1R - 91

REPORTS

DATE:

4/22/2005

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

April 22, 2005

Ms. Camille Reynolds
Plains All American
3112 West Highway 82
Lovington, NM 88260

Re: Annual Monitoring Report
South Mattix Site, Plains Ref: 2000-10410
SW/4 NE/4 of Section 15, T-24S, R-37E
Lea County, New Mexico
NMOCD Ref: 1R-0091

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the report shown above. The recommendations shown in Section 7.0 of the report are accepted and approved.

The NMOCD requires Plains All American (Plains) to address soil remediation issues at this site. Plains must submit a proposed workplan, by June 30, 2005, that describes how the contaminated soils problem at the South Mattix site will be resolved.

NMOCD approval of this report does not relieve Plains of liability should its operations at this site prove to have been harmful to public health or the environment. Nor does it relieve Plains of its responsibility to comply with the rules and regulations of any other federal, state, county, or local governmental agency.

If you have any questions, contact me at (505) 476-3492 or emartin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin
Environmental Bureau

Cc: NMOCD, Hobbs

PLAINS
ALL AMERICAN

February 15, 2005

IR-091

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

Re: Plains All American – Annual Monitoring Reports
4 Sites in Lea County, New Mexico

Dear Mr. Martin:

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

Denton Station	Section 14, Township 15 South, Range 37 East, Lea County
Lea Station Station	Section 28, Township 20 South, Range 37 East, Lea County
South Mattix	Section 15, Township 24 South, Range 37 East, Lea County
Junction 34 To Lea	Section 21, Township 20 South, Range 37 East, Lea County

EPI prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed EPI in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above 4 facilities.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds

Camille Reynolds
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

ENVIRONMENTAL PLUS, INC. Micro-Blaze Micro-Blaze Out™
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

11 February 2005

Mr. Ed Martin
NM Energy, Minerals, and Natural Resources Department
New Mexico Oil Conservation Division – Environmental Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Annual Monitoring Report
Plains All American Pipeline, L.P. South Mattix #2000-10410
UL-G Section 15 T24S R37E, Lea County, New Mexico
Landowner: Grobe Estate

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Ms. Camille Reynolds, Plains All American Pipeline, L.P. (Plains), submits for your consideration this *Annual Monitoring Report* for the above-referenced site. Based on data collected during the past year, Plains recommends continued quarterly sampling of the groundwater monitoring well and collection of groundwater level data.

Should you have any questions or comments please feel free to contact me at (505) 394-3481. Ms. Reynolds may be contacted through Plains' Lovington office at (505) 396-3341.

All official correspondence should be addressed to:

Ms. Camille Reynolds
Plains All American Pipeline, L.P.
3112 West US Highway 182
Lovington, New Mexico 88260

Sincerely,

ENVIRONMENTAL PLUS, INC.

Iain Olness, P.G.
Hydrogeologist

cc: Larry W. Johnson, NMOCD – Hobbs District Office
Camille Reynolds, Plains All American Pipeline, L.P. – Lovington
Jeff Dann, Plains All American Pipeline, L.P. – Houston
File

ENVIRONMENTAL PLUS, INC.

P.O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 505•394•3481 ••• FAX 505•394•2601

PLAINS
ALL AMERICAN
PIPELINE, L.P.

ANNUAL MONITORING REPORT

SOUTH MATTIX

PLAINS REF: 2000-10410

SW¼ OF THE NE¼ OF SECTION 15, TOWNSHIP 24 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

~10 MILES NORTHEAST OF JAL, LEA COUNTY, NEW MEXICO
LATITUDE: N32° 13' 01" LONGITUDE: W103° 08' 57"

JANUARY 24, 2005

PREPARED BY:

Environmental Plus, Inc.

