AP- 96

ANNUAL MONITORING REPORT

YEAR(S): 2007



March 30, 2010

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

APP - 1 9010

Environmental Bureau Oil Conservation Division

Re:

Plains All American - 2009 Annual Monitoring Reports

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

Dear Mr. Hansen:

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

Lovington Gathering WTI	1RP-838	AP-46	Section 06, T17S, R37E, Lea County
Red Byrd #1	1R-0085		Section 01, T20S, R36E, Lea County
DCP Plant to Lea Sta. 6" #2	1R-2136		Section 31, T20S, R37E, Lea County
DCP Plant to Lea Sta. 6" Sec.31	1R-2166		Section 31, T20S, R37E, Lea County
Ballard Grayburg 5-Inch	2R-0053		Section 10, T18S, R29E, Eddy County

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

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

Sincerely.

Jason Henry

Remediation Coordinator

Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

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Environmental Bureau
Oil Conservation Division

2009 ANNUAL MONITORING REPORT

LOVINGTON GATHERING WTI
SE ¼ NE ¼ SECTION 6, TOWNSHIP 17 SOUTH, RANGE 37 EAST
LATITUDE 32°, 51′, 56.0″ NORTH, LONGITUDE 103°, 17′, 07.2″ WEST
LEA COUNTY, NEW MEXICO
PLAINS SRS NUMBER: 2006-0142
NMOCD REF: 1RP-838 / AP-96

PREPARED FOR:



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

PREPARED BY:

BASIN ENVIRONMENTAL CONSULTING, LLC

P. O. Box 381

Lovington, New Mexico 88260

March 2010

Curt D. Stanley

Project Manager

TABLE OF CONTENTS

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1

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(1)

INTRODUCTION1
SITE DESCRIPTION AND BACKGROUND INFORMATION
FIELD ACTIVITIES
LABORATORY RESULTS
SUMMARY6
ANTICIPATED ACTIONS
LIMITATIONS7
DISTRIBUTION8
FIGURES Figure 1 – Site Location Map Figure 2A – Inferred Groundwater Gradient Map – March 3, 2009
Figure 2B – Inferred Groundwater Gradient Map – June 18, 2009 Figure 2C – Inferred Groundwater Gradient Map – September 1, 2009 Figure 2D – Inferred Groundwater Gradient Map – December 18, 2009
Figure 3A – Groundwater Concentration Map – March 3, 2009 Figure 3B – Groundwater Concentration Map – June 18, 2009 Figure 3C – Groundwater Concentration Map – September 1, 2009 Figure 3D – Groundwater Concentration Map – December 18, 2009
TABLES Table 1 – Groundwater Elevation Data Table 2 – Concentrations of Benzene and BTEX in Groundwater Table 3 – Concentrations of Poly Aromatic Hydrocarbons (Semi-Volatile) in Groundwater Table 4 – Concentrations of Volatile Organic Compounds in Groundwater Table 5 – Concentrations of RCRA and NMWQCC Metals in Groundwater Table 6 – Concentrations of Anions/Cations in Groundwater
APPENDICES Appendix A – Laboratory Reports Appendix B – Monitor Well Logs Appendix C - Release Notification and Corrective Action (Form C-141)

INTRODUCTION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Marketing, L.P., (Plains), prepared this annual report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2009 only. Site activities and remedial work are summarized in several letters and reports previously submitted to the NMOCD. For reference, the Site Location Map is provided as Figure 1.

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

SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site is SE¼, NE¼ Section 6, Township 17 South, Range 37 East, The site latitude is 32°, 51, 56.0 North and the site longitude is 103°, 17, 07.2 West. On April 21, 2006, Basin responded to the pipeline release on behalf of Plains to repair the pipeline and excavate the impacted soil. The Lovington Gathering WTI Pipeline was repaired utilizing a pipeline clamp and the visually stained soil was excavated and placed on plastic sheeting to mitigate any further hydrocarbon impact to the underlying soil. Approximately 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 visibly surface stained area covering approximately thirty (30) feet in length by twenty-seven (27) feet in width. Excavation activities conducted during the initial response and subsequent remediation of the site covered an area approximately thirty (30) feet in length by twenty-seven (27) feet in width and ranged from approximately five (5) to six (6) feet in depth. Excavated soil was placed on a 6-mil poly-liner for future remedial action. Utilizing olfactory, visual and photo ionization detector (PID) technology it was determined Volatile Organic Compounds (VOCs) remained in the sidewalls and floor of the excavation.

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

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

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

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

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

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

FIELD ACTIVITIES

No PSH was detected in any of the site monitor wells during the 2009 reporting period.

The site monitoring wells were gauged and sampled March 3, June 18, September 1 and December 18, 2009. During these sampling events, the monitoring wells were purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided

by the laboratory and placed on ice in the field. Purge water was collected in a trailer mounted polystyrene tank and disposed at an NMOCD approved disposal in Monument, New Mexico.

Locations of the groundwater monitoring wells and the inferred groundwater elevations were constructed from the measurements collected during the 2009 quarterly sampling events, are depicted on Figures 2A through 2D. The 2009 groundwater elevation data is provided as Table 1.

The Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0011 feet/foot to the south-southeast as measured between groundwater monitor wells MW-1 and MW-9. The corrected groundwater elevation ranged between 3,725.06 and 3,720.41 feet above mean sea level, in monitor well MW-1 on March 3, 2009 and in monitor well MW-9 on September 1, 2009, respectively.

LABORATORY RESULTS

Groundwater samples were collected from the groundwater monitoring wells (MW-1 through MW-10) during the quarterly monitoring events were delivered to Xenco Laboratories, formerly Environmental Laboratory of Texas, Odessa, Texas for determination of benzene, toluene, ethylbenzene and xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. Pursuant to an NMOCD request, the groundwater monitoring wells were sampled annually for concentrations of Poly Aromatic Hydrocarbons (PAH) utilizing EPA Method SW 8270C. A summary of BTEX constituent concentrations and PAH constituent concentrations for 2009 are presented in Table 2 and Table 3, respectively. The laboratory reports are provided as Appendix A.

Monitor well MW-1 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene, toluene, ethylbenzene, and total xylene were less than the laboratory MDL and NMOCD regulatory standard during all four (4) quarters of the 2009 reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-2 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0097 mg/L during the 2nd quarter to 0.084 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st, 3rd and 4th quarters of the reporting period. Toluene and ethylbenzene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd quarter to 0.0095 mg/L during the 4th quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-3 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 1.367 mg/L during the 1st quarter of 2009. Benzene concentrations were above NMOCD regulatory standards

during the 1st quarter of the reporting period. Toluene concentrations ranged from less than the laboratory MDL during the 2nd and 4th quarters to 0.0305 mg/L during the 1st quarter of 2009. Toluene concentrations were less than NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 2nd, 3rd and 4th quarters to 0.0251 mg/L during the 1st quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 2nd and 4th quarters to 0.0331 mg/L during the 1st quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-4 is sampled on a quarterly schedule and analytical results indicate concentrations of benzene, toluene, ethylbenzene and total xylene were less than the laboratory MDL and NMOCD regulatory standard during all four (4) quarters of the 2009 reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-5 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were less than the laboratory MDL and NMOCD regulatory standard for each BTEX constituent during all four (4) quarters of the 2009 reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-6 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the laboratory MDL during the 1st and 3rd quarters to 0.013 mg/L during the 4th quarter of 2009. Benzene concentrations were above NMOCD regulatory standard during the 4th quarter of the reporting period. Toluene, ethylbenzene and xylene concentrations were less than the laboratory MDL and NMOCD regulatory standard for all four (4) quarters of the 2009 reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-7 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0775 mg/L during the 1st quarter of 2009. Benzene concentrations were above NMOCD regulatory standard during the 1st, 2nd, and 3rd quarters of the reporting period. Toluene and ethylbenzene concentrations were less than the laboratory MDL and NMOCD regulatory standard for all four (4) quarters of the 2009 reporting period. Total xylene concentrations ranged from less than the laboratory MDL the 3rd and 4th quarters to 0.329 mg/L during the 2nd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the 2009 reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

On December 7 through 10, 2009, monitor well MW-7 was reinstalled as a four (4) inch monitor well and deepened to a total depth of one-hundred five (105) feet bgs. This activity was

undertaken to increase the available volume of water within the monitor well casing. Additional details will be discussed below in the "Anticipated Actions" section of this Annual Report.

Monitor well MW-8 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the laboratory MDL during the 4th quarter to 0.0284 mg/L during the 1st quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 1st and 3rd quarters of the reporting period. Toluene concentrations were less than the laboratory MDL and NMOCD regulatory standard during all four (4) quarters of the 2009 reporting period. Ethylbenzene concentrations ranged from less than the laboratory MDL during the 1st and 4th quarters to 0.0016 mg/L during the 2nd quarter of 2009. Ethylbenzene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged less than the laboratory MDL during the 4th quarter to 0.0141 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard for all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

Monitor well MW-9 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from less than the laboratory MDL during the 1st, 2nd and 4th quarters to 0.9717 mg/L during the 3rd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 3rd quarter of the reporting period Toluene concentrations ranged from less than the laboratory MDL during the 1st, 2nd and 4th quarters to 0.0641 mg/L during the 3rd quarter of 2009. Toluene concentrations were less than NMOCD regulatory standard during all four (4) quarters of the reporting period. Ethylbenzene concentrations were less than the laboratory MDL and NMOCD regulatory standard for all four (4) quarters of the reporting period. Total xylene concentrations ranged from less than the laboratory MDL during the 1st, 2nd and 4th quarters to 0.0422 mg/L during the 3rd quarter of 2009. Total xylene concentrations were less than the NMOCD regulatory standard during all four (4) quarters of the reporting period. Analytical results indicate PAH constituent concentrations were less than the laboratory MDL for each constituent during the 4th quarter of the reporting period.

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On December 7 through 10, 2009, monitor well MW-9 was reinstalled as a four (4) inch monitor well and deepened to a total depth of one-hundred five (105) feet bgs. This activity was undertaken to increase the available volume of water within the monitor well casing. Additional details will be discussed below in the "Anticipated Actions" section of this Annual Report.

Monitor well MW-10 was installed on October 28, 2009 and will be sampled on a quarterly schedule. The analytical results indicate benzene, toluene, ethylbenzene and total xylene concentrations were less than the laboratory MDL during the initial groundwater chemistry sampling event, conducted on November 2, 2009. A monitor well log is provided as Appendix B.

The analytical results for volatile organic compounds using EPA method 8260, indicated all reported constituent concentrations were less than the appropriate laboratory MDL. A summary of Concentrations of Volatile Organic Compounds in Water is provided as Table 4.

The analytical results for RCRA and NMWQCC metals using EPA SW826-6020A and EPA 7470A, indicated all reported constituent concentrations were less than the appropriate laboratory MDL, with the exception of chromium, which exhibited a concentration of 0.053 mg/L. The chromium concentration is marginally above the NMWQCC drinking water standard (Sections 1-101.UU and 3-103.A.) of 0.05 mg/L. A summary of Concentrations of RCRA and NMWQCC Metals in Groundwater is provided as Table 5.

The analytical results for anions and cations using EPA SW375.4, 325.3 310,160.1 and SW846 6010B, indicated all NMWQCC regulatory constituent concentrations were less than the maximum contaminant level NMWQCC drinking water standards, with the exception fluoride, which exhibited a concentration of 9.27 mg/L. The maximum contaminant level NMWQCC drinking water standard for fluoride is 1.6 mg/L. A summary of Concentrations of Anions/Cations in Groundwater is provided as Table 6.

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

SUMMARY

Based on the depth of hydrocarbon impact at this site, the NMOCD requested quarterly groundwater sampling events to be conducted at this site. No PSH was detected in any of the site monitor wells during the 2009 reporting period.

Currently, there are ten (10) groundwater monitoring wells (MW-1 through MW-10) on-site. The Groundwater Gradient Map Figure 2D, indicates a general gradient of approximately 0.0011 feet/foot to the south-southeast as measured between groundwater monitor wells MW-1 and MW-9.

Laboratory analytical results obtained during the 4th quarter groundwater sampling event in December 2009 indicated benzene and BTEX constituent concentrations were less than the laboratory MDL for groundwater monitor wells MW-1, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9 and MW-10. Analytical results indicate benzene concentrations were above the NMOCD regulatory standard for groundwater monitor wells MW-2 and MW-6 at concentrations of 0.0129 mg/L and 0.013 mg/L, respectively. However, toluene, ethylbenzene and total xylene concentrations were less than the NMOCD regulatory standard.

On August 18, 2008, a Stage 1 and Stage 2 Abatement Plan was submitted to the NMOCD Santa Fe Office. On December 14, 2009, Plains received an email from the NMOCD Santa Fe Office indicating, the submitted Lovington Gathering WTI Stage 1 and Stage 2 Abatement Plan was administratively complete and approved the proposed Public Notice as submitted. On February 9, 2010, Plains received an email from the NMOCD Santa Fe Office, indicating the NMOCD had conditionally approved the Stage 1 and Stage 2 Abatement Plan (AP-96) in accordance with 19.15.30.16 NMAC. In the conditional approval, the NMOCD required Plains submit an amended Stage 2 Abatement Plan to address dissolved phase issues at the site to the OCD within 90 days (May 9, 2010).

ANTICIPATED ACTIONS

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Quarterly monitoring and groundwater sampling will continue in the reporting year 2010.

Plains anticipates, an enhanced dissolved phased hydrocarbon recovery system will be installed at the Lovington Gathering WTI release site in the 1st half of 2010. The system will employ two (2) total fluid remediation pumps installed in monitor wells MW-7 and MW-9. The pumps have the capacity to pump approximately seven-hundred (700) gallons of groundwater per day for combined output of approximately 1,400 gallons (35 water barrels) per day. The recovered water will be collected in a one-thousand (1,000) gallon poly tank located on the site. An automated transfer pump will transport the water approximately ¼ mile to the north of the site to a four (4) inch poly line which terminates at the Three Forks Salt Water Disposal Facility. The four (4) inch poly line transports recovered water from the Plains C.S. Caylor (NMOCD AP-052) release site, located approximately ¼ mile north of the Lovington Gathering WTI release site. Recovered water from the C.S. Caylor and Lovington Gathering WTI release sites will be metered separately and the two (2) systems will operate independently.

Plains anticipates the removal of the groundwater containing dissolved phase hydrocarbons will assist in abating the groundwater issues at the Lovington Gathering WTI release site, as well as maintaining contaminant plume control. The actual volume of groundwater pumped from the release site will be dependent on the groundwater recharge rate of the monitor wells, which may fluctuate seasonally.

