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Effective Solutions

2014
ANNUAL MONITORING REPORT

DCP PLANT TO LEA STATION 6-INCH SECTION 31
Unit Letter "K" (NESW), Section 31, Township 20 South, Range 37 East
Latitude 32.52733º North, Longitude 103.2906º West
Lea County, New Mexico
Plains SRS #: 2009-084
NMOCD Reference #: 1RP-2166

Prepared For:

PLAINS

Plains All American Pipeline, LP
333 Clay Street, Suite 1600
Houston, Texas 77002

Prepared By:

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

March 2015

Ben J. Arguijo
Project Manager

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1.0 INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of Plains All American Pipeline, LP (Plains), is pleased to submit this *Annual Monitoring Report* in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1st of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2014 only. For reference, a "Site Location Map" is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2014 to assess the levels and extent of dissolved phase constituents and Phase-Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 feet were not sampled.

2.0 SITE DESCRIPTION & BACKGROUND INFORMATION

The legal description of the site is Unit Letter "K" (NESW), Section 31, Township 20 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by The State of New Mexico and administered by the New Mexico State Land Office (NMSLO). The geographic coordinates of the release site are 32.52733° North latitude and 103.2906° West longitude.

On April 2, 2009, Plains discovered a crude oil release from a six (6)-inch steel pipeline. During initial response activities, Plains installed a temporary clamp on the pipeline to mitigate the release. The crude oil release resulted in a surface stain measuring approximately six (6) feet in width by eight (8) feet in length. Plains initially classified the release as “non-reportable”. Upon further investigation, Plains reclassified the release to "reportable" status and notified the NMOCD Hobbs District Office and submitted a "Release Notification and Corrective Action" (Form C-141) on April 29, 2009. The cause of the release was attributed to external corrosion of the pipeline. The C-141 indicated approximately twenty (20) barrels of crude oil was released from the pipeline, with no recovery.

On April 15, 2009, one (1) soil boring (SB-1) was advanced approximately ten (10) feet west of the release point to evaluate the vertical extent of soil impact. During advancement of the soil boring, groundwater was encountered at approximately seventy-seven (77) feet below ground surface (bgs). Temporary casing was installed in the boring to obtain a preliminary groundwater sample. On April 16, 2009, a groundwater sample (SB-1) was collected from the temporary casing and submitted to the laboratory for analysis of total dissolved solids (TDS), chlorides, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Following the collection of the groundwater sample, the temporary casing was removed from the soil boring and the soil boring was plugged with cement and bentonite, as required by the New Mexico Office of the State Engineer (NMOSE). Laboratory analytical results indicated a benzene concentration of 1.915 mg/L, a BTEX concentration of 4.7711 mg/L, a chloride concentration of 54.6 mg/L, and a TDS concentration of 788 mg/L. Based on the analytical results of the submitted groundwater sample, Plains notified NMOCD representatives in the Hobbs District Office and the Santa Fe Office of the laboratory-confirmed impact to groundwater at the release site.

On June 2, 2009, following advancement of the soil boring, excavation of hydrocarbon-impacted soil commenced. Excavated soil was stockpiled on-site on a plastic liner to mitigate the potential leaching of the contaminants into the vadose zone. Approximately 1,400 cubic yards (cy) of soil was stockpiled on-site, pending final disposition. The final dimensions of the excavation were approximately seventy-seven (77) feet in width, approximately eighty (80) feet in length, and fifteen (15) feet in depth.

On September 21 through September 23, 2009, Plains installed and developed four (4) monitor wells (MW-1 through MW-4) at the release site, as approved by the NMOCD. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo-Ionization Detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX and total petroleum hydrocarbons (TPH) using EPA Methods SW-846 8021b and SW-846 8015M, respectively.

Monitor well MW-1 was installed on the floor of the excavation, at approximately fifteen (15) feet bgs, to a total depth of approximately eighty-six (86) feet bgs. Soil samples collected at twenty-five (25) feet bgs, thirty-five (35) feet bgs, forty-five (45) feet bgs, fifty-five (55) feet bgs, sixty-five (65) feet bgs, and seventy-five (75) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for all of the submitted soil samples. BTEX concentrations ranged from 0.0359 mg/Kg for the soil sample collected at twenty-five (25) feet bgs to 13.444 mg/Kg for the soil sample collected at fifty-five (55) feet bgs. The TPH concentrations ranged from 286 mg/Kg for the soil sample collected at twenty-five (25) feet bgs to 1,538 mg/Kg for the soil sample collected at fifty-five (55) feet bgs.

Monitor well MW-2 is located approximately seventy-five (75) feet northwest (up-gradient) of the release point. The monitor well was installed to a total depth of approximately ninety (90) feet bgs. Soil samples collected at fifteen (15) feet bgs, thirty (30) feet bgs, forty-five (45) feet bgs, sixty (60) feet bgs, and seventy-five (75) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

Monitor well MW-3 is located approximately seventy-five (75) feet to the southwest (cross-gradient) of the release point. The monitor well was installed to a total depth of approximately ninety (90) feet bgs. Soil samples collected at fifteen (15) feet bgs, thirty (30) feet bgs, forty-five (45) feet bgs, and sixty (60) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at fifteen (15) feet bgs, thirty (30) feet bgs, forty-five (45) feet bgs, and sixty (60) feet bgs to 0.0025 mg/Kg for the soil sample collected at sixty (60) feet bgs. Analytical results indicated BTEX concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at fifteen (15) feet bgs, thirty (30) feet bgs, and forty-five (45) feet bgs to 0.0052 mg/Kg for the soil sample collected at sixty (60) feet bgs. TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

Monitor well MW-4 is located approximately seventy-five (75) feet to the southeast (down-gradient) of the release point. The monitor well was installed to a total depth of approximately eighty-nine (89) feet bgs. Soil samples collected at fifteen (15) feet bgs, thirty (30) feet bgs, forty-

five (45) feet bgs, and sixty (60) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

On January 25, 2011, one (1) additional monitoring well (MW-5) was installed to further monitor the down-gradient migration of the PSH plume. Monitor well MW-5 is located approximately sixty (60) feet to the southeast (down-gradient) of the release point. The monitor well was installed to a total depth of approximately ninety-five (95) feet bgs. Soil samples collected at fifteen (15) feet bgs, twenty-five (25) feet bgs, forty-five (45) feet bgs, sixty-five (65) feet bgs, and seventy-five (75) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitor well MW-5.

On September 11, 2013, one (1) additional monitoring well (MW-6) was installed to further monitor the down-gradient migration of the PSH plume. Monitor well MW-6 is located approximately ninety-five (95) feet to the east (cross-gradient) of the release point. The monitor well was installed to a total depth of approximately one hundred (100) feet bgs. Soil samples collected at five (5) feet bgs, forty (40) feet bgs, and seventy-five (75) feet bgs were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. PSH was not observed in monitor well MW-6.

Currently, a total of six (6) monitor wells are located at the DCP Plant to Lea Station 6-Inch Section 31 release site. Monitor wells MW-2 through MW-6 are gauged and sampled on a quarterly schedule, while MW-1 is gauged weekly but not sampled due to the presence of PSH.

3.0 FIELD ACTIVITIES

3.1 Product Recovery Efforts

A measurable thickness of PSH was detected in monitor well MW-1 during the initial site investigation. Basin Environmental began manual, bi-weekly gauging and recovery of PSH from monitor well MW-1 in October 2009. Approximately 4,650 gallons (111 barrels) of PSH has been recovered from MW-1 since recovery operations began in 2009, and approximately 1,069 gallons (25.5 barrels) of PSH was recovered from MW-1 during the 2014 reporting period. The average PSH thickness measured in monitor well MW-1 during the reporting period was 2.78 feet, and the maximum PSH thickness was 4.15 feet on March 4, 2014.

In September 2012, a Mobile Dual-Phase Extraction (MDPE) unit was installed on monitor well MW-1 by Talon LPE. The MDPE unit is shared with the nearby release site known as DCP Plant to Lea Station 6-Inch #2 (NMOCD Reference #1RP-2136), and the location of the unit is alternated quarterly. During the 2014 reporting period, approximately 1,816 gallons (43.2 barrels) of PSH in the vapor phase and approximately 5.5 gallons (0.13 barrels) of PSH in the liquid phase were recovered by the MDPE unit, for a total of approximately 1,822 equivalent gallons (43.4 barrels) of PSH. To date, a total of approximately 4,196 equivalent gallons (99.9 barrels) of PSH has been recovered from monitor well MW-1 by MDPE.

All recovered fluids are disposed of at an NMOCD-approved disposal facility.

3.2 Groundwater Monitoring

The on-site monitor wells were gauged and sampled on February 14 (1Q2014), May 8 (2Q2014), August 5 (3Q2014), and November 7, 2014 (4Q2014). The groundwater monitoring events consisted of measuring static water levels in the on-site monitor wells (MW-1 through MW-7), checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. The monitor wells were purged using disposable Teflon bailers of a minimum of three (3) well volumes of water, or until the wells were dry. Groundwater was allowed to recharge, and samples were obtained using clean, disposable Teflon bailers. Water samples were stored in clean, plastic or glass containers provided by the laboratory and placed on ice in the field. Purged water was collected in a trailer-mounted polystyrene tank and disposed of at an NMOCD-approved disposal.

A yearly monitoring event for polyaromatic hydrocarbons (PAH) was conducted on May 13, 2014. Based on sampling criteria provided by the NMOCD, only monitor well MW-6 was subject to PAH monitoring during the 2014 calendar year.

Locations of the groundwater monitoring wells and the inferred groundwater elevations, which were constructed from the measurements collected during the 2014 quarterly sampling events, are depicted in Figures 2A through 2D. The "Groundwater Gradient Map" from the most recent sampling event (Figure 2D, November 7, 2014) indicates a general gradient of approximately 0.002 feet/foot to the southeast as measured between groundwater monitor wells MW-2 and MW-4.

On November 7, 2014, the corrected groundwater elevation ranged between 3,455.61 and 3,456.35 feet above mean sea level in monitor wells MW-4 and MW-2, respectively. The "2014 Groundwater Elevation Data" is provided as Table 1.

