GW - 351

GW

MONITORING REPORTS

DATE:

2010

2010 ANNUAL MONITORING REPORT

LEA STATION
PLAINS REF: 2003-00339
(COMPANY # 231735)

NW¼ OF SECTION 28, T20S, R37E
~9.5 MILES NORTH-NORTHWEST OF
EUNICE, LEA COUNTY, NEW MEXICO
LATITUDE: N32° 32' 51.3" LONGITUDE: W103° 15' 37.0"

JANUARY 2012

PREPARED BY:
ENVIRONMENTAL PLUS, INC.
P.O. BOX 1558
2100 AVENUE O
EUNICE, NEW MEXICO 88231

PREPARED FOR:

PLAINS
ALL AMERICAN

PLAINS
ALL AMERICAN

January 27, 2012

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

Re: Plains All American – 2010 Annual Monitoring Report
1 Site in Lea County, New Mexico

Dear Mr. Hansen:

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

Lea Station — Section 28, Township 20 South, Range 37 East, Lea County

Environmental Plus, Inc. (EPI) prepared this document and has vouched for its accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the document and interviewed EPI personnel in order to verify the accuracy and completeness of the report. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Report for the above facility.

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

Distribution List

2010 Annual Monitoring and Soil Closure Report

Plains Pipeline, L.P.

Lea Station (Ref. #2003-00339)

Name	Title	Company or Agency	Mailing Address	e-mail
Edward Hansen	Environmental Engineer	New Mexico Oil Conservation Division – Santa Fe	1120 South St. Francis Drive Santa Fe, NM 87505	edward.hansen@state.nm.us
Geoffrey Leking	Environmental Engineer	New Mexico Oil Conservation Division – Hobbs	1625 North French Drive Hobbs, NM 88240	geoffreyr.leking@state.nm.us
Jeff Dann	Senior Environmental Specialist	Plains All American Pipeline	333 Clay Street, Suite 1600 Houston, TX 77002	jpdann@paalp.com
Jason Henry	Remediation Coordinator	Plains All American Pipeline	2530 State Highway 214 Denver City, Texas 79323	jhenry@paalp.com
File	- -	Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231	dduncanepi@gmail.com

Standard of Care

2010 Annual Monitoring Report

Lea Station
Ref. # 2003-00339

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental, and/or the natural sciences.

This report was prepared by:

David P. Duncan
Civil Engineer

1-23-12
Date

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APPENDIX

I. Background

Lea Station is located approximately nine (9) miles north-northwest of Eunice in Lea County, New Mexico, at an elevation of approximately 3,495 feet above mean sea level (reference *Figures 1* and *2*). The site is located in the Monument-Jal Oil Field and is utilized as a crude oil pipeline pumping station. There are no residences or surface water bodies within a 1,000-foot radius of the facility. The facility is surrounded by a barbed wire fence and has a locked gate (reference *Figure 3*).

In 1992, Shell Pipeline Corporation (SPLC) retained CURA to establish baseline conditions of the subsurface environment at the site. In December 1992, twelve (12) soil borings were advanced around the site and seven (7) groundwater monitoring wells installed. Analytical results for soil samples collected during this phase of the investigation indicated two general areas of concern (one each in the eastern and western half of the site) were identified as hydrocarbon-impacted areas by elevated total petroleum hydrocarbon (TPH) concentrations in soils [>100 parts per million (ppm)]. Analytical results for groundwater samples collected during this phase of the investigation indicated dissolved phase hydrocarbon contaminants present in five (5) of seven (7) groundwater samples.

Based on these results, an additional four (4) soil borings were advanced with four (4) groundwater monitoring wells installed in September 1993. Results of this and previous phases of the investigation indicated three (3) hydrocarbon-impacted areas present on the site. One is located in the eastern portion, one in the north-central portion and one in the western portion. In addition, phase separated hydrocarbons (PSH) were detected in groundwater monitoring well MW-8. Due to the presence of PSH, extent of hydrocarbon-impacted soil and groundwater, CURA recommended feasibility testing be completed to evaluate soil and groundwater remedial methods for potential implementation at the site.

In September 1994, CURA submitted a *Remediation Plan* to SPLC. The plan consisted of a soil vapor extraction (SVE) and product-only pumping system in the vicinity of groundwater monitoring well MW-8. The *Remediation Plan* included installation of two (2) recovery wells (RW-1 and RW-2), installation of two (2) PSH only pump/air extraction units (one unit each in RW-1 and RW-2), regulatory notification of air emissions, final installation of the system, performance monitoring, operation/maintenance activities and reporting.

In February 1995, a remediation system consisting of SVE with product-only pumping was installed at the west end of the site. The system was designed with high vacuum levels at the wellheads in an effort to induce oil flow towards the wells, as observed during the pilot testing. Recovery of PSH occurred from 1994 to 2003. Currently no PSH is present in this area and the SVE system has been turned off.

Plains assumed responsibility for Lea Station remediation activities in late 2003.

Annual Monitoring Reports submitted to the NMOCD from 2004 through 2009 documented quarterly gauging results, PSH recovery efforts, laboratory analytical results for BTEX and PAH concentrations and recommendations for upgrading sampling of the groundwater monitor well network.

II. Field Activities

Site visits were made monthly throughout 2010 to gauge monitor wells for determining depth to PSH (if present) and groundwater.

Groundwater samples were collected on March 25, June 30, September 28 and December 29, 2010 for laboratory analyses.

III. Groundwater Gradient and PSH Thickness

Prior to purging, monitoring wells were gauged to determine depth to groundwater and thickness of any PSH. Except for minor fluctuations, average groundwater levels have generally risen during recordable years (2003-2010). PSH was non-detectable in groundwater monitoring wells during 2010. A summary of groundwater elevations and PSH thickness is included in *Table 1.*

Based on data collected during the four (4) sampling and twelve (12) gauging events, groundwater is flowing in the southeast direction (reference *Figures 4, 6, 8* and *10*).

IV. PSH Recovery

No appreciable PSH thickness was detected in the groundwater monitoring wells during 2010 gauging and sampling activities. In the past, absorbent booms and hand bailing accomplished recovery of PSH on-site. Approximately 260 gallons of PSH have been recovered to date. However, no recordable volume of PSH was recovered in 2010. A summary of historic PSH recovery is presented in *Table 1.*

V. Groundwater Sampling

Groundwater monitoring wells are sampled on a quarterly basis until analytical results indicate contaminant concentrations are below New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards for eight (8) consecutive quarters. Samples are submitted to an independent laboratory for quantification of benzene, toluene, ethyl-benzene and total xylenes (BTEX) on a quarterly basis and poly-aromatic hydrocarbons (PAH) on an annual basis. After receipt of analytical results indicating contaminant concentrations below NMWQCC standards for eight (8) consecutive quarters, qualifying groundwater monitoring wells are sampled on an annual basis and samples submitted for quantification of BTEX, until analytical results for all samples collected from the groundwater monitoring well network are below NMWQCC standards for eight (8) consecutive quarters. Groundwater monitoring wells with quarterly laboratory analytical results below NMWQCC groundwater standards for eight (8) consecutive quarters which are not needed to monitor existing contaminant plume may be plugged and abandoned (P&A).

On March 25 and September 28, 2010, groundwater samples collected from monitoring wells MW-1, -2, -3 and MW-11 were submitted to an independent laboratory for quantification of BTEX concentrations.

On June 30 and December 29, 2010, groundwater samples collected from monitoring wells MW-1 – MW-4 and MW-7 – MW-13 were submitted to an independent laboratory for quantification of BTEX concentrations.

On December 29, 2010, groundwater samples were also collected from monitoring wells MW-1 – MW-4 and MW-7 – MW-13 with submittal to an independent laboratory for quantification of PAH constituent concentrations.

VI. Groundwater Analytical Results

PSH was not detected in groundwater monitoring wells during sampling events in 2010. Laboratory analytical data collected from eight (8) monitor wells (MW-4, -5, -6, -7, -8, -9, -10 and MW-13) indicated benzene concentrations below NMWQCC standards. Laboratory analytical data collected from five (5) monitor wells (MW-1, -2, -3, -11 and MW-12) indicated benzene concentrations above NMWQCC standards. However, laboratory analytical data collected from all monitor wells indicated BTEX concentrations below NMWQCC standards.

Summaries of PSH recovery are presented in *Table 1*, BTEX and TPH laboratory analytical results in *Table 2* and PAH laboratory analytical results in *Table 3*. Hence, monitor well analytical results were not expanded on individually, but can be accessed by reviewing the above noted *Tables*.

Due to voluminous data contained in gauging and analytical tables, only data collected from 2007 – 2010 are presented in *Tables 1 – 3* for this report. Complete tables containing all gauging and laboratory analytical data are included on an attached USB Flash Drives (*Appendix A* and *B*).

VII. Recommendations

Based on field monitoring and laboratory analytical results on groundwater samples collected during 2010 in conjunction with analytical data amassed during the previous thirteen (13) years, the following are recommendations with regards to gauging and sampling protocol for 2011 (also summarized in *Table 4*):

1) Gauge all groundwater monitoring wells for water levels and presence of PSH on a monthly basis.