LIMITATIONS

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

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

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

DISTRIBUTION

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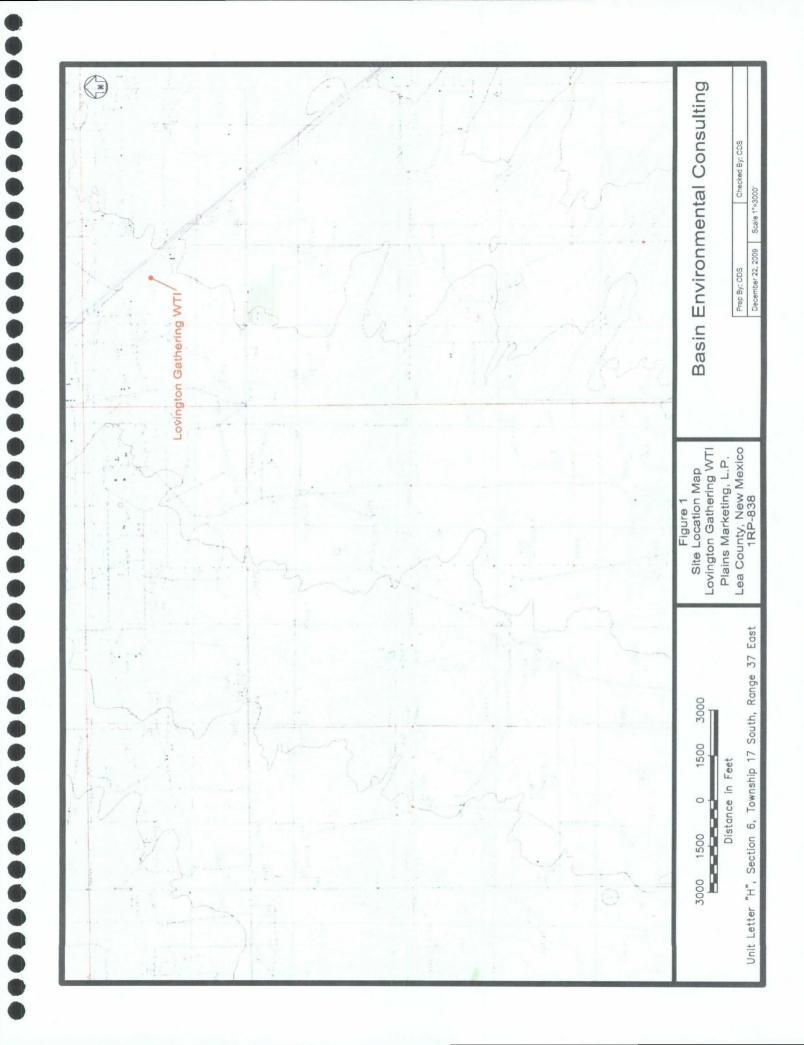
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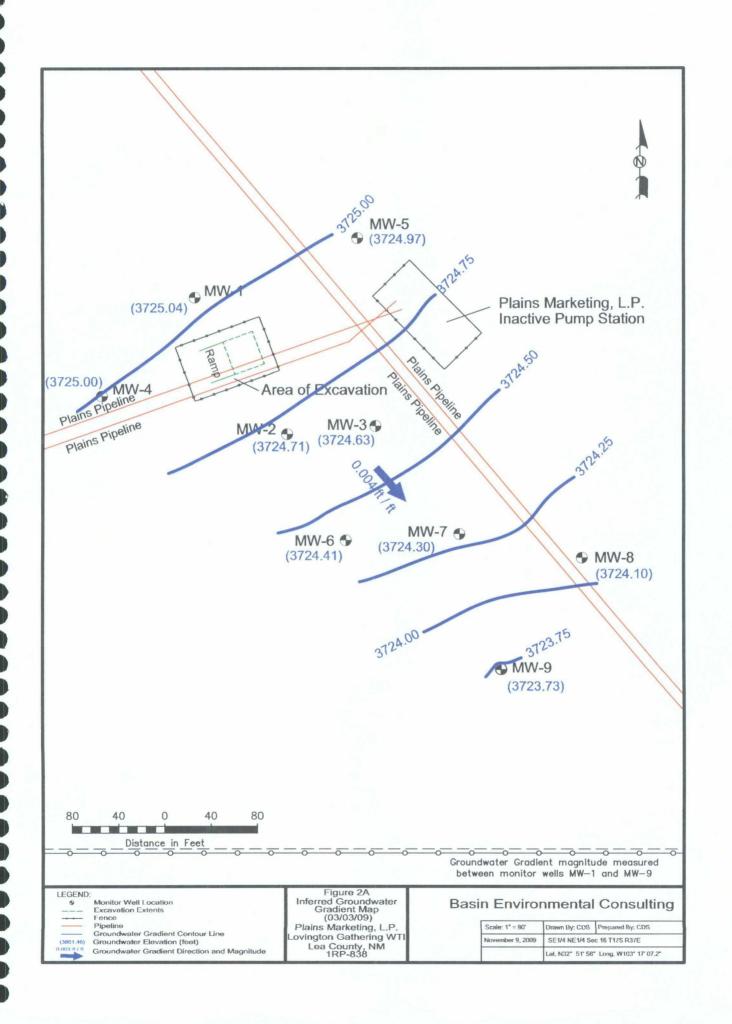
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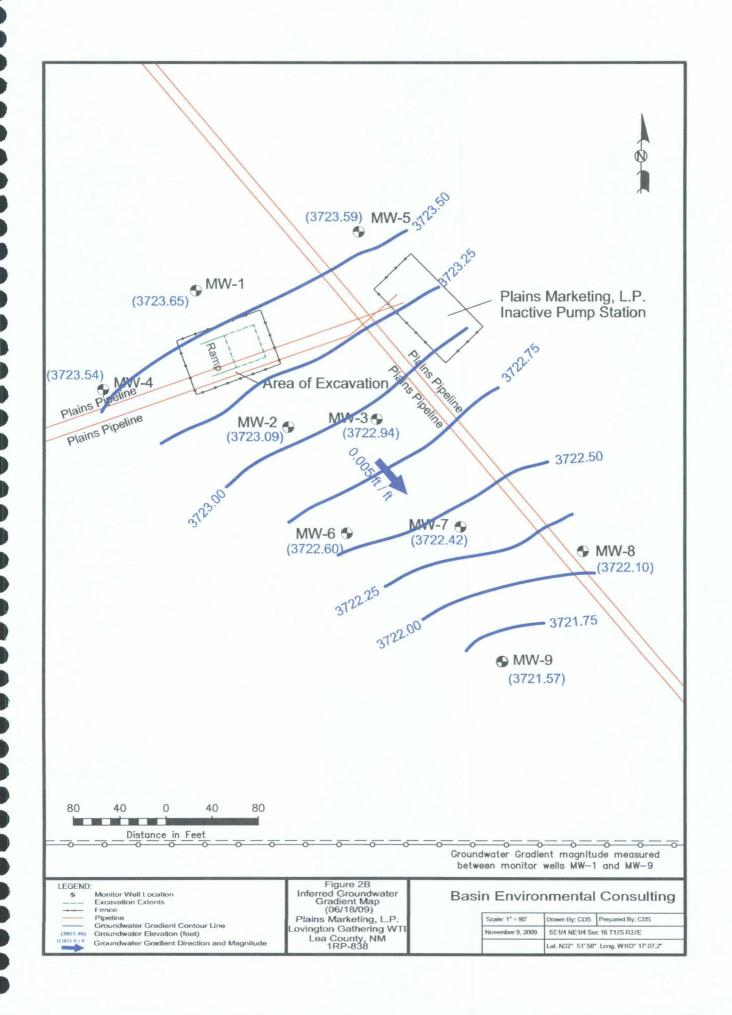
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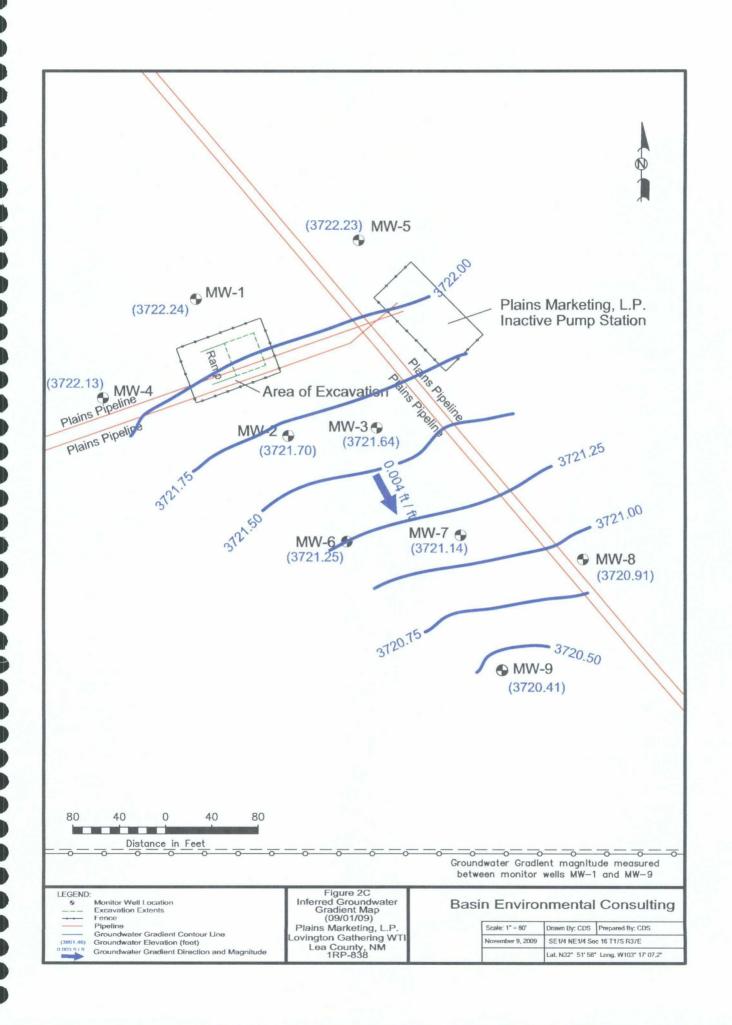
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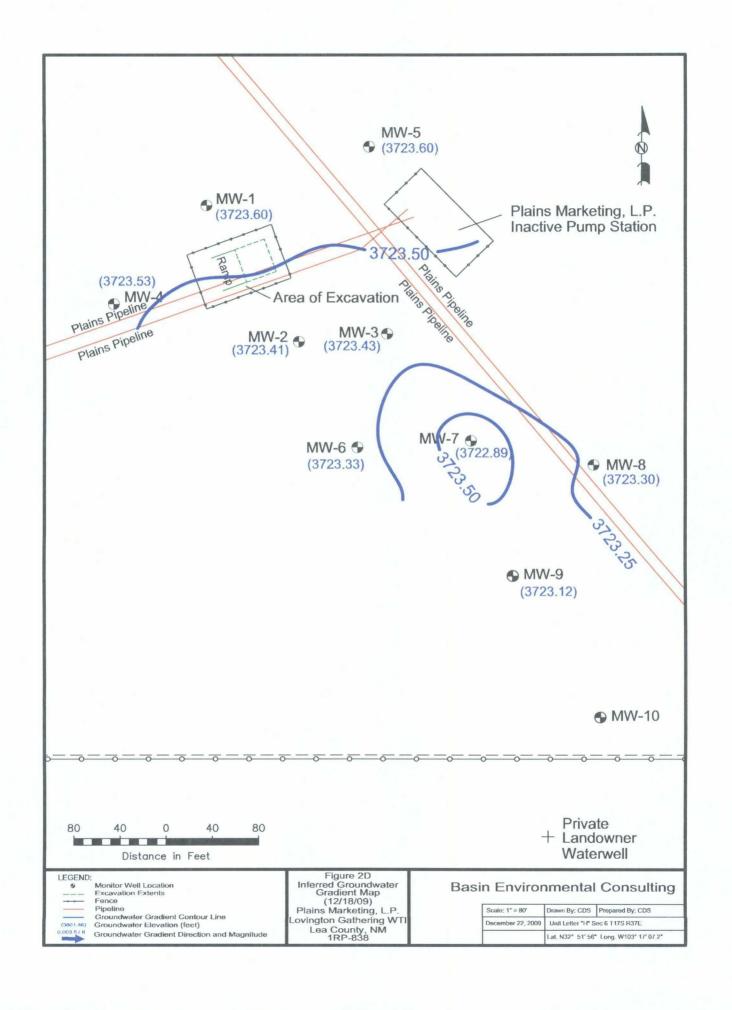
Figures

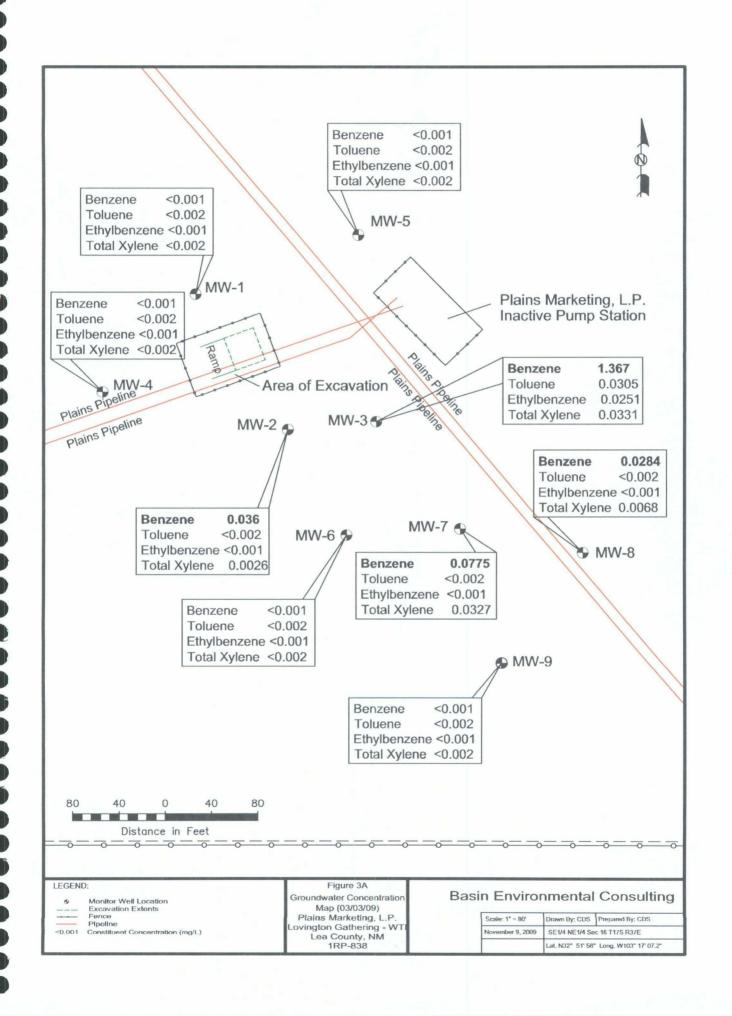


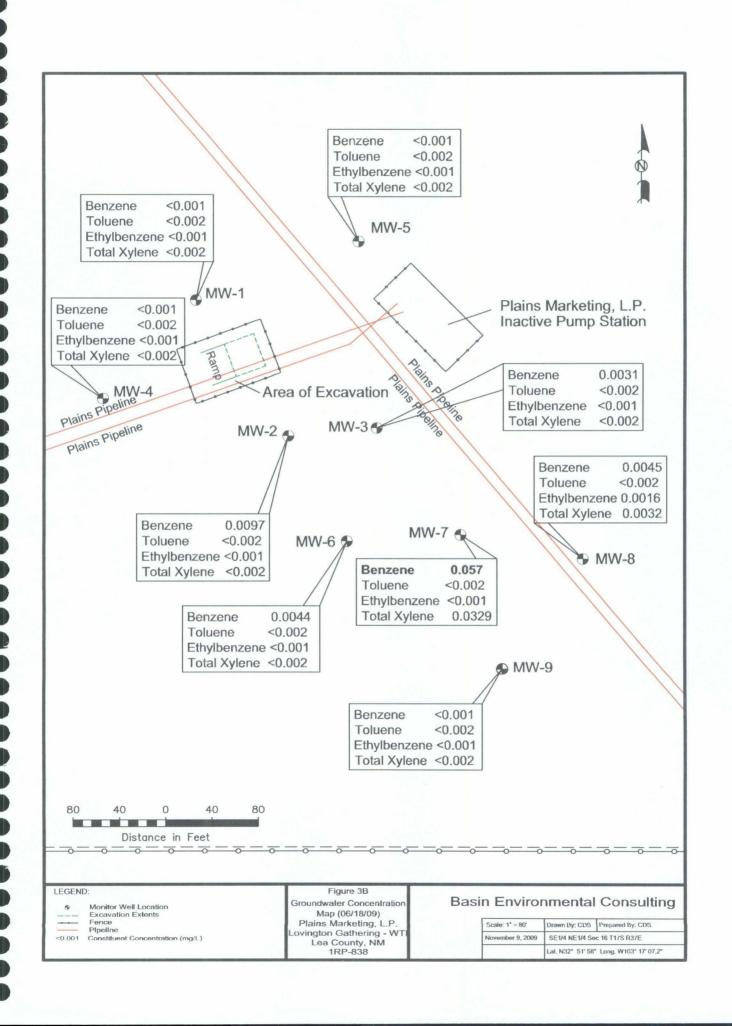


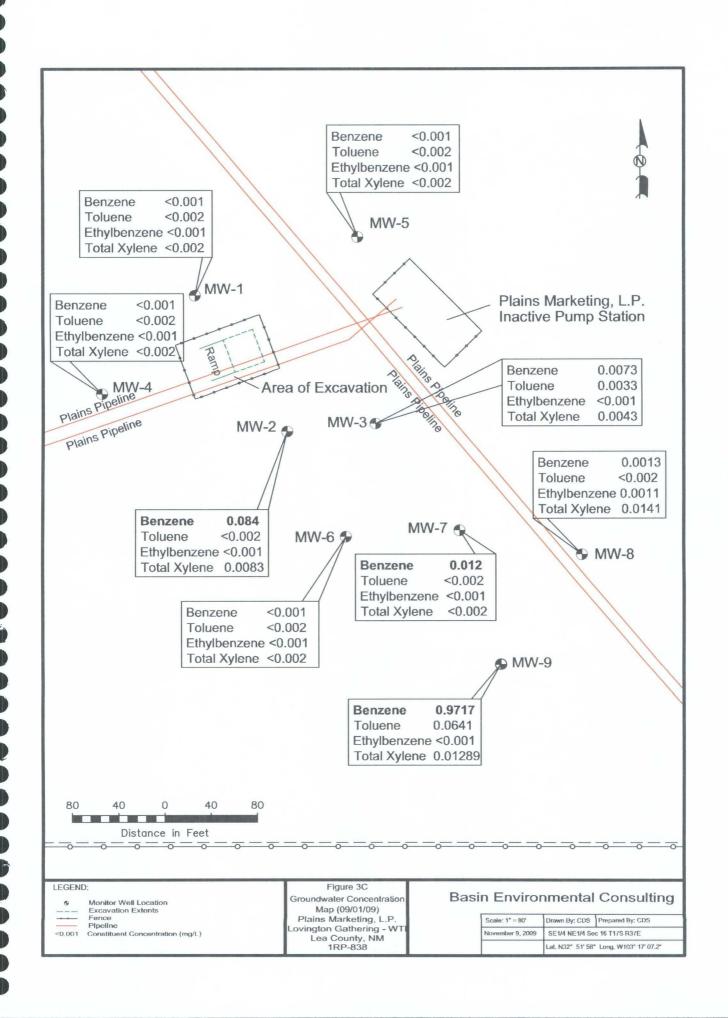


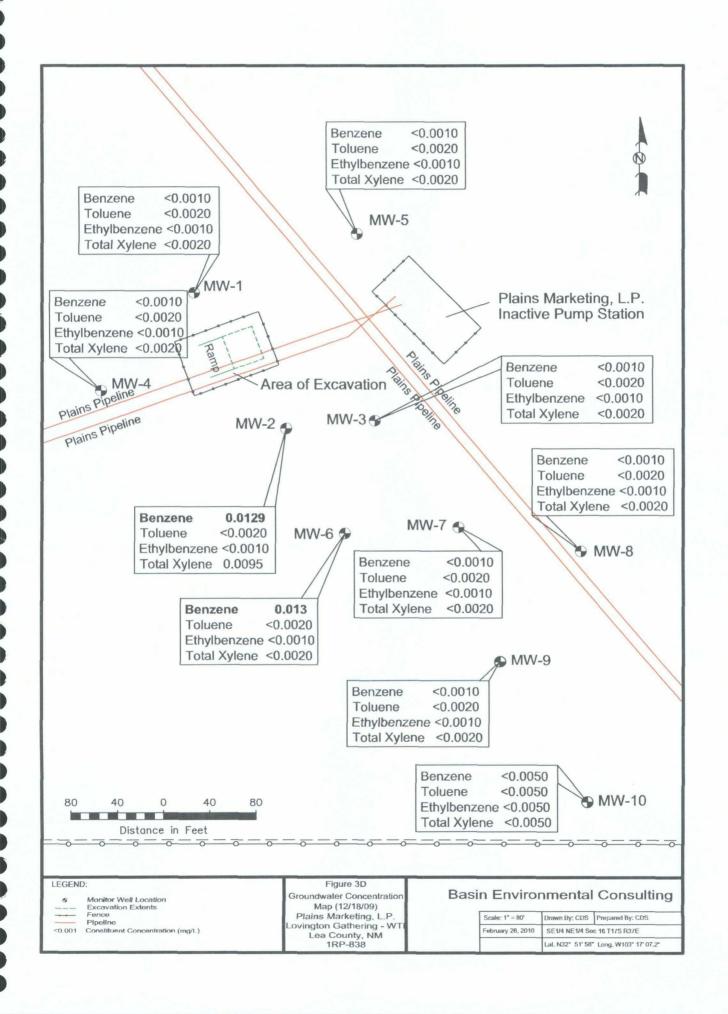












Tables

GROUNDWATER ELEVATION DATA

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

NMOCD REF NO: 1RP-838

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	03/03/09	3,806.60	_	81.56	0.00	3,725.04
	06/18/09	3,806.60	-	82.95	0.00	3,723.65
	09/01/09	3,806.60	-	84.36	0.00	3,722.24
	12/18/09	3,806.60	-	83.00	0.00	3,723.60
MW-2	03/03/09	3,806.31	-	81.60	0.00	3,724.71
	06/18/09	3,806.31		83.22	0.00	3,723.09
	09/01/09	3,806.31	-	84.61	0.00	3,721.70
	12/18/09	3,806.31	-	82.90	0.00	3,723.41
MW-3	03/03/09	3,806.19	-	81.56	0.00	3,724.63
	06/18/09	3,806.19	-	83.25	0.00	3,722.94
	09/01/09	3,806.19	-	84.55	0.00	3,721.64
	12/18/09	3,806.19	-	82.76	0.00	3,723.43
MW-4	03/03/09	3,806.67	<u>-</u>	81.67	0.00	3,725.00
	06/18/09	3,806.67	-	83.13	0.00	3,723.54
	09/01/09	3,806.67	-	84.54	0.00	3,722.13
	12/18/09	3,806.67	-	83.14	0.00	3,723.53
1 2 2	, Av					
MW-5	03/03/09	3,806.30	_	81.33	0.00	3,724.97
	06/18/09	3,806.30	-	82.71	0.00	3,723.59
	09/01/09	3,806.30	-	84.07	0.00	3,722.23
	12/18/09	3,806.30	-	82.70	0.00	3,723.60
MW-6	03/03/09	3,806.08	-	81.67	0.00	3,724.41
	06/18/09	3,806.08		83.48	0.00	3,722.60
	09/01/09	3,806.08	-	84.83	0.00	3,721.25
	12/18/09	3,806.08	-	82.75	0.00	3,723.33
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MW-7	03/03/09	3,806.05	-	81.75	0.00	3,724.30
	06/18/09	3,806.05	-	83.63	0.00	3,722.42
	09/01/09	3,806.05	-	84.91	0.00	3,721.14
	12/18/09	3,806.05	-	83.16	0.00	3,722.89
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GROUNDWATER ELEVATION DATA