2100 Avenue O
P.O. Box 1558
Eunice, NM 88231
Phone: (505)394-3481
FAX: (505)394-2601
iolness@hotmail.com

PLAINS ALL AMERICAN

Standard of Care

Annual Monitoring Report

South Mattix
Ref. # 2000-10410

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:

Iain A Olness — 11 February 2005

Iain A. Olness, P.G.
Hydrogeologist

Date

This report was reviewed by:

Pat McCasland — 2-11-05

Pat McCasland

Date

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FIGURES

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APPENDICES

1.0 Background

The Plains All American Pipeline, L.P. (Plains) South Mattix site is located in Unit Letter-G, the SW¼ of the NE¼ of Section 15, Range 37E, Township 24S at Latitude 32°13'01"N and Longitude 103°08'57"W approximately 10 miles northeast of Jal, Lea, New Mexico on property owned by the Grobe Estate (reference *Figures 1 and 2*). There are no domestic or agricultural water wells or surface water bodies within 1,000 horizontal feet of the site. The site is associated with the Plains South Mattix crude oil transfer pump station and has historically been impacted from pump leaks and potentially a sub-grade sump. During site soil delineation in December 2001, the vertical extent of soil impacted above the New Mexico Oil Conservation Division (NMOCD) remedial goals was determined to be approximately 50 feet below ground surface (bgs).

A two-inch groundwater monitoring well was installed during site soil delineation activities in December 2001 and is sampled on a quarterly basis. In addition, water and PSH level measurements recorded during the quarterly sampling visits.

During the December 13, 2002 sampling event, a 0.01 foot thickness of phase separated hydrocarbon (PSH) was measured. Likewise, a sheen of oil was observed on the purge water during well purging, but has not been observed since.

2.0 Field Activities

Site visits were made to the site on January 27, April 21, July 14 and October 20, 2004 to collect samples from the groundwater monitoring well. In addition, groundwater level measurements were obtained prior to purging the well to determine the depth to groundwater and to determine if PSH were present on the water surface.

On August 9 and 10, 2004, the sump at the site was removed per the New Mexico Oil Conservation Division's (NMOCD) request. During the replacement of the sump, 28 yards of impacted soil were removed and transported to Lea Station Landfarm for treatment.

3.0 Groundwater Gradient and PSH Thickness

The area groundwater gradient, according to the USGS Ground-Water Report 6, Geology and Ground-Water Conditions in Southern Lea County, New Mexico (A. Nicholson and A. Clebsch, 1961), is to the southeast. No PSH was detected on the water surface during the past year.

4.0 PSH Recovery

No PSH was detected on the water surface during the past year.

5.0 Groundwater Sampling

During 2004, groundwater monitoring well MW-1 was sampled on January 27, April 21, July 14 and October 20. The samples were submitted to an independent laboratory for the quantification

of BTEX via EPA Method 8260b. In addition, the sample collected on July 14 was also analyzed for the presence of poly-aromatic hydrocarbons (PAHs) via EPA Method 8270C. The well was purged a minimum of three well volumes or dry and samples collected utilizing dedicated or disposable sample bailers. Samples were then placed on ice and shipped to an independent laboratory under chain-of-custody for analysis.

6.0 Analytical Results

Analytical results for the sample collected on January 27, 2004, indicated benzene concentrations of 12.2 micrograms per liter (µg/L), over the New Mexico Water Quality Control Commission (NMWQCC) standard of 10 µg/L (reference *Table 2*). Although differing concentrations were detected for the remaining analytes (i.e., toluene, ethylbenzene and total xylenes), all were below the NMWQCC standards (reference *Table 2*).

Analytical results for the sample collected on April 21, 2004, indicated benzene concentrations of 21.4 µg/L, again over the NMWQCC standard of 10 µg/L (reference *Table 2*). Although differing concentrations were detected for the remaining analytes (i.e., toluene, ethylbenzene and total xylenes) again, all were below the NMWQCC standards (reference *Table 2*).

Analytical results for the samples collected on July 14 and October 20, 2004, were reported as non-detectable (ND) for all analytes at or above each analytes respective method detection limit (MDL) (reference *Tables 2 and 3*).

7.0 Status and Recommendation

Based on field monitoring and analytical results collected during the past year and analyzed in conjunction with data collected during the past three years, the following recommendations are made in regards to the sampling protocol:

1) Continue to collect groundwater samples and water/PSH level data on a quarterly basis. The samples should be submitted for quantification of BTEX on a quarterly basis and PAHs on an annual basis.

2) Should PSH be detected in the groundwater monitoring well, semi-monthly visits shall be made to recover the PSH and sampling activities ceased until such time that PSH is no longer detected in the groundwater monitoring well.

EPI, on behalf of Plains requests formal written approval from the NMOCD to implement these proposed remedial activities.