4.0 LABORATORY RESULTS

Groundwater samples collected from the monitor wells during the quarterly and yearly monitoring events were delivered to Xenco Laboratories in Odessa, Texas, for determination of BTEX and/or PAH constituent concentrations by EPA Methods SW846-8021b and SW846 8270C, respectively. A summary of benzene and BTEX constituent concentrations is presented in Table 2, "2014 Concentrations of Benzene & BTEX in Groundwater". A summary of PAH constituent concentrations is presented in Table 3, "Concentrations of Semi-Volatile Compounds in Groundwater". Laboratory analytical reports are provided as Appendix A. "Groundwater Concentration" maps are provided as Figures 3A through 3D.

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

Monitor well MW-1

Monitor well MW-1 was not sampled during the 2014 reporting period due to the presence of PSH in the monitor well.

Monitor well MW-2

Laboratory analytical results indicated benzene, ethylbenzene, toluene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMOCD regulatory standards during all four quarters of the reporting period.

Monitor well MW-3

Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL in 1Q2014, 3Q2014, and 4Q2014 to 0.0024 mg/L in 2Q2014. Ethylbenzene, toluene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. Benzene, ethylbenzene, toluene, and total xylene concentrations were less than NMOCD regulatory standards during all four quarters of the reporting period.

Monitor well MW-4

Laboratory analytical results indicated benzene concentrations ranged from 0.0047 mg/L in 4Q2014 to 0.0240 mg/L in 1Q2014. Toluene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL in all submitted groundwater samples. The benzene concentration in the groundwater sample collected during 1Q2014 exceeded the NMOCD regulatory standard of 0.01 mg/L. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards during all four quarters of the reporting period.

Monitor well MW-5

Laboratory analytical results indicated benzene, ethylbenzene, toluene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMOCD regulatory standards during all four quarters of the reporting period.

Monitor well MW-6

Laboratory analytical results indicated benzene, ethylbenzene, toluene, and total xylene concentrations were both less than the appropriate laboratory MDL and less than NMOCD regulatory standards in 3Q2013 and 4Q2013.

PAH constituent concentrations were both less than the appropriate laboratory MDL and NMOCD regulatory standards in the groundwater sample collected on May 13, 2014.

5.0 SUMMARY

This report presents the results of the monitoring activities for the 2014 annual monitoring period. Currently, there are six (6) groundwater monitor wells (MW-1 through MW-6) on-site. Monitor well MW-1 was not sampled in 2014 due to the presence of PSH in the monitor well. Monitor wells MW-2 through MW-6 were sampled during all four quarters of the monitoring period. The results of these sampling events are summarized above.

The "Groundwater Gradient Map" from the most recent sampling event (Figure 2D, November 7, 2014) indicates a general gradient of approximately 0.002 feet/foot to the southeast as measured between groundwater monitor wells MW-2 and MW-4.

A measurable thickness of PSH was detected in monitor well MW-1 throughout the 2013 reporting period. The average PSH thickness measured in MW-1 during the reporting period was 2.78 feet, and the maximum PSH thickness was 4.15 feet on March 4, 2014.

During the reporting period, approximately 1,069 gallons (25.5 barrels) of PSH was recovered, by manual recovery, from monitor well MW-1. Approximately 1,816 gallons (43.2 barrels) of PSH in the vapor phase and approximately 5.5 gallons (0.13 barrels) of PSH in the liquid phase were recovered by Mobile Dual-Phase Extraction, for a total of approximately 1,822 equivalent gallons (43.4 barrels) of PSH.

Review of laboratory analytical results generated from analysis of groundwater samples collected in 2014 indicated benzene concentrations were less than NMOCD regulatory standards in monitor wells MW-2, MW-3, MW-5, and MW-6. However, the benzene concentration in the groundwater sample collected from monitor well MW-4 during 1Q2014 exceeded the NMOCD regulatory standard of 0.01 mg/L. Toluene, ethylbenzene, and total xylene concentrations were less than NMOCD regulatory standards during all four quarters of the reporting period.

6.0 ANTICIPATED ACTIONS

PSH recovery by Mobile Dual-Phase Extraction from monitor well MW-1 will continue on an alternating quarterly basis during the 2015 monitoring period. During months when the MDPE unit is not active at the site, manual PSH recovery from monitor well MW-1 will be conducted on a semi-weekly schedule. All fluids recovered from MW-1 will be disposed of at an NMOCD-permitted disposal facility.

Monitor wells MW-2 through MW-6 will be monitored and sampled quarterly. Results from the 2015 sampling events will be reported in the *2015 Annual Monitoring Report*, which will be submitted to the NMOCD by April 1, 2016.

7.0 LIMITATIONS

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

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

8.0 DISTRIBUTION

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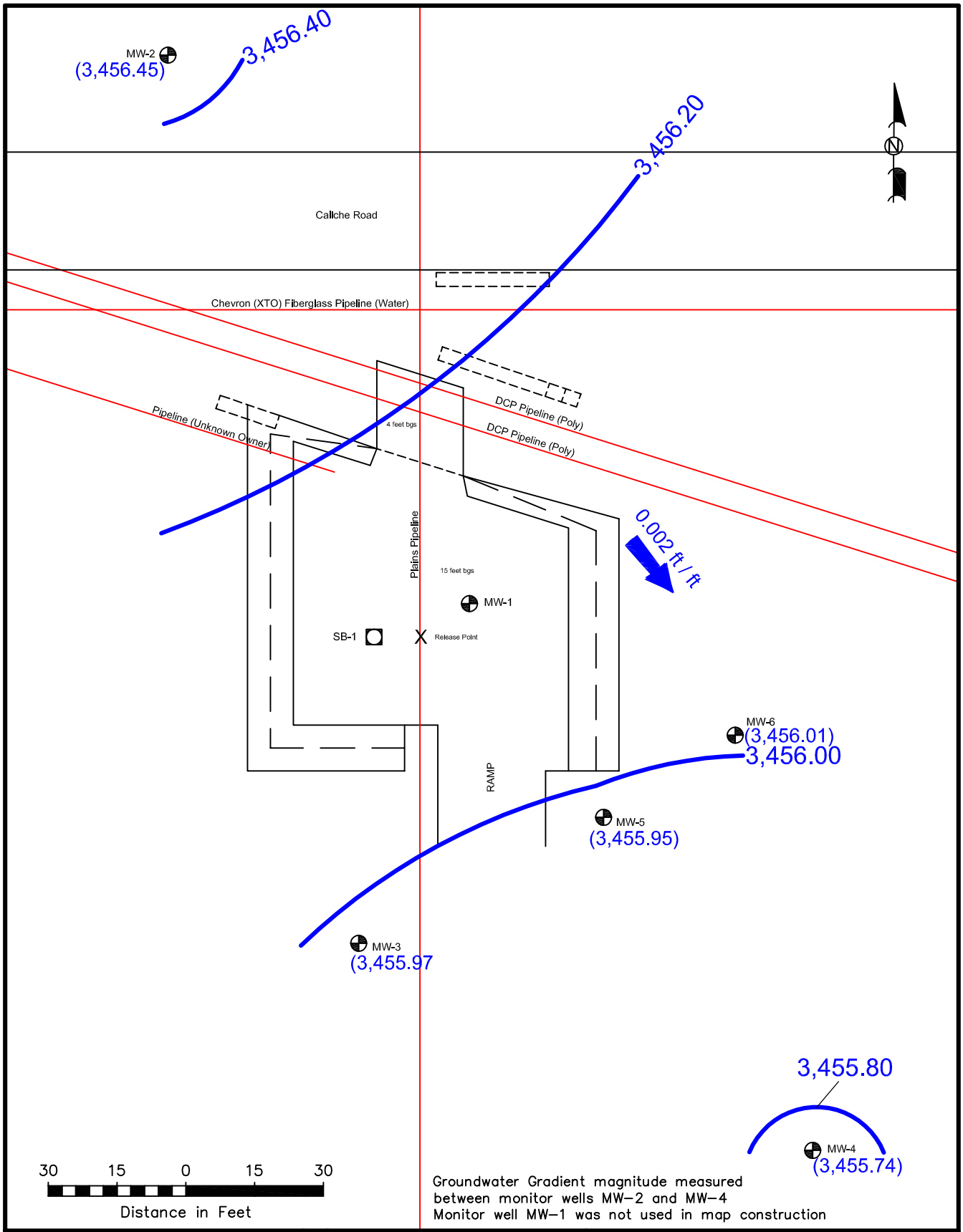
Figures

Figure 1
Site Location Map
Plains Pipeline, LP
DCP Plant to Lea Station 6" Section 31
Lea County, New Mexico
SRS #2009-084
1RP-2166

Basin Environmental Service Technologies, LLC

Drawn By: BJA	Checked By: BRB
March 28, 2011	Scale: 1" = 2000'



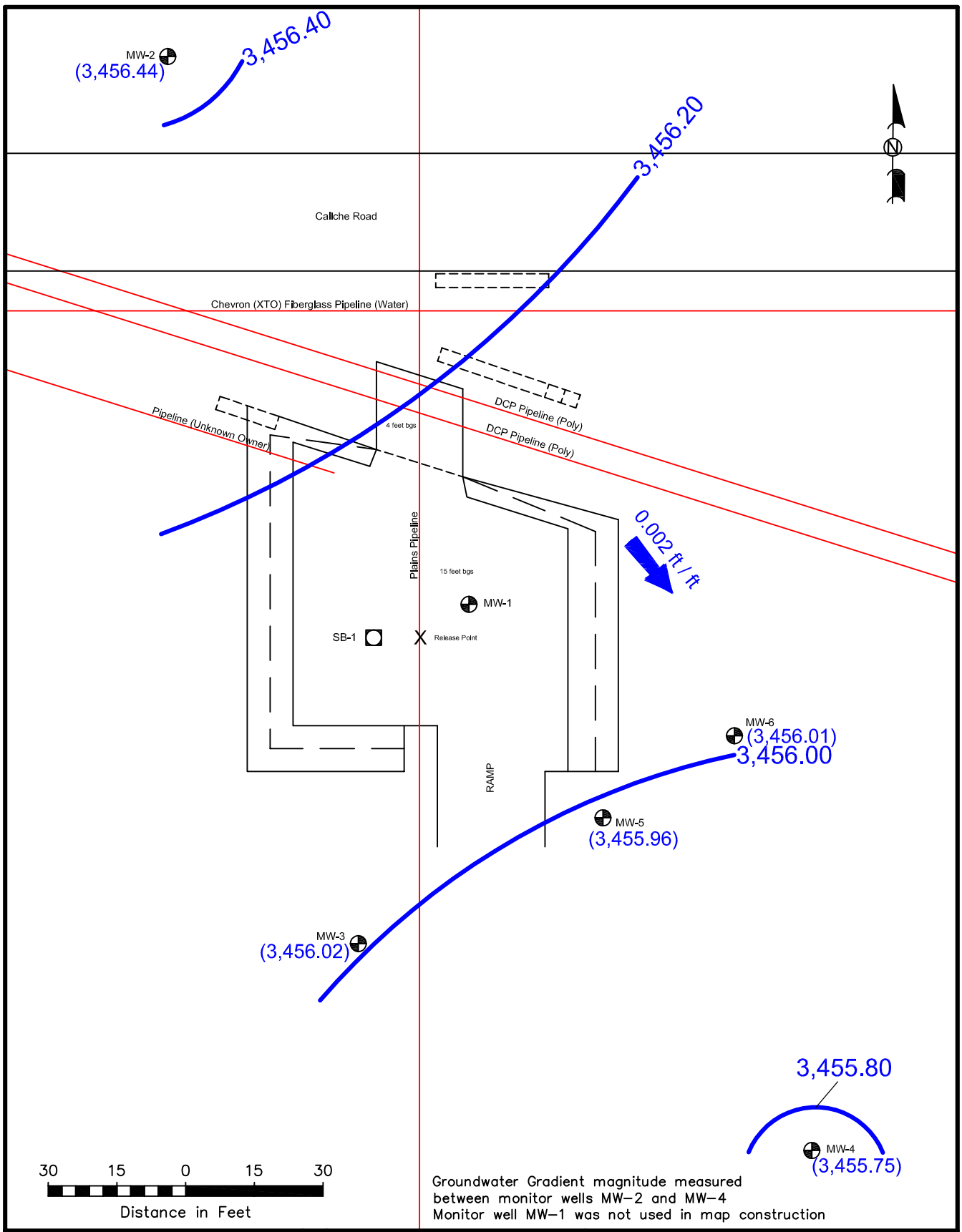
LEGEND:

- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.003 ft / ft Groundwater Gradient Direction and Magnitude

Figure 2A
Inferred Groundwater Gradient Map
1Q2014
Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Checked By: BRB
March 20, 2015		



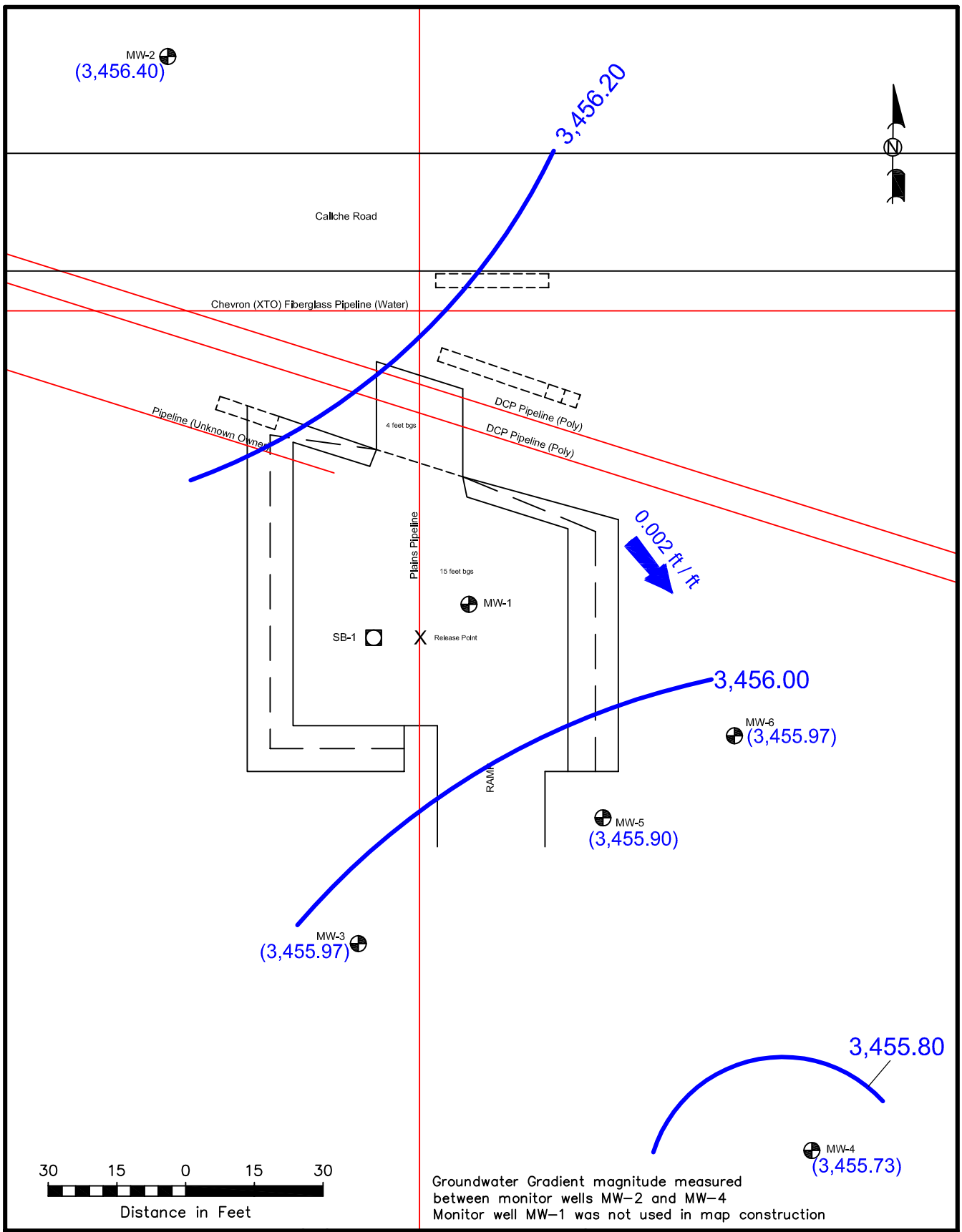
LEGEND:

- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.003 ft / ft Groundwater Gradient Direction and Magnitude

Figure 2B
Inferred Groundwater Gradient Map
2Q2014
Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Checked By: BRB
March 20, 2015		



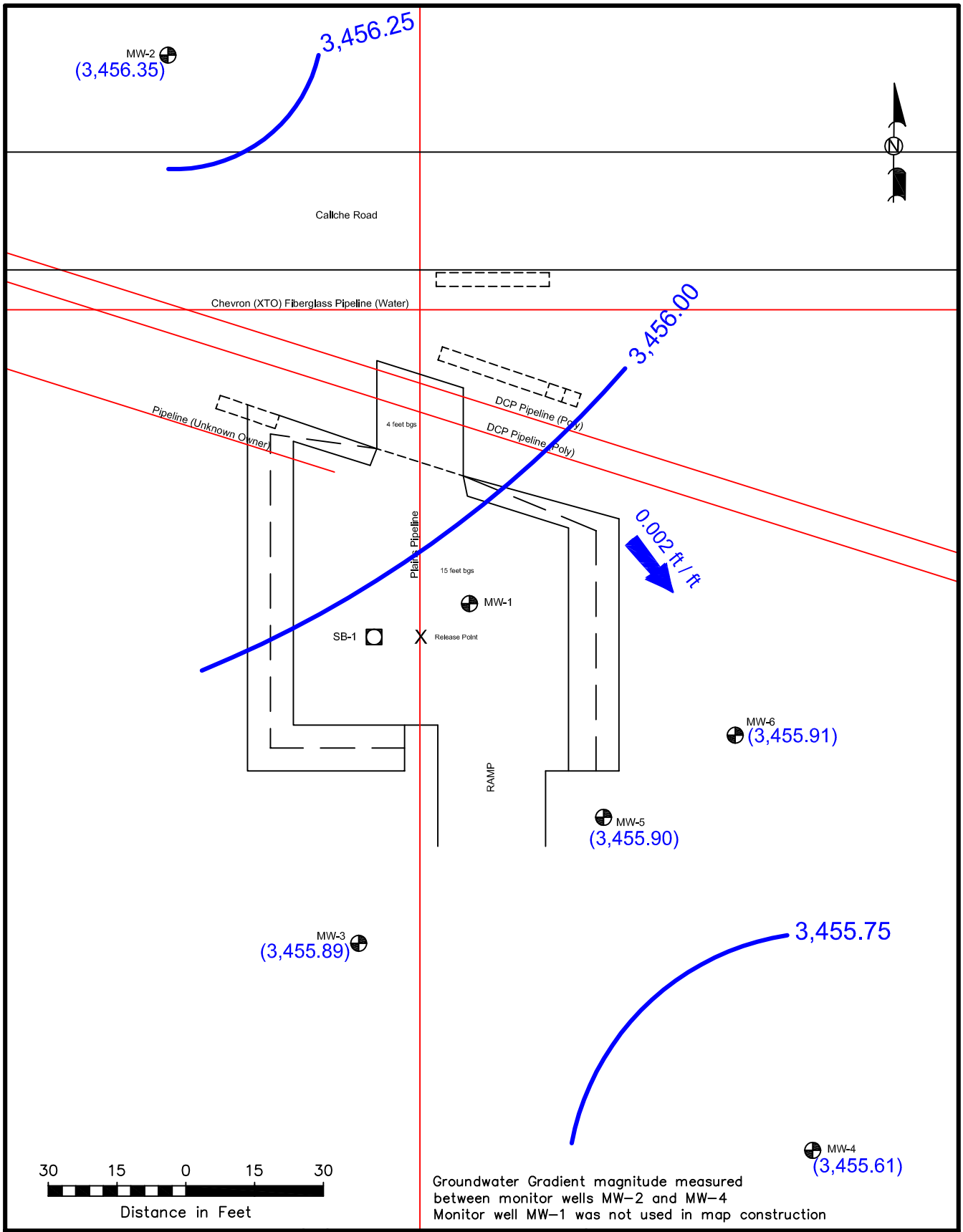
LEGEND:

- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.003 ft / ft Groundwater Gradient Direction and Magnitude

Figure 2C
Inferred Groundwater Gradient Map
3Q2014
Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Checked By: BRB
March 20, 2015		