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

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-8	03/03/09	3,805.89	-	81.79	0.00	3,724.10
	06/18/09	3,805.89	-	83.79	0.00	3,722.10
	09/01/09	3,805.89	-	84.98	0.00	3,720.91
	12/18/09	3,805.89	-	82.59	0.00	3,723.30
			79.0			
MW-9	03/03/09	3,806.02	-	82.29	0.00	3,723.73
	06/18/09	3,806.02	-	84.45	0.00	3,721.57
	09/01/09	3,806.02	-	85.61	0.00	3,720.41
	10/05/09	3,806.02	-	84.59	0.00	3,721.43
	12/18/09	3,806.02	-	82.90	0.00	3,723.12
	a a comment					nea.
MW-10	11/02/09	-	-	82.99	0.00	<u>-</u>
	12/18/09	-	-	82.94	0.00	-
					Property of the second	

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CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

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

		METHODS: EPA SW 846-8021B, 5030					
SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M,P- XYLENES	O-XYLENES (mg/L)	
MW-1	03/03/09	<0.001	<0.002	<0.001	(mg/L) <0.002	<0.001	
1,1,1,1	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	
	12/10/00	0.0010	10.0020	-0.0010	10.0020	10.0010	
MW-2	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	
			•			1	
MW-3	03/03/09	1.367	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	
.,			· · ·	3 1	7	¥ .	
MW-4	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	
					*	,	
MW-5	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	
					3		
MW-6	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	
100/2	00 (00 (00		.0.000	0.001			
MW-7	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	
NA)A/ C	02/02/00	0.0004	10,000	10.004	0.0000	10 004	
MW-8	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	
ļ	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	
	<u> </u>	<u> </u>		<u> </u>	. <u>. </u>		

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CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

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

		METHODS: EPA SW 846-8021B, 5030						
SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M,P- XYLENES (mg/L)	O-XYLENES (mg/L)		
MW-9	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	0.9717	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	<0.0020	<0.0010	0.0442	<0.0010		
	12/18/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010		
MW-10	11/02/09	<0.005	<0.005	<0.005	<0.010	<0.005		
-				, i	÷			
NMOCD CRITERIA		0.01	0.75	0.75	TOTAL XY	LENES 0.62		

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

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PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838

All water concentrations are reported in mg/L

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	Pyrene	<0.00>	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Ръевангътепе	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	/Aaphthalene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	onoryq(bo-6,2,4 onobnf	<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
	Fluoranthene	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005
SW846-8270C, 3510	Chrysene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
FPA SW846-8270	Вспхо[k]Пиогапthепе	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005
	Benzo[b]fluoranthene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Benzola pyrene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Benzo[a]anthracene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Anthracenc	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	Acenaphthylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	ənədiidqanəəA	<0.005	<0.005	<0.00>	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	SAMPLE	11/02/09	60/81/71	12/18/09	12/18/09	12/18/09	12/18/09	12/18/09	12/18/09	12/18/09	09/55/09
	SAMPLE SAMPLE LOCATION DATE		MW-1	MW-2	MW-3	MW-4	MW-5	9-MW	7-WM	MW-8	6-WW

TABLE 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838

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 All water concentrations are in mg/L

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- 00.00	
- 000 000 000	
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-	
- 0.005	
- 0000 - 0000	
0.1 mg/L	0
-	
-	
MW-2 ontaminant i NMWQCC er standards 11.UU and 3-	¥.
Maximum C. Levels from Drinking watu	103
	OS <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005

<0.01

Chloroethane

00000000 800000000000

TABLE 4
CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838

_	
<0.005	J\gm†.0
<0.005	J\gm
<0.005	J\gm f0.0
<0.005	J\gm č00.0
<0.005	-
<0.005	-
<0.005	-
<0.005	-
<0.005	-
<0.005	J\gm 1000.0
<0.005	-
<0.005	-
<0.005	-
<0.005	-
<0.005	-
	-
<0.005	⊒\քա†.0
-	-
MW-10	Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3- 103.A.
11/02/09	Maximum Contaminant Levels from NIMWQCC Drinking water standard Sections 1-101.UU and 3
	MW-10 - <0.005 - <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005

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CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838
All water concentrations are in mg/L

ansrtaeoroloroethane	<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\gmf.0
lsopropylbenzene	<0.005	-
9nonsx9H-2	١	-
Hexachlorobutadiene	<0.005	-
Ethylbenzene	<0.005	J\gm &\.0
enagorgoroldoiG-£,f-znart	<0.005	-
eneqorqoroldəi G-£, f-ziə	<0.005	<u>-</u>
f,†-Dichloropropane	<0.005	-
2,2-Dichloropropane	<0.005	-
9nsqorqoroldəid-£,†	<0.005	-
1,2-Dichloropropane	<0.005	<u>-</u>
enanteoroldoid-2,1-znart	<0.005	
Sample	MW-10	Maximum Contaminant Levels from NMWQCC Drinking water standards Sections 1-101.UU and 3-
Date Sampled		Maximum C Levels fron Drinking wat Sections 1-1

Page 4 of 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
PLAINS MARKETING, LP
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838
All water concentrations are in mg/L TABLE 4

Vinyl Chloride	<0.002	J\gm t00.0
Vinyl Acetate		-
ənəlүX-q,m	<0.01	¬ /6ա
o-Xylene	<0.005	Σ∂.0 9nəlγX lstoT
eneznedlydteminT-2,£,t	<0.005	-
ənəznədiydəminT-4,2,t	<0.005	-
ensqorqoroldɔirΤ-ɛ,Δ,t	<0.005	-
ensrltemorouflorolfairT	<0.005	-
Trichloroethene (TCE)	<0.005	J \gm t0.0
ensdteoroldoirT-2,1,1	<0.005	-
ensd19o1old5i1T-f,f,f	<0.005	J\gm
1,2,4-Trichlorobenzene	<0.005	-
ənəznədoroldɔirΤ-ε,Δ,t	<0.005	-
anauloT	<0.005	J\gm &T.0
Tetrachloroethene (PCE)	<0.005	-
1,1,2,2-Tetrachloroethane	<0.005	J\gm S0.0
Sample Location	MW-10	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 NAWYQCC METALS IN GROUNDWATER

PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1RP-838

All water concentrations are reported in mg/L

_				
ľ	EPA SW846-6020A, EPA 7470A	Mercury	0.0001	J\gm £00.0
		əniX	<0.003	J/gm 01
		Silver	<0.002	J\gm 20.0
		Selenium Selenium	<0.003	J\gm &0.0
		Nickel	0.027	J\gm Հ .0
		типэрдхіоМ	<0.004	J\gm 0.f
		Manganese	0.017	J\gm Հ.0
All water concentrations are reported in mg/L		рвэД	<0.002	J\gm 20.0
		lron	0.82	J\gm 0.1
		Cobber	<0.003	J\gm 0.1
		tladoD	<0.005	J\gm 20.0
		Chromium	0.053	J\gm ટ 0.0
		muimbsD	<0.001	J\gm 10.0
		Вогоп	0.397	J\gm 27.0
		Barium	0.134	J\gm 0.1
		oinos4A	0.007	J\gm I.0
	L	munimulA	806.0	J\gm 0.2
		SAMPLE DATE	11/02/09	ntaminant M WQCC rr tions 1- 103.A.
		SAMPLE SAMPLE LOCATION DATE	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
PLAINS MARKETING, L.P.
LOVINGTON GATHERING WTI
LEA COUNTY, NEW MENICO
NMOCD REFERENCE NUMBER 1RP -838

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	Flouride	9.27	.d/gm ə.l
	Phosphate	<2.5	•
:	Nitrate	2.14	7/8 m 01
	Carbonate	<4.00	-
SW846 6010B	Bicarbonate Carbonate	126	-
EPA SW375.4, 325.3, 310, 160.1 SW846 6010B	Sulfate	64.1	J\gm 009
PA SW375.4, 3:	Chloride	24.9	J\gm 0&£
H	Sodium	33.3	-
	Potassium	<12.5	-
	Magnesium	13.6	•
	Calcium	76.5	-
SAMPLE SAMPLE	DATE LOCATION	MW-10	ontaminant NM WQCC tter setions 1- 3-103.A.
SAMPLE	DATE	11/2/2009	Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1- 101.UU and 3-103.A.

Appendices

Appendix A
Laboratory Reports

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







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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(1)





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-I	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

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Report Date: 10-MAR-09

Date Received in Lab: Wed Mar-04-09 05:03 pm

					Project Manager: Brent Barron, II	Brent Barron, II	
	Lab Id:	326509-001	326509-002	326509-003	326509-004	326509-005	326509-006
Analusis Daniastod	Field Id:	MW-5	MW-4	MW-6	WW-9	MW-1	MW-3
Anulysis Acquesieu	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 EPA 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
	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	1.367 0.0050
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0305 0.0100
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0.0251 0.0050
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	0.0173 0.0100
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0100.0 QN	0.0158 0.0050
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	0100'0 QN	0.0331 0.0050
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	1.4557 0.0050

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretentions and results expressed thoughout this analytical report research the business of KENCO taboratories. 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

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Report Date: 10-MAR-09

Date Received in Lab: Wed Mar-04-09 05:03 pm

Project Manager: Brent Barron, II

	Lab Id:	326509-007	326509-008	326509-009	
Australia Donnard	Field Id:	MW-2	MW-7	MW-8	
Analysis Requesied	Depth:				
	Matrix:	WATER	WATER	WATER	
	Sampled:	Mar-03-09 14:00	Mar-03-09 15:00	Mar-03-09 16:00	
BTEX by FPA 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 use. The interpretations and results expressed throughout this analytical report present the best, dugment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no varianty 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.
- * Outside XENCO's scope of NELAC Accreditation.

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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lanc, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Project Name: Lovington Gathering WTI

Work Orders: 326509,

Project ID: 2006-142

Lab Batch #: 751977

Sample: 526053-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 03/09/09 22:21	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-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:

Matrix: Water

Units: mg/L	Date Analyzed: 03/09/09 22:41	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		0.0291	0.0300	97	80-120	

Lab Batch #: 751977

Sample: 526053-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 03/09/09 23:37	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		0.0265	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 F	RECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0268	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	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0262	0.0300	87	80-120	
4-Bromofluorobenzene		0.0266	0.0300	89	80-120	

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 * A / B

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 326509,

Project ID: 2006-142

Lab Batch #: 751977

Sample: 326509-003 / SMP

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 01:45	SU	RROGATE RE	ECOVERY S	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		i
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 Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 02:15	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		0.0267	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	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	17. 19.	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	St	RROGATE R	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	V	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0260	0.0300	87	80-120	

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 * A / B

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 326509,

Project ID: 2006-142

Lab Batch #: 751977

Sample: 326509-008 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 04:58	SU	RROGATE R	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

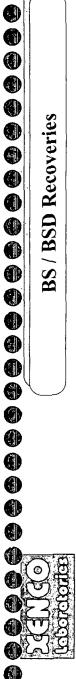
Matrix: Water

Units: mg/L	Date Analyzed: 03/10/09 05:20	SU	RROGATE R	RECOVERY	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		0.0269	0.0300	90	80-120	

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution







Project Name: Lovington Gathering WTI

Work Order #: 326509

Lab Batch ID: 751977 Analyst: ASA

Sample: 526053-1-BKS

Date Prepared: 03/09/2009

Batch #: 1

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

Matrix: Water

Units: mg/L		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	λ	
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]	[0]	iα	[E]	Result [F]	[5]				
Benzene	QN	0.1000	0.1086	601	0.1	0.1084	108	0	70-125	25	
Toluene	QN	0.1000	0.1047	105	0.1	0.1072	101	2	70-125	25	
Ethylbenzene	ND	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	811	9	70-131	25	
o-Xylene	ND	0.1000	0.1054	105	0.1	0.1123	112	9	71-133	25	

Environmental Lab of Texas	tal La	oof Te	Xax	·n (•			126 04	00 VV 888a,	CHAIN OF 12600 West F20 Enst Odessa, Toxas 79765	IN OF East 79765	500	1001	REC	ONC.	ONE	Pho Fro	(S/S F	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 1-20 East ras 79765 Fax: 432-453-1713	SS7 800 713			
Project Manager	Camille Bryant	yant (Cea	A	James James									Projec	Many	5	ingto	Gatt	Project Name: Lovington Gathering WTI	ΕM			
Company Name	Besin Envi	Basin Environmental Service Technologies, LLC	Ace Jec	hnoto	ies, LLC	-				C. Caracian				ã.	ofect	500	Project #: 2006-142						ı
Company Address. P. O. Box 301	S. P O. Box 3	101												Proje	oct Lo	Les	Project Loc: Lea County, NM	N. N.					١
City/State/Zip:	Lo-ington, NM 88260	NW 88260													õ	PA	PO#: PAA- J. Henry	ξ					١
Telephone No:	(575)605-7210	210				Fax No:	왝	05) 3((505) 365-1429				ge .	Report Format:	mat	×	X Standard	g	TRAP	75	Ó	NPDES	
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	MW-6				3/3/2009	1000	7	×	×			-	ΜS						×				×
	MW-9				3/3/2009	1100		×	×				<u>₹</u>					\dashv	×			-	×
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	MW-3			7	3/3/2009	1300	2	×	×				δŠ					-	×		1	-	×
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	MW-8		+	1	3/3/2009	1600	7	×	×	\downarrow	#	+	Š	+	\pm	1	7	-	×	\pm	1	7	×
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Environmental Lab of Texas

		Variance/ Corrective Action Re		e Log-In	1	
Client.	Torsi	n Env. Plains				
Date/ Time:	3.4.	· · · · · · · · · · · · · · · · · · ·				
Lab ID#	3	26509				
Initials.		Ćλι_				
		Sample Receipt	Chacklist			
		odnipie Recorpi	. Oncomist		Cli	ent Initials
#1 Tempera	ture of contai	ner/ cooler?	Yes	No	20 .0	
		geod condition?	Yes	No		
		on shipping container/ cooler?	Yes	No	(Not Present	
		on sample bottles/ container?	(Yes)	Nó	Not Present	
#5 Chain of	Custody pres	ent?	(Yes)	No		
#6 Sample	instructions co	omplete of Chain of Custody?	(es)	No		
		ed when relinquished/ received?	(Yes)	No		
#8 Chain of	Custody agre	es with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Containe	er label(s) legi	ble and intact?	Yes	No	Not Applicable	
#10 Sample	matrix/ prope	erties agree with Chain of Custody?	(Yes)	No		
	ers supplied t		Yes)	No		
#12 Sample	s in proper co	intainer/ bottle?	(Yes)	No	See Below	
#13 Sample	s properly pre	eserved?	(Yes)	No	See Below	
#14 Sample	bottles intact	?	(Yes)	No		
#15 Preserv	rations docum	ented on Chain of Custody?	(Yes	No		
#16 Contain	iers documen	ted on Chain of Custody?	(Yes)	No		
		ount for indicated test(s)?	(Yes	No	See Below	
#18 All sam	ples received	within sufficient hold time?	(Yes	No	See_Below	
#19 Subcon	tract of samp	le(s)?	Yes	No	(Not Applicable)	
		rero headspace?	(Yes)	No	Not Applicable	
		Variance Docu	mentation			
Contact:		Contacted by:			Date/ Time:	
Regarding:						
Corrective A	ction Taken:					

Check all tha	at Apply:	See attached e-mail/ fax Client understands and wo Cooling process had begur	•		•	

Analytical Report 335947

for

1

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

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

Lovington Gathering WTI

Sample Id	Matrix	Date Collected	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

CASE NARRATIVE



1

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lovington Gathering WTI

Project ID: 2006-142 Work Order Number: 335947 Report Date: 24-JUN-09 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 1d: 2006-142



Project Name: Lovington Gathering WTI

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

Brent Barron II 24-JUN-09 Report Date: Project Manager.