2) Sample groundwater monitoring wells MW-1, -2, -3 and MW-11 on a quarterly basis and submit samples for quantification of BTEX concentrations. In the event PSH is detected during any groundwater sampling event, the monitoring well(s) will (shall) be excluded from quarterly sampling events.

3) Sample groundwater monitoring wells MW-4, -7, -8, -9, -10, -12 and MW-13 on a semi-annual basis with submittal of samples for quantification of BTEX. Should analytical results indicate presence of contaminants above NMWQCC standards, sample the impacted well(s) on a quarterly basis for quantification of BTEX constituent concentrations.

4) Based on results of PAH analysis over the past few years, further PAH analysis should be conducted only on those monitor wells (MW-2 and MW-3) which have historically exhibited PAH constituent concentrations near or above NMWQCC standards.

5) Sample groundwater monitoring wells RW-1, RW-2, MW-5 and MW-6 on an annual basis and submit samples for quantification of BTEX concentrations.

FIGURES

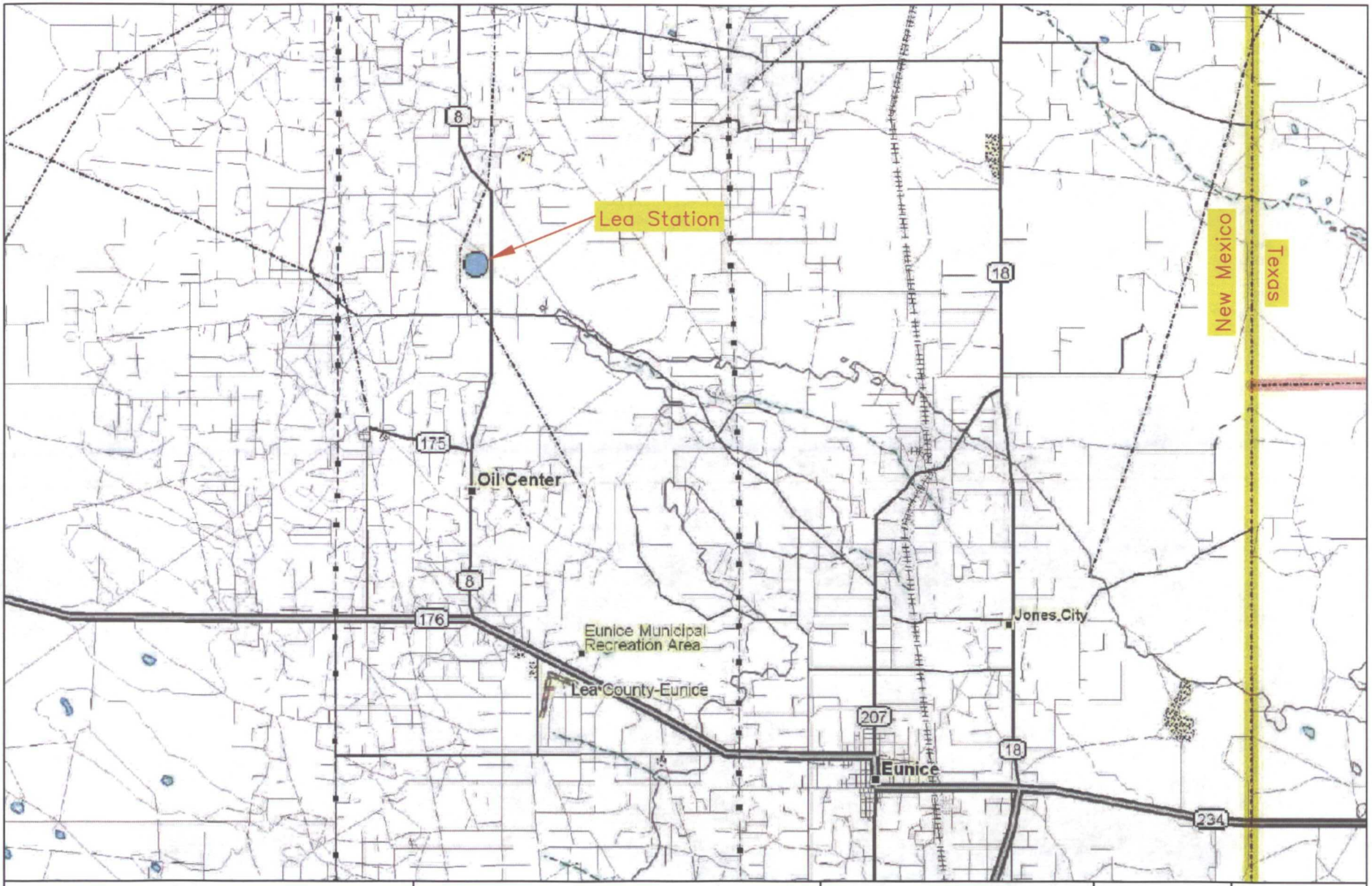

Figure 1
Area Map
Plains All American Pipeline, L.P.
Lea Station

Lea County, New Mexico
NW 1/4, Sec. 28, T20S, R37E
N 32° 32' 51.3" W 103° 15' 37.0"
Elevation: 3,495 feet amsl

DWG By: Iain Olness
February 2005

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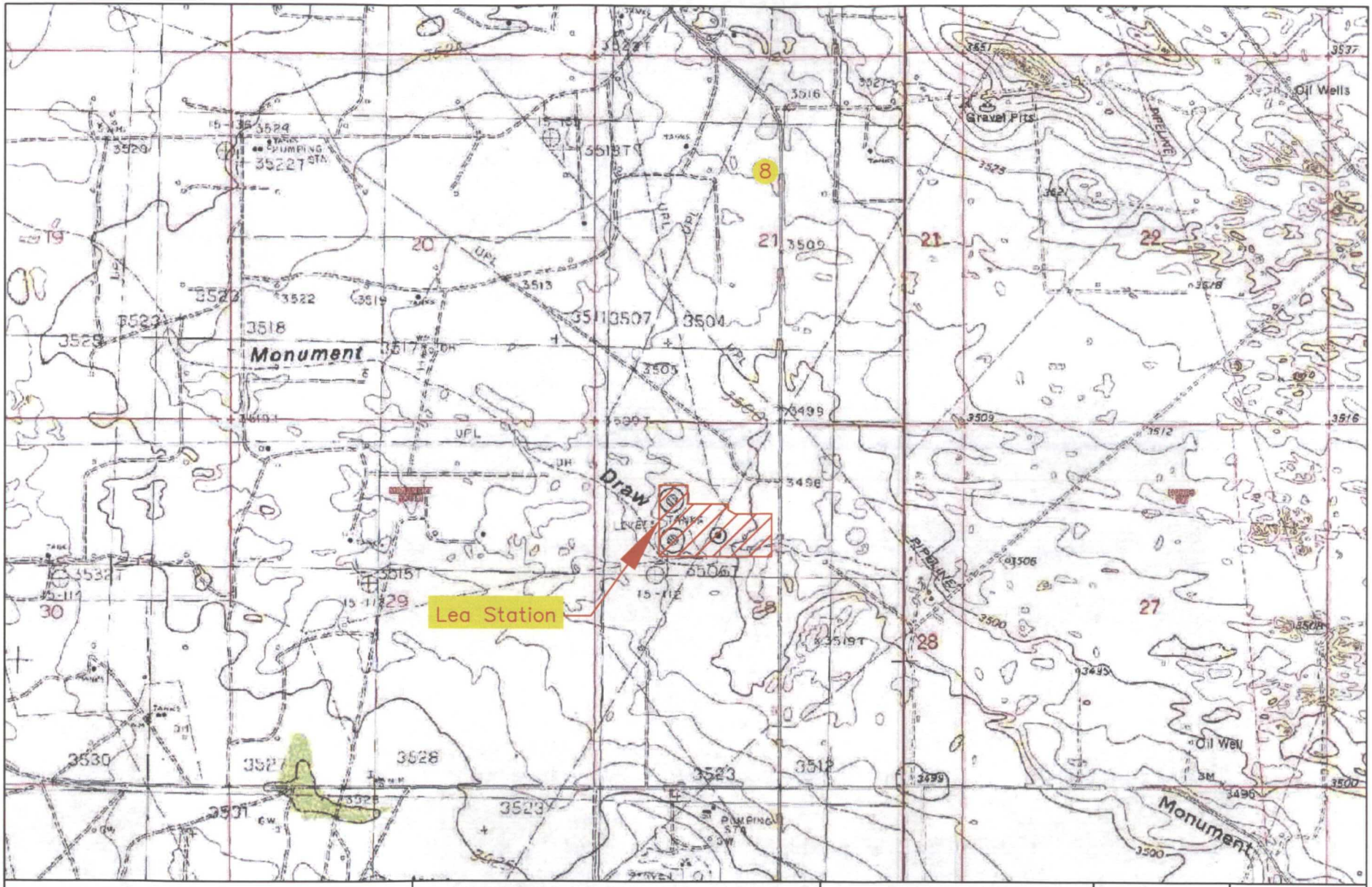