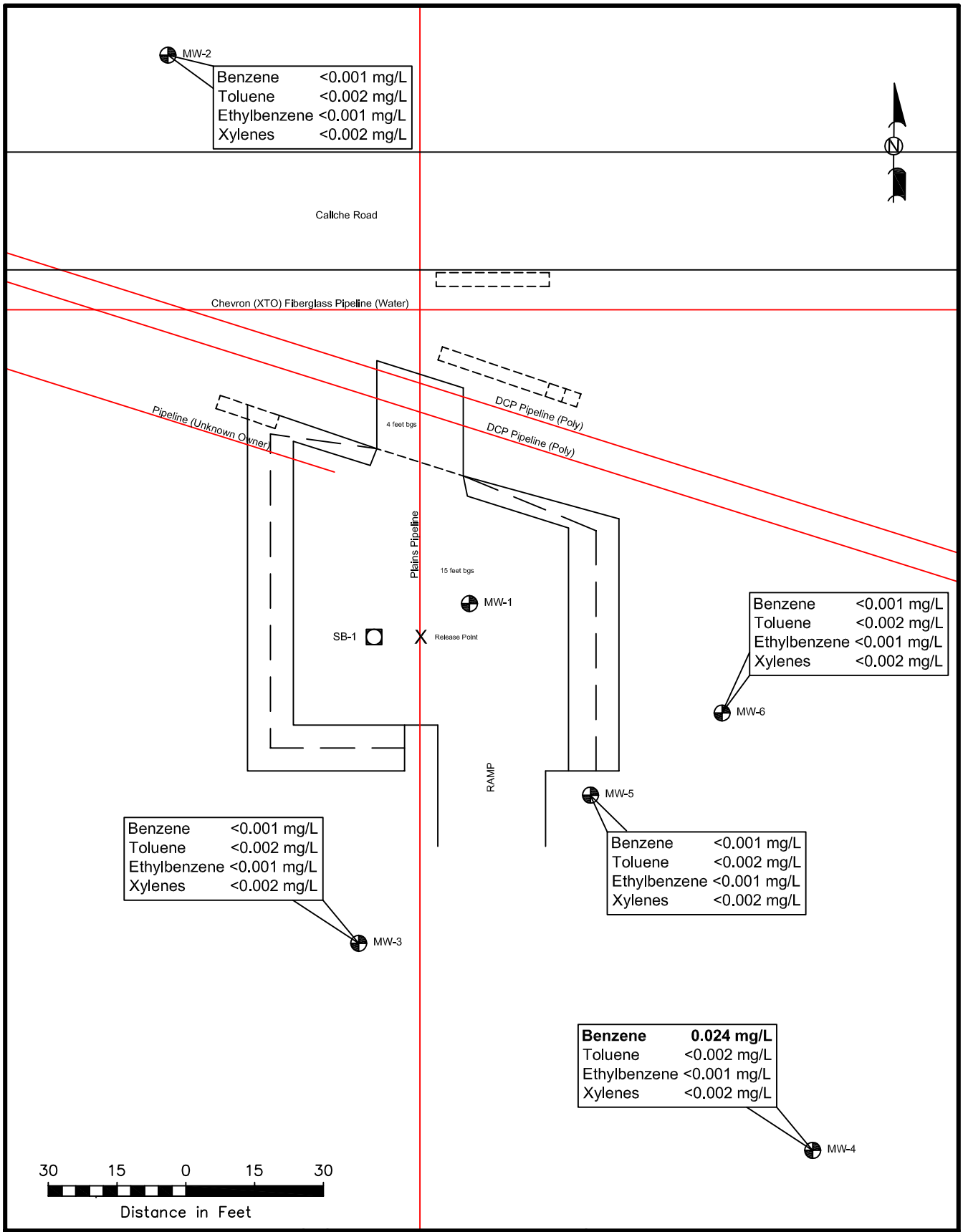
LEGEND:

- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- Groundwater Gradient Contour Line
- (3801.46) Groundwater Elevation (feet)
- 0.003 ft / ft Groundwater Gradient Direction and Magnitude

Figure 2D
Inferred Groundwater Gradient Map
4Q2014
Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Checked By: BRB
March 20, 2015		



LEGEND:

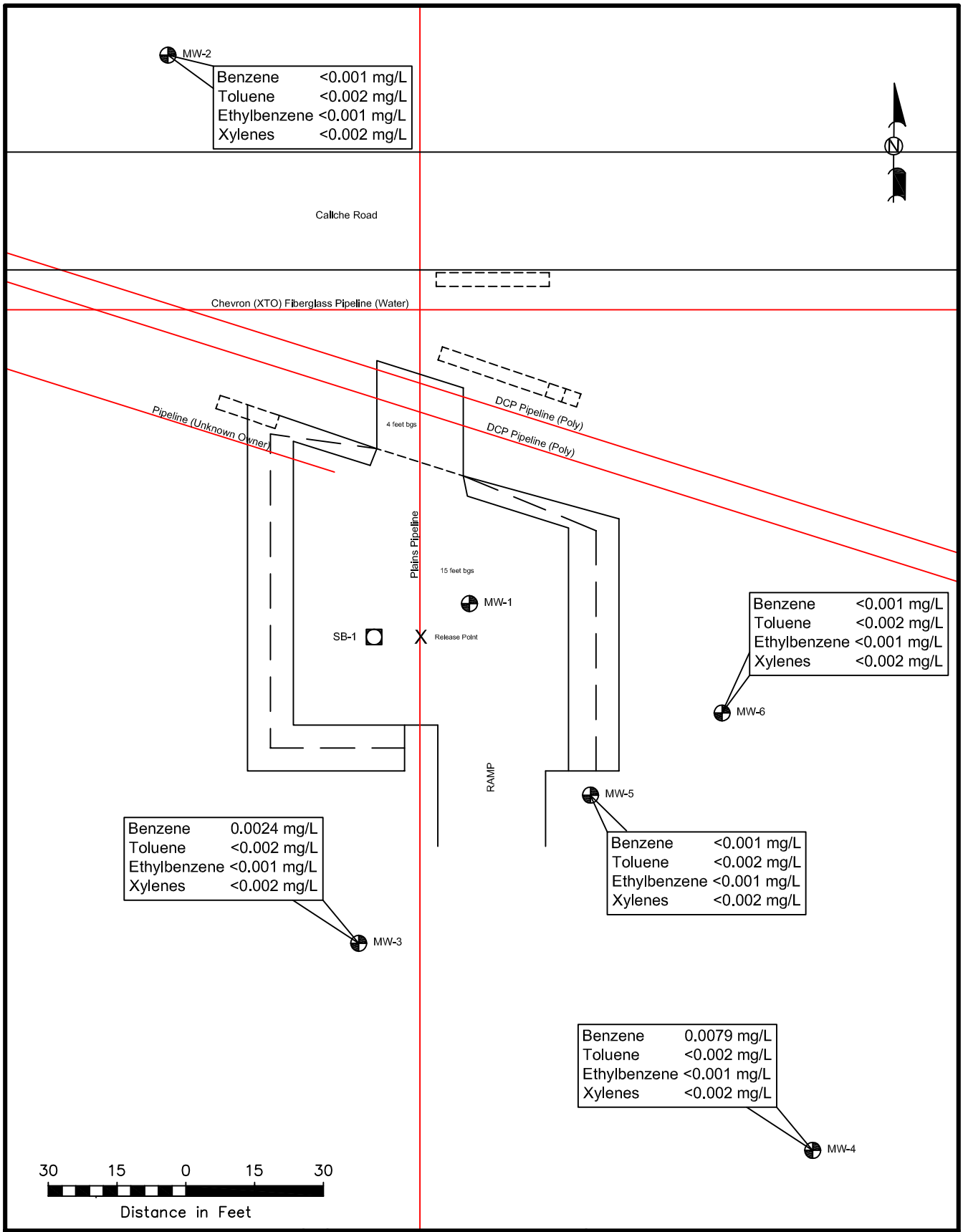
Excavation Extent
Pipeline
Soil Boring
Monitor Well
<0.001 Constituent Concentration (mg/L)

Figure 3A
Groundwater Concentration Map
1Q2014

Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Prepared By: BJA
March 20, 2015		



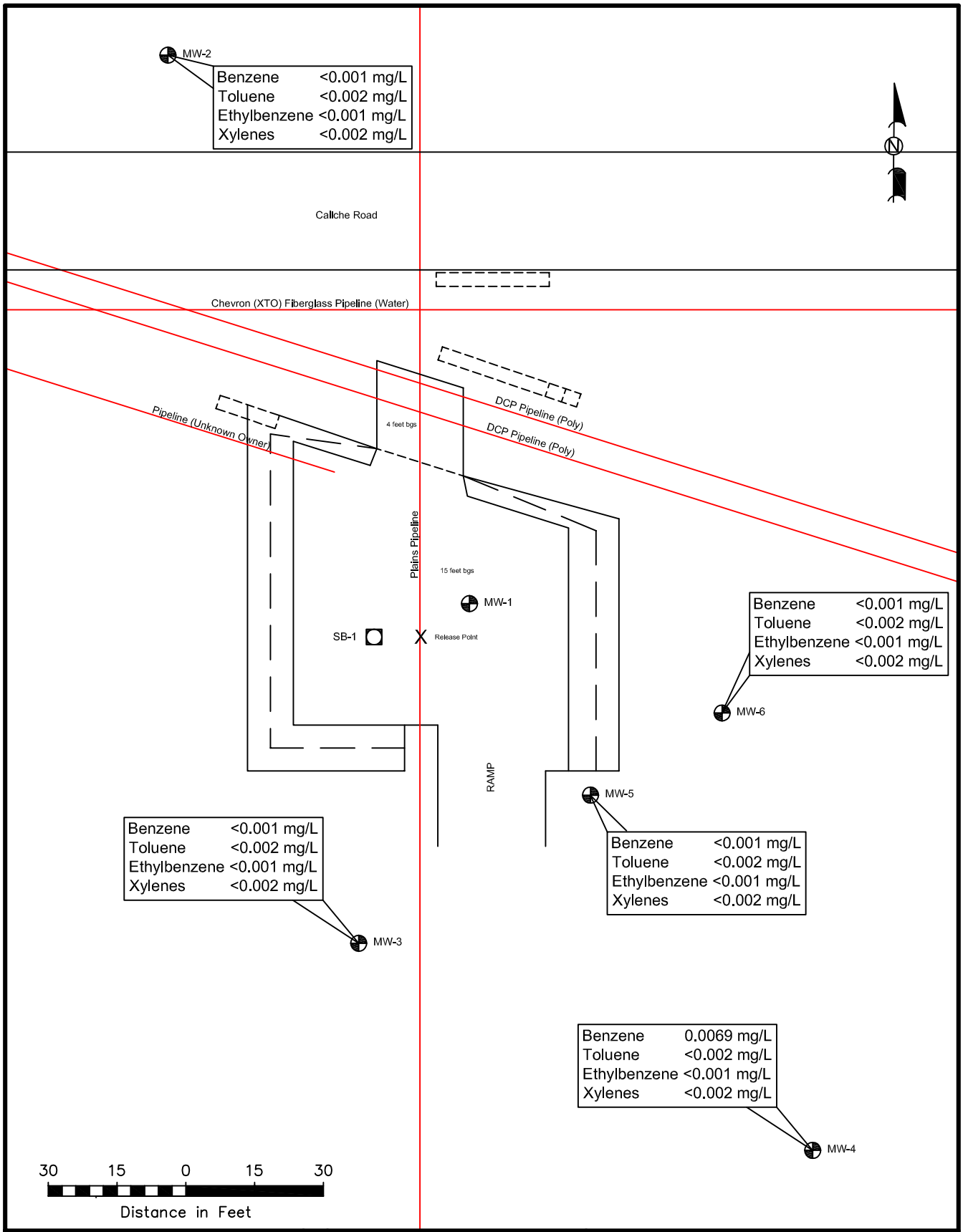
LEGEND:
- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- <0.001 Constituent Concentration (mg/L)

