10 Date Received: 05/27/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809029 BTEX by EPA 8021

SW8021BM

Batch 809029, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is

suspected; data not confirmed by re-analysis

Samples affected are: 374687-006,374687-008,374687-007.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 374687 PLAINS ALL AMERICANEH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu May-27-10 01:40 pm Report Date: 03-JUN-10

Project Manager: Brent Barron. II

					I toloce manager . Diene Darron, in	Stellt Dans, 22		
	Lab Id:	374687-001	374687-002	374687-003	374687-004	374687-005	374687-006	
Andreis Donnesdad	Field Id:	MW-5	MW-I	MW4	MW-10	MW-7	MW-8	
Anaiysis Nequesieu	Depth:							
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
	Sampled:	May-25-10 09:00	May-25-10 09:45	May-25-10 10:45	May-25-10 11:30	May-25-10 12:45	May-25-10 13:00	
BTEX by EPA 8021	Extracted:	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	
	Analyzed:	Jun-02-10 19:54	Jun-02-10 20:17	Jun-02-10 20:39	Jun-02-10 21:01	Jun-02-10 21:24	Jun-02-10 21:46	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L R	Z
Benzenc		0.0014 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0012 0.0010	010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	020
Ethylbenzene		ND 0.0010	0100'0 QN	ND 0.0010	ND 0.0010	ND 0.0010	0.0010 0.0010	010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	010
Xylenes, Total		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	010
Total BTEX		0.0014 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0022 0.0010	010

Odessa Laboratory Manager Brent Barron, II

Page 5 of 14

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This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpratedions and recults expressed throughout this analytical treport represent the best judgmen of XENCO Laboratories. XENCO Laboratories assumes no responsibility and matees 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.



Project Location: Lea County, NM Contact: Jason Henry Project Id: 2006-142

# Certificate of Analysis Summary 374687 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Thu May-27-10 01:40 pm Report Date: 03-JUN-10

Project Manager: Brent Barron, II

	Lab Id:	374687-007	374687-008	374687-009	374687-010	
Australia Daniel	Field Id:	MW-3	MW-2	9-MW	6-WW	
Anutysis Nequesieu	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	
	Sampled:	May-25-10 14:15	May-25-10 15:00	May-25-10 15:30	May-25-10 16:15	
BTEX by EPA 8021	Extracted:	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	Jun-02-10 15:45	
	Analyzed:	Jun-02-10 22:55	Jun-02-10 23:17	Jun-02-10 23:40	Jun-03-10 00:02	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Benzene		0,0109 0,0010	0.0023 0.0010	0.0059 0.0010	0.0421 0.0010	
Toluene		0.0033 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		0.0048 0.0020	ND 0.0020	ND 0.0020	0.0063 0.0020	
o-Xylene		0.0027 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	
Xylenes, Total		0.0075 0.0010	ND 0.0010	ND 0.0010	0.0063 0.0010	
Total BTEX		0.0217 0.0010	0.0023 0.0010	0.0059 0.0010	0.0484 0.0010	

Odessa Laboratory Manager Breht Barron, II

Page 6 of 14

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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.



## 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
  - \* Outside XENCO's scope of NELAC Accreditation.

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**Project Name: Lovington Gathering WTI** 

rk Orders: 374687,

Lab Batch #: 809029 Sample: 564756-1-BKS / BKS Project ID: 2006-142

Matrix: Water

SURROGATE RECOVERY STUDY Units: mg/L Date Analyzed: 06/02/10 16:31 Amount True Control BTEX by EPA 8021 Flags Found Amount Recovery Limits %R [**B**] %R [A] [D] **Analytes** 1,4-Difluorobenzene 0.0307 0.0300 102 80-120 4-Bromofluorobenzene 0.0298 0.0300 99 80-120

Lab Batch #: 809029

Sample: 564756-1-BSD / BSD

Batch:

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/10 16:54	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		0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0295	0.0300	98	80-120	

Lab Batch #: 809029

Sample: 564756-1-BLK / BLK

Matrix: Water Batch:

Units: mg/L Date Analyzed: 06/02/10 18:01	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			121		
4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 809029