Figure 2 Site Location Map Plains All American Pipeline, L.P. Lea Station	Lea County, New Mexico NW 1/4, Sec. 28, T20S, R37E N 32° 32' 51.3" W 103° 15' 37.0" Elevation: 3,495 feet amsl	DWG By: Iain Olness February 2005	REVISED:
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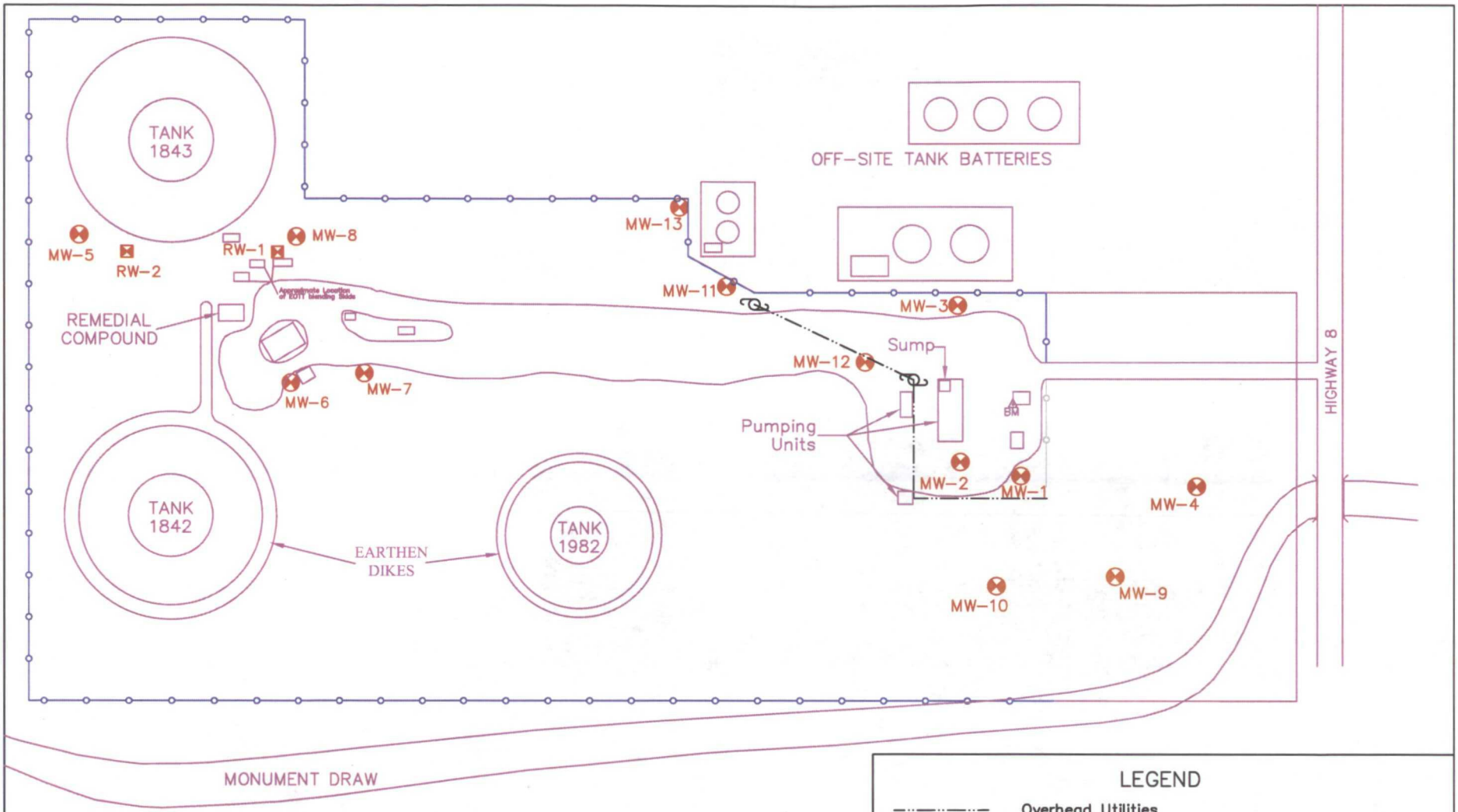

Figure 3 Site Map Plains All American Pipeline, L.P. Lea Station	Lea County, New Mexico NW 1/4, Sec. 28, T20S, R37E N 32° 32' 51.3" W 103° 15' 37.0" Elevation: 3,495 feet amsl	DWG By: Iain Olness February 2004	REVISED: Jan. 2005	N
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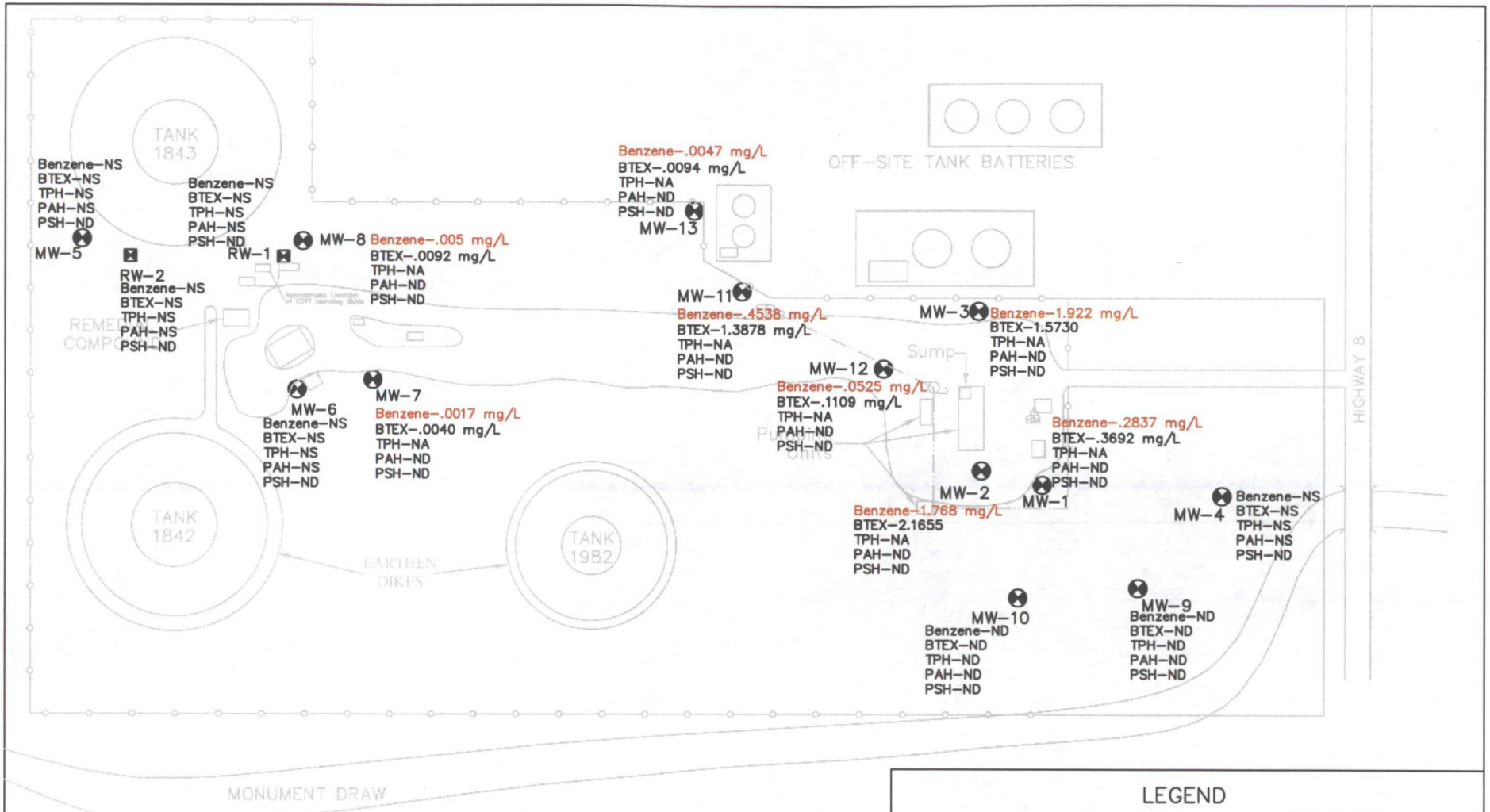

LEGEND

Overhead Utilities
Fence
Monitoring Well

ND Not Detected
NA Not Analyzed
NS Not Sampled

BTEX Benzene, Toluene, EthylBenzene & Total Xylenes

TPH Total Petroleum Hydrocarbons

PSH Phase separated hydrocarbons

Figure 5
Contamination Map–3/26/10
Plains All American Pipeline, L.P.
Lea Station

Lea County, New Mexico
NW 1/4, Sec. 28, T20S, R37E
N 32° 32' 51.3" W 103° 15' 37.0"
Elevation: 3,495 feet amsl