Figure 3B
Groundwater Concentration Map
2Q2014

Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Prepared By: BJA
March 20, 2015		



LEGEND:
- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- <0.001 Constituent Concentration (mg/L)

Figure 3C
Groundwater Concentration Map
3Q2014

Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

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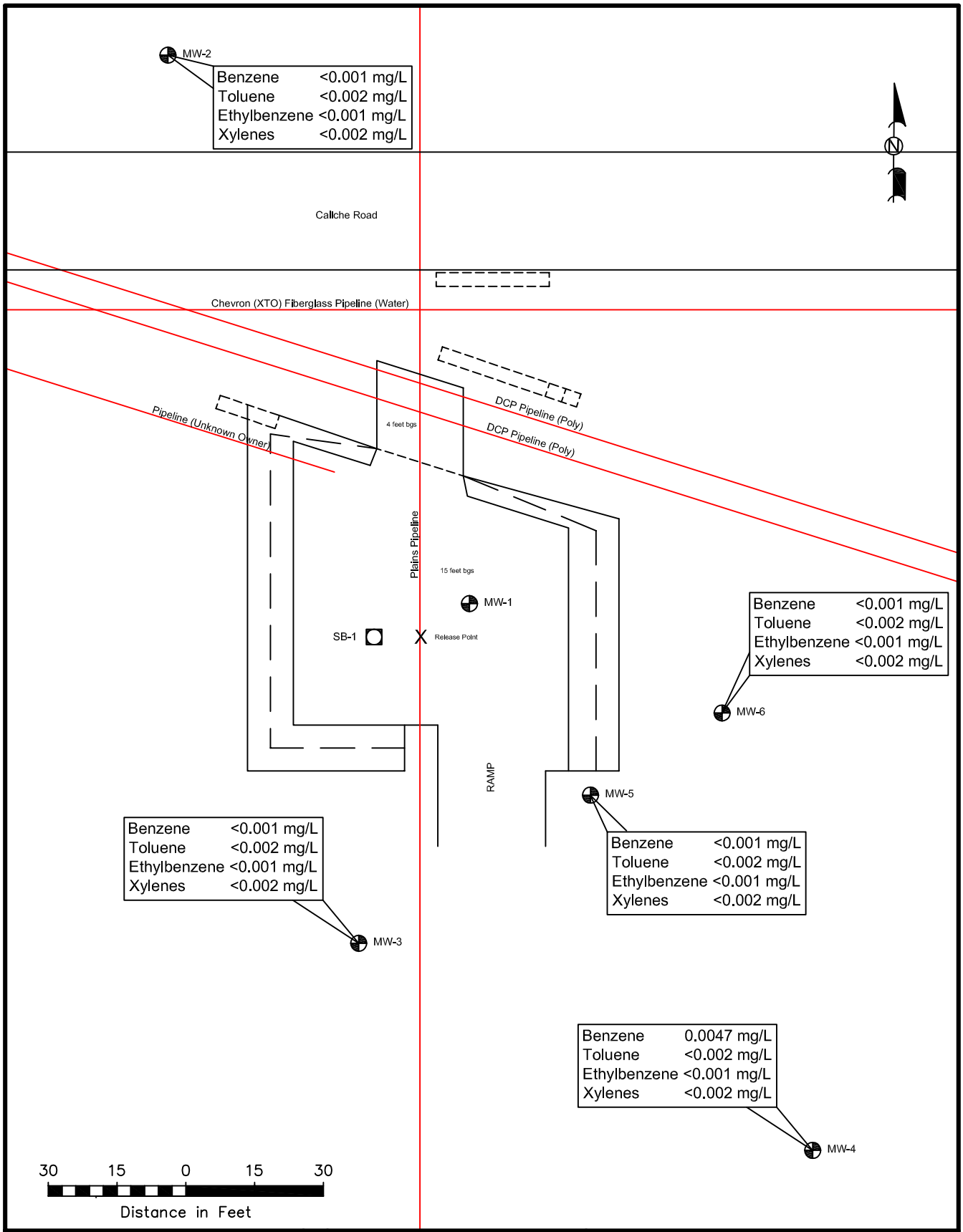
March 20, 2015		



LEGEND:
- Excavation Extent
- Pipeline
- Soil Boring
- Monitor Well
- <0.001 Constituent Concentration (mg/L)

Figure 3D
Groundwater Concentration Map
4Q2014

Plains All American Pipeline, LP
DCP Plant to Lea Station 6-Inch Sec 31
Lea County, NM
1RP-2166

Basin Environmental Service Technologies, LLC

Scale: 1" = 30'	Drawn By: BJA	Checked By: BRB
March 20, 2015		

Tables

TABLE 1
2014 GROUNDWATER ELEVATION DATA

PLAINS ALL AMERICAN PIPELINE, LP
DCP PLANT TO LEA STATION 6-INCH SEC. 31
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2009-084
NMOCD REFERENCE #: 1RP-2166

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	02/14/2014	3,539.59	82.68	85.86	3.18	3,456.43
	05/08/2014	3,539.59	*	*	*	*
	08/05/2014	3,539.59	82.86	85.77		3,453.82
	11/07/2014	3,539.59	*	*	*	*
MW-2	02/14/2014	3,539.37	-	82.92	-	3,456.45
	05/08/2014	3,539.37	-	82.93	-	3,456.44
	08/05/2014	3,539.37	-	82.97	-	3,456.40
	11/07/2014	3,539.37	-	83.02	-	3,456.35
MW-3	02/14/2014	3,539.28	-	83.31	-	3,455.97
	05/08/2014	3,539.28	-	83.26	-	3,456.02
	08/05/2014	3,539.28	-	83.31	-	3,455.97
	11/07/2014	3,539.28	-	83.39	-	3,455.89
MW-4	02/14/2014	3,540.07	-	84.33	-	3,455.74
	05/08/2014	3,540.07	-	84.32	-	3,455.75
	08/05/2014	3,540.07	-	84.34	-	3,455.73
	11/07/2014	3,540.07	-	84.46	-	3,455.61
MW-5	02/14/2014	3,539.90	-	83.95	-	3,455.95
	05/08/2014	3,539.90	-	83.94	-	3,455.96
	08/05/2014	3,539.90	-	84.00	-	3,455.90
	11/07/2014	3,539.90	-	84.00	-	3,455.90
MW-6	02/14/2014	3540.82	-	84.81	-	3,456.01
	05/08/2014	3540.82	-	84.81	-	3,456.01
	08/05/2014	3540.82	-	84.85	-	3,455.97
	11/07/2014	3540.82	-	84.91	-	3,455.91

- = Not applicable
Elevations based on the North American Vertical Datum of 1988
** Due to the presence of a Mobile Dual Phase Extraction (MDPE) unit, monitor well MW-1 was not gauged during the 2Q2014 & 4Q2014 quarterly monitoring events.*

TABLE 2
2014 CONCENTRATIONS OF BENZENE & BTEX IN GROUNDWATER

PLAINS ALL AMERICAN PIPELINE, LP
DCP PLANT TO LEA STATION 6-INCH SEC. 31
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2009-084
NMOCD REFERENCE #: 1RP-2166

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8260b					
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL BTEX (mg/L)
MW-2	02/14/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	05/08/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	08/05/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	11/07/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
MW-3	02/14/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	05/08/14	0.0024	<0.0020	<0.0010	<0.0020	<0.0010	0.0024
	08/05/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	11/07/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
MW-4	02/14/14	**0.0240**	<0.0020	<0.0010	<0.0020	<0.0010	0.0240
	05/08/14	0.0079	<0.0020	<0.0010	<0.0020	<0.0010	0.0079
	08/05/14	0.0069	<0.0020	<0.0010	<0.0020	<0.0010	0.0069
	11/07/14	0.0047	<0.0020	<0.0010	<0.0020	<0.0010	0.0047
MW-5	02/14/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	05/08/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	08/05/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	11/07/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
MW-6	02/14/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	05/08/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	08/05/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
	11/07/14	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020
NMOCD CRITERIA		**0.01**	**0.75**	**0.75**	**TOTAL XYLENES 0.62**		

TABLE 3
CONCENTRATIONS OF SEMI-VOLATILE COMPOUNDS IN GROUNDWATER

PLAINS ALL AMERICAN PIPELINE, LP
DCP PLANT TO LEA STATION 6-INCH SEC. 31
LEA COUNTY, NEW MEXICO
PLAINS SRS #: 2009-084
NMOCD REFERENCE #: 1RP-2166

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510															
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
MW-6	5/13/2014	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.000051	<0.00051	<0.000051	<0.000051

Appendices

Appendix A
Laboratory Analytical Reports

Analytical Report 479538

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

DCP Plant to Lea Station 6' Sec 31

SRS# 2009-084

24-FEB-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

24-FEB-14

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

Reference: XENCO Report No(s): **479538**
DCP Plant to Lea Station 6' Sec 31
Project Address: Lea County, NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 479538. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 479538 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 479538

PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6' Sec 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	02-14-14 13:00		479538-001
MW-3	W	02-14-14 13:20		479538-002
MW-4	W	02-18-14 13:30		479538-003
MW-5	W	02-14-14 14:00		479538-004
MW-6	W	02-14-14 14:30		479538-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 479538