Lab Id: 335947-001 335947-002 335947-002 335947-003						rroject Manager: Dicin Dallon, 11	Sicili Dalloll, 11		
Autysis Requested Field Id. MW-1 MW-2 MW-3 N Depth: Depth: WATER		Lab Id:	335947-001	335947-002	335947-003	335947-004	335947-005	335947-006	90
Marrix: WATER Mun-18:09 10:00 Jun-18:09	And Lorin Donnard	Field Id:	MW-1	MW-2	MW-3	MW-4	MW-5	9-MW	
FEX by EPA 8021B Extracted: Jun-13-09 16:00 Jun-13-09 16:00 <t< td=""><th>Amaiysis Requested</th><th>Depth:</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Amaiysis Requested	Depth:							
TEX by EPA 8021B Extracted: Lun-18-09 09:00 Jun-18-09 09:30 Jun-18-09 10:00 Jun-18-09 10:00 <t< td=""><th></th><th>Matrix:</th><td>WATER</td><td>WATER</td><td>WATER</td><td>WATER</td><td>WATER</td><td>WATER</td><td>ر.</td></t<>		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	ر.
TEX by EPA 8021B		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	1:30
Analyzed: Jun-23-09 17:35 Jun-23-09 17:56 Jun-23-09 18:18 Jun-23-09 18:18<	RTEX by FPA 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	90:9
UnityRL: RLL RL		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	9:22
ND 0.0001 0.0007 0.0010 0.0031 0.0010 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0010 N		Units/RL:				mg/L RL	mg/L RL	mg/L	R
ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0010	Benzene		ND 0.0010	0.0097 0.0010	0.0031 0.0010	ND 0.0010	ND 0.0010	0.0044 0.0010	0.0010
0100.0 UN 0.0010 UN 0.00010 UN 0.00010 UN 0.00010 UN 0.00010 UN 0.00010 UN 0.00010 UN 0.0010 UN	Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND	ND 0.0020
ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0020 ND 0.0010 ND 0.0	Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND	ND 0.0010
ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010	m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND	0.0020
ND 0.0010 ND 0.0010 ND 0.0010	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	0100.0 UN	ND	0.0010
ND 0.0010 0.0097 0.0010 0.0031 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	0.0010

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and entire expressed throughout this analytical report present the best, diggerent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data breichy 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



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	
Analysic Dogwood	Field Id:	MW-7	MW-8	MW-9	
Anniyas Nequesicu	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		0.00570 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		0.0899 0.0010	0.0093 0.0010	ND 0.0010	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and reputs expressed throughout this analytical report present the kest judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data breight 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 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.
- 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

Work Orders: 335947,

Project ID: 2006-142

Lab Batch #: 763334

Sample: 532422-1-BKS / BKS

Batch: 1 Matrix: Water

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

Lab Batch #: 763334

Sample: 532422-1-BSD / BSD

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 15:47	SU	RROGATE R	RECOVERY	STUDY	_
втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1.4-Difluorobenzene		0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0316	0.0300	105	80-120	

Lab Batch #: 763334

Sample: 532422-1-BLK / BLK

Batch:

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
1,4-Diffuorobenzene	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 17:3		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	Attacytes	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 Da	te Analyzed: 06/23/09 17:56	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by E		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	*

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 335947,

Project ID: 2006-142

Lab Batch #: 763334

Sample: 335947-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 18:18	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	0.0251	0.0300	84	80-120		
4-Bromofluorobenzene	0.0213	0.0300	71	80-120	*	

Lab Batch #: 763334

Sample: 335947-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/23/09 18:39	su	RROGATE R	RECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	11		[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: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/23/09 19:01	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	0.0258	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 Date Analyzed: 06/23/09 19:22	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	0.0259	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	SURROGATE RECOVERY STUDY				
вте	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0261	0.0300	87	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 335947,

Project ID: 2006-142

Lab Batch #: 763334

Sample: 335947-008 / SMP

Batch: | Matrix: Water

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

Lab Batch #: 763334

Sample: 335947-009 / SMP

Batch: | Matrix: Water

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

Lab Batch #: 763334

Sample: 335947-007 S / MS

Batch: 1 M

1 Matrix: Water

Units: mg/L	Date Analyzed: 06/24/09 00:01	SU	RROGATE F	RECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0310	0.0300	103	80-120	

Lab Batch #: 763334

Sample: 335947-007 SD / MSD

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 06/24/09 00:23	SU	RROGATE R	RECOVERY	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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution







Project Name: Lovington Gathering WTI

Work Order #: 335947

Analyst: ASA

Sample: 532422-1-BKS Lab Batch ID: 763334

Date Prepared: 06/23/2009

Batch #: 1

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

Matrix: Water

Units: mg/L		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	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		[B]	[C]	[0]	[E]	Result [F]	<u>5</u>				
Benzene	ND	0.1000	0.1067	107	0.1	0.1046	105	2	70-125	25	
Toluene	ND	0.1000	0.1040	104	0.1	6101.0	102	2	70-125	25	
Ethylbenzene	ND	0.1000	0.1098	011	0.1	0.1083	108	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.2200	011	0.2	0.2170	601		70-131	25	
o-Xylenc	ND	0.1000	0.1041	104	0.1	0.1035	104	1	71-133	25	

Relative Perecnt 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 #: 335947

Lab Batch ID: 763334

Date Analyzed: 06/24/2009

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

Analyst: ASA Batch #:

Project ID: 2006-142

Matrix: Water

eporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	MAT!	RIX SPIR	KE DUPLICA'	TE RECO	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R (DI	Spike Added (E)	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits	Control Limits %RPD	Flag
Benzenc	0.0570	0.1000	0.1607	104	0.1000	0.1625	901	-	70-125	25	
Toluene	ND	0.1000	9060'0	16	0.1000	0.0916	92	_	70-125	25	
Ethylbenzene	QN	0.1000	0.0943	94	0.1000	0.0949	95	-	71-129	25	
m,p-Xylenes	0.0329	0.2000	0.2355	101	0.2000	0.2378	102	-	70-131	25	
o-Xylenc	QN	0.1000	0.0904	06	0.1000	0.0911	16	-	71-133	25	

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

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

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Environmental Lab of Texas

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Variance/ Corrective Action Rep	ort- Sample	e Log-In	•	
Olient. Plains / Plasin				
Date/ Time: 06-19-09 C 0840				
ab ID#: 3359 47				
initials: JMF				
Sample Receipt (Checklist			
				ient Initials
#1 Temperature of container/ cooler?	(Yes	<u>No</u>	1.6 °C	
2 Shipping container in good condition?	Yes	No	-	
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present>	
44 Custody Seals intact on sample bottles/ container?//ubel	Yes	No	Not Present	
5 Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	(Yes)	No		
7 Chain of Custody signed when relinquished/ 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?	(Yes)	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	
#13 Samples properly preserved?	(Yes')	No	See Below	
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Y.08-	No		
#16 Containers documented on Chain of Custody?	Yes	> No	<u> </u>	
#17 Sufficient sample amount for indicated test(s)?	(Yes	No	See Below	
#18 All samples received within sufficient hold time?	YES	No	See Sclow	
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	
Variance Docum Contact: Contacted by:	nentation		Date/ Time:	
Contacts by.			Date/ Time.	
Regarding:			·	
Corrective Action Taken:				
	·····	_		
		***************************************	·	

Check all that Apply: See attached e-mail/ fax				
Client understands and would	d like to proc	eed with	analysis	
Cooling process had begun s				
<u> </u>				
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Analytical Report 343328

for

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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,

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Brent Barron, II

Odessa Laboratory Manager

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

Certificate of Analysis Summary 343328 PLAINS ALL AMERICAN EH&S, Midland, TX

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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

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	Lab Id:	343328-001	343328-002	343328-003	343328-004	343328-005	343328-006	
Analysis Donnestod	Field Id:	MW-5	MW4	MW-6	6-WM	MW-1	MW-2	
naisan hay 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	Scp-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						
Benzene		ND 0.0010	ND 0.0010	0100.0 QN	0.9717 0.0100	ND 0.0010	0.0842 0.0010	01
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	0.0641 0.0200	ND 0.0020	ND 0.0020	20
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0100	ND 0.0010	ND 0.0010	10
m,p-Xylcncs		ND 0.0020	ND 0.0020	ND 0.0020	0.0867 0.0200	ND 0.0020	0.0083 0.0020	20
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	0.0422 0.0100	ND 0.0010	ND 0.0010	10
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	0.1289 0.0100	ND 0.0010	0.0083 0.0010	10
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	1.1647 0.0100	ND 0.0010	0.0925 0.0010	10
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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 hoper represent 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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Brent Barron, II Odessa Laboratory Manager



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



PLAINS ALL AMERICAN EH&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, Il

	Lab Id:	343328-007	343328-008	343328-009	
Analysis Donnetal	Field Id:	MW-8	MW-7	MW-3	
massanhau sistinuv	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		0100'0 QN	01000 ON	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 roport, 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 breeby 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

Work Orders: 343328,

Project ID: 2006-142

Lab Batch #: 771027

(1)

Sample: 536990-1-BKS / BKS

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 09:41	SU	RROGATE R	ECOVERY S	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		1	[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	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0342	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	
вте	X by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		!
1,4-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: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 13:22	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1.4-Difluorobenzene	0.0308	0.0300	103	80-120		
4-Bromofluorobenzene	0.0369	0.0300	123	80-120	*	

Lab Batch #: 771027

Sample: 343218-001 SD / MSD

Batch: |

Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 14:34	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		0.0372	0.0300	124	80-120	*	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 343328, Lab Batch #: 771027

Sample: 343328-001 / SMP

Project ID: 2006-142

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 09/03/09 15:48	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0274	0.0300	91	80-120		
4-Bromofluorobenzene	0.0162	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	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0274	0.0300	91	80-120		
4-Bromofluorobenzene		0.0163	0.0300	54	80-120	*	

Lab Batch #: 771027

Sample: 343328-003 / SMP

Batch: 1

Matrix: Water

Units: mg/L	ng/L Date Analyzed: 09/03/09 16:25 SURROGAT		03/09 16:25 SURROGATE RECOVERY S				
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1.4-Difluorobenzene	Analytes	0.0280	0.0300	93	80-120		
4-Bromofluorobenzene		0.0153	0.0300	51	80-120	*	

Lab Batch #: 771027

Sample: 343328-006 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 17:21	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes.		<u>}</u>	[D]			
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	SURROGATE RECOVERY STUDY				
вте	X 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	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 343328,

Project ID: 2006-142

Lab Batch #: 771027

Sample: 343328-008 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 17:57	709 17:57 SURROGATE RECOVERY S				
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			(1)		
1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0205	0.0300	68	80-120	*

Lab Batch #: 771027

Sample: 343328-009 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 09/03/09 18:16	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0248	0.0300	83	80-120		
4-Bromofluorobenzene		0.0175	0.0300	58	80-120	*	

Lab Batch #: 771296

Sample: 537136-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 14:52	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenzene		0.0303	0.0300	101	80-120		
4-Bromofluorobenzene		0.0329	0.0300	110	80-120		

Lab Batch #: 771296

Sample: 537136-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 15:11	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes				[D]			
1,4-Difluorobenzene		0.0308	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	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0133	0.0300	44	80-120	*

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 343328,

Project ID: 2006-142

Lab Batch #: 771296

Sample: 343328-005 / SMP

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 16:07	SU	RROGATE RI	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		0.0268	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	STUDY	
вте	X 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

l Matrix: Water

Units: mg/L	Date Analyzed: 09/05/09 22:34	SU	RROGATE RI	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			(5)		
1,4-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	Date Analyzed: 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	

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 343328

Lab Batch ID: 771027 Analyst: ASA

Sample: 536990-1-BKS

Date Prepared: 09/03/2009

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

Batch #: 1

Matrix: Water

Units: mg/L		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE 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	Bik. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	<u> </u>	亘	Ξ	Result [F]	<u>[5]</u>				
Вепденс	ND	0.1000	0.1023	102	0.1	8660'0	100	2	70-125	25	
Toluene	QN	0.1000	0.0982	86	0.1	0.0956	96	3	70-125	25	
Ethylbenzene	QN	0.1000	0.1093	601	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-Xylenc	ND	0.1000	0.1065	107	0.1	0.1040	104	2	71-133	25	

Analyst: ASA

Lab Batch ID: 771296

Date Prepared: 09/04/2009

Batch #: 1

Sample: 537136-1-BKS

Matrix: Water

Date Analyzed: 09/05/2009

Flag Limits %RPD Control 25 25 25 25 25 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 71-129 70-125 70-125 70-131 71-133 RPD 9 Blk. Spk 110 Dup. %R [G] 112 117 105 <u>10</u> Blank Spike Duplicate Result [F] 0.1047 0.1124 0.2333 0.1103 0.1006 Spike Added 0.2 0.1 0 0.1 0.1 Blank Spike %R [D] 105 110 103 94 86 0.2192 0.1025 Blank Spike Result [C] 0.0941 0.1048 0.0981 0.1000 0.2000 0.1000 0.1000 0.1000 Spike Added <u>B</u> Blank Sample Result ND ND ΩN ΩN ₹ ΝD BTEX by EPA 8021B Units: mg/L Analytes Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluene

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 #: 343328

Date Analyzed: 09/03/2009 Lab Batch ID: 771027

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

Batch #:

Matrix: Water

Project ID: 2006-142

ASA Analyst:

Flag Control Limits 25 25 25 25 25 Control Limits %R 70-125 70-125 71-129 71-133 70-131 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 9 7 Spiked Dup. %R [G] 107 102 110 114 86 Spiked Sample Result [F] Duplicate 0.0983 0.1073 0.1104 0.2288 0.1022 Spike Added 0.1000 0.1000 0.1000 0.2000 0.1000 Ξ Spiked Sample 001 103 <u>a</u> 95 92 107 Spiked Sample 0.0916 0.1034 0.0950 0.2147 0.0997 Result $\overline{\mathbf{c}}$ 0.1000 0.2000 Spike Added 0.1000 0.1000 0.1000 $[\mathbf{B}]$ Parent Sample Result $\overline{\mathbf{X}}$ S S S ΝΩ S BTEX by EPA 8021B Analytes Reporting Units: mg/L Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

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

Matrix: Water Analyst: Batch #:

Flag Limits %RPD Control 25 25 25 25 25 71-129 Control Limits %R 70-125 70-125 71-133 70-131 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % Spiked Dup. %R [G] 100 95 93 86 88 Spiked Sample Result [F] 0.1992 0.0954 0.0929 0.1715 0.0881 Spike Added 0.1000 0.1000 0.1000 0.2000 0.1000 ⊡ Spiked Sample Spiked
Result Sample
[C] %R 8 9 97 100 94 9960.0 0.0940 0.0904 0.2006 0.1737 Spike Added 0.1000 0.1000 0.1000 0.1000 0.2000 <u>B</u> Parent Sample Result 0.0738 <u>v</u> ď ND N_D S 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 $RPD = 200^*((C-F)/((C+F))$

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 13 of 15

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 11-20 East Ras 19768 Fax: 432-693-1713	Project Name: Lovington Gathering WTI	Project #: 2006-142	Project Loc: Les County, NA	PO #: PAA - 1. Henry	Report Format: X Standard [] TRRP [] NPDES	The Age of the Age of		Matth Carl	######################################	CHIQUIGE ELV ENIU BVH NOCTM RECI GUACORRIGO GUACORRIGO LIBH: 1X LI	X × ×	X X X	× x x x	× × ×	X X	X X X	× × × × × × × × × × × × × × × × × × ×	×	Sample Confinentia:	Date Time Labels on consumerical Cutton Cutt	Data Time Semple Hand Delivered C N N Semple Ward Delivered C N N N Semple Ward Rep N N N N N N N N N N N N N N N N N N N	pon Receipt. 5.1
CHAIN O 12600 West I-20 East Odesse, Toxes 19765	10				Fax No: (575) 398-1429	e-mail: cstanley@basinenv.com		Preservation & a of Containers	ed Containers	Time Sa Heor Hosta, of Heor Hosta, o	0830 3 x X	0915 3 X X	0950 3 X X	1025 3 X \	1105 3 X X	×	1205 3 X X	3 ×				o Jam
(as	PAGE 01 OF	ce Technologies, LLC			The state of the s	CL Raykens				inniga8 Bolbn3 Bolbn3	8/1/2009	9/1/2009	9/1/2009	6/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009		Time Received by.	Ima Received by.	Time Received by ELOT
Environmental Lab of Texas	Project Manager: Curt Stanley	Company Name Basin Environmental Service Technologies, LLC	Company Address: 2800 Plains Hwy	City/State/Zip: Lovington, NM 88250	Telephone No: (575) 441-2244	Sampler Signature, AD Steel Lon	0 0	* 243378		FIELD CODE	MW.5	MW-4	WW-6	MW-9	MW-1	MW-2	MW-8	MW-3	Special Instructions:	Jake 19 July	(b) C Date /	id by.
Env		-	_	J			(lab use only)	ORDER #:	(Ajlio 69n qa	M) # 8A.1	ã	20	03	5	S	8	5 6	90	Special In	別と	Reinquisher	Refragashed by

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Direct:	Plains / Basin Env.				
	9309 13:50				
Date/ Time					
Lab ID # :	343328				
Initials.	aL				
	Sample Receipt	Checklist			
#1 Temperatur	e of container/ cooler?	⟨⟨es⟩	No	T 5 T	Client Initials
	ntainer in good condition?	To Ses	No		
	als intact on shipping container/ cooler?	Yes	No	(Not Present)	
	als intact on sample bottles/ container?	Yes	No	Not Present	
	istody present?	(Yes)	No		
	ructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Ct	istody signed when relinquished/ received?	(Yes)	No		
	istody agrees with sample label(s)?	(Yes)	No	ID written on Cont./	Lid
	abel(s) legible and intact?	(Yes)	No	Not Applicable	
	atrix/ properties agree with Chain of Custody?	Yes	No		
	supplied by ELOT?	Yes	No		
	proper container/ bottle?	(Yes)	No	See Below	
	roperly preserved?	Yes	No	See Below	
#14 Sample bo		(Yes)	No		
	ons documented on Chain of Custody?	(Yes)	No	-	
	documented on Chain of Custody?	(Yes)	No		
	sample amount for indicated test(s)?	Yes	No	See Below	
	s received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontra		Yes	No_	Not Applicable	
#20 VOC sam	oles have zero headspace?	Yes	No	Not Applicable	
	Variance Docu	mentation			
Contact:	Contacted by:			Date/ Time:	
Regarding:				- Annicossis or many control of the same o	
Corrective Actio	n Taken:		***************************************	——————————————————————————————————————	
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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 (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)





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

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MW-9

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**(1)** 



### **Sample Cross Reference 344353**



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

Lovington Gathering WTI

Sample Id **Date Collected** Matrix

Sep-10-09 09:40

Lab Sample Id 344353-001

W

Sample Depth





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.