DWG By: Iain Olness
February 2005

REVISED:
March 2011

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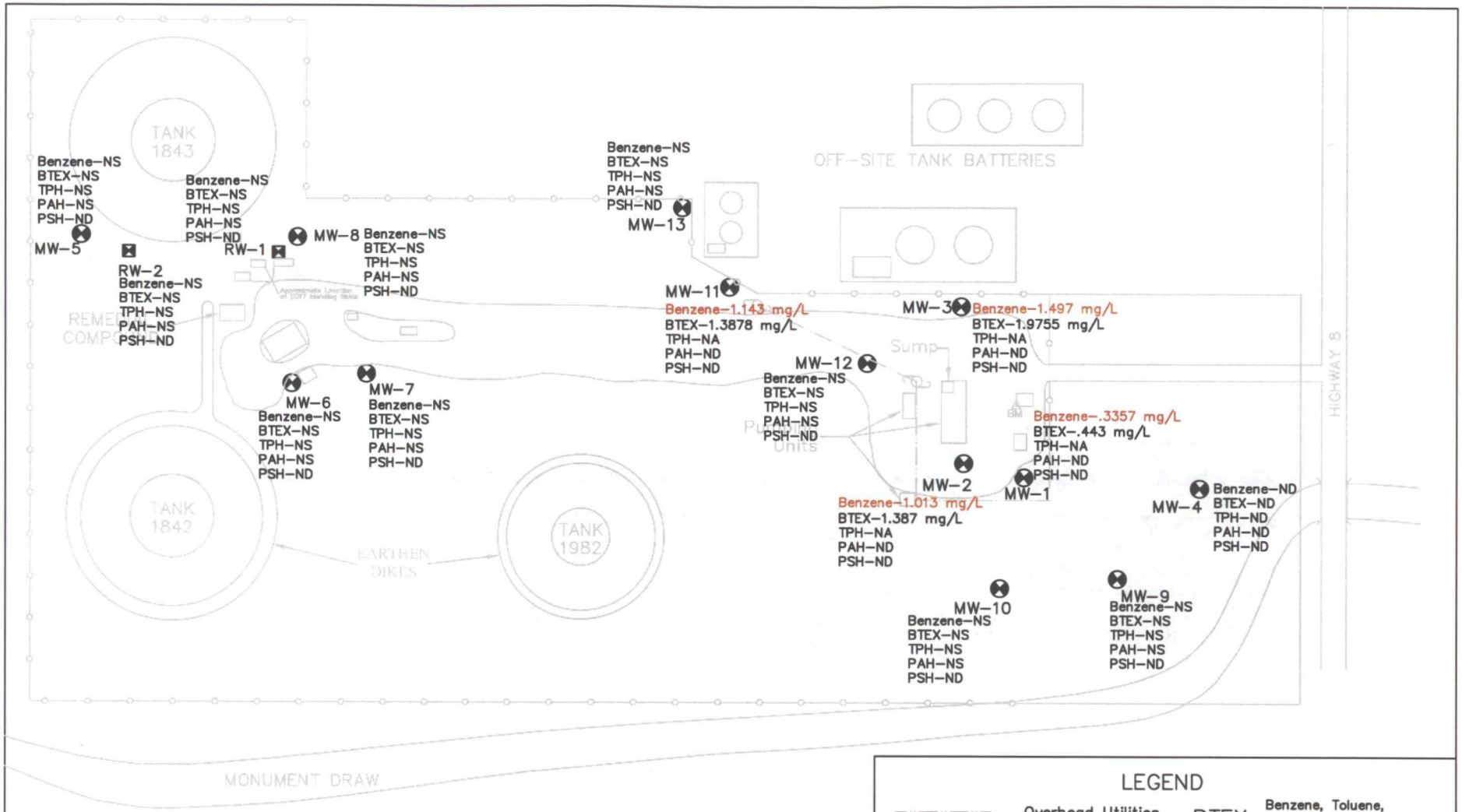

LEGEND

Overhead Utilities
Fence
Monitoring Well

ND Not Detected
NA Not Analyzed
NS Not Sampled

BTEX Benzene, Toluene, EthylBenzene & Total Xylenes

TPH Total Petroleum Hydrocarbons

PSH Phase separated hydrocarbons

Figure 7
Contamination Map–6/30/10
Plains All American Pipeline, L.P.
Lea Station

Lea County, New Mexico
NW 1/4, Sec. 28, T20S, R37E
N 32° 32' 51.3" W 103° 15' 37.0"
Elevation: 3,495 feet amsl

DWG By: Iain Olness
February 2005

REVISED:
March 2011

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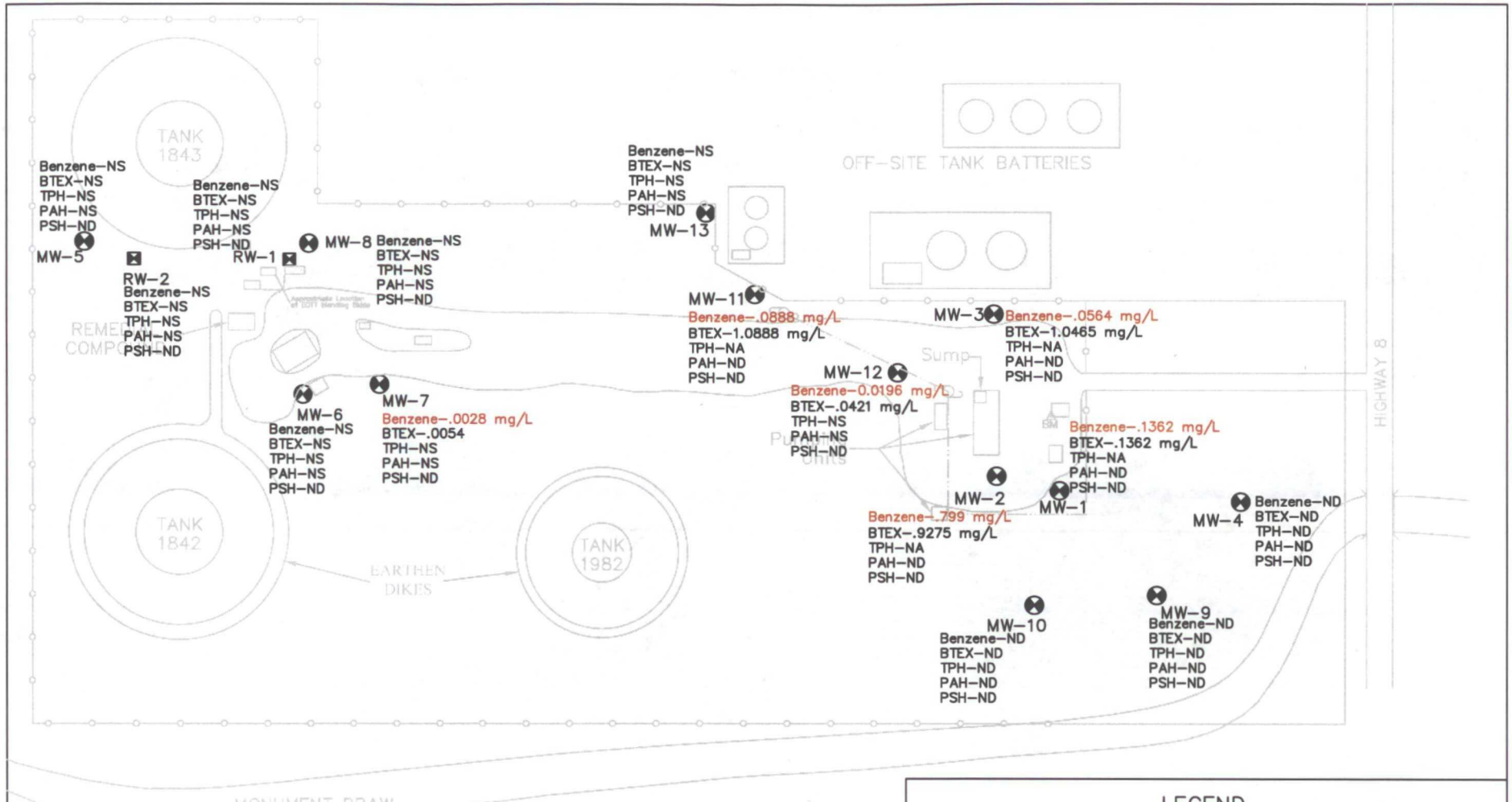

LEGEND

Overhead Utilities
Fence
Monitoring Well

ND Not Detected
NA Not Analyzed
NS Not Sampled

BTEX Benzene, Toluene, EthylBenzene & Total Xylenes

TPH Total Petroleum Hydrocarbons

PSH Phase separated hydrocarbons

Figure 11
Contamination Map–12/30/10
Plains All American Pipeline, L.P.
Lea Station

Lea County, New Mexico
NW 1/4, Sec. 28, T20S, R37E
N 32° 32' 51.3" W 103° 15' 37.0"
Elevation: 3,495 feet amsl