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6' Sec 31

Project Id: SRS# 2009-084
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-18-14 03:40 pm
Report Date: 24-FEB-14
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	479538-001		479538-002		479538-003		479538-004		479538-005	
	Field Id:	MW-2		MW-3		MW-4		MW-5		MW-6	
	Depth:										
	Matrix:	WATER		WATER		WATER		WATER		WATER	
	Sampled:	Feb-14-14 13:00		Feb-14-14 13:20		Feb-18-14 13:30		Feb-14-14 14:00		Feb-14-14 14:30	
BTEX by EPA 8021B	***Extracted:***	Feb-23-14 15:00		Feb-23-14 15:00		Feb-23-14 15:00		Feb-23-14 15:00		Feb-23-14 15:00	
	Analyzed:	Feb-23-14 22:12		Feb-23-14 22:28		Feb-23-14 22:44		Feb-23-14 23:00		Feb-23-14 23:16	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00100	ND	0.00100	0.0240	0.00100	ND	0.00100	ND	0.00100
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
m_p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total Xylenes		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total BTEX		ND	0.00100	ND	0.00100	0.0240	0.00100	ND	0.00100	ND	0.00100

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Orders : 479538, **Project ID:** SRS# 2009-084

Lab Batch #: 934653 **Sample:** 479538-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 22:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 934653 **Sample:** 479538-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 22:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 934653 **Sample:** 479538-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 22:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 934653 **Sample:** 479538-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 23:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 934653 **Sample:** 479538-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 23:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Orders : 479538,

Project ID: SRS# 2009-084

Lab Batch #: 934653 **Sample:** 651480-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 19:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 934653 **Sample:** 651480-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 19:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 934653 **Sample:** 651480-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/23/14 19:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 934653 **Sample:** 479199-005 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/24/14 09:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

Lab Batch #: 934653 **Sample:** 479199-005 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 02/24/14 10:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Order #: 479538 **Project ID:** SRS# 2009-084

Analyst: ARM **Date Prepared:** 02/23/2014 **Date Analyzed:** 02/23/2014

Lab Batch ID: 934653 **Sample:** 651480-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.105	105	0.100	0.109	109	4	70-125	25	
Toluene	<0.00200	0.100	0.105	105	0.100	0.109	109	4	70-125	25	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.107	107	5	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.201	101	0.200	0.210	105	4	70-131	25	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.109	109	5	71-133	25	

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

Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Order # : 479538 **Project ID:** SRS# 2009-084

Lab Batch ID: 934653 **QC- Sample ID:** 479199-005 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 02/24/2014 **Date Prepared:** 02/23/2014 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.116	116	0.100	0.109	109	6	70-125	25	
Toluene	0.00344	0.100	0.122	119	0.100	0.114	111	7	70-125	25	
Ethylbenzene	<0.00100	0.100	0.119	119	0.100	0.112	112	6	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.237	119	0.200	0.223	112	6	70-131	25	
o-Xylene	0.00132	0.100	0.120	119	0.100	0.112	111	7	71-133	25	

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

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

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

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Asbestos Radiochemistry

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

Page 1 of 1

LAB W.O#: 479538

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@basinenv.com
Project ID:	DCP Plant to Lea Station 6" Sec. 31 SRS #2009-084	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	
Sampler Signature:		Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A	

TAT Work Days = D Need results by:_____ Time:_____

Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other_____

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260	BTEX									Hold Sample (CALL___) Run PAH on Highest TPH___ Only if
								# Cont	Lab Only:											
1	MW-2	2.14.14	13:00	GW			3			X	X									
2	MW-3	2.14.14	13:20	GW			3			X	X									
3	MW-4	2.14.14	13:30	GW			3			X	X									
4	MW-5	2.14.14	14:00	GW			3			X	X									
5	MW-6	2.14.14	14:30	GW			3			X	X									
6																				
7																				
8																				
9																				
0																				

* Container Type Codes

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

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

** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA C.
H_2SO_4 G. $Na_2S_2O_3$ K. ZnAc&NaOH
D. NaOH H. $NaHSO_4$ L Asbc Acid&NaOH
O. _____

^ Matrix Type Codes

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

REMARKS

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1		Basin ET	2-14-14	3:40		MS	2/14/14	3:40
2					Julian M	Xenco Odessa	2-17-14	10:00
3								
4								

Lab Use Only	YES	NO	N/A
Non-Conformances found?		X	
Samples intact upon arrival?	X		
Received on Wet Ice?		X	
Labeled with proper preservatives?	X		
Received within holding time?	X		
Custody seals intact?		X	
VOCs rec'd w/o headspace?	X		
Proper containers used?	X		
pH verified-acceptable, excl VOCs?	X		
Received on time to meet HTs?	X		

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

C.O.C. Serial #

Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 02/18/2014 03:40:00 PM

Work Order #: 479538

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	18.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

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

Analyst:	PH Device/Lot#:

Checklist completed by: Ruriko Konuma Date: 02/18/2014

Checklist reviewed by: Kelsey Brooks Date: 02/18/2014

Analytical Report 485077

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

DCP PLANT TO LEA STATION 6" SEC. 31

SRS #2009-084

16-MAY-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

16-MAY-14

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

Reference: XENCO Report No(s): **485077**
DCP PLANT TO LEA STATION 6" SEC. 31
Project Address: NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 485077. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 485077 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 485077

PLAINS ALL AMERICAN EH&S, Midland, TX

DCP PLANT TO LEA STATION 6" SEC. 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	05-08-14 13:30		485077-001
MW-3	W	05-08-14 14:00		485077-002
MW-4	W	05-08-14 14:30		485077-003
MW-5	W	05-08-47 15:00		485077-004
MW-6	W	05-08-14 15:30		485077-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 485077

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP PLANT TO LEA STATION 6" SEC. 31

Project Id: SRS #2009-084
Contact: Ben Arguijo
Project Location: NM

Date Received in Lab: Fri May-09-14 03:30 pm
Report Date: 16-MAY-14
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	485077-001		485077-002		485077-003		485077-004		485077-005	
	Field Id:	MW-2		MW-3		MW-4		MW-5		MW-6	
	Depth:										
	Matrix:	WATER		WATER		WATER		WATER		WATER	
	Sampled:	May-08-14 13:30		May-08-14 14:00		May-08-14 14:30		May-08-47 15:00		May-08-14 15:30	
BTEX by EPA 8021B	***Extracted:***	May-15-14 16:00		May-15-14 16:00		May-15-14 16:00		May-15-14 16:00		May-15-14 16:00	
	Analyzed:	May-16-14 01:51		May-16-14 02:07		May-16-14 02:24		May-16-14 02:40		May-16-14 02:57	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00100	0.00240	0.00100	0.00794	0.00100	ND	0.00100	ND	0.00100
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
m,p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total Xylenes		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total BTEX		ND	0.00100	0.00240	0.00100	0.00794	0.00100	ND	0.00100	ND	0.00100

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: DCP PLANT TO LEA STATION 6" SEC. 31

Work Orders : 485077, **Project ID:** SRS #2009-084

Lab Batch #: 941148 **Sample:** 485077-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 01:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 941148 **Sample:** 485077-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 02:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 941148 **Sample:** 485077-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 02:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 941148 **Sample:** 485077-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 02:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 941148 **Sample:** 485077-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 02:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: DCP PLANT TO LEA STATION 6" SEC. 31

Work Orders : 485077, **Project ID:** SRS #2009-084

Lab Batch #: 941148 **Sample:** 655595-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/15/14 20:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 941148 **Sample:** 655595-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/15/14 20:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 941148 **Sample:** 655595-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/15/14 20:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0340	0.0300	113	80-120	

Lab Batch #: 941148 **Sample:** 485068-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/15/14 20:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 941148 **Sample:** 485068-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/15/14 21:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: DCP PLANT TO LEA STATION 6" SEC. 31

Work Order #: 485077 **Project ID:** SRS #2009-084

Analyst: ARM **Date Prepared:** 05/15/2014 **Date Analyzed:** 05/15/2014

Lab Batch ID: 941148 **Sample:** 655595-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.106	106	3	70-125	25	
Toluene	<0.00200	0.100	0.104	104	0.100	0.106	106	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.114	114	3	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.229	115	0.200	0.235	118	3	70-131	25	
o-Xylene	<0.00100	0.100	0.115	115	0.100	0.118	118	3	71-133	25	

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

Form 3 - MS / MSD Recoveries

Project Name: DCP PLANT TO LEA STATION 6" SEC. 31

Work Order # : 485077 **Project ID:** SRS #2009-084

Lab Batch ID: 941148 **QC- Sample ID:** 485068-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 05/15/2014 **Date Prepared:** 05/15/2014 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.105	105	0.100	0.111	111	6	70-125	25	
Toluene	<0.00200	0.100	0.106	106	0.100	0.112	112	6	70-125	25	
Ethylbenzene	<0.00100	0.100	0.114	114	0.100	0.119	119	4	71-129	25	
m,p-Xylenes	<0.00200	0.200	0.234	117	0.200	0.245	123	5	70-131	25	
o-Xylene	<0.00100	0.100	0.117	117	0.100	0.123	123	5	71-133	25	

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

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

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 Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Asbestos Radiochemistry

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

Page 1 of 1

LAB W.O#: 485077

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@basinenv.com
Project ID:	DCP Plant to Lea Station 6" Sec. 31 SRS #2009-084	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	

Sampler Signature:

Circle One Event: Daily Weekly Monthly Quartely Semi-Annual Annual N/A

TAT Work Days = D Need results by:_____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260	BTEX	PAH								Hold Sample (CALL___) Run PAH on Highest TPH___ Only if
								# Cont	Lab Only:		VP	GA								
1	MW-2	5/8/14	1330	GW			3				X									
2	MW-3	5/8/14	1400	GW			3				X									
3	MW-4	5/8/14	1430	GW			3				X									
4	MW-5	5/8/14	1500	GW			3				X									
5	MW-6	5/8/14	1530	GW			4				X	X								
6																				
7																				
8																				
9																				
0																				

* Container Type Codes

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

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

** Preservative Type Codes

A. None, E. HCL, I. Ice, B. HNO_3, F. MeOH, J. MCAA, C. H_2SO_4, G. $Na_2S_2O_3$, K. ZnAc&NaOH, D. NaOH, H. $NaHSO_4$, L Asbc Acid&NaOH, O. _____

^ Matrix Type Codes

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

REMARKS

PAH-not received.