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

# Certificate of Analysis Summary 344353

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Fri Sep-11-09 04:35 pm Report Date: 16-SEP-09

Project Manager: Brent Barron, II

	Lab Id:	344353-001	
Analysis Pognastad	Field Id:	MW-9	
Thursday Meynesicu	Depth:		
	Matrix:	WATER	
	Sampled:	Scp-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	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
o-Xylene		ND 0.0100	
Total Xylenes		0.0537 0.0100	
Total BTEX		1.892 0.0100	

This analytical roport, and the entire data package it represents, has been made for your exclusive and confidential use. The interpraterations and results expressed introughout this manyitied inteper temperation 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

Work Orders: 344353,

**Project ID:** 2006-142

Lab Batch #: 772597

Sample: 537880-1-BKS / BKS

Batch: | Matrix: Water

Units: mg/L Date Analyzed: 09/15/09 22:37	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	0.0302	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 <b>SU</b>	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		1	[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

l Matrix: Water

Units: mg/L	Date Analyzed: 09/15/09 23:32	SU	RROGATE RI	ECOVERY	STUDY	
	EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
An	alytes			IPI		
1,4-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

<b>Units:</b> mg/L <b>Date Analyzed:</b> 09/16/09 02:38	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-Difluorobenzenc	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	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 344353,

**Project ID: 2006-142** 

Lab Batch #: 772597

**Sample:** 344338-003 SD / MSD

Batch: 1 Matrix: Water

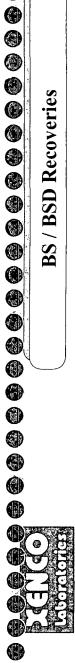
Units: mg/L Date Analyzed: 09/16/09 06:00	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0351	0.0300	117	80-120	

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution







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 Flag

Limits %RPD Control 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 0 Blk. Spk Dup. [G] Ξ 901 101 112 901 Spike Duplicate Result [F] 0.1110 0.1064 0.1062 0.1007 0.2248 Blank Spike Added 0.1 0.2  $\Xi$ 0.1 0. 0.1 Blank Spike %R [D] 2 112 107 107 101 0.1012 0.2246 0.1069 Blank Spike Result 0.1069 0.1095  $\overline{\mathbf{c}}$ 0.1000 0.1000 0.2000 Spike Added 0.1000 0.1000 <u>8</u> Sample Result Blank Ω S Ð S ₹ S 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)







## Project Name: Lovington Gathering WTI

Work Order #: 344353

Lab Batch ID: 772597

Date Analyzed: 09/16/2009

QC-Sample ID: 344338-003 S

Matrix: Water Batch #:

**Project ID: 2006-142** 

Analyst: ASA **Date Prepared:** 09/15/2009

Reporting Units: mg/L		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	MAT	RIX SPIF	KE DUPLICA	TE RECO	VERY 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
Всп2спс	ND	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	76	0.1000	0.1103	110	13	71-129	25	
m,p-Xylenes	QN	0.2000	0.1977	66	0.2000	0.2248	112	13	70-131	25	
o-Xylcnc	ND	0.1000	0.0930	93	0.1000	0.1066	107	14	71-133	25	

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

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

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### Environmental Lab of Texas

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Variance/ Corrective A	otion Report- Sample	e Log-Ir	1	
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Date/ Time: 9:11:09 16:35	W. Jenus, de			
ab 10 #: 34 4 353				
nitials' QV	MANAGAM AND			
*				
Sample	Receipt Checklist			
	<del></del>			Client Initials
#1 Temperature of container/ cooler?	CYes>	No	3.6	C
#2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler		No	Not Present	
44 Custody Seals intact on sample bottles/ container		No	Not Present	_
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody		No		
47 Chain of Custody signed when relinquished/ received.		No		
8 Chain of Custody agrees with sample label(s)?	(Yes)	No	10 written on Cont./ Li	ď
9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Cu		No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	(Yes)	No	See Below	
#14 Sample bottles infact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?		No		
#16 Containers documented on Chain of Custody?	(Yès)	No	<u> </u>	
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	<del></del>
#18 All samples received within sufficient hold time?	(Yes)	No		<del></del>
#19 Subcontract of sample(s)?		No	See-Below	
	Yes	***************************************	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	
Varian	ce Documentation			
· ·				
Contact: Contacted by:			Date/ Time	
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### **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 (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)





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



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



Project Name: Lovington Gathering WTI

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

Report Date: 09-OCT-09

Brent Barron, II Project Manager:

	Lab Id:	347203-001	
Analysis Doguestad	Field Id:	MW-9	
unicon ved nesten	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	
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 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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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

Work Orders: 347203,

**Project ID:** 2006-142

Lab Batch #: 775966

Sample: 539833-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 10/06/09 20:17	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	0.0300	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 20:3	8 SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	0.000	0.0200	<u> </u>	20.120	
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	Date Analyzed: 10/06/09 21:20	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		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	

Lab Batch #: 775966

Sample: 347203-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 10/06/09 23:27	SU	RROGATE R	ECOVERY	STUDY	
вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes				L	
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: 1

Matrix: Water

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

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 347203,

**Project ID: 2006-142** 

Lab Batch #: 775966

Sample: 346642-006 SD / MSD

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 10/07/09 06:07	SU	RROGATE R	ECOVERY	STUDY	
ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		ı
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: 1 Matrix: Water

Units: mg/L	Date Analyzed: 10/07/09 09:09	SU	RROGATE R	RECOVERY	STUDY	
	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	Marytes	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 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	0.0301	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 I	RECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amour Found [A]	•	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0290		97	80-120	ļ

Lab Batch #: 776140

Sample: 347203-001 / DL

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 10/07/09 19:13	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		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0284	0.0300	95	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 347203,

**Project ID: 2006-142** 

Lab Batch #: 776140

Sample: 347183-001 S / MS

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 10/07/09 19:55.	SU	RROGATE R	RECOVERY	STUDY	
вте	X by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	Analytis	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:

Matrix: Water

Units: mg/L	Date Analyzed: 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			101		
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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



## BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Sample: 539833-1-BKS Lab Batch ID: 775966 Analyst: ASA

Work Order #: 347203

Date Analyzed: 10/06/2009 **Project ID: 2006-142** 

Matrix: Water

Batch #:

Date Prepared: 10/06/2009

Units: mg/L		BLANI	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE F	<b>ECOVE</b>	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>B</u> ]	[C]	ē	亘	Result [F]	<u> </u>			-	
Benzene	ND	0.1000	6160'0	92	0.1	0.0915	92	0	70-125	25	
Toluene	QN	0.1000	0.0903	06	0.1	0.0903	06	0	70-125	25	
Ethylbenzene	ND	0.1000	0.0917	92	0.1	0.0921	92	0	71-129	25	
m,p-Xylcnes	ND	0.2000	0.2002	100	0.2	0.2013	101	1	70-131	25	
o-Xylene	ND	0.1000	0.0975	86	1.0	0.0983	86	1	71-133	25	

Analyst: ASA

Lab Batch ID: 776140

**Date Prepared:** 10/07/2009

Batch #: 1

Sample: 539963-1-BKS

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. G.R. 103 94 93 95 66 Duplicate Result [F] 0.0945 0.2069 Blank Spike 0.0942 0.0928 0.0991 Spike Added 0.2 0.1 0.1  $\Xi$ 0.1 0.1 Blank Spike %R [D] 103 93 92 94 66 Blank Spike Result 0.0918 0.0940 0.2064 0.0990 0.0931  $\overline{\mathbf{c}}$ 0.1000 0.1000 0.1000 0.2000 0.1000 Spike Added <u>B</u> Sample Result Blank ₹ ND Ð ND δ ND 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)]







# Project Name: Lovington Gathering WTI

Work Order #: 347203

Lab Batch ID: 775966

Date Analyzed: 10/07/2009

**QC-Sample ID:** 346642-006 S Date Prepared: 10/06/2009

Batch #:

Matrix: Water

**Project ID: 2006-142** 

Analyst: ASA

BTEX by EPA 8021B Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sampl								1 1		
	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene ND 0	0.1000	0.0827	83	0.1000	0.0900	06	-	70-125	25	
Toluenc ND 0	0.1000	0.0817	82	0.1000	0.0888	68	∞	70-125	25	
Ethylbenzene ND 0	0.1000	0.0818	82	0.1000	0.0893	68	6	71-129	25	
m,p-Xylenes	0.2000	0.1784	68	0.2000	0.1951	86	6	70-131	25	
o-Xylene ND 0	0.1000	0.0859	98	0.1000	0.0949	95	10	71-133	25	

QC-Sample ID: 347183-001 S Date Prepared: 10/07/2009 Date Analyzed: 10/07/2009 Lab Batch ID: 776140

Analyst: ASA

Matrix: Water

Batch #:

Reporting Units: mg/L		X	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	UX SPIK	E DUPLICA	TE RECO	VERY S	STUDY		
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]	[0]	[D]	Added [E]	Result [F]	%R [G]	%	% <b>R</b>	%RPD	)
Benzene	QN	0.1000	0.0800	08	0.1000	0.0802	80	0	70-125	25	
Tolucne	QN	0.1000	0.0795	80	0.1000	96200	80	0	70-125	25	
Ethylbenzene	QN	0.1000	0.0802	08	0.1000	0.0801	80	0	71-129	25	
m,p-Xylenes	QN	0.2000	0.1743	87	0.2000	0.1728	98	1	70-131	25	
o-Xylene	QN	0.1000	0.0844	84	0.1000	0.0836	84	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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	Project Manager.	Curt Stanley	l		PAGE 01 OF	10			48/40					۵	olect )	tame	é	ngtor	Gat	Project Name: Lovington Gathering WTI	\$				1
	Company Name	Basin Environmental Service Technologies, LLC	rylce Te	chnolo	jes, LLC			***************************************	***************************************			1			ā	₩ 15	8	Project #: 2006-142							1
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	City/State/Zip:	Lovington, NM 88260		***************************************			1				1					8	Z.	PO #: PAA - J. Henry	À				1		1
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### Environmental Lab of Texas

Variance/ Corrective Action Re	port- Sample	a Log-ir	1		
CHERL BOSIN ENV. /Plains					
Date/ Time 10 - 6 - 09 9:13					
ab ID#: 3477.03					
nitials: AL					
· ·	Ob 1-15-4				
Sample Receipt	Checknst			Clie	nt Initials
11 Temperature of container/ cooler?	(Yes)	No	5, 1	° Cl	
#2 Shipping container in good condition?	(Yes)	No			
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Prese	ent>	
44 Custody Seals Intact on sample bottles/ container?	(Yes')	No	Not Prese		
#5 Chain of Custody present?	res	No			
#6 Sample instructions complete of Chain of Custody?	(Yes)	No	<del> </del>		
7 Chain of Custody signed when relinquished/ received?	(Yes)	No	_		
#8 Chain of Custody agrees with sample label(s)?	∕ves.	No	ID written on C	ont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applic	<del></del>	
#10 Sample matrix/ properties agree with Chain of Custody?	res	No	)		
#11 Containers supplied by ELOT?	(Yes)	No			
#12 Samples in proper container/ bottle?	(Yes)	No	See Belo	774	
#13 Samples properly preserved?	(Yes)	No	See Beld		
#14 Sample bottles intact?	Yes	No	1 000 000	-	
#15 Preservations documented on Chain of Custody?	(Yes)	No	<del> </del>		
#16 Containers documented on Chain of Custody?	(Yes)	No	<del> </del>		
#17 Sulficient sample amount for indicated test(s)?	Fres	No	See Belo		
#18 All samples received within sufficient hold time?	(Yes)	No	See Beld		
#19 Subcontract of sample(s)?	Yes.	No	-	<del></del>	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applic		
#20 VOC samples have zero headspace?	(Cles)	110	Not Applic	able	
Variance Docu	mentation				
Contacted by:			Date/ Time	<u> </u>	
Regarding.					
regarding.			***************************************		
					***************************************
Corrective Action Taken.					
***************************************					
Chack all that Apply: See attached e-mail/ fax					
Check all that Apply. See attached e-mail fax  Client understands and wou	id like to proc	eed with	analysis		
Cooling process had begun					

### **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 (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)

Page 1 of 38

Final Ver. 1.000





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.

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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 Depth

Sample Id

MW-10

0

1

Matrix **Date Collected** 

W Nov-02-09 09:00 Lab Sample Id 350679-001

Version: 1,014

Page 3 of 38

Final Ver. 1.000





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

Page 4 of 38 Final Ver. 1.000

### 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

Page 5 of 38 Final Ver. 1.000



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

PLAINS ALL AMERICAN 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 1d:	350679-001	100	
Analysis Dogwood	Field Id:	MW-10	0	
Amaiysis Nequesica	Depth:			
	Matrix:	WATER	<b>~</b>	
	Sampled:	Nov-02-09 09:00	00:60	
Alkalinity by SM2320B	Extracted:			
	Analyzed:	Nov-03-09 15:25	15:25	
	Units/RL:	mg/L	RL	
Alkalinity, Bicarbonate (as CaCO3)		126	4.00	
Alkalinity, Total (as CaCO3)		126	4.00	
Alkalinity, phenolphthalein		QN	4.00	
Alkalinity, Carbonate (as CaCO3)		ON	4.00	
Determination of Inorganic Anions In	Extracted:			
Water By Ion	Analyzed:	Nov-04-09 11:19	11:19	
	Units/RL:	mg/L	RL	
Fluoride		9.27		
Chloride		24.9		
Sulfate		64.1	5.00	
Nitrate as N		2.14	2.14 0.500	
Ortho-Phosphate		Q.	2.50	

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, 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

Version: 1.014

Since 1990

Odessa Laboratory Manager Brent Barron, II

Page 6 of 38

Final Ver. 1.000



PLAINS ALL AMERICAN 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

		(m)	
	Lab Id:	350679-001	
Andreic Dogwood	Field Id:	MW-10	
Junifyly Weynesten	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		0100 806:0	
Arsenic		0.007 0.002	
Barium		0.134 0.005	
Boron		0.397 0.010	
Cadmium		ND 0:001	
Chromium			
Cobalt			
Copper			
Iron			
Lead		ND 0.002	
Manganese		0.017 0.003	
Molybdenum			
Nickel		0.027 0.005	
Sclenium			
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	
Метситу		0.0001 0.0001	

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Page 7 of 38



# 

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lovington Gathering WTI

Date Received in Lab: Tue Nov-03-09 10:22 am

Brent Barron, II Report Date: 11-NOV-09 Project Manager:

	Lab Id:	350679-001	_		
Acontinuis Dogwood	Field Id:	MW-10			4 - 1
naisanhau sistinuv	Depth:				
	Matrix:	WATER			
	Sampled:	Nov-02-09 09:00	00:		
Metals per ICP by SW846 6010B	Extracted:				
	Analyzed:	Nov-05-09 13:02	3:02		
!	Units/RL:	mg/L	RL		
Calcium		76.5	2.50		
Magnesium		13.6	0.250		
Potassium		QN	12.5		
Sodium		33.3	12.5		

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Page 8 of 38

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PLAINS ALL AMERICAN 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		0	
Analysis Reauested	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			
Acenaphthene		ND 0.005			
Acenaphthylene		ND 0.005			
Aniline (Phenylamine, Aminobenzene)		ND 0.020			
Anthracene		ND 0.005			
Benzo(a)anthracene		ND 0.005			
Benzo(a)pyrene		ND 0.005			
Benzo(b)fluoranthene		ND 0.005			
Benzo(k)fluoranthene		ND 0.005			
Benzo(g,h,i)perylene		ND 0.005			
Benzoic Acid		ND 0.030			
Benzyl Butyl Phthalatc		ND 0.005			
bis(2-chlorocthoxy) methane		ND 0.010			
bis(2-chlorocthyl) ether		ND 0.010			
bis(2-chloroisopropyl) ether		ND 0.010			
bis(2-cthylhcxyl) phthalate		ND 0.005			
4-Bromophenyl-phenylether		ND 0.010			
4-chloro-3-methylphenol		ND 0.010			
4-Chloroaniline		ND 0.020			
2-Chloronaphthalene		ND 0.010			
2-Chlorophenol		ND 0.010			
4-Chlorophenyl Phenyl Ether		ND 0.010			
Chrysene					
Dibenz(a,h)anthracene		ND 0.005			
Dibenzofuran		ND 0.010			
di-n-Butyl Phthalatc		ND 0.005			

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Page 9 of 38



PLAINS ALL AMERICAN 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 Reanested	Field Id:	MW-10
mais a mais and a mais a	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-Dichlorobenzenc		ND 0.010
3,3-Dichlorobenzidine		ND 0.010
2,4-Dichlorophenol		ND 0:010
Dicthyl 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
Fluorenc		ND 0.005
Hexachlorobenzene		ND 0.010
Hexachlorobutadiene		
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		
3&4-Methylphenol		ND 0.010
Naphthalene		ND 0.005

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Page 10 of 38



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

Certificate of Analysis Summary 350679

PLAINS ALL AMERICAN 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 Dogwood	Field Id:	MW-10
Anaiysis nequesied	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		0.010 ND 0.010
N-Nitrosodi-n-Propylamine		ND 0.010
N-Nitrosodiphenylamine		ND 0.010
Pentachlorophenol		ND 0.010
Phenanthrene		ND 0.005
Phenol		ND 0.010
Pyrene		ND 0.005
Pyridine		ND 0.010
1,2,4-Trichlorobenzene		0100 QN
2,4,5-Trichlorophenol		ND 0.010
2,4,6-Trichlorophenol		0100 QN

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Odessa Laboratory Manager

Page 11 of 38



Certificate of Analysis Summary 350679

PLAINS ALL AMERICAN 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 Ronnostod	Field Id:	MW-10
Timity is treducated	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
Chlorobenzene		ND 0.005
Chloroethane		ND 0.010
Chloroform		ND 0.005
Methyl Chloride		ND 0.010
2-Chlorotoluene		ND 0.005
4-Chlorotoluene		ND 0.005
p-Cymene (p-Isopropyltoluene)		ND 0.005
Dibromochloromethane		ND 0.005
1,2-Dibromo-3-Chloropropanc		ND 0.005
1,2-Dibromoethane		ND 0.005
Methylene bromide		ND 0.005
1,2-Dichlorobenzene		ND 0.005
1,3-Dichlorobenzene		ND 0.005
1,4-Dichlorobenzene		ND 0.005

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Odessa Laboratory Manager Brefit Barron, II