DWG By: Iain Olness
February 2005

REVISED:
March 2011

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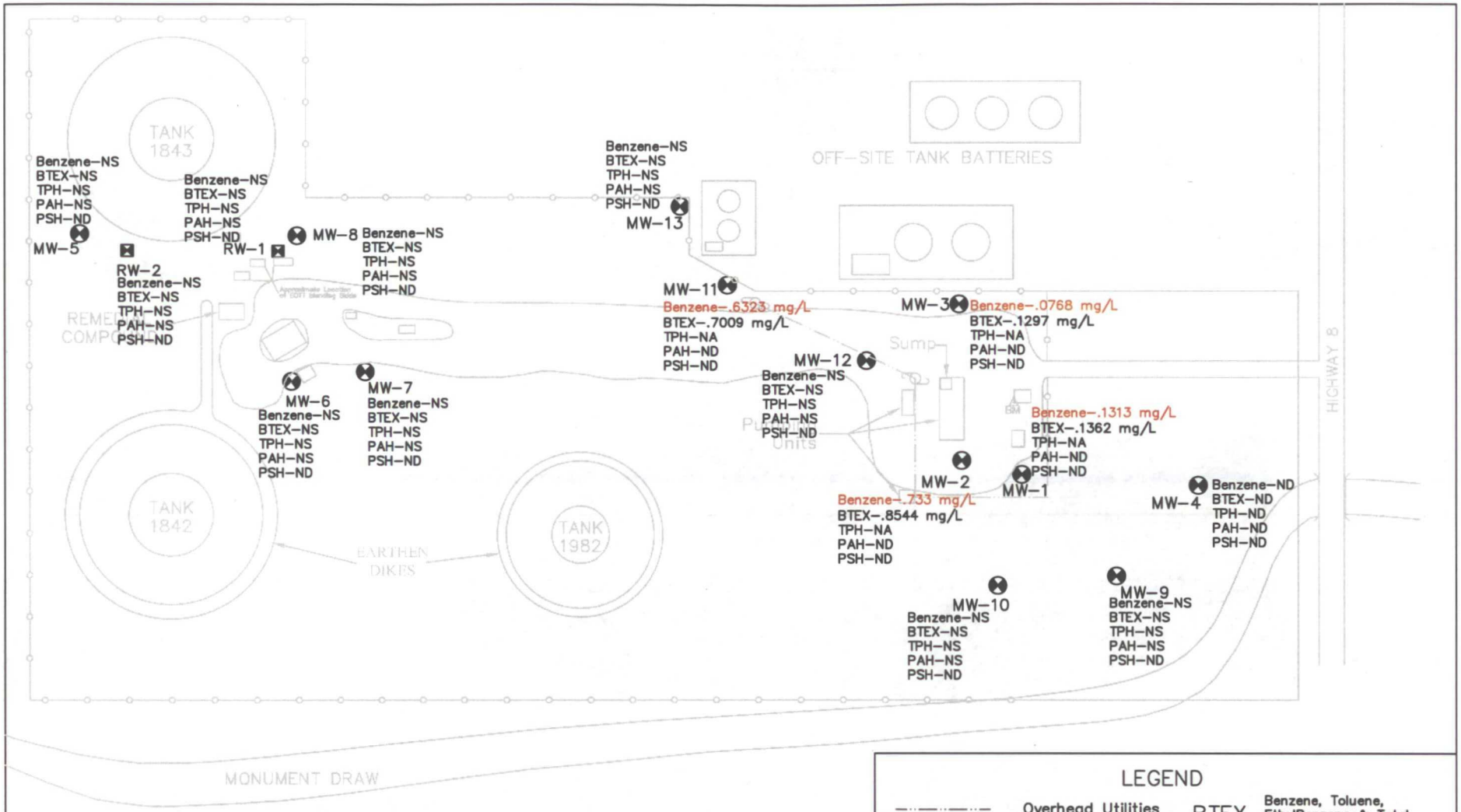

LEGEND

- Overhead Utilities
- Fence
- Monitoring Well

ND Not Detected
NA Not Analyzed
NS Not Sampled

BTEX Benzene, Toluene, EthylBenzene & Total Xylenes

TPH Total Petroleum Hydrocarbons

PSH Phase separated hydrocarbons

Figure 9
Contamination Map–9/28/10
Plains All American Pipeline, L.P.
Lea Station

Lea County, New Mexico
NW 1/4, Sec. 28, T20S, R37E
N 32° 32' 51.3" W 103° 15' 37.0"
Elevation: 3,495 feet amsl