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1		Basin Enviro.	5/8/14	1555	Verta Rogers	MS	5-8-14	15:55
2					Mmc Mic	Xenco	5/9/14	15:30
3								
4								

Lab Use Only	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

C.O.C. Serial #

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

 Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 05/09/2014 03:30:00 PM

Work Order #: 485077

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

Temperature Measuring device used :

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

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

Analyst:	PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 05/09/2014

Checklist reviewed by: Kelsey Brooks Date: 05/09/2014

Analytical Report 485474

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

DCP Plant to Lea Station 6" Sec. 31

SRS #2009-084

21-MAY-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

21-MAY-14

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

Reference: XENCO Report No(s): **485474**
DCP Plant to Lea Station 6" Sec. 31
Project Address: NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 485474. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 485474 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 485474

PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-6	W	05-13-14 14:30		485474-001

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 485474

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6" Sec. 31

Project Id: SRS #2009-084
Contact: Ben Arguijo
Project Location: NM

Date Received in Lab: Wed May-14-14 12:00 pm
Report Date: 21-MAY-14
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	485474-001					
	Field Id:	MW-6					
	Depth:						
	Matrix:	WATER					
	Sampled:	May-13-14 14:30					
PAHs by GCMS SIM SUB: E871002	***Extracted:***	May-16-14 15:30					
	Analyzed:	May-19-14 16:19					
	Units/RL:	mg/L RL					
Acenaphthene		ND 0.0000510					
Acenaphthylene		ND 0.0000510					
Anthracene		ND 0.0000510					
Benzo(a)anthracene		ND 0.0000510					
Benzo(a)pyrene		ND 0.0000510					
Benzo(b)fluoranthene		ND 0.0000510					
Benzo(g,h,i)perylene		ND 0.0000510					
Benzo(k)fluoranthene		ND 0.0000510					
Chrysene		ND 0.0000510					
Dibenz(a,h)anthracene		ND 0.0000510					
Dibenzofuran		ND 0.0000510					
Fluoranthene		ND 0.0000510					
Fluorene		ND 0.0000510					
Indeno(1,2,3-c,d)Pyrene		ND 0.0000510					
Naphthalene		ND 0.000510					
Phenanthrene		ND 0.0000510					
Pyrene		ND 0.0000510					

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Orders : 485474, **Project ID:** SRS #2009-084

Lab Batch #: 941130 **Sample:** 485474-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/19/14 16:19

SURROGATE RECOVERY STUDY

PAHs by GCMS SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Nitrobenzene-d5	0.599	1.00	60	35-114	
2-Fluorobiphenyl	0.562	1.00	56	43-116	
Terphenyl-D14	0.680	1.00	68	33-141	

Lab Batch #: 941130 **Sample:** 655514-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 12:00

SURROGATE RECOVERY STUDY

PAHs by GCMS SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Nitrobenzene-d5	0.683	1.00	68	35-114	
2-Fluorobiphenyl	0.665	1.00	67	43-116	
Terphenyl-D14	0.748	1.00	75	33-141	

Lab Batch #: 941130 **Sample:** 655514-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 12:17

SURROGATE RECOVERY STUDY

PAHs by GCMS SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Nitrobenzene-d5	0.690	1.00	69	35-114	
2-Fluorobiphenyl	0.685	1.00	69	43-116	
Terphenyl-D14	0.810	1.00	81	33-141	

Lab Batch #: 941130 **Sample:** 655514-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 05/16/14 16:07

SURROGATE RECOVERY STUDY

PAHs by GCMS SIM Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Nitrobenzene-d5	0.698	1.00	70	35-114	
2-Fluorobiphenyl	0.684	1.00	68	43-116	
Terphenyl-D14	0.797	1.00	80	33-141	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Order #: 485474 **Project ID:** SRS #2009-084

Analyst: PKH **Date Prepared:** 05/15/2014 **Date Analyzed:** 05/16/2014

Lab Batch ID: 941130 **Sample:** 655514-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PAHs by GCMS SIM Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.0000500	0.00100	0.000610	61	0.00100	0.000616	62	1	57-90	25	
Acenaphthylene	<0.0000500	0.00100	0.000633	63	0.00100	0.000617	62	3	47-95	25	
Anthracene	<0.0000500	0.00100	0.000638	64	0.00100	0.000633	63	1	56-90	25	
Benzo(a)anthracene	<0.0000500	0.00100	0.000792	79	0.00100	0.000798	80	1	51-100	25	
Benzo(a)pyrene	<0.0000500	0.00100	0.000706	71	0.00100	0.000744	74	5	49-97	25	
Benzo(b)fluoranthene	<0.0000500	0.00100	0.000794	79	0.00100	0.000781	78	2	41-114	25	
Benzo(g,h,i)perylene	<0.0000500	0.00100	0.000721	72	0.00100	0.000728	73	1	51-105	25	
Benzo(k)fluoranthene	<0.0000500	0.00100	0.000648	65	0.00100	0.000647	65	0	54-103	25	
Chrysene	<0.0000500	0.00100	0.000734	73	0.00100	0.000736	74	0	60-101	25	
Dibenz(a,h)anthracene	<0.0000500	0.00100	0.000655	66	0.00100	0.000786	79	18	50-109	25	
Dibenzofuran	<0.0000500	0.00100	0.000615	62	0.00100	0.000613	61	0	55-91	25	
Fluoranthene	<0.0000500	0.00100	0.000688	69	0.00100	0.000657	66	5	58-93	25	
Fluorene	<0.0000500	0.00100	0.000626	63	0.00100	0.000598	60	5	58-93	25	
Indeno(1,2,3-c,d)Pyrene	<0.0000500	0.00100	0.000666	67	0.00100	0.000709	71	6	52-108	25	
Naphthalene	<0.000500	0.00100	0.000627	63	0.00100	0.000638	64	2	51-100	25	
Phenanthrene	<0.0000500	0.00100	0.000721	72	0.00100	0.000717	72	1	43-97	25	
Pyrene	<0.0000500	0.00100	0.000758	76	0.00100	0.000753	75	1	51-95	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

CHAIN OF CUSTODY RECORD

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

LAB W.O#: 485474

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@basinenv.com
Project ID:	DCP Plant to Lea Station 6" Sec. 31 SRS #2009-084	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	

TAT Work Days = D Need results by:_____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

Sampler Signature:

Circle One Event: Daily Weekly Monthly Quartely Semi-Annual Annual N/A

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Example Volatiles by 8260	PAH									Hold Sample (CALL__) Run PAH on Highest TPH__ Only if
								Pres Type** E, I											
								# Cont	Lab Only:										
1	MW-6	5/13/14	1430	GW			1			X									
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

* Container Type Codes

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

Other _____

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

** Preservative Type Codes

A. None, E. HCL, I. Ice, B. HNO_3, F. MeOH, J. MCAA, C. H_2SO_4, G. $Na_2S_2O_3$, K. ZnAc&NaOH, D. NaOH, H. $NaHSO_4$, L Asbc Acid&NaOH, O. _____

^ Matrix Type Codes

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

REMARKS

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 2cc 2 3 9-8

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1		Basin Environ.	5/14/14	~~1550~~ 1220	Perla Rosales	MS	5-14-14	1220
2					Minerva Xenco	XENCO	5/15/15	9:58
3								
4								

Lab Use Only	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

C.O.C. Serial #

Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 05/14/2014 12:00:00 PM

Work Order #: 485474

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

Temperature Measuring device used :

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

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

Analyst:	PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 05/15/2014

Checklist reviewed by: Kelsey Brooks Date: 05/15/2014

Analytical Report 491035

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

DCP Plant to Lea Station 6' Sec 31

SRS# 2009-084

18-AUG-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

18-AUG-14

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

Reference: XENCO Report No(s): **491035**
DCP Plant to Lea Station 6' Sec 31
Project Address: Lea County, NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 491035. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 491035 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 491035

PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6' Sec 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	08-05-14 12:45		491035-001
MW-3	W	08-05-14 13:00		491035-002
MW-4	W	08-05-14 13:30		491035-003
MW-5	W	08-05-14 13:15		491035-004
MW-6	W	08-05-14 13:45		491035-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 491035

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6' Sec 31

Project Id: SRS# 2009-084
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Thu Aug-07-14 11:21 am
Report Date: 18-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	491035-001		491035-002		491035-003		491035-004		491035-005	
	Field Id:	MW-2		MW-3		MW-4		MW-5		MW-6	
	Depth:										
	Matrix:	WATER		WATER		WATER		WATER		WATER	
	Sampled:	Aug-05-14 12:45		Aug-05-14 13:00		Aug-05-14 13:30		Aug-05-14 13:15		Aug-05-14 13:45	
BTEX by EPA 8021B	***Extracted:***	Aug-15-14 17:00		Aug-15-14 17:00		Aug-15-14 17:00		Aug-15-14 17:00		Aug-15-14 17:00	
	Analyzed:	Aug-16-14 00:58		Aug-16-14 01:15		Aug-16-14 01:31		Aug-16-14 19:07		Aug-16-14 02:20	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00100	ND	0.00100	0.00685	0.00100	ND	0.00100	ND	0.00100
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
m_p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total Xylenes		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total BTEX		ND	0.00100	ND	0.00100	0.00685	0.00100	ND	0.00100	ND	0.00100

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

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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.