Page 12 of 38



# Certificate of Analysis Summary 350679

PLAINS ALL AMERICAN 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:	01-MM	
Analysis Requested	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		ND 0.005	
1,1-Dichloroethene		ND 0.005	
cis-1,2-Dichlorocthylene		ND 0.005	
trans-1,2-dichloroethylene		ND 0.005	
1,2-Dichloropropane		ND 0.005	
1,3-Dichloropropanc		ND 0.005	
2,2-Dichloropropane		ND 0.005	
1,1-Dichloropropene		]	
cis-1,3-Dichloropropene		ND 0.005	
trans-1,3-dichloropropenc		ND 0.005	
Ethylbenzene		ND 0.005	
Hexachlorobutadiene		ND 0.005	
isopropylbenzene		ND 0.005	
Methylene Chloride		ND 0.005	
Naphthalene		ND 0.010	
n-Propylbenzene		ND 0.005	
Styrene		ND 0.005	
1,1,1,2-Tetrachloroethane			
1,1,2,2-Tetrachloroethane		ND 0.005	1.000
Tetrachloroethylene		ND 0.005	
Toluenc		ND 0.005	
1,2,3-Trichlorobenzene		ı	
1,2,4-Trichlorobenzene		ND 0.005	

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Page 13 of 38





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:

Analysis Requested         Field Id:         MW-10           Depth:         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 14:05           L1,2-Trichlorocthanc         ND 0.005           I,1,2-Trichlorocthanc         ND 0.005           Trichlorocthanc         ND 0.005           Trichlorocthanc         ND 0.005           Trichlorocthanc         ND 0.005           Trichlorocthylenc         ND 0.005           Trichlorophoromethanc         ND 0.005           1,2,3-Trichlorophoromethanc         ND 0.005           1,2,4-Trimethylbenzenc         ND 0.005           1,3,5-Trimethylbenzenc         ND 0.005           O-Xylenc         ND 0.005		Lab Id:	350679-001
Depth:   Depth:   Matrix:   Sampled:   Sampled:   Sampled:   Sampled:   COAs by SW-846 8260B   Extracted:   Units/RL:   Unit	Analysis Donnostod	Field Id:	MW-10
Matrix:  Sampled: Sampled: Sampled: OAs by SW-846 8260B  Extracted: Analyzed: Units/RL: ylene oromethane oromethane hylbenzene hylbenzene	Anaiysis Neynesieu	Depth:	
OAs by SW-846 8260B Extracted: UB: T104704295-08-TX Analyzed: Orocthanc orocthanc oromethanc oromethanc oromethanc oromethanc hylbenzenc hylbenzenc		Matrix:	WATER
OAs by SW-846 8260B  UB: T104704295-08-TX  Analyzed: Units/RU: Uni		Sampled:	Nov-02-09 09:00
UB: T104704295-08-TX Analyzed: Units/RL: Drocthanc Syche oromethanc oromethanc hylbenzenc hylbenzenc			Nov-05-09 14:05
rroethanc rocthanc ylene oromethanc oromethanc ropropanc hylbenzene			Nov-05-09 15:29
orocthanc ylene oromethane oromethane oropropane hylbenzene			mg/L RL
ylcne oromethane oromethane inylbenzene inylbenzene	richloroethane		ND 0.005
ylene oromethane oropropane hylbenzene hylbenzene	richloroethane		ND 0.005
oromethane oropropane hylbenzene hylbenzene	roethylene		ND 0.005
oropropane hylbenzene hylbenzene	rofluoromethane		ND 0.005
hylbenzene	richloropropanc		ND 0.005
hylbenzene	rimethylbenzene		ND 0.005
	rimethylbenzene		ND 0.005
	ne		ND 0.005
	dene		ND 0.010
Vinyl Chloride ND 0.002	Chloride		ND 0.002

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Page 14 of 38

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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



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 350679,

**Project ID: 2006-142** 

Lab Batch #: 780919

Sample: 542398-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/05/09 13:34	SU	RROGATE R	RECOVERY	STUDY	
SVOAs by SW-846 8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			121		
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

Units: mg/L	Date Analyzed: 11/05/09 14:12	SU	RROGATE R	ECOVERY :	STUDY	-
	by SW-846 8270C	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
2-Fluorobiphenyl		0.045	0.050	90	43-116	
2-Fluorophenol		0.034	0.050	68	21-100	
Nitrobenzene-d5		0.044	0.050	88	35-114	<del></del>
Phenol-d6		0.024	0.050	48	10-94	
Terphenyl-D14		0.052	0.050	104	33-141	
2,4,6-Tribromophenol		0.048	0.050	96	10-123	

Lab Batch #: 780919 Sample: 542398-1-BSD / BSD Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 14:50	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
2-Fluorobiphenyl		0.048	0.050	96	43-116	
2-Fluorophenol		0.035	0.050	70	21-100	
Nitrobenzene-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	

Version: 1.014

Page 16 of 38 Final Ver. 1.000

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



## Form 2 - Surrogate Recoveries

**Project Name: Lovington Gathering WTI** 

Work Orders: 350679,

**Project ID: 2006-142** 

Lab Batch #: 780919

Sample: 350679-001 / SMP

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 11/09/09 12:29	SU	RROGATE RI	ECOVERY	STUDY	
SVOA	s by SW-846 8270C Analytes	Amount Found [A]	True Amount  B	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl		0.044	0.050	88	43-116	•
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: 11/0	05/09 11:26	SU	RROGATE RI	ECOVERY	STUDY	
VOAs by SW-846 8260B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
4-Bromofluorobenzene		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	

Lab Batch #: 780540 Sample: 542495-1-BKS / BKS Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/05/09 14:42	Su	RROGATE RI	ECOVERY	STUDY	
VOAs by SW-846 8260B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
4-Bromofluorobenzene	0.0472	0.0500	94	74-124	
Dibromofluoromethane	0.0424	0.0500	85	75-131	
1,2-Dichlorocthane-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

Page 17 of 38 Final Ver. 1.000

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



## Form 2 - Surrogate Recoveries

Project Name: Lovington Gathering WTI

Work Orders: 350679,

**Project ID:** 2006-142

Lab Batch #: 780540

Sample: 350679-001 / SMP

Batch: | Matrix: Water

Units: mg/L	Date Analyzed: 11/05/09 15:29	SU	RROGATE R	ECOVERY S	STUDY	
VOAs	by SW-846 8260B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
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 RI	ECOVERY	STUDY	
	y SW-846 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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	<b>Date Analyzed:</b> 11/05/09 17:39	SU	RROGATE RI	ECOVERY	STUDY	
VOAs	by SW-846 8260B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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.

Version: 1.014

Page 18 of 38 Final Ver. 1.000

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



## **Blank Spike Recovery**



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

Alkalinity by SM2320B

**Analytes** 

**Date Prepared:** 11/03/2009

Analyst: WRU

Reporting Units: mg/L

	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
_	ND	170	170	100	80-120	

Lab Batch #: 780438

Sample: 542412-1-BKS

Matrix: Water

**Date Analyzed:** 11/05/2009

**Date Prepared:** 11/05/2009

Analyst: HAT

Alkalinity, Total (as CaCO3)

Reporting Units: mg/L Ba	itch #: 1	BLANK /	BLANK SPI	KE REC	COVERYS	STUDY
Inductively Coupled Plasma Atomic Emission Sp  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Aluminum	ND	0.200	0.171	86	75-125	
Arsenic	ND	0.050	0.051	102	75-125	
Barium	ND	0.050	0.055	110	75-125	
Boron	0.015	0.020	0.022	110	75-125	
Cadmium	ND	0.020	0.022	110	75-125	
Chromium	ND	0.050	0.049	98	75-125	
Cobalt	ND	0.050	0.050	100	75-125	
Copper	ND	0.050	0.051	102	75-125	
Iron	ND	0.200	0.200	100	75-125	
Lcad	ND	0.050	0.049	98	75-125	
Manganese	ND	0.050	0.050	100	75-125	
Molybdenum	ND	0.050	0.053	106	75-125	
Nickel	ND	0.050	0.049	98	75-125	
Selenium	ND	0.050	0.054	108	75-125	
Silver	ND	0.020	0.022	110	75-125	
Zinc	ND	0.050	0.051	102	75-125	

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

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

BRL - Below Reporting Limit

Version: 1.014



## **Blank Spike Recovery**



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 BLANK/BLANK SPIKE RECOVERY STUDY Batch #: Blank Spike Blank Blank Control Determination of Inorganic Anions In Water By Result Added Spike Spike Limits Flags Result %R %R [A] [B] Analytes [C] [D] 97 Fluoride ND 2.50 2.43 90-110 ND 10.0 10.3 103 90-110 Chloride 11.2 Sulfate ND 11.0 102 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.

BRL - Below Reporting Limit

Version: 1.014

Page 20 of 38 Final Ver. 1.000



## **Blank Spike Recovery**



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

BLANK/BLANK SPIKE RECOVERY STUDY Reporting Units: mg/L Batch #: Spike Rlank Rlank Blank Control VOAs by SW-846 8260B Result Added Spike Spike Limits Flags %R %R [A] [B] Result Analytes [C] [D] ND 0.050 0.047 94 66-142 Benzene ND 0.050 0.045 90 75-125 Bromobenzene 92 73-125 0.050 0.046 Bromochloromethane ND Bromodichloromethane ND 0.050 0.046 92 75-125 Bromoform ND 0.050 0.046 92 75-125 ND 0.050 0.049 98 70-130 Methyl bromide 0.050 100 65-135 MTBE ND 0.050 0.050 n-Butylbenzene ND 0.052 104 75-125 ND 0.050 0.052 104 75-125 Sec-Butylbenzene tert-Butylbenzene ND 0.050 0.052 104 75-125 0.050 0.052 104 62-125 ND Carbon Tetrachloride ND 0.050 0.048 96 60-133 Chlorobenzene Chloroethane ND 0.050 0.049 98 70-130 0.050 0.047 94 74-125 Chloroform ND Methyl Chloride ND 0.050 0.043 86 70-130 ND 0.050 0.049 98 73-125 2-Chlorotoluene 74-125 4-Chlorotoluene ND 0.050 0.048 96 0.050 0.052 104 ND 75-125 p-Cymene (p-Isopropyltoluene) 0.050 0.047 94 Dibromochloromethane ND 73-125 1,2-Dibromo-3-Chloropropane ND 0.050 0.054 108 59-125 ND 0.050 0.050 100 69-127 Methylene bromide ND 0.050 0.048 96 75-125 1.2-Dichlorobenzene 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 0.050 0.044 1,1-Dichloroethane ND 88 72-125 0.050 0.046 92 1,2-Dichloroethane ND 68-127 0.050 92 59-172 1,1-Dichloroethene ND 0.046 0.050 cis-1,2-Dichloroethylene ND 0.047 94 75-125 trans-1,2-dichloroethylene ND 0.050 0.044 88 75-125 ND 0.050 0.043 74-125 1,2-Dichloropropane 86 1,3-Dichloropropane ND 0.050 0.046 92 75-125

ND

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

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

BRL - Below Reporting Limit

2,2-Dichloropropane

Version: 1.014

Page 21 of 38 Final Ver. 1.000

0.043

75-125

86

0.050



1

## **Blank Spike Recovery**



Project Name: Lovington Gathering WTI

Work Order #: 350679 Project ID: 2006-142

Lab Batch #: 780540Sample: 542495-1-BKSMatrix: WaterDate Analyzed: 11/05/2009Date Prepared: 11/05/2009Analyst: JEA

Reporting Units: mg/L

Batch #: 1

BLANK/BLANK SPIKE RECOVERY STUDY

Reporting Units: mg/L	Batch #:	BLANK /J	BLANK SPI	KE REC	COVERYS	STUDY
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	
Toluene	ND	0.050	0.049	98	59-139	
1,2,3-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	
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.

BRL - Below Reporting Limit

Version: 1.014

Page 22 of 38 Final Ver. 1.000





Project Name: Lovington Gathering WTI

Work Order #: 350679

Analyst: LATCOR Lab Batch ID: 780359

Sample: 542392-1-BKS

Date Prepared: 11/04/2009

Batch #: 1

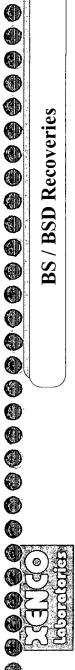
**Project ID:** 2006-142 **Date Analyzed:** 11/05/2009

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE F	RECOVE	RY STUD	Y	
Mercury by SW-846 7470A	Blank Sample Result	Spike Added	Blank Spike Besult	Blank Spike	Spike Added	Blank Spike Dunlicate	BIK. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	[B]	[C]	ē	E	Result [F]	<u>5</u>				
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

Version: 1.014





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		BLANI	K/BLANK S	SPIKE / B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE I	RECOVE	RY STUD	Y	
SVOAs by SW-846 8270C 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
Acenaphthene	QN	0.050	0.042	84	0.05	0.044	88	S	27-132	31	
Accnaphthylene	ND	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	QN	0.050	0.043	98	0.05	0.045	06	5	47-145	25	
Benzo(a)anthracene	QV	0.050	0.041	82	0.05	0.044	88	7	33-143	25	
Benzo(a)pyrene	QN	0.050	0.044	88	0.05	0.046	92	4	65-135	25	
Benzo(b)fluoranthene	ΩN	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	QN	0.050	0.049	86	0.05	0.053	901	∞	65-135	25	
Benzoic Acid	ΩN	0.150	0.091	19	0.15	060'0	09	-	30-115	40	
Benzyl Butyl Phthalate	ND	0.050	0.047	94	0.05	0.049	86	4	65-135	25	
bis(2-chloroethoxy) methane	ND	0.050	0.039	78	0.05	0.041	82	S	54-188	25	
bis(2-chlorocthyl) ether	QN	0.050	0.037	74	0.05	0.039	78	S	65-135	25	
bis(2-chloroisopropyl) ether	QN	0.050	0.037	74	0.05	0.039	8/	5	65-135	25	
bis(2-cthylhexyl) phthalatc	QN	0.050	0.041	82	0.05	0.043	98	5	8-158	25	
4-Bromophenyl-phenylether	ΩN	0.050	0.046	62	0.05	0.050	100	8	65-135	25	
4-chloro-3-methylphenol	ND	0.050	0.044	88	0.05	0.047	64	7	16-129	33	
4-Chloroaniline	ND	0.050	0.050	100	0.05	0.051	102	2	9-128	25	
2-Chloronaphthalene	ND	0.050	0.042	84	0.05	0.045	06	7	65-135	25	
2-Chlorophenol	ND	0.050	0.041	82	0.05	0.044	88	7	16-116	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

Page 24 of 38

Final Ver. 1.000

Version: 1.014





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

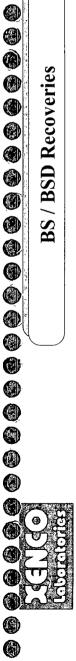
SVOAs by SW-846 8270C	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control	Control Limits	Flag
Analytes	E	 <u>B</u>	Result [C]	%R [D]	[9]	Duplicate Result [F]	%R [G]	%	%R	%RPD	)
4-Chlorophenyl Phenyl Ether	QN	0.050	0.046	92	0.05	0.048	96	4	65-135	25	
Chrysene	QN	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 Phthalatc	QN	0.050	0.042	84	0.05	0.045	06	7	49-135	50	
1,2-Dichlorobenzene	QN	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	QN	0.050	0.041	82	0.05	0.036	72	13	12-147	25	
2,4-Dichlorophenol	QN	0.050	0.045	06	0.05	0.048	96	9	65-135	25	
Dicthyl Phthalatc	QN	0.050	0.044	88	0.05	0.047	94	7	37-125	95	
Dimethyl Phthalate	Q	0.050	0.043	98	0.05	0.046	92	7	25-175	50	
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-Dinitrotoluene	QN	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	99	
Fluoranthene	QN	0.050	0.041	82	0.05	0.043	98	5	47-125	25	
Fluorene	QN	0.050	0.044	88	0.05	0.047	94	L	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

Version: 1.014

Final Ver. 1.000

Page 25 of 38







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

**Date Analyzed:** 11/05/2009 **Project ID: 2006-142** Matrix: Water

Batch #: 1

SVOAs by SW-846 8270C	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD 9/	Control Limits	Control Limits	Flag
Analytes	₹	[8]		<u> </u>	[ <u>E</u> ]	Dupneate Result [F]	[G]	<b>0</b> /	70 K	%RFD	
Hexachlorobenzene	QN	0.050	0.047	94	0.05	0.050	100	9	46-133	25	
Hexachlorobutadiene	ND	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	
Isophoronc	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	78	0.05	0.041	82	5	14-176	25	
3&4-Methylphenol	QN	0.100	0.065	99	0.1	0.068	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	811	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	90	0.05	0.028	95	11	10-80	90	
N-Nitrosodi-n-Propylamine	QN	0.050	0.036	72	0.05	0.036	72	0	22-134	38	
N-Nitrosodiphenylamine	QZ	0.050	0.051	102	0.05	0.055	110	8	2-196	25	
Pentachlorophenol	QZ	0.050	0.035	70	0.05	0.036	72	3	17-117	99	
Phenanthrene	QN	0.050	0.042	84	0.05	0.044	88	5	65-135	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*[(C-F)/(C+F)]

Version: 1.014

Page 26 of 38







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	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>@</u>	[C]	ē	<u>a</u>	Result [F]	[5]				
Phenol	QN	0.050	0.026	52	0.05	0.029	88	=	12-110	25	
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

Version: 1.014

Page 27 of 38



## Form 3 - MS Recoveries

Project Name: Lovington Gathering WTI



Work Order #: 350679

Lab Batch #: 780311 **Date Analyzed:** 11/04/2009 **Project ID:** 2006-142

Date Prepared: 11/04/2009

Analyst: LATCOR

QC- Sample ID: 350679-001 S

Batch #:

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	

BRL - Below Reporting Limit

Version: 1.014

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

All Results are based on MDL and Validated for QC Purposes







# Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch ID: 780438

Date Analyzed: 11/05/2009

QC- Sample ID: 350103-001 S

Batch #:

Project ID: 2006-142

Matrix: Water HAT Analyst: **Date Prepared:** 11/05/2009

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA'	TE REC	OVERY 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	950.0	88	2	75-125	25	
Barium	0.037	0.050	0.087	100	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	92	2	75-125	25	
Cobalt	QN	0.050	0.045	06	0.050	0.044	88	2	75-125	25	
Copper	QN	0.050	0.045	8	0.050	0.043	98	5	75-125	25	
Iron	0.320	0.200	0.510	95	0.200	0.510	95	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	820'0	86	0.050	0.075	92	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	78	3	75-125	25	
Silver	ND	0.020	910'0	80	0.020	910.0	80	0	75-125	25	
Zinc	0.004	0.050	0.042	92	0.050	0.041	74	3	75-125	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 29 of 38