Sample: 374687-001 / SMP

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/10 19:54	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 809029

Sample: 374687-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/10 20:17	SU	RROGATE R	ECOVERY	STUDY	
вті	EX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0246	0.0300	82	80-120	
4-Bromofluorobenzene		0.0305	0.0300	102	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

rk Orders: 374687, ab Batch #: 809029

Sample: 374687-003 / SMP

Project ID: 2006-142

Batch:

Matrix: Water

Units: mg/L Date Analyzed: 06/02/10 20:39	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	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 809029

Sample: 374687-004 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/02/10 2	1:01 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	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 809029

Sample: 374687-005 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/10 21:24	SU	RROGATE RI	ECOVERY	STUDY	
вт	EX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	Titlatytes	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	-

Lab Batch #: 809029

Sample: 374687-006 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/10 21:46	SU	RROGATE R	ECOVERY S	STUDY	
вт	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0225	0.0300	75	80-120	*
4-Bromofluorobenzene		0.0311	0.0300	104	80-120	

Lab Batch #: 809029

**Sample:** 374687-007 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/02/10 22:55	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	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0268	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

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



Project Name: Lovington Gathering WTI

rk Orders: 374687,

Sample: 374687-008 / SMP

Project ID: 2006-142

ab Batch #: 809029

Matrix: Water Batch:

Units: mg/L Date Analyzed: 06/02/10 23:17	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	0.0231	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 809029

Sample: 374687-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/02/10 23:40	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
BTI	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0247	0.0300	82	80-120	
4-Bromofluorobenzene		0.0291	0.0300	97	80-120	

Lab Batch #: 809029

Sample: 374687-010 / SMP

Matrix: Water

 Units: mg/L Date Analyzed: 06/03/10 00:02	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Difluorobenzene	0.0266	0.0300	89	80-120	
Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 809029

Sample: 374687-001 S / MS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 06/03/10 02:39	SU	RROGATE R	ECOVERY	STUDY	
вті	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			رطا		
1,4-Difluorobenzene		0.0302	0.0300	101	80-120	
4-Bromofluorobenzene		0.0312	0.0300	104	80-120	

Lab Batch #: 809029

Sample: 374687-001 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 06/03/10 03:02	SU	RROGATE R	ECOVERY :	STUDY	
вті	EX 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		0.0308	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

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







## Project Name: Lovington Gathering WTI

Work Order #: 374687

Analyst: ASA

Lab Batch ID: 809029

Sample: 564756-1-BKS

Date Prepared: 06/02/2010 Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 06/02/2010

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY 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>B</b> ]	(C)	[D]	[E]	Result [F]	[6]				
Benzene	ND	0.1000	0.1056	106	0.1	0.1103	110	4	70-125	25	
Toluenc	ΩN	0.1000	0.1039	104	0.1	0.1086	109	4	70-125	25	
Ethylbenzene	ND	0.1000	0.1065	107	0.1	0.1119	112	5	71-129	25	
m,p-Xylenes	ND	0.2000	0.2129	106	0.2	0.2237	112	5	70-131	25	
o-Xylene	QN	0.1000	0.1045	105	0.1	0.1096	110	5	71-133	25	

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









Work Order #: 374687

Lab Batch ID: 809029

Date Analyzed: 06/03/2010

QC-Sample D: 374687-001 S Date Prepared: 06/02/2010

Batch #:

Analyst: ASA

Matrix: Water

**Project ID: 2006-142** 

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	3 / MATI	RIX SPII	KE DUPLICA	re reco	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	e e	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesuit [A]	Added (B)	<u>.                                    </u>	¥ <u>ē</u>	Added [E]	Kesuit [F]	<u>¥</u> <u>5</u>	8	% *	%KPD	
Benzene	0.0014	0.1000	0.0988	62	0.1000	0.0956	94	3	70-125	25	
Toluene	ND	0.1000	0.0945	95	0.1000	0.0917	92	3	70-125	25	
Ethylbenzene	QN	0.1000	0.0963	96	0.1000	0.0928	93	4	71-129	25	
m,p-Xylenes	QN	0.2000	0.1836	92	0.2000	0.1722	98	9	70-131	25	
o-Xylene	ND	0.1000	0.0923	92	0.1000	0.0874	87	5	71-133	25	