DWG By: Iain Olness
February 2005

REVISED:
March 2011

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TABLES

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-1	09/30/08		100.73		27.72	73.01				color
	10/31/08				27.75	72.98				
	11/26/08				27.81	72.92				
	12/30/08				27.90	72.83				
	01/30/09				28.07	72.66				
	02/26/09				28.00	72.73				
	03/31/09				28.18	72.55				
	04/30/09				28.19	72.54				
	05/29/09				28.34	72.39				
	06/26/09				28.41	72.32				
	07/31/09				28.49	72.24				
	08/28/09				28.66	72.07				
	09/25/09				28.84	71.89				
	10/30/09				29.11	71.89				
	11/27/09				29.16	71.57				
	12/21/09				29.28	71.45				
	1/29/2010				28.98	71.75				
	2/26/2010				29.38	71.35				
	3/26/2010				29.20	71.53				
	4/30/2010				29.21	71.52				
	5/27/2010				29.31	71.42				
	6/30/2010				28.91	71.82				
	7/30/2010				27.05	73.68				
	8/26/2010				27.81	72.92				
	9/28/2010				28.15	72.58				
	10/29/2010				28.41	72.32				
	11/29/2010				28.59	72.14				
	12/29/2010				28.64	72.09				
MW-2	09/30/08		102.37		29.00	73.37				color
	10/31/08				28.89	73.48				
	11/26/08				28.85	73.52				
	12/30/08				28.88	73.49				
	01/30/09				29.07	73.30				
	02/26/09				29.01	73.36				
	03/31/09				29.13	73.24				
	04/30/09				29.26	73.11				
	05/29/09				29.28	73.09				
	06/26/09				29.34	73.03				
	07/31/09				29.53	72.84				
	08/28/09				29.67	72.70				
	09/25/09				29.83	72.54				
	10/30/09				30.10	72.27				
	11/27/09				30.14	72.23				
	12/21/09				30.18	72.19				
	1/29/2010				30.34	72.03				
	2/26/2010				30.39	71.98				
	3/26/2010				30.17	72.20				
	4/30/2010				30.21	72.16				
	5/27/2010				30.29	72.08				
	6/30/2010				28.91	73.46				
	7/30/2010				28.91	73.46				
	8/26/2010				29.05	73.32				
	9/28/2010				29.12	73.25				
	10/29/2010				29.20	73.17				
	11/29/2010				29.34	73.03				
	12/29/2010				29.50	72.87				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-3	09/30/08		103.61		28.87	74.74				color
	10/31/08				28.82	74.79				
	11/26/08				28.66	74.95				
	12/30/08				28.58	75.03				
	01/30/09				28.71	74.90				
	02/26/09				28.67	74.94				
	03/31/09				28.77	74.84				
	04/30/09				28.82	74.79				
	05/29/09				28.95	74.66				
	06/26/09				29.09	74.52				
	07/31/09				29.33	74.28				
	08/28/09				29.45	74.16				
	09/25/09				29.61	74.00				
	10/30/09				29.79	73.82				
	11/27/09				29.81	73.80				
	12/21/09				29.81	73.80				
	1/29/2010				29.95	73.66				
	2/26/2010				29.37	74.24				
	3/26/2010				29.78	73.83				
	4/30/2010				29.73	73.88				
	5/27/2010				29.78	73.83				
	6/30/2010				29.05	74.56				
	7/30/2010				29.05	74.56				
	8/26/2010				28.84	74.77				
	9/28/2010				28.81	74.80				
	10/29/2010				28.96	74.65				
	11/29/2010				29.06	74.55				
	12/29/2010				29.10	74.51				
MW-4	09/30/08		96.08		24.41	71.67				
	10/31/08				24.15	71.93				
	11/26/08				24.63	71.45				
	12/30/08				24.86	71.22				
	01/30/09				25.09	70.99				
	02/26/09				25.08	71.00				
	03/31/09				25.23	70.85				
	04/30/09				25.27	70.81				
	05/29/09				25.42	70.66				
	06/26/09				25.56	70.52				
	07/31/09				25.37	70.71				
	08/28/09				25.73	70.35				
	09/25/09				26.04	70.04				
	10/30/09				26.31	69.77				
	11/27/09				26.38	69.70				
	12/21/09				26.42	69.66				
	1/29/2010				26.56	69.52				
	2/26/2010				26.28	69.80				
	3/26/2010				26.28	69.80				
	4/30/2010				26.29	69.79				
	5/27/2010				26.41	69.67				
	6/30/2010				26.49	69.59				
	7/30/2010				23.14	72.94				
	8/26/2010				24.46	71.62				
	9/28/2010				25.18	70.90				
	10/29/2010				25.57	70.51				
	11/29/2010				25.80	70.28				
	12/29/2010				25.94	70.14				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-5	09/30/08		109.21		28.91	80.30				
	10/31/08				28.79	80.42				
	11/26/08				28.65	80.56				
	12/30/08				28.59	80.62				
	01/30/09				28.79	80.42				
	02/26/09				28.63	80.58				
	03/31/09				28.79	80.42				
	04/30/09				28.81	80.40				
	05/29/09				29.02	80.19				
	06/26/09				29.16	80.05				
	07/31/09				29.42	79.79				
	08/28/09				29.53	79.68				
	09/25/09				29.68	79.53				
	10/30/09				29.84	79.37				
	11/27/09				29.91	79.30				
	12/21/09				29.81	79.40				
	1/29/2010				30.00	79.21				
	2/26/2010				29.94	79.27				
	3/26/2010				29.70	79.51				
	4/30/2010				29.65	79.56				
	5/27/2010				29.78	79.43				
	6/30/2010				30.02	79.19				
	7/30/2010				28.01	81.20				
	8/26/2010				27.91	81.30				
	9/28/2010				27.98	81.23				
	10/29/2010				28.33	80.88				
	11/29/2010				28.50	80.71				
	12/29/2010				28.52	80.69				
MW-6	09/30/08		106.26		27.48	78.78				
	10/31/08				27.37	78.89				
	11/26/08				27.43	78.83				
	12/30/08				27.87	78.39				
	01/30/09				27.66	78.60				
	02/26/09				27.55	78.71				
	03/31/09				27.69	78.57				
	04/30/09				27.73	78.53				
	05/29/09				27.92	78.34				
	06/26/09				27.99	78.27				
	07/31/09				28.98	77.28				
	08/28/09				28.21	78.05				
	09/25/09				28.42	77.84				
	10/30/09				28.64	77.62				
	11/27/09				28.70	77.56				
	12/21/09				28.64	77.62				
	1/29/2010				28.85	77.41				
	2/26/2010				28.71	77.55				
	3/26/2010				28.53	77.73				
	4/30/2010				28.52	77.74				
	5/27/2010				28.69	77.57				
	6/30/2010				28.76	77.50				
	7/30/2010				26.67	79.59				
	8/26/2010				27.04	79.22				
	9/28/2010				27.16	79.10				
	10/29/2010				27.46	78.80				
	11/29/2010				27.58	78.68				
	12/29/2010				27.62	78.64				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-7	09/30/08		106.27		28.39	77.88				
	10/31/08				28.43	77.84				
	11/26/08				28.22	78.05				
	12/30/08				28.20	78.07				
	01/30/09				28.52	77.75				
	02/26/09				28.27	78.00				
	03/31/09				28.41	77.86				
	04/30/09				28.44	77.83				
	05/29/09				28.64	77.63				
	06/26/09				28.77	77.50				
	07/31/09				28.98	77.29				
	08/28/09				29.05	77.22				
	09/25/09				29.20	77.07				
	10/30/09				29.39	76.88				
	11/27/09				29.43	76.84				
	12/21/09				29.37	76.90				
	1/29/2010				29.56	76.71				
	2/26/2010				29.45	76.82				
	3/26/2010				29.26	77.01				
	4/30/2010				29.22	77.05				
	5/27/2010				29.39	76.88				
	6/30/2010				29.61	76.66				
	7/30/2010				27.73	78.54				
	8/26/2010				27.86	78.41				
	9/28/2010				27.95	78.32				
	10/29/2010				28.21	78.06				
	11/29/2010				28.31	77.96				
	12/29/2010				28.35	77.92				
MW-8	09/30/08		107.44		29.31	78.13				
	10/31/08				29.20	78.24				
	11/26/08				29.13	78.31				
	12/30/08				29.09	78.35				
	01/30/09				29.28	78.16				
	02/26/09				29.15	78.29				
	03/31/09				29.30	78.14				
	04/30/09				29.31	78.13				
	05/29/09				29.52	77.92				
	06/26/09				29.66	77.78				
	07/31/09				29.83	77.61				
	08/28/09				29.91	77.53				
	09/25/09				30.07	77.37				
	10/30/09				30.26	77.18				
	11/27/09				30.28	77.16				
	12/21/09				30.16	77.28				
	1/29/2010				30.39	77.05				
	2/26/2010				30.31	77.13				
	3/26/2010				30.06	77.38				
	4/30/2010				30.02	77.42				
	5/27/2010				30.19	77.25				
	6/30/2010				30.46	76.98				
	7/30/2010				28.52	78.92				
	8/26/2010				28.59	78.85				
	9/28/2010				28.67	78.77				
	10/29/2010				28.97	78.47				
	11/29/2010				29.08	78.36				
	12/29/2010				29.04	78.40				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-9	09/30/08		97.21		26.15	71.06				
	10/31/08				26.10	71.11				
	11/26/08				26.31	70.90				
	12/31/08				26.46	70.75				
	01/30/09				26.42	70.79				
	02/26/09				26.38	70.83				
	03/31/09				26.55	70.66				
	04/30/09				26.59	70.62				
	05/29/09				26.78	70.43				
	06/26/09				26.92	70.29				
	07/31/09				27.06	70.15				
	08/28/09				27.23	69.98				
	09/25/09				27.41	69.80				
	10/30/09				27.61	69.60				
	11/27/09				27.68	69.53				
	12/21/09				27.71	69.50				
	1/29/2010				27.86	69.35				
	2/26/2010				27.81	69.40				
	3/26/2010				27.71	69.50				
	4/30/2010				27.69	69.52				
	5/27/2010				27.87	69.34				
	6/30/2010				28.03	69.18				
	7/30/2010				25.74	71.47				
	8/26/2010				26.37	70.84				
	9/28/2010				26.75	70.46				
	10/29/2010				27.08	70.13				
	11/29/2010				27.21	70.00				
	12/29/2010				27.31	69.90				
MW-10	09/30/08		102.51		32.69	69.82				
	10/31/08				32.64	69.87				
	11/26/08				32.57	69.94				
	12/31/08				32.78	69.73				
	01/30/09				32.88	69.63				
	02/26/09				32.83	69.68				
	03/31/09				32.98	69.53				
	04/30/09				33.01	69.50				
	05/29/09				33.16	69.35				
	06/26/09				33.31	69.20				
	07/31/09				33.47	69.04				
	08/28/09				33.62	68.89				
	09/25/09				33.81	68.70				
	10/30/09				34.02	68.49				
	11/27/09				34.11	68.40				
	12/21/09				34.15	68.36				
	1/29/2010				34.33	68.18				
	2/26/2010				34.31	68.20				
	3/26/2010				34.21	68.30				
	4/30/2010				34.17	68.34				
	5/27/2010				34.34	68.17				
	6/30/2010				34.49	68.02				
	7/30/2010				32.48	70.03				
	8/26/2010				32.86	69.65				
	9/28/2010				33.21	69.30				
	10/29/2010				33.45	69.06				
	11/29/2010				33.55	68.96				
	12/29/2010				33.68	68.83				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-11	09/30/08		105.62		29.50	76.12				color
	10/31/08				29.42	76.20				
	11/26/08				29.28	76.34				
	12/30/08				29.21	76.41				
	01/30/09				29.34	76.28				
	02/26/09				29.27	76.35				
	03/31/09				29.39	76.23				Changed Sock
	04/30/09				29.41	76.21				
	05/29/09				29.61	76.01				
	06/26/09				29.76	75.86				
	07/31/09				30.00	75.62				
	08/28/09				30.13	75.49				flipped sock
	09/25/09				30.27	75.35				color
	10/30/09				30.41	75.21				
	11/27/09				30.41	75.21				
	12/21/09				30.38	75.24				
	1/29/2010				30.51	75.11				
	2/26/2010				30.47	75.15				
	3/26/2010				30.28	75.34				
	4/30/2010				30.23	75.39				
	5/27/2010				30.36	75.26				
	6/30/2010				30.69	74.93				
	7/30/2010				29.64	75.98				
	8/26/2010				29.44	76.18				
	9/28/2010				29.41	76.21				
	10/29/2010				29.55	76.07				
	11/29/2010				29.61	76.01				
	12/29/2010				29.61	76.01				
MW-12	09/30/08		103.90		28.72	75.18				
	10/31/08				28.74	75.16				
	11/26/08				28.65	75.25				
	12/30/08				28.61	75.29				
	01/30/09				28.77	75.13				
	02/26/09				28.74	75.16				
	03/31/09				28.81	75.09				
	04/30/09				28.87	75.03				
	05/29/09				28.96	74.94				
	06/26/09				29.07	74.83				
	07/31/09				29.27	74.63				
	08/28/09				29.36	74.54				
	09/25/09				29.52	74.38				
	10/30/09				29.68	74.22				
	11/27/09				29.76	74.14				
	12/21/09				29.80	74.10				
	1/29/2010				29.94	73.96				
	2/26/2010				29.34	74.56				
	3/26/2010				29.83	74.07				
	4/30/2010				29.77	74.13				
	5/27/2010				29.84	74.06				
	6/30/2010				30.04	73.86				
	7/30/2010				29.19	74.71				
	8/26/2010				28.96	74.94				
	9/28/2010				28.87	75.03				
	10/29/2010				28.97	74.93				
	11/29/2010				29.03	74.87				
	12/29/2010				29.11	74.79				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
MW-13	09/30/08		103.89		27.08	76.81				
	10/31/08				26.91	76.98				
	11/26/08				26.77	77.12				
	12/31/08				26.75	77.14				
	01/30/09				26.78	77.11				
	02/26/09				26.75	77.14				
	03/31/09				26.83	77.06				
	04/30/09				26.88	77.01				
	05/29/09				27.13	76.76				
	06/26/09				27.38	76.51				
	07/31/09				27.61	76.28				
	08/28/09				27.82	76.07				add sock
	09/25/09				27.91	75.98				
	10/30/09				27.97	75.92				
	11/27/09				27.96	75.93				
	12/21/09				27.94	75.95				
	1/29/2010				28.03	75.86				
	2/26/2010				27.92	75.97				
	3/26/2010				27.76	76.13				
	4/30/2010				27.68	76.21				
	5/27/2010				27.91	75.98				
	6/30/2010				28.28	75.61				
	7/30/2010				27.12	76.77				
	8/26/2010				26.93	76.96				
	9/28/2010				26.99	76.90				
	10/29/2010				27.10	76.79				
	11/29/2010				27.10	76.79				
	12/29/2010				27.22	76.67				
RW-1	09/30/08		106.40		27.02	79.38				
	10/31/08				26.89	79.51				
	11/26/08				26.80	79.60				
	12/30/08				26.76	79.64				
	01/30/09				26.98	79.42				
	02/26/09				26.84	79.56				
	03/31/09				26.99	79.41				
	04/30/09				27.00	79.40				
	05/29/09				27.21	79.19				
	06/26/09				27.34	79.06				
	07/31/09				27.58	78.82				
	08/28/09				27.68	78.72				
	09/25/09				27.81	78.59				
	10/30/09				27.99	78.41				
	11/27/09				28.02	78.38				
	12/21/09				27.93	78.47				
	1/29/2010				28.14	78.26				
	2/26/2010				28.04	78.36				
	3/26/2010				27.83	78.57				
	4/30/2010				27.80	78.60				
	5/27/2010				27.95	78.45				
	6/30/2010				28.20	78.20				
	7/30/2010				26.28	80.12				
	8/26/2010				26.38	80.02				
	9/28/2010				26.47	79.93				
	10/29/2010				26.74	79.66				
	11/29/2010				26.82	79.58				
	12/29/2010				26.88	79.52				