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

Final Ver. 1.000

Version: 1.014







# Project Name: Lovington Gathering WTI

Date Analyzed: 11/05/2009 Lab Batch ID: 780359

Work Order #: 350679

Analyst: LATCOR QC-Sample ID: 350336-001 S **Date Prepared:** 11/04/2009

1 Matrix: Water Batch #:

Project ID: 2006-142

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Reporting Units: mg/L

Mercury by SW-846 7470A	Parent		Spiked Sample Spiked	Spiked		Duplicate	Spiked			Control	
	Sample	Spike	Result	Sample	Spike	Spiked Sample	Dup.	RPD	(A)	Limits	Flag
	Result	Added	[2]	%R	Added	Result [F]	% <b>R</b>	%	%R	%RPD	
Analytes	<u>[</u>	[8]		<u>a</u>	[E]		<u>[</u>				
Mercury	ND	0.0010	0.0007	70	0.0010	0.0007	70	0	75-125	20	×

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

Version: 1.014

Page 30 of 38

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







**(1)** 

## Project Name: Lovington Gathering WTI

Work Order #: 350679

Lab Batch ID: 780540

Date Analyzed: 11/05/2009

OC-Sample ID: 350679-001 S **Date Prepared:** 11/05/2009

Batch #: Analyst:

Matrix: Water

Project ID: 2006-142

Flag Limits %RPD Control 20 20 2 20 20 20 20 20 20 20 20 20 20 20 20 20 2 28 20 20 7 21 23 Control Limits %R 75-125 75-125 75-125 70-130 75-125 66-142 73-125 70-130 70-130 73-125 74-125 73-125 59-125 75-125 75-125 75-125 65-135 75-125 62-125 60-133 74-125 69-127 75-125 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY 0 0 0  $\equiv$ 4 4 0 7 0 d 9 0 00 4 ~ 4 N 7 7 Spiked Dup. [G] 100 102 8 102 102 100 100 001 94 96 96 90 96 06 96 98 8 88 86 86 86 92 86 Duplicate Spiked Sample Result [F] 0.047 0.048 0.049 0.049 0.048 0.050 0.048 0.046 0.050 0.045 0.044 0.050 0.045 0.045 0.048 0.043 0.050 0.049 0.050 0.049 0.051 0.051 0.051 Spike Added 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 Sample Spiked %**R** <u>a</u> 100 104 84 90 94 96 88 96 96 90 4 96 96 92 92 86 96 88 4 86 86 88 94 Spiked Sample Result 0.048 0.044 0.044 0.047 0.049 0.048 0.049 0.045 0.050 0.048 0.048 0.046 0.046 0.049 0.048 0.045 0.047 0.048 0.044 0.047 0.047 0.042 0.052  $\overline{\mathcal{O}}$ Spike Added 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 Parent Sample Result ΩN S S Q ΩN S Ę S Ð ND ND 呈 S ₹ S Q. 2 2 N N 2 S ND ΩN ND N S S VOAs by SW-846 8260B Analytes p-Cymene (p-Isopropyltoluene) 1,2-Dibromo-3-Chloropropane Reporting Units: mg/L Bromodichloromethane Dibromochloromethane Bromochloromethane Carbon Tetrachloride 1,2-Dichlorobenzene 1,3-Dichlorobenzene Methylene bromide Sec-Butylbenzene tert-Butylbenzene Methyl Chloride Methyl bromide 2-Chlorotoluene 4-Chlorotoluene n-Butylbenzene Chlorobenzene Bromobenzene Chlorocthane Bromoform Chloroform MTBE

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

Version: 1.014







Project Name: Lovington Gathering WTI

Project ID: 2006-142

Matrix: Water

JEA Analyst: Batch #: QC-Sample ID: 350679-001 S Date Prepared: 11/05/2009

Date Analyzed: 11/05/2009 Lab Batch ID: 780540 Reporting Units: mg/L

Work Order #: 350679

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	Result [A]	Added [B]	[C]	% <u>C</u>	Added [E]	Result [F]	% <u>@</u>	%	%R	%RPD	
1,4-Dichlorobenzene	ND	0.050	0.048	96	0.050	0.050	100	4	75-125	20	
Dichlorodifluoromethane	ΩN	0.050	0.039	78	0.050	0.041	82	5	70-130	23	
1,1-Dichlorocthane	ND	0.050	0.042	84	0.050	0.043	98	2	72-125	20	
1,2-Dichlorocthane	ND	0.050	0.048	96	0.050	0.048	96	0	68-127	20	
1,1-Dichlorocthene	ND	0.050	0.042	84	0.050	0.042	84	0	59-172	22	
cis-1,2-Dichlorocthylene	ND	0.050	0.048	96	0.050	0.048	96	0	75-125	20	
trans-1, 2-dichlorocthylene	ND	0.050	0.042	84	0.050	0.044	88	5	75-125	20	
1,2-Dichloropropanc	ND	0.050	0.042	84	0.050	0.043	98	2	74-125	20	
1,3-Dichloropropanc	ND	0.050	0.044	88	0.050	0.048	96	6	75-125	20	
2,2-Dichloropropanc	QN	0.050	0.040	80	0.050	0.041	82	2	75-125	20	
1,1-Dichloropropenc	ΩN	0.050	0.042	84	0.050	0.043	98	2	75-125	20	
cis-1,3-Dichloropropene	ND	0.050	0.044	88	0.050	0.045	06	2	74-125	20	
trans-1,3-dichloropropene	ΩN	0.050	0.046	92	0.050	0.047	94	2	66-125	20	
Ethylbenzene	ND	0.050	0.047	94	0.050	0.049	86	4	75-125	20	
Hexachlorobutadiene	ND	050'0	0.046	65	0.050	0.049	86	9	75-125	20	
isopropylbenzene	ND	0.050	0.048	96	0.050	0.049	86	2	75-125	20	
Methylene Chloride	ND	0.050	0.048	96	0.050	0.049	86	2	75-125	35	
Naphthalene	ND	0.050	0.046	92	0.050	0.050	100	8	75-125	20	
n-Propylbenzene	ND	0.050	0.049	86	0.050	0.051	102	4	75-125	20	
Styrene	ND	0.050	0.049	86	0.050	0.051	102	4	75-125	51	
1,1,1,2-Tetrachloroethanc	ND	0.050	0.048	96	0.050	0.049	86	2	72-125	20	
1,1,2,2-Tetrachlorocthane	ND	0.050	0.045	06	0.050	0.047	94	4	74-125	31	
Tetrachloroethylene	ND	0.050	0.045	90	0.050	0.046	92	2	71-125	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

Version: 1.014

Page 32 of 38







Project Name: Lovington Gathering WTI

Batch #: QC-Sample ID: 350679-001 S Date Analyzed: 11/05/2009 Lab Batch ID: 780540

Matrix: Water Analyst: JEA Date Prepared: 11/05/2009

**Project ID: 2006-142** 

Reporting Units: mg/L

Work Order #: 350679

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	Result [A]	Added [B]	<u></u>	%R [D]	Added (E)	Result [F]	%R [G]	%	% <b>R</b>	%RPD	
Toluene	ND	0.050	0.046	92	0.050	0.048	96	4	59-139	21	
1,2,3-Trichlorobenzene	QN	0.050	0.047	94	0.050	0.050	100	9	75-137	20	
1,2,4-Trichlorobenzene	ND	0.050	0.046	92	0.050	0.050	100	∞	75-135	20	
1,1,1-Trichloroethane	ND	0.050	0.041	82	0.050	0.042	84	2	75-125	20	
1,1,2-Trichlorocthane	ON	0.050	0.045	06	0.050	0.046	95	2	75-127	20	
Trichloroethylene	ND	0.050	0.045	06	0.050	0.044	88	2	62-137	24	
Trichlorofluoromethane	ND	0.050	0.041	82	0.050	0.042	84	2	67-125	20	
1,2,3-Trichloropropanc	ND	0.050	0.046	92	0.050	0.046	92	0	75-125	20	
1,2,4-Trimethylbenzene	ND	0.050	0.049	86	0.050	0.051	102	4	75-125	20	
1,3,5-Trimethylbenzene	ND	0.050	0.049	86	0.050	0.052	104	9	70-125	20	
o-Xylene	ND	0.050	0.046	92	0.050	0.049	86	9	75-125	20	
m,p-Xylene	ND	0.100	0.095	95	0.100	0.097	26	2	75-125	20	
Vinyl Chloride	ND	0.050	0.041	82	0.050	0.043	98	5	75-125	20	

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

Version: 1.014

Page 33 of 38



## **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 #:

Matrix: Water

Reporting Units: mg/L SAMPLE / SAMPLE DUPLICATE RECOVERY Alkalinity by SM2320B Sample Control Parent Sample RPD Result Duplicate Limits 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 20 NC

Alkalinity, Bicarbonate (as CaCO3) Lab Batch #: 780311

Date Analyzed: 11/04/2009

Date Prepared: 11/04/2009

ND

Analyst: LATCOR

NC

20

QC-Sample ID: 350679-001 D

Batch #: 1

Matrix: Water

ND

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	

Page 34 of 38

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



## **Sample Duplicate Recovery**



**Project Name: Lovington Gathering WTI** 

Work Order #: 350679

Lab Batch #: 780438 Project ID: 2006-142

 Date Analyzed:
 11/05/2009
 Date Prepared:
 11/05/2009
 Analyst: HAT

 QC- Sample ID:
 350103-001 D
 Batch #:
 1
 Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/L Control **Inductively Coupled Plasma Atomic Emission** Sample Parent Sample Duplicate RPD Limits Result Flag **Spectroscopy Mass Spectrometry** %RPD Result [A] [B] Analyte Aluminum 0.550 0.669 20 20 0.014 Arsenic 0.012 15 20 Barium 0.037 0.039 5 20 4.99 11 20 Boron 5.58 ND Cadmium ND NC 20 Chromium ND ND NC 20 Cobalt NC 20 ND ND Copper ND ND NC 20 0.320 0.400 22 20 F Iron Lcad 0.002 ND NC 20 Manganese 0.029 0.032 10 20 Molybdenum 0.026 0.027 4 20 Nickel NC ND ND 20 Selenium 0.006 0.006 0 20 Silver ND NC 20 ND Zinc 0.004 0.004 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

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/L Metals per ICP by SW846 6010B Sample Control Parent Sample RPD Duplicate Limits Result Flag Result %RPD [A] [B] Analyte Calcium 76.5 73.5 25 Magnesium 13.6 12.7 7 25 Potassium ND ND NC 25 33.3 29.8 Sodium 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

# **Environmental Lab of Texas**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

0

YAG 4 TAT brabnat2 □ NPDES end ST (84 . AS (eluberine eng) TAT HBUF **Thosphall** FOH Project Name: Lovington Gathering WTI Phone: 432-563-1800 Fax: 432-563-1713 × TRRP NMWQCC Metats (see Attached) Sergie Certifices (Machine Machine)
VOCs Free of Headspace?
Labor Information (Machine)
Custody seels on container(County) seels on container(County) seels on container(County) seels on container(County) seels of County) BLEX 80518\2030 OLBLEX 8560 Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2006-142 letsis: As Ag Ba Cd Cr Pb Hg Se TOTAL SAR / ESP / CEC Anions (Cl. SO4, Alkatinity) Cations (Ca. Mg. Na. K) Report Format: 9001 XT 2001 XT :Hd M2108 1.814 Hd cdstanley@basin-consulting.com ₹ ow-Drindng water SL-Sludg 器 Other (Specify) Mone Odessa, Texas 79765 CO52SEN HOEN 'OSTH (575) 396-1429 אכו דנסיין אשל HAD MUDG FONH × CBJ - SOUM | LAMBEY otal #, of Containers benetiti 7 bla Fax No: .. Per Avor Se mail: 0060 Time Sampled 11/02/09 Received by: Basin Environmental Service Technologies, LLC Date Sampled Ending Depth Beginning Depth Levington, NM 88260 (575)605-7210 Company Address: P.O. Box 301 **Curt Stanley** 3500079 FELD CODE **MW-10** Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: (lab use only ORDER #: (tino eau dai) # 8A Ö

ပ္

=

Temperature Upon Receipt:

11.3.09 10:22

AM

Date

Received by:

3/2/

Ē

Sage Base

Relinquished by

## NMOCD - Analytical Parameters for Initial Groundwater Sampling (3-12-08)

Rield Parameters

specific conductance

pH

temperarure depth to water

## General Chemistry

Calcium

Magnesium

Potassium Sodium

Chloride

Sulfate 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)

Page 28 of 29

## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Basin Env. / Plains				
Date/ Time:	11.3.09 10:22				
Lab ID#:					
Lab ID #:	350679				
Ini <b>tial</b> s:	AL				
		<b>A</b>			
	Sample Receipt	Checklist		<b>-</b>	
#1 Tempe		1723	N.	Client Init	tials
	rature of container/ cooler?	(Yes)	No	1.1	
10 0 1	ng container in good condition?	(Yes) Yes	No No	Not Present	$\dashv$
	ly Seals intact on shipping container/ cooler?  ly Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain		(Yes)	No	Not Fresent	
	of Custody present? e instructions complete of Chain of Custody?	(Yes)	No		$\dashv$
O Sample	of Custody signed when relinquished/ received?	Ø98	No		
	of Custody signed when relinquished/ received? of Custody agrees with sample label(s)?	Yes	No	iD written on Cont./ Lid	$\dashv$
O Contair	ner label(s) legible and intact?	(Pes)	No	Not Applicable	
	le matrix/ properties agree with Chain of Custody?	Yes	No	I MOLAPPIIGABIE	$\dashv$
10 Garripi	iners supplied by ELOT?	(Yes)	No		
140 0	11 11 11	Yes	No	See Below	
t13 Sampl	les in proper container/ bottle? les properly preserved?	Yes	No	See Below	$\dashv$
t14 Samp	le bottles intact?	Yes	No	GEE BEIOW	$\dashv$
t15 Prese	rvations documented on Chain of Custody?	Tes	No		
		(Yes	No		$\dashv$
#17 Suffici	iners documented on Chain of Custody? ient sample amount for indicated test(s)?	res	No	See Below	$\dashv$
	mples received within sufficient hold time?	Yes	No	See Below	$\dashv$
		(es)	No	Not Applicable	
#20 VOC :	samples have zero headspace?	(Yes)	No	Not Applicable	
,20 100	ontract of sample(s)? samples have zero headspace?  Variance Docu		110	140t Applicable	
	vanance Docu	mentation			
Contact:	Contacted by:			Date/ Time:	
Jonadi.			•	Date/ Time.	
Regarding:	16 metals succesubbed to	Xeno	-Hair	ston was subject	1 7
		NOND	1,00	Sion was sunder	<u>1 L</u>
METIC	o-Dallas				
Corrective A	Action Taken:				
Check all th					
	Client understands and wou	ild like to prod	eed with	analysis	
	Cooling process had begun	shortly after	sampling	event	

## **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 (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)





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

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 356497**



## 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-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

Final Ver. 1.000

Page 3 of 21





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.



Contact: Jason Henry Project Location: Lea County, NM

Project Id: 2006-142



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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

	Lab Id:	356497-001	356497-002	356497-003	356497-004	356497-005	356497-006
Analysis Donnostod	Field Id:	MW-5	MW-I	MW-4	9-MM	MW-3	MW-7
naisanhay sistinut	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
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					
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	0.0130 0.0010	ND 0.0010	ND 0.0010
Tolucne		ND 0.0020					
Ethylbenzene		ND 0.0010	ND 0,0010				
m,p-Xylenes		ND 0.0020					
o-Xylene		ND 0.0010					
Xylenes, Total		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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Brent Barron, II Odessa Laboratory Manager

Page 5 of 21



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

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

					110jee Managei.	DIGHT Dallon, 11	
	Lab Id:	356497-001	356497-002	356497-003	356497-004	356497-005	356497-006
Labour D. Contract	Field Id:	MW-5	MW-I	MW-4	9-WM	MW-3	MW-7
Analysis Requesiea	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
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
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
	Units/RL:	mg/L RL	mg/L RL				
Acenaphthene		ND 0.005	ND 0.005				
Acenaphthylene		ND 0.005	ND 0.005				
Anthracene		ND 0.005	ND 0.005				
Benzo(a)anthracene		ND 0.005	ND 0.005				
Benzo(a)pyrene		ND 0.005	ND 0.005				
Benzo(b)fluoranthenc		ND 0.005	ND 0.005				
Benzo(k)fluoranthene		ND 0.005	ND 0.005				
Benzo(g,h,i)perylene		ND 0.005	ND 0.005				
Chrysene		ND 0.005	ND 0.005				
Dibenz(a,h)anthracene		ND 0.005	ND 0.005				
Fluoranthene		ND 0.005	ND 0.005				
Fluorenc		ND 0.005	ND 0.005				
Indeno(1,2,3-c,d)Pyrene		ND 0.005	ND 0.005				
1-Methylnaphthalene		ND 0.005	ND 0.005				
2-Methylnaphthalene		ND 0.005	ND 0.005				
Naphthalene		ND 0.005	ND 0.005				
Phenanthrene		ND 0.005	ND 0.005				
Pyrene		ND 0.005	ND 0.005				

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Odessa Laboratory Manager Brent Barron, II

Page 6 of 21



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

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

	Lab Id:	356497-007	356497-008	356497-009	
Laborate B. State Laboratory	Field Id:	MW-8	MW-2	6-WW	
Anaiysis Kequesiea	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	ND 0.0010	
m,p-Xylenes		ND 0.0020	0.0095 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	
Xylenes, Total		ND 0.0010	0.0095 0.0010	ND 0.0010	
Total BTEX		0100'0 QN	0.0224 0.0010	ND 0.0010	