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

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

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

## Ereconmental Lab of Texas



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Odessa, Texas 79765

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

				NPDES		F	4.54	27	**************************************	PS (outbothse-ord) TAT HEUS YAU & TAT DYBURGE	×	×	×	×	×	×	×	×	×	×	# 2 G 0/	<b>z</b> z/ <b>g</b>	z	Lone Star	ပ္	
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						Analyze For:		Н	-	Seminologicos			1	$\dashv$	+	$\dashv$					Laboratory Comments: Semple Containers Mact? VOCs Free of Headspace?	Labelt on contain (16) Custody seals on container(s)	9	by Sampler Client Rep. by Courier UPS	Temperature Upon Raceipt:	
2		Project Loc: Lea County, NH	<u> </u>	19		Z YE	1	П	_	ealthsioV				ヿ	7			一	7	ヿ	Laboratory Comments Somple Containers (Me VOCs Free of Headspa	悪いと	Sample Hand Delivered	<u> </u>	<u> </u>	,
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3	Project #: 2006-142	쾰	PO #: PAA- J. Henry	X Standard		ı	٢	일		Anions (Cl. SO4, Alkalinity)											2 2 3	40	울.	ă á	<u>Ş</u>	
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Project Nan	흊	뮻	ă	Report Format:						8001 XT 8001 XT :H9T									$\Box$			6			<b>.</b>	
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	yales, LLC									Date Sampled	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010	5/25/2010		Received by:	Received by:		Received by ELOT	
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=	onmental Se	<b>4-</b>	N 88260		6	W															57-72		) Page O		Date	
Camille Bryant	Basin Environmental Service Technologies, LLC	P. O. Box 301	I wington, NM 88260	(K75)R05_7210	7	1	\ •\	•	ルレユーのカー	100 00 100 100 100 100 100 100 100 100	MW.5	MW-1	MW4	MW-10	MW-7	MW-8	MW-3	HW-2	MW-6	MW-9						
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Project Manager:	Company Name	Company Address:	City/State/7in	Tologhone No.	<u> </u>	Sampler Signature:			Ή												igus:	W				
Projec	Comp				<u> </u>	Samp		(Auo	**					_	L						Special Instructions	水	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	· ·	shed by:	
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## **XENCO** Laboratories

Atlanta, Corpus Christi, Dallas, Houston, Miami, Midland, Philadelphia, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS - SRC Revision/Date: No.00, 05/18/10 Effective Date: 05/20/10

Page No.:

1 of 1

## Report - Sample I og-In

		Preiogin / Noncom	FQI	mance Report – Sami	ne rog-n			
Client: \300	Sin	Env. Pla	11	<u>~</u> S				
Date/Time:	3.2	7-10 13:40	<u> </u>					
Lab ID #:		374687						
Initials:		AL		<del></del>				
		Samp	ole	Receipt Checklist				
1. Sample on	ice?				Blue	Water	No	
2. Shipping co	ontaine	r in good condition?			(Yes)	No	None	- 1
3. Custody se	als inta	ct on shipping contain	er	(cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Ci	ustody	present?			(Yes)	No		
5. Sample ins	truction	s complete on chain o	f c	ustody?	(Yes)	No		
6. Any missin	g / extr	a samples?			Yes	(No)		
7. Chain of cu	stody s	signed when relinquish	ed	/ received?	(Yes)	No		*** *** * *** *
8. Chain of cu	stody a	agrees with sample lab	le(	(s)?	(Yes)	No		
9. Container l	abels le	egible legible and intac	t?		Yes	No		
10. Sample m	natrix / p	properties agree with c	ha	in of custody?	(Yes)	No		
11. Samples	in prope	er container / bottle?		, , , , , , , , , , , , , , , , , , ,	(Yes)	No		
12. Samples	properl	y preserved?			Yes	No	N/A	·-···
13. Sample c	ontaine	r intact?	Yes	No				
14. Sufficient	sample	amount for indicated	tes	st(s)?	(Yes	No		
15. All sample	es rece	ived within sufficient ho	old	time?	Yes	No		
16. Subcontra	act of s	ample(s)?			Yes	No	(N/A)	
17. Voc samp	ole have	e zero head space?			Yes	No	N/A	
18. Cooler 1	No.	Cooler 2 No.		Cooler 3 No.	Cooler 4	No.	Cooler 5	No.
lbs ∵≥	S.(°C	lbs 0	Ċ	ibs °C	ibs	ိုင	lbs	°C
Cantact				mance Documentatio	n Date/Tin			
Contact:		Contacted	טנ	y	_Date/ Hin	ie		_
Regarding: _		<del></del>						
Corrective A	ctionTa	ken:						_
· · · · · · · · · · · · · · · · · · ·								
Check all the	at apply			egun shortly after sampling	event and	out of tempe	rature	
		·		y NELAC 5.5.8.3.1.a.1. perature confirm out of tem	perature 🖂	nditions		
				t would like to proceed with				