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS, PHASE SEPARATED HYDROCARBON THICKNESSES AND MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

PLAINS ALL AMERICAN PIPELINE, L.P. - LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
RW-2	09/30/08		106.65		27.04	79.61				
	10/31/08				26.99	79.66				
	11/26/08				26.52	80.13				
	12/30/08				26.51	80.14				
	01/30/09				26.64	80.01				
	02/26/09				26.52	80.13				
	03/31/09				26.66	79.99				
	04/30/09				26.66	79.99				
	05/29/09				26.85	79.80				
	06/26/09				27.04	79.61				
	07/31/09				27.28	79.37				
	08/28/09				27.36	79.29				
	09/25/09				27.54	79.11				
	10/30/09				27.70	78.95				
	11/27/09				27.77	78.88				
	12/21/09				27.72	78.93				
	1/29/2010				27.85	78.80				
	2/26/2010				27.77	78.88				
	3/26/2010				27.60	79.05				
	4/30/2010				27.49	79.16				
	5/27/2010				27.65	79.00				
	6/30/2010				27.90	78.75				
	7/30/2010				25.96	80.69				
	8/26/2010				25.93	80.72				
	9/28/2010				25.98	80.67				
	10/29/2010				26.34	80.31				
	11/29/2010				26.39	80.26				
	12/29/2010				26.51	80.14				
* Measured from a relative datum (benckmark = 100 feet).							**Note 1**: Total recovery:		0.00	gallons by manual means.
** Correction Equation for Phase-Separated Hydrocarbons: Corrected Groundwater Elevation =							**Note 2**: The SVE System blower failed on 3/12/98. The system was			
Top of Casing Elevation - [Depth to Water Below Top of Casing - (SG)(PSH Thickness)].							reactivated on 4/15/99.			
Specific Gravity (SG) = 0.9 for crude oil.										

TABLE 2

GROUNDWATER ANALYTICAL RESULTS (BTEX & TPH)

PLAINS ALL AMERICAN PIPELINE, L.P.
LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	TPH as Gasoline	TPH as Diesel	TPH as Oil	Total TPH
MW1	09/30/08	0.3516	0.0603	0.0530	0.0372	0.5021				
	12/30/08	0.3155	ND	0.0565	ND	0.3720	3.54	1.88	ND	5.42
	03/31/09	0.1453	ND	0.0386	0.019	0.2030				
	06/26/09	0.3280	0.212	ND	ND	0.5400				
	09/25/09	0.3140	ND	0.0730	ND	0.3870				
	12/21/09	0.3203	ND	0.0721	0.036	0.4279				
	3/26/2010	0.2837	ND	0.0633	0.0222	0.3692				
	6/30/2010	0.3557	ND	0.0724	0.0149	0.443				
	9/28/2010	0.1313	ND	0.0207	0.015	0.167				
	12/30/2010	0.1362	ND	ND	ND	0.1362				
MW-2	06/30/08	0.8336	0.0107	0.1227	0.058	1.0250	4.57	2.44	ND	7.01
	09/30/08	0.7206	0.0509	0.0831	0.051	0.9055				
	12/30/08	0.9645	ND	0.1245	ND	1.0890	7.97	12.90	ND	20.87
	03/31/09	0.8256	ND	0.1024	0.047	0.9746				
	06/26/09	0.9340	ND	ND	ND	0.9340				
	09/25/09	0.6570	ND	0.1925	0.1485	0.9980				
	12/21/09	0.8145	ND	0.1690	0.102	1.0850				
	3/26/2010	1.768	ND	0.2405	0.157	2.1655				
	6/30/2010	1.013	ND	0.202	0.172	1.387				
	9/28/2010	0.733	ND	0.0917	0.0297	0.8544				
	12/30/2010	0.799	ND	ND	0.1285	0.9275				
MW-3	06/30/08	0.1805	0.0028	0.0129	0.0045	0.2007	ND	ND	ND	ND
	09/30/08	0.2517	0.0231	0.0158	ND	0.2906				
	12/30/08	0.3475	0.11	0.0950	0.221	0.7730	ND	2.61	ND	2.61
	03/31/09	0.9449	0.3079	0.1205	0.087	1.4600				
	06/26/09	0.7060	ND	ND	ND	0.7060				
	09/25/09	1.3040	ND	0.2275	ND	1.5315				
	12/21/09	1.3740	ND	0.1990	ND	1.5730				
	3/26/2010	1.922	ND	0.394	ND	2.316				
	6/30/2010	1.497	ND	0.322	0.1565	1.9755				
	9/28/2010	0.0768	0.0021	0.015	0.0358	0.1297				
	12/30/2010	0.564	ND	0.2145	0.268	1.0465				
MW-4	06/30/08	ND	ND	ND	ND	ND	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/30/08	0.0043	0.0121	0.0040	0.0064	0.0268	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	ND	ND	ND	ND	ND				
	09/25/09	Not Sampled [A]								
	12/21/09	ND	ND	ND	ND	ND				
	6/30/2010	ND	ND	ND	ND	ND				
	12/30/2010	ND	ND	ND	ND	0.0000				
MW-5	06/30/08	Not Sampled [A]								
	09/30/08	Not Sampled [A]								
	12/30/08	Not Sampled [A]								
	03/31/09	Not Sampled [A]								
	06/26/09	Not Sampled [A]								
	09/25/09	Not Sampled [A]								
	12/21/09	Not Sampled [A]								
	3/26/2010	Not Sampled [A]								
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	Not Sampled [A]								

TABLE 2

GROUNDWATER ANALYTICAL RESULTS (BTEX & TPH)