FIGURES

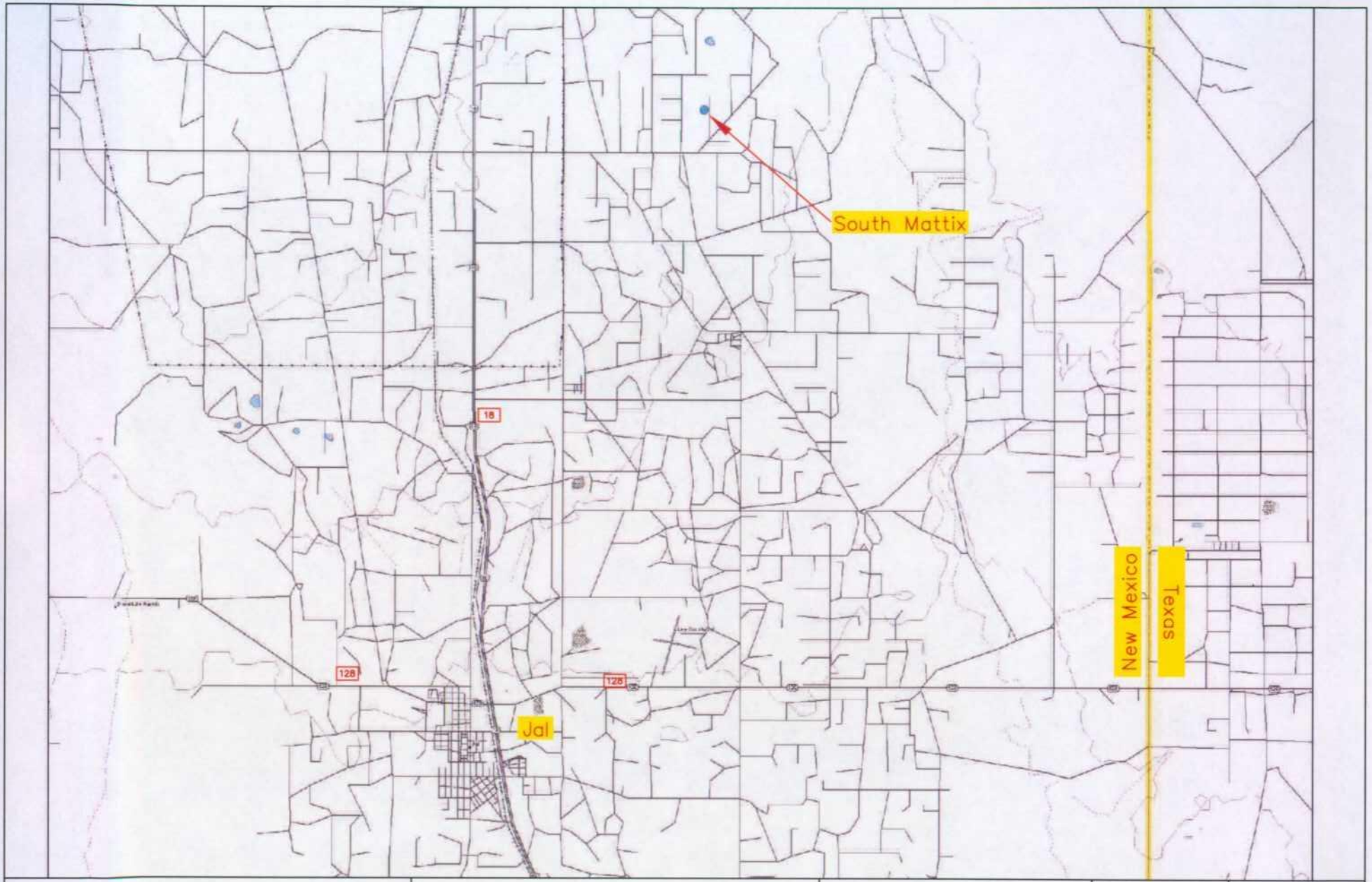

Figure 1
Area Map
Plains All American Pipeline, LP
South Mattix

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Jan. 2005

0 1.5 3.0
Miles

SHEET
1 of 1

N

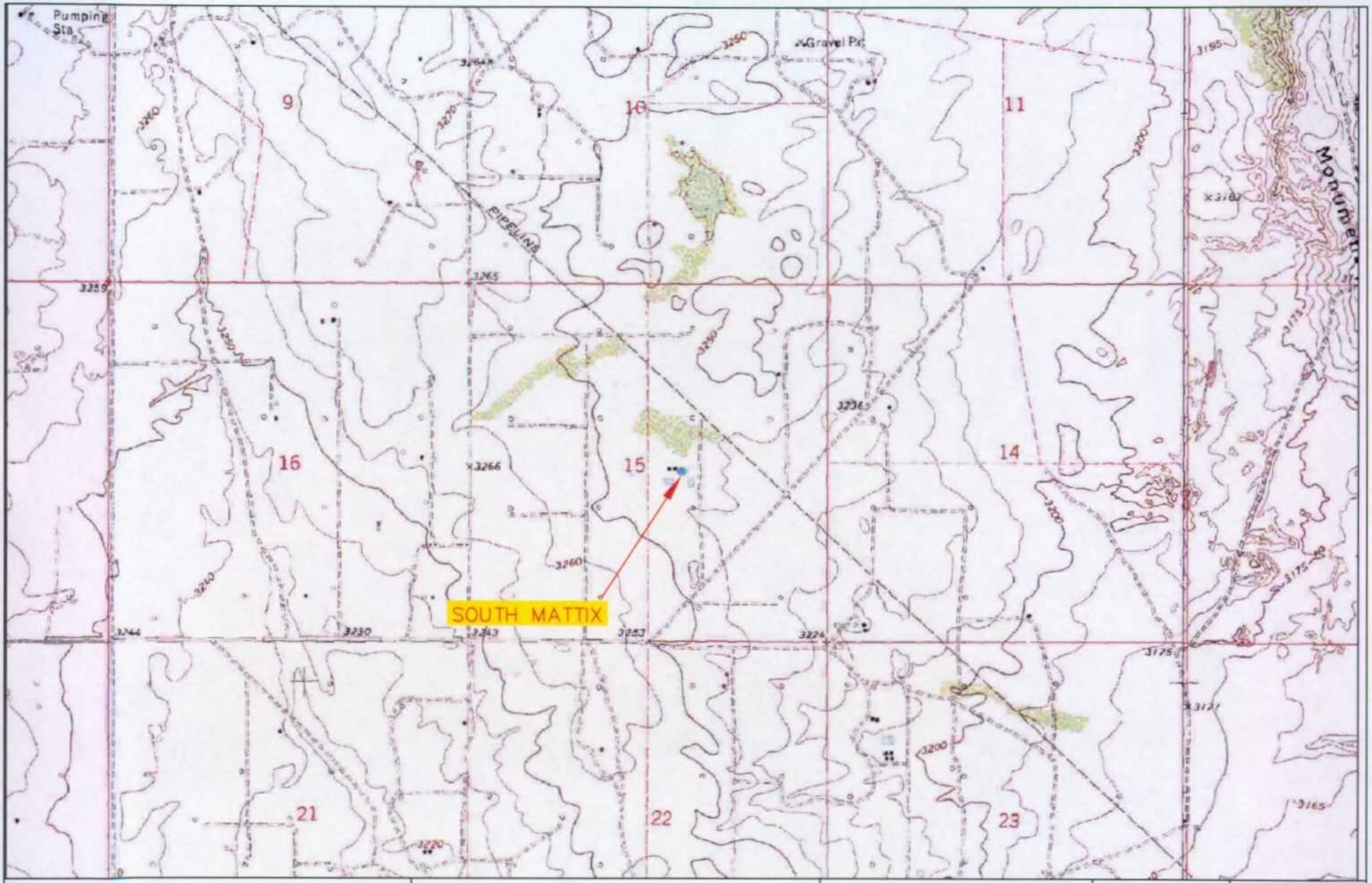

Figure 2 Site Location Map Plains All American Pipeline, LP South Mattix	Lea County, New Mexico SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E N 32° 13' 1.19" W 103° 08' 57.1" Elevation: 3,245 feet amsl	DWG By: Iain Olness June 2004	REVISED: Jan. 2005
		0 2,000 4,000 Feet	SHEET 1 of 1
			N

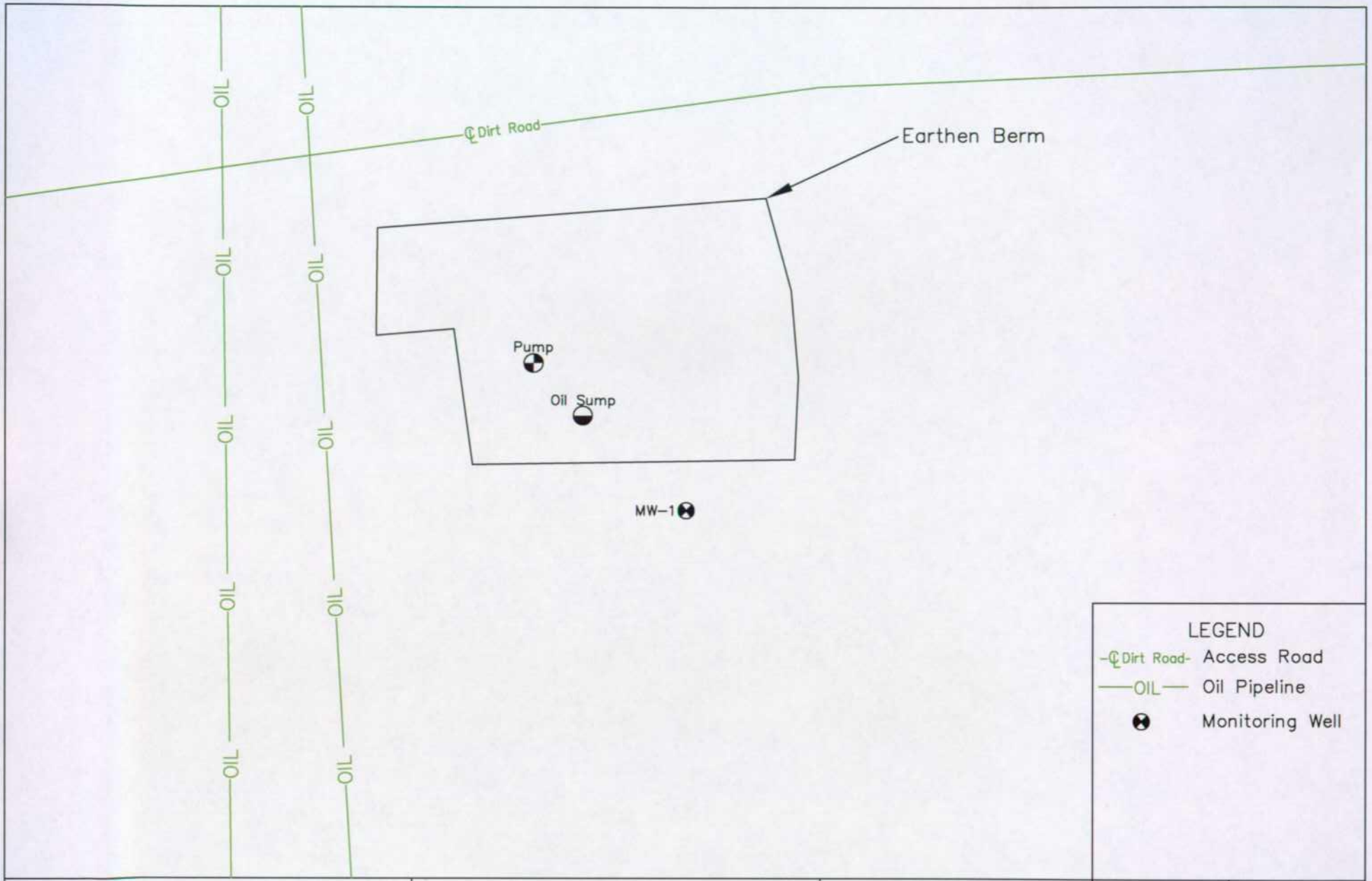

Figure 3
Site Map
Plains All American Pipeline, LP
South Mattix

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Jan. 2005

0 65 130
Feet

SHEET
1 of 1

N

Figure 4: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-1 from 12/28/01 through 12/31/04, Plains All American Pipeline, L.P. South Mattix Sump, Lea County, New Mexico.