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Page 7 of 21



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

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

	Lab Id:	356497-007	356497-008	356497-009	
Analysis Danied	Field Id:	MW-8	MW-2	WW-9	
Amaysis nequesieu	Depth:				- · · · -
	. Matrix:	WATER	WATER	WATER	
	Sampled:	Dec-18-09 16:00	Dec-18-09 16:45	Dcc-18-09 17:30	
SVOA PAHs List	Extracted:	Dec-23-09 11:54	Dec-23-09 11:57	Dec-23-09 12:00	
SUB: T104704215-08B-TX	Analyzed:	Dec-24-09 19:33	Dec-24-09 20:11	Dec-24-09 20:48	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	
Acenaphthene		ND 0.005	ND 0.005	ND 0.005	
Acenaphthylene		ND 0.005	ND 0.005	ND 0.005	
Anthracene		ND 0.005	ND 0.005	ND 0.005	
Benzo(a)anthracene		ND 0.005	ND 0.005	ND 0.005	
Benzo(a)pyrene		ND 0.005	ND 0.005	ND 0.005	
Benzo(b)fluoranthene		ND 0.005	ND 0.005	ND 0.005	
Benzo(k)fluoranthene		ND 0.005	ND 0.005	ND 0.005	
Benzo(g,h,i)perylene	<u></u>	ND 0.005	ND 0.005	ND 0.005	
Chrysene		ND 0.005	ND 0.005	ND 0.005	
Dibenz(a,h)anthracenc		ND 0.005	ND 0.005	ND 0.005	
Fluoranthene		ND 0.005	ND 0.005	ND 0.005	
Fluorene		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	
1-Mcthylnaphthalene		ND 0.005	ND 0.005	ND 0.005	
2-Methylnaphthalene		ND 0.005	ND 0.005	ND 0.005	
Naphthalene		ND 0.005	ND 0.005	ND 0.005	
Phenanthrene		ND 0.005	ND 0.005	ND 0.005	
Pyrenc		ND 0.005	ND 0.005	ND 0.005	

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Page 8 of 21



### 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

Work Orders: 356497,

**Project ID: 2006-142** 

Lab Batch #: 787355

**Sample:** 546427-1-BKS / BKS

Matrix: Water Batch:

Units: mg/L	<b>Date Analyzed:</b> 12/24/09 08:46	SU	RROGATE R	RECOVERY	STUDY	
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			(D)		
1,4-Difluorobenzene		0.0313	0.0300	104	80-120	
4-Bromofluorobenzene		0.0296	0.0300	99	80-120	

Lab Batch #: 787355

**Sample:** 546427-1-BSD / BSD

Batch: 1

Matrix: Water

Units: mg/L	<b>Date Analyzed:</b> 12/24/09 09:09	SU	RROGATE R	RECOVERY	STUDY	
ВТЕ	X by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0320	0.0300	107	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	_

Lab Batch #: 787355

**Sample:** 546427-1-BLK / BLK

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 10:17	SU	RROGATE R	ECOVERY	STUDY	
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	!		[D]		
1,4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	

Lab Batch #: 787355

Sample: 356497-001 / SMP

Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 12:57	SU	RROGATE R	ECOVERY	STUDY	
ВТ	EX 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		0.0313	0.0300	104	80-120	

Lab Batch #: 787355

Sample: 356497-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 13:20	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	Analytes	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0270	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution

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



Project Name: Lovington Gathering WTI

Work Orders: 356497,

Sample: 356497-003 / SMP

**Project ID: 2006-142** 

Lab Batch #: 787355

003 / SMP Batch:

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 13:42	SU	JRROGATE R	ECOVERY	STUDY	
вті	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0270	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	Date Analyzed: 12/24/09 14:05	SU	RROGATE R	RECOVERY	STUDY	
вт	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0283	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

SURROGATE RECOVERY STUDY Date Analyzed: 12/24/09 15:14 Units: mg/L True Control BTEX by EPA 8021 Amount Limits Found Recovery Flags [A] [B] %R %R [D]**Analytes** 1,4-Difluorobenzene 0.0268 0.030089 80-120 4-Bromofluorobenzene 0.0310 0.0300 103 80-120

Lab Batch #: 787355

Sample: 356497-006 / SMP

Batch: 1

Units: mg/L Date Analyzed: 12/24/09 15:37	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	0.0254	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

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 15:5		SURROGATE RECOVERY STUDY						
ВТЕ	EX by EPA 8021	Amount Found {A}	True Amount [B]	Recovery %R	Control Limits %R	Flags		
	Analytes			[D]				
1,4-Difluorobenzene		0.0208	0.0300	69	80-120	*		
4-Bromofluorobenzene		0.0256	0.0300	85	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 356497,

**Project ID: 2006-142** 

Lab Batch #: 787355

Sample: 356497-008 / SMP

Batch: i Matrix: Water

Units: mg/L Date Analyzed: 12/24/09	9 16:22 SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0276	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						
ВТІ	EX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
	Analytes			121				
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]				
1,4-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		

Page 12 of 21

Surrogate Recovery [D] = 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 356497,

Project ID: 2006-142

Lab Batch #: 787254

Sample: 546283-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L Date Ana	lyzed: 12/24/09 13:52	SURROGATE RECOVERY STUDY						
SVOA PAHs L	ist	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		0.024	0.050	48	21-100			
Nitrobenzene-d5		0.037	0.050	74	35-114			
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:

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 14:30	SURROGATE RECOVERY STUDY					
SVOA 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		
Terphenyl-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						
SVOA 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			

Surrogate Recovery [D] = 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



**Project Name: Lovington Gathering WTI** 

**Work Orders** : 356497,

**Project ID: 2006-142** 

Lab Batch #: 787254

Sample: 356497-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 15:46	SURROGATE RECOVERY STUDY					
SVOA 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 Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 16:23 SURROGATE RECOVERY STUDY						
	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	
Terphenyl-D14		0.042	0.050	84	33-141	
2,4,6-Tribromophenol		0.040	0.050	80	10-123	

Lab Batch #: 787254 Sample: 356497-003 / SMP Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 17:01 SURROGATE RECOVERY STUDY					
SVOA 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	0.021	0.050	42	21-100	
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	

Surrogate Recovery [D] = 100 * A / B

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

Page 14 of 21 Final Ver. 1.000

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

**Work Orders:** 356497,

**Project ID: 2006-142** 

Lab Batch #: 787254

Sample: 356497-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09	17:40 SU	SURROGATE RECOVERY STUDY						
SVOA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
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: 1

Matrix: Water

Units: mg/L	Date Analyzed: 12/24/09 18:17	SU	RROGATE RI	ECOVERY	STUDY	
SV	OA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes			[0]		
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	
Terphenyl-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 RE	COVERY	STUDY	
SVOA PAHs List	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[2]		
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	

Surrogate Recovery [D] = 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lovington Gathering WTI

Work Orders: 356497,

Sample: 356497-007 / SMP

**Project ID: 2006-142** 

Lab Batch #: 787254

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 19:33	su	RROGATE R	ECOVERY	STUDY	
SVOA PAHs List Analytes	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	
Terphenyl-D14	0.038	0.050	76	33-141	
2,4,6-Tribromophenol	0.041	0.050	82	10-123	

Lab Batch #: 787254

Sample: 356497-008 / SMP

Batch: 1

Matrix: Water

Date Analyzed: 12/24/09 20:11	SU	RROGATE R	ECOVERY	STUDY	
A PAHs List	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
	0.038	0.050	76	43-116	
	0.022	0.050	44	21-100	<del></del>
	0.040	0.050	80	35-114	
	0.013	0.050	26	10-94	
	0.044	0.050	88	33-141	
	0.050	0.050	100	10-123	
	Date Analyzed: 12/24/09 20:11  A PAHs List  Analytes	A PAHs List Analytes  O.038  O.022  O.040  O.013  O.044	A PAHs List  Amount Found [A]  Analytes     0.038   0.050     0.040   0.050     0.013   0.050     0.044   0.050	A PAHs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pahs List  A Pah	A PAHs List  Amount Found [A]  [A]  True Amount [B]  Recovery %R [D]  0.038  0.050  76  43-116  0.022  0.050  44  21-100  0.040  0.050  80  35-114  0.013  0.050  26  10-94  0.044  0.050  88  33-141

Lab Batch #: 787254

Sample: 356497-009 / SMP

Batch: 1

Matrix: Water

Units: mg/L Date Analyzed: 12/24/09 20:48	SU	RROGATE R	ECOVERY	STUDY	
SVOA 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

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution







Project Name: Lovington Gathering WTI

Work Order #: 356497

Analyst: ASA

Sample: 546427-1-BKS Lab Batch ID: 787355

Date Prepared: 12/21/2009

Batch #: 1

**Project ID:** 2006-142 **Date Analyzed:** 12/24/2009

Matrix: Water

Units: mg/L		BLANI	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE F	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	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	[C]	[0]	[E]	Result [F]	[6]				
Benzene	ΩN	0.1000	0.1105	111	0.1	0.1144	114	3	70-125	25	
Toluene	QN	0.1000	0.1095	011	0.1	0.1140	114	4	70-125	25	
Ethylbenzene	ND	0.1000	0.1076	801	0.1	0.1126	113	5	71-129	25	
m,p-Xylenes	ΩN	0.2000	0.2202	011	0.2	0.2302	511	4	70-131	25	
o-Xylene	QN	0.1000	0.1144	114	0.1	0.1188	611	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

Page 17 of 21



# BS / BSD Recoveries



Project Name: Lovington Gathering WTI

Work Order #: 356497 Analyst: KAN

Lab Batch ID: 787254

Sample: 546283-1-BKS

Date Prepared: 12/23/2009

Batch #: 1

Date Analyzed: 12/24/2009 **Project ID: 2006-142** 

Matrix: Water

Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE 1	RECOVE	RY STUD	λı	
SVOA PAHs List	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]	<u>D</u>	<u>a</u>	E	Result [F]	<u>5</u>				
Acenaphthene	QN	0.050	0.038	9/	0.05	0.040	80	5	27-132	31	
Acenaphthylene	QN	0.050	0.038	9/	0.05	0.040	80	5	46-108	25	
Anthracene	QN	0.050	0.039	78	0.05	0.041	82	5	47-145	25	
Benzo(a)anthracene	QN	0.050	0.040	80	0.05	0.042	84	5	33-143	25	
Benzo(a)pyrene	ND	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)perylene	QN	0.050	0.040	80	0.05	0.043	98	7	65-135	25	
Chrysene	ND	0.050	0.037	74	0.05	0.039	78	5	65-135	25	
Dibenz(a,h)anthracene	QN	0.050	0.042	84	0.05	0.045	06	7	50-125	25	
Fluoranthene	ND	0.050	0.040	80	0.05	0.043	98	7	47-125	25	
Fluorene	QN	0.050	0.040	80	0.05	0.042	84	5	48-139	25	
Indeno(1,2,3-c,d)Pyrenc	QN	0.050	0.042	84	0.05	0.045	06	7	27-160	25	
Naphthalene	QN	0.050	0.036	72	0.05	0.039	78	∞	26-175	25	
Phenanthrene	ND	0.050	0.039	78	0.05	0.041	82	5	65-135	25	
Pyrene	QN	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







Project Name: Lovington Gathering WTI

Work Order #: 356497

QC-Sample ID: 356194-011 S Date Analyzed: 12/24/2009 Lab Batch ID: 787355

Matrix: Water ASA Analyst: Batch #: **Date Prepared:** 12/21/2009

Project ID: 2006-142

		Ž	ATRIX SPIKE	:/MAT	RIX SPIF	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE REC	VERY S	TUDY		
BTEX by EPA 8021 Ss. Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike :	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1000	9880.0	68	0.1000	0.0882	88	0	70-125	25	
Tolucne	QN	0.1000	9980'0	87	0.1000	0.0853	88	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-Xylenc	QN	0.1000	0.0925	93	0.1000	0.0862	98	7	71-133	25	

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

# **Environmental 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, NIM

Project #: 2006-142

Basin Environmental Service Technologies, LLC

Camille Bryant

Project Manager:

Company Name

Lovington, NM 88260

City/State/Zip:

Company Address: P. O. Box 301

(575) 605-7210

Telephone No:

PO #: PAA- J. Henry X Standard

NPDES

TRRP

Report Format:

(505) 396-1429

Fax No:

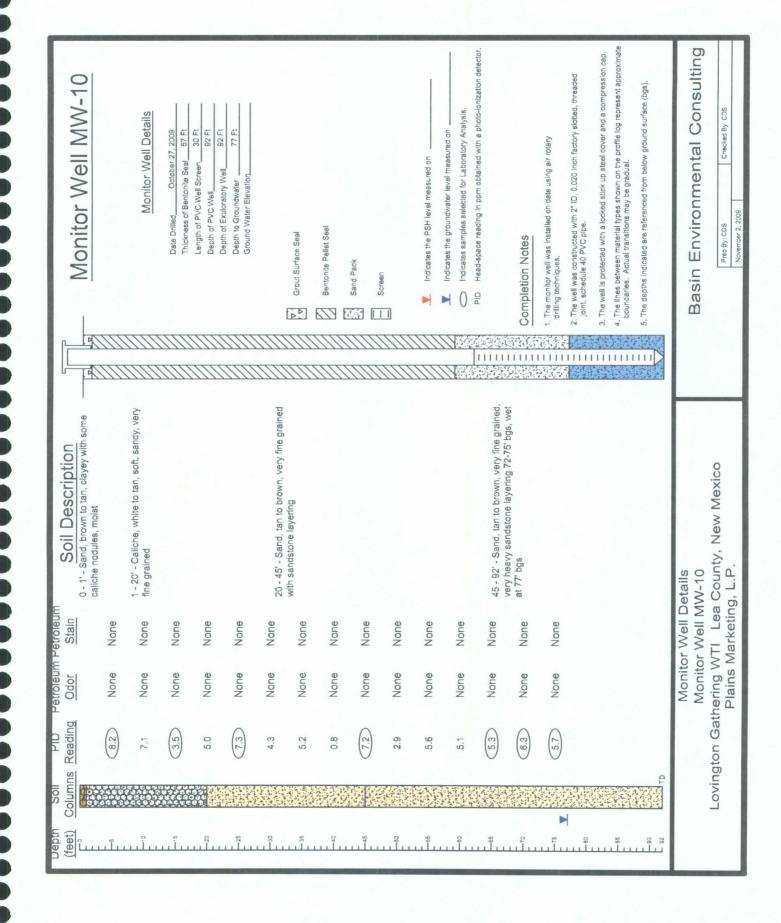
(lab use only)			_	_													1				nialyte o	ś			1	7	
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ORDER #:	1 THOSS #1						l		reser	Preservation & # of Containers	810	of Con	talner	_	Matrix	99			V-3			09				81	ſ
(Yino eau drii) * 원소	FIELD CODE		daginning Depth	ritqeQ gnibn	Date Sampled	Time Sampled	letd Filtered	Toe (1) L ambar gless	HNO ²	HC1(3) 40mr 91625	HO®N *OS*H	_c O _c S _c €N	enoV	OM – Dripsking waser sr-singg Oggel (Specify)	CW — Groundwater s—sollysol NP−Non-Potable Specify Oth		TPH: TX 1005 TX 1006 Cettons (Ca. Mg. Na. K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Volatiles Volatiles	selitstovimes	STEX 80218/5030 or BTEX 82	R.O.R.M.	(0728) JA9		AS (eluberias ere Schedule) 24	YAC 4 TAT brebness
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Refinquist	July July	Date /	E Z		Received by:									Date		Time	<b>300</b>	astod (S	Sea tea	S on C	S parts	Custody seals on container(s) Custody seals on container(s) Custody seals on cooler(s)	3	T X	zz€ 310>	<b>z</b> z <b>z</b>	
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duis	Reinquished by:	Date	Time		Received by ELOT:	14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	ى						12.	Date 12-2(-09		Time 1713	<u>ٿ</u> ر	Ë Pe	atrue	Temperature Upon Receipt:	8	A PL		,	ج ج	ပ္	

## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env.					
Date/ Time: 12-21-09 @ 1713					
Lab ID#: 356497					
Initials: JMF					
Initials.					
Sample Receipt 0	Checklist				
				Client initials	;
#1 Temperature of container/ cooler?	(Yes)	No	3.6 °C		
#2 Shipping container in good condition?	₹ <b>9</b> \$>	No			
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present		ı
#4 Custody Seals intact on sample bottles/ container? / 12/2/5	Yes)	No	Not Present		
#5 Chain of Custody present?	Yes	No			Į
#6 Sample instructions complete of Chain of Custody?	Yes	No			1
#7 Chain of Custody signed when relinquished/ 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?	(Yes)	No	Not Applicable		
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No			į
#11 Containers supplied by ELOT?	(Yes	No			
#12 Samples in proper container/ bottle?	(Yes)	No	See Below		
#13 Samples properly preserved?	(Yes)	No	See Below		
#14 Sample bottles intact?	(Yes)	No			1
#15 Preservations documented on Chain of Custody?	Yes	No		<del></del>	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	Xerxo-Ho	-PAL
#20 VOC samples have zero headspace?	(Yes')	No	Not Applicable	VG (0-110.	
TO CONTINUE HAVE LOT HOUSE PAGE.	100	110	1 Not Applicable		ı
Contact: Contacted by:  Regarding:	nentation		Date/ Time:		
Corrective Action Taken:					
Check all that Apply:  See attached e-mail/ fax  Client understands and would Cooling process had begun se					

Appendix B Monitor Well Logs



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

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

# State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

220 S. St. Fran		,			Sa	inta re	e, NM 875	,03					
	· ·		Rel	ease l	Notific	ation	and Co	orrective A	ction	1			
							OPER/	ATOR		x Initi	al Report		Final
		ains Pipeline						nille Reynolds					
		Hwy 82, Lo		NM 882	260			No. 505-441-09					
Facility Nar	ne Loving	ton Gatherin	ig WTI				Facility Typ	e 6"Steel Pipe	ine				
Surface Ow	ner Robert	Rice		N	Mineral O	wner	-			Lease 1	No.		
					LOCA	TIOI	N OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet fi	rom the	North/	South Line	Feet from the	East/\	West Line	County		
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Source of Re								Hour of Occurren			Hour of Di		
		·					4-21-2006	@ 13:00			6 @ 13:15		
Was Immedia	ate Notice (			<b>-</b>			If YES, To	Whom?					
			] Yes [	_ No [	☐ Not Re	equired	Pat Capert	on			/	2223	24.25
By Whom? C			·· · · · · · · · · · · · · · · · · · ·					Hour 4-21-2006			100		
Was a Water	course Read			7 27			If YES, Vo	olume Impacting	the Wat	ercourse.	OF		28
			Yes 🗵	7 NO							18	A 4	þ
If a Watercou	irse was Im	pacted, Descr	ibe Fully.	+							0.1	"OC	<17.
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