PLAINS ALL AMERICAN PIPELINE, L.P.
LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	TPH as Gasoline	TPH as Diesel	TPH as Oil	Total TPH
MW-6	06/30/08	Not Sampled [A]								
	09/30/08	Not Sampled [A]								
	12/30/08	Not Sampled [A]								
	03/31/09	Not Sampled [A]								
	06/26/09	Not Sampled [A]								
	09/25/09	Not Sampled [A]								
	12/21/09	Not Sampled [A]								
	3/26/2010	Not Sampled [A]								
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	Not Sampled [A]								
MW-7	06/30/08	0.0010	ND	0.0010	ND	0.0020	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/30/08	0.0046	0.0103	0.0052	0.0059	0.0260	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	0.0011	ND	0.0013	ND	0.0024				
	09/25/09	Not Sampled [A]								
	12/21/09	0.0012	ND	0.0023	ND	0.0035				
	3/26/2010	0.0017	ND	0.0023	ND	0.0040				
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	0.0028	ND	0.0026	ND	0.0054				
MW-8	06/30/08	ND	ND	ND	ND	ND	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/30/08	0.0062	0.0172	0.0064	0.0088	0.0386	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	0.0023	ND	0.0023	ND	0.0046				
	09/25/09	Not Sampled [A]								
	12/21/09	0.0044	ND	0.0049	ND	0.0093				
	3/26/2010	0.005	ND	0.0042	ND	0.0092				
	6/30/2010									
	9/28/2010									
	12/30/2010									
MW-9	06/30/08	ND	ND	ND	ND	ND	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/31/08	0.0081	0.0240	0.0057	0.0091	0.0469	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	ND	ND	ND	ND	ND				
	09/25/09	Not Sampled [A]								
	12/21/09	ND	ND	ND	ND	ND				
	3/26/2010	ND	ND	ND	ND	ND				
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	ND	ND	ND	ND	ND				
MW-10	03/31/07	□0.001	□0.001	□0.001	□0.003	□0.006				
	08/01/07	□0.001	□0.001	□0.001	□0.003	□0.006				
	12/13/07				Not Sampled [A]					
	03/31/08	Not Sampled [A]								
	06/30/08	ND	ND	ND	ND	ND	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/31/08	0.0074	0.0249	0.0057	0.0095	0.0475	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	ND	ND	ND	ND	ND				
	09/25/09	Not Sampled [A]								
	12/21/09	ND	ND	ND	ND	ND				
	3/26/2010	ND	ND	ND	ND	ND				
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	ND	ND	ND	ND	ND				

TABLE 2

GROUNDWATER ANALYTICAL RESULTS (BTEX & TPH)

PLAINS ALL AMERICAN PIPELINE, L.P.
LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	TPH as Gasoline	TPH as Diesel	TPH as Oil	Total TPH
MW-11	06/30/08	**0.6838**	ND	0.2066	ND	0.8904	2.40	ND	ND	2.40
	09/30/08	**0.4075**	ND	0.1226	ND	0.5301				
	12/30/08	**0.2820**	ND	0.0630	ND	0.3450	2.93	7.03	ND	9.96
	03/31/09	**0.2698**	ND	0.0595	0.014	0.3432				
	06/26/09	**0.5740**	ND	0.1105	ND	0.6845				
	09/25/09	**1.7760**	ND	0.4095	ND	2.1855				
	12/21/09	**1.1020**	ND	0.2765	ND	1.3785				
	3/26/2010	**0.4538**	ND	0.0977	0.011	0.5625				
	6/30/2010	**1.143**	ND	0.2448	ND	1.3878				
	9/28/2010	**0.6323**	ND	0.0686	ND	0.7009				
	12/30/2010	**0.888**	ND	0.2008	ND	1.0888				
MW-12	06/30/08	0.0063	ND	0.0076	ND	0.0139	--	--	--	--
	09/30/08	Not Sampled [A]								
	12/30/08	**0.0360**	ND	0.0476	ND	0.0836	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	**0.0314**	ND	0.0234	ND	0.0548				
	09/25/09	Not Sampled [A]								
	12/21/09	**0.0640**	ND	0.0508	0.003	0.1175				
	3/26/2010	**0.0525**	ND	0.0584	ND	0.1109				
	6/30/2010									
	9/28/2010									
	12/30/2010	**0.0196**	ND	0.0225	ND	0.0421				
MW-13	06/30/08	0.0019	ND	0.0024	ND	0.0043	--	--	--	--
	09/03/08	Not Sampled [A]								
	12/31/08	0.0030	0.0093	0.0026	0.0045	0.0194	--	--	--	--
	03/31/09	Not Sampled [A]								
	06/26/09	0.0030	ND	0.0029	ND	0.0059				
	09/25/09	Not Sampled [A]								
	12/21/09	0.0032	ND	0.0039	ND	0.0071				
	3/26/2010	0.0047	ND	0.0047	ND	0.0094				
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	Not Sampled [A]								
RW-1	06/30/08	Not Sampled [A]								
	09/30/08	Not Sampled [A]								
	12/30/08	Not Sampled [A]								
	03/31/09	Not Sampled [A]								
	06/26/09	Not Sampled [A]								
	09/25/09	Not Sampled [A]								
	12/21/09	Not Sampled [A]								
	3/26/2010	Not Sampled [A]								
	6/30/2010	Not Sampled [A]								
	9/28/2010	Not Sampled [A]								
	12/30/2010	Not Sampled [A]								
NMWQCC Groundwater		**0.01**	0.75	0.75	0.62					

mg/L = milligrams per liter
ND = None Detected
If the cell is blank, then that analysis was not performed.
[A] Not sampled due to eight consecutive quarters of analytical data below NMWQCC groundwater standards.

TABLE 3

CONCENTRATIONS OF PAH IN GROUNDWATER

LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Anthracene (ug/L)	Benzo(a)anthracene (ug/L)	Benzo(a)pyrene (ug/L)	Benzo(b)fluoranthene (ug/L)	Benzo(g,h,i)perylene (ug/L)	Benzo(j,k)fluoranthene (ug/L)	Chrysene (ug/L)	Dibenz(a,h)anthracene (ug/L)	Fluoranthene (ug/L)	Fluorene (ug/L)	Indenol(1,2,3-cd)pyrene (ug/L)	1-Methylnapthlene (ug/L)	2-Methylnapthlene (ug/L)	Naphthalene (ug/L)	Phenanthrene (ug/L)	Pyrene (ug/L)
MW-1	30-Dec-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.010	ND	ND	ND	ND
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.009	ND	ND	ND	ND
MW-2	30-Dec-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.027	ND	0.008	ND	ND
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022	ND	ND	ND	ND
MW-3	30-Dec-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.012	ND	ND	ND	ND
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	NOT SAMPLED																	

TABLE 3

CONCENTRATIONS OF PAH IN GROUNDWATER

LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Anthracene (ug/L)	Benzo(a)anthracene (ug/L)	Benzo(a)pyrene (ug/L)	Benzo(b)fluoranthene (ug/L)	Benzo(g,h,i)perylene (ug/L)	Benzo(j,k)fluoranthene (ug/L)	Chrysene (ug/L)	Dibenz(a,h)anthracene (ug/L)	Fluoranthene (ug/L)	Fluorene (ug/L)	Indenol(1,2,3-cd)pyrene (ug/L)	1-Methylnapthlene (ug/L)	2-Methylnapthlene (ug/L)	Naphthalene (ug/L)	Phenanthrene (ug/L)	Pyrene (ug/L)
MW-6	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10																		
	30-Jun-10																		
	28-Sep-10																		
	30-Dec-10																		
MW-7	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10																		
	30-Jun-10																		
	28-Sep-10																		
	30-Dec-10																		
MW-9	31-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10	31-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 3

CONCENTRATIONS OF PAH IN GROUNDWATER

LEA STATION
LEA COUNTY, NEW MEXICO

Monitor Well	Date Sampled	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Anthracene (ug/L)	Benzo(a)anthracene (ug/L)	Benzo(a)pyrene (ug/L)	Benzo(b)fluoranthene (ug/L)	Benzo(g,h,i)perylene (ug/L)	Benzo(j,k)fluoranthene (ug/L)	Chrysene (ug/L)	Dibenz(a,h)anthracene (ug/L)	Fluoranthene (ug/L)	Fluorene (ug/L)	Indenol(1,2,3-cd)pyrene (ug/L)	1-Methylnapthlene (ug/L)	2-Methylnapthlene (ug/L)	Naphthalene (ug/L)	Phenanthrene (ug/L)	Pyrene (ug/L)
MW-11	30-Dec-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.017	ND	ND	0.011	ND
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND	ND
MW-12	30-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13	31-Dec-08	NOT SAMPLED																	
	21-Dec-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	26-Mar-10	NOT SAMPLED																	
	30-Jun-10	NOT SAMPLED																	
	28-Sep-10	NOT SAMPLED																	
	30-Dec-10	NOT SAMPLED																	
New Mexico Water Quality						0.7									30				

ND = Not Detected
NA = Not Analyzed

TABLE 4

Summary of Groundwater Sampling Recommendations for 2011
Plains All American Pipeline, L.P.
Lea Station - Ref. #2003-00339
Lea County, New Mexico

Monitoring Well	Eight Quarters Below	Sampling Schedule				Notes
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
RW-1					BTEX	Recommend Annual BTEX analysis
RW-2					BTEX	Recommend Annual BTEX analysis
MW-1	No	BTEX	BTEX	BTEX	BTEX	
MW-2	No	BTEX	BTEX	BTEX	BTEX, PAH	Recommend Annual PAH analysis
MW-3	No	BTEX	BTEX	BTEX	BTEX, PAH	Recommend Annual PAH analysis
MW-4	Yes		BTEX		BTEX	
MW-5	Yes				BTEX	Recommend Annual BTEX analysis
MW-6	Yes				BTEX	Recommend Annual BTEX analysis
MW-7	Yes		BTEX		BTEX	
MW-8	Yes		BTEX		BTEX	
MW-9	Yes		BTEX		BTEX	
MW-10	Yes		BTEX		BTEX	
MW-11	No	BTEX	BTEX	BTEX	BTEX	
MW-12	Yes		BTEX		BTEX	
MW-13	Yes		BTEX		BTEX	