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L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

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RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Orders : 491035, **Project ID:** SRS# 2009-084

Lab Batch #: 948384 **Sample:** 491035-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/16/14 00:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 948384 **Sample:** 491035-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/16/14 01:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 948384 **Sample:** 491035-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/16/14 01:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 948384 **Sample:** 491035-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/16/14 02:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 948384 **Sample:** 491035-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/16/14 19:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Orders : 491035, **Project ID:** SRS# 2009-084

Lab Batch #: 948384 **Sample:** 660133-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/15/14 21:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 948384 **Sample:** 660133-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/15/14 21:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 948384 **Sample:** 660133-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/15/14 21:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 948384 **Sample:** 491033-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/15/14 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 948384 **Sample:** 491033-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 08/15/14 22:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Order #: 491035 **Project ID:** SRS# 2009-084

Analyst: ARM **Date Prepared:** 08/15/2014 **Date Analyzed:** 08/15/2014

Lab Batch ID: 948384 **Sample:** 660133-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.104	104	0.100	0.104	104	0	70-125	25	
Toluene	<0.00200	0.100	0.103	103	0.100	0.103	103	0	70-125	25	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.215	108	0.200	0.212	106	1	70-131	25	
o-Xylene	<0.00100	0.100	0.104	104	0.100	0.103	103	1	71-133	25	

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

Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6' Sec 31

Work Order # : 491035 **Project ID:** SRS# 2009-084

Lab Batch ID: 948384 **QC- Sample ID:** 491033-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 08/15/2014 **Date Prepared:** 08/15/2014 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.104	104	0.100	0.110	110	6	70-125	25	
Toluene	<0.00200	0.100	0.103	103	0.100	0.109	109	6	70-125	25	
Ethylbenzene	<0.00100	0.100	0.108	108	0.100	0.116	116	7	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.211	106	0.200	0.227	114	7	70-131	25	
o-Xylene	<0.00100	0.100	0.102	102	0.100	0.109	109	7	71-133	25	

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

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

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

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Asbestos Radiochemistry

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

Page 1 of 1

LAB W.O # : 491035

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@basinenv.com
Project ID:	DCP Plant to Lea Station 6" Sec. 31 SRS #2009-084	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	

TAT Work Days = D Need results by: _____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other _____

Sampler Signature: Daley Easton

Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type * VC	Pres Type** E, I	Example Volatiles by 8260	BTEX								Hold Sample (CALL) Run PAH on Highest TPH Only if
								# Cont	Lab Only:										
1	MW-2	8-5-14	12:45	GW			3			X	X								
2	MW-3	8-5-14	13:00	GW			3			X	X								
3	MW-4	8-5-14	15:30	GW			3			X	X								
4	MW-5	8-5-14	13:15	GW			3			X	X								
5	MW-6	8-5-14	13:45	GW			3			X	X								
6																			
7																			
8																			
9																			
10																			

VC VP E,I

* Container Type Codes

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

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

** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA C.
H_2SO_4 G. $Na_2S_2O_3$ K. ZnAc&NaOH
D. NaOH H. $NaHSO_4$ L Asbc Acid&NaOH
O. _____

^ Matrix Type Codes

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

REMARKS

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 1° 2 3 3°

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Daley Easton	Basin Environ.	8-5-14	4:38 pm	Jerlyn Resendo	MS	8-5-14	4:38
2					MRSS	Xenco	8/7/14	11:21
3								
4								

Lab Use Only	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

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

C.O.C. Serial #

 Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 08/07/2014 11:21:00 AM

Work Order #: 491035

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

Temperature Measuring device used :

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 08/07/2014

Checklist reviewed by: Date:

Analytical Report 497002

for

PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

DCP Plant to Lea Station 6" Sec. 31

SRS#2009-084

13-NOV-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-18), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

13-NOV-14

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

Reference: XENCO Report No(s): **497002**
DCP Plant to Lea Station 6" Sec. 31
Project Address: Lea County, NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 497002. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 497002 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 497002

PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6" Sec. 31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	11-07-14 16:20		497002-001
MW-3	W	11-07-14 15:30		497002-002
MW-4	W	11-07-14 15:00		497002-003
MW-5	W	11-07-14 14:30		497002-004
MW-6	W	11-07-14 15:40		497002-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 497002

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6" Sec. 31

Project Id: SRS#2009-084
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Wed Nov-12-14 01:55 pm
Report Date: 13-NOV-14
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	497002-001		497002-002		497002-003		497002-004		497002-005	
	Field Id:	MW-2		MW-3		MW-4		MW-5		MW-6	
	Depth:										
	Matrix:	WATER		WATER		WATER		WATER		WATER	
	Sampled:	Nov-07-14 16:20		Nov-07-14 15:30		Nov-07-14 15:00		Nov-07-14 14:30		Nov-07-14 15:40	
BTEX by EPA 8021	***Extracted:***	Nov-12-14 15:00		Nov-12-14 15:00		Nov-12-14 15:00		Nov-12-14 15:00		Nov-12-14 15:00	
	Analyzed:	Nov-12-14 21:10		Nov-12-14 21:27		Nov-12-14 22:15		Nov-13-14 08:10		Nov-12-14 22:48	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Benzene		ND	0.00100	ND	0.00100	0.00471	0.00100	ND	0.00100	ND	0.00100
Toluene		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
m_p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Xylenes, Total		ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100	ND	0.00100
Total BTEX		ND	0.00100	ND	0.00100	0.00471	0.00100	ND	0.00100	ND	0.00100

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Orders : 497002, **Project ID:** SRS#2009-084

Lab Batch #: 955234 **Sample:** 497002-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 21:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 955234 **Sample:** 497002-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 21:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 955234 **Sample:** 497002-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 22:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 955234 **Sample:** 497002-005 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 22:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 955234 **Sample:** 497002-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/13/14 08:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Orders : 497002, **Project ID:** SRS#2009-084

Lab Batch #: 955234 **Sample:** 664359-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 17:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 955234 **Sample:** 664359-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 17:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 955234 **Sample:** 664359-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 17:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 955234 **Sample:** 496966-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 18:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 955234 **Sample:** 496966-001 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/12/14 18:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Order #: 497002 **Project ID:** SRS#2009-084

Analyst: ARM **Date Prepared:** 11/12/2014 **Date Analyzed:** 11/12/2014

Lab Batch ID: 955234 **Sample:** 664359-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0852	85	0.100	0.0858	86	1	70-125	25	
Toluene	<0.00200	0.100	0.0921	92	0.100	0.0932	93	1	70-125	25	
Ethylbenzene	<0.00100	0.100	0.0991	99	0.100	0.0996	100	1	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.205	103	0.200	0.205	103	0	70-131	25	
o-Xylene	<0.00100	0.100	0.0966	97	0.100	0.0969	97	0	71-133	25	

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

Form 3 - MS / MSD Recoveries

Project Name: DCP Plant to Lea Station 6" Sec. 31

Work Order # : 497002 **Project ID:** SRS#2009-084

Lab Batch ID: 955234 **QC- Sample ID:** 496966-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/12/2014 **Date Prepared:** 11/12/2014 **Analyst:** ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0883	88	0.100	0.0870	87	1	70-125	25	
Toluene	<0.00200	0.100	0.0956	96	0.100	0.0941	94	2	70-125	25	
Ethylbenzene	<0.00100	0.100	0.103	103	0.100	0.101	101	2	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.212	106	0.200	0.208	104	2	70-131	25	
o-Xylene	<0.00100	0.100	0.0983	98	0.100	0.0973	97	1	71-133	25	

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

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

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 Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY RECORD

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

LAB W.O#: 490002

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Ben Arguijo	Email:	cjbryant@paalp.com, bjarguijo@basinenv.com
Project ID:	DCP Plant to Lea Station 6" Sec. 31 SRS #2009-084	PO#:	PAA-C. Bryant
Invoice To:	Camille Bryant Plains All American	Quote #:	

TAT Work Days = D Need results by:_____ Time:_____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

Sampler Signature: D. Saxton

Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

ANALYSES REQUESTED

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Cont Type* VC	Pres Type** E, I	Example Volatiles by 8260	BTEX									Hold Sample (CALL) Run PAH on Highest TPH Only if
											VP	GA	1							
											E,I	I								
1	MW-2	11/7/14	1620	GW			3				X									
2	MW-3	11/7/14	1530	GW			3				X									
3	MW-4	11/7/14	1500	GW			3				X									
4	MW-5	11/7/14	1430	GW			3				X									
5	MW-6	11/7/14	1540	GW			3				X									
6																				
7																				
8																				
9																				
0																				

Cont | Lab Only:

REMARKS

* Container Type Codes

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

** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA C.
H_2SO_4 G. $Na_2S_2O_3$ K. ZnAc&NaOH
D. NaOH H. $NaHSO_4$ L Asbc Acid&NaOH
O. _____

^ Matrix Type Codes

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

Reg. Program / Clean-up Std	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C
CTLs TRRP DW NPDES LPST DryCln Other:	FL TX GA NC SC NJ PA OK LA AL NM Other:	1 **2** 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:	ADaPT SEDD ERPIMS XLS Other:	Match Incomplete Absent Unclear	1 1.2 3 4.0

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	D. Saxton	Basin Env.	11/7/14	1700		Basin Env.	11/7/14	1700
2		Basin Env.	11/11/14	1150	B. Blakenship	Basin	11-11-14	11:50
3	B. Blakenship	Basin	11-11-14	1255	Kerlan Research	MS	11-11-14	12:55
4						Xenco	11/12/14	1355

Lab Use Only	YES	NO	N/A
Non-Conformances found?			
Samples intact upon arrival?			
Received on Wet Ice?			
Labeled with proper preservatives?			
Received within holding time?			
Custody seals intact?			
VOCs rec'd w/o headspace?			
Proper containers used?			
pH verified-acceptable, excl VOCs?			
Received on time to meet HTs?			

C.O.C. Serial #

 Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 11/12/2014 01:55:00 PM

Work Order #: 497002

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

Temperature Measuring device used :

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 11/12/2014

Checklist reviewed by: Kelsey Brooks Date: 11/12/2014

Appendix B
Release Notification & Corrective Action (Form C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
APR 29 2009
HOBBSOCD

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	DCP Plant to Lea Station 6-inch Sec. 31	Facility Type	Pipeline

Surface Owner NM SLO	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	31	20S	37E					Lea

Latitude N 32.52733° Longitude W 103.2906°

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 bbls	Volume Recovered 0 bbls
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 04/02/2009 15:00
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? on 04/29/2009 Larry Johnson (initial estimate = 2-3 bbls based on small surface stain)	
By Whom? Jason Henry	Date and Hour 04/29/2009 @ 09:00 (revised to reportable on 04/29/2009)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

External corrosion of 6" inch pipeline caused a release of crude oil. A clamp was installed on the pipeline to mitigate the release. Throughput for the subject line is 660 bbls/day and the operating pressure of the pipeline is 45 psi. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 65.

Describe Area Affected and Cleanup Action Taken.*

The released crude resulted in a surface stain that measured approximately 6' x 8'. The impacted area will be remediated per applicable guidelines.

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

Signature: Jason Henry	OIL CONSERVATION DIVISION	
Printed Name: Jason Henry	Approved by District Supervisor: L Johnson ENVIRONMENTAL ENGINEER	
Title: Remediation Coordinator	Approval Date: 4.29.09	Expiration Date: 6.29.09
E-mail Address: jhenry@paalp.com	Conditions of Approval:	Attached ☐ IRP# 09.4.2166
Date: 04/29/2009 Phone: (575) 441-1099		

* Attach Additional Sheets If Necessary