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

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

## State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

## **Release Notification and Corrective Action**

						OPERA	TOR	x lr	itial Report		Final	Report
Name of Co							nille Reynolds					
		Hwy 82, Lov		NM 88260	<del></del>		No. 505-441-090 e 6"Steel Pipeli					
Facility Nan	ne Loving	ton Gatherin	g w 11			racinty Typ	e o Steel Pipeli			. ,		
Surface Ow	ner Rober	t Rice		Mineral O	wner			Leas	e No.			
				LOCA	TIO	N OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/West Lin		<del></del>		
Н	6	17S	37E						Lea			
	<u> </u>	·	200 51	1.56.00	l		1020 121 02 2		L,,,_,,,,,,			
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Type of Rele Source of Re					~		lour of Occurrence		ne Recovered nd Hour of D			
Source of Re	10000 0 010	or repende				4-21-2006	@ 13:00		006@13:15			
Was Immedia	ate Notice (			1 av . (**)		If YES, To						
			Yes L	No Not Re	equirea	1				2223	24 25	
By Whom? C			·····				Hour 4-21-2006 (and olume Impacting)		(307	,• —		<u>&amp;7/</u>
was a water	course Rea		Yes 🗵	No		II TES, V	olume impacting	ine watercourse	13.14.15.16.17 18.18.	· Al	ू ही	<b>76</b> 3728.
f a Watercon	irse was Im	pacted, Descr	ibe Fully.	•	······································				214	400c	\$ 2.7. g	<u>``</u>
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				n Taken Internal o					/ " - "			_4
The sweet cr	ude has an	H <sub>2</sub> S content of	f <10 ppm	g line. The pressu . The line was ap	proxim	ately 1.5 feet	bgs at the release	point.	y of the sweet	crude	ii was .	<b>, 14</b> .
approximate	ly 1,500 ft².			ken.* The impacte								
regulations a public health should their or the enviro	Il operators or the envi operations l nment. In	are required to a representation are trained are trained a	to report at acceptant adequately OCD accep	e is true and comp nd/or file certain r ce of a C-141 repo y investigate and r ptance of a C-141	elease root by the emedian	notifications a ne NMOCD m te contaminat	nd perform correct narked as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated as "Final Richard Indicated In	ctive actions for deport" does not reat to ground w	releases which relieve the op- rater, surface v	h may e erator o water, hi	ndange f liabili uman he	er ity ealth
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Printed Nam	e: Camille	Reynolds	1	U		Approved by	District Supervis	sor:				
Title: Remed	liation Coo	rdinator				Approval Da	te:	Expirat	on Date:		<del></del>	
E-mail Addr	ess: cjreyno	olds@paalp.co	om			Conditions o				<del>/ **/ //</del>		·····
Date: 4/26/2	006			Phone:505-441			, -		Attache	ed 🔲		
facility	J- PPI	9 CO Q \\ la 1 PA CO (01)	38437 14 <i>3</i> 85	42	· [	pflica	tion-pPA	10041163	Y267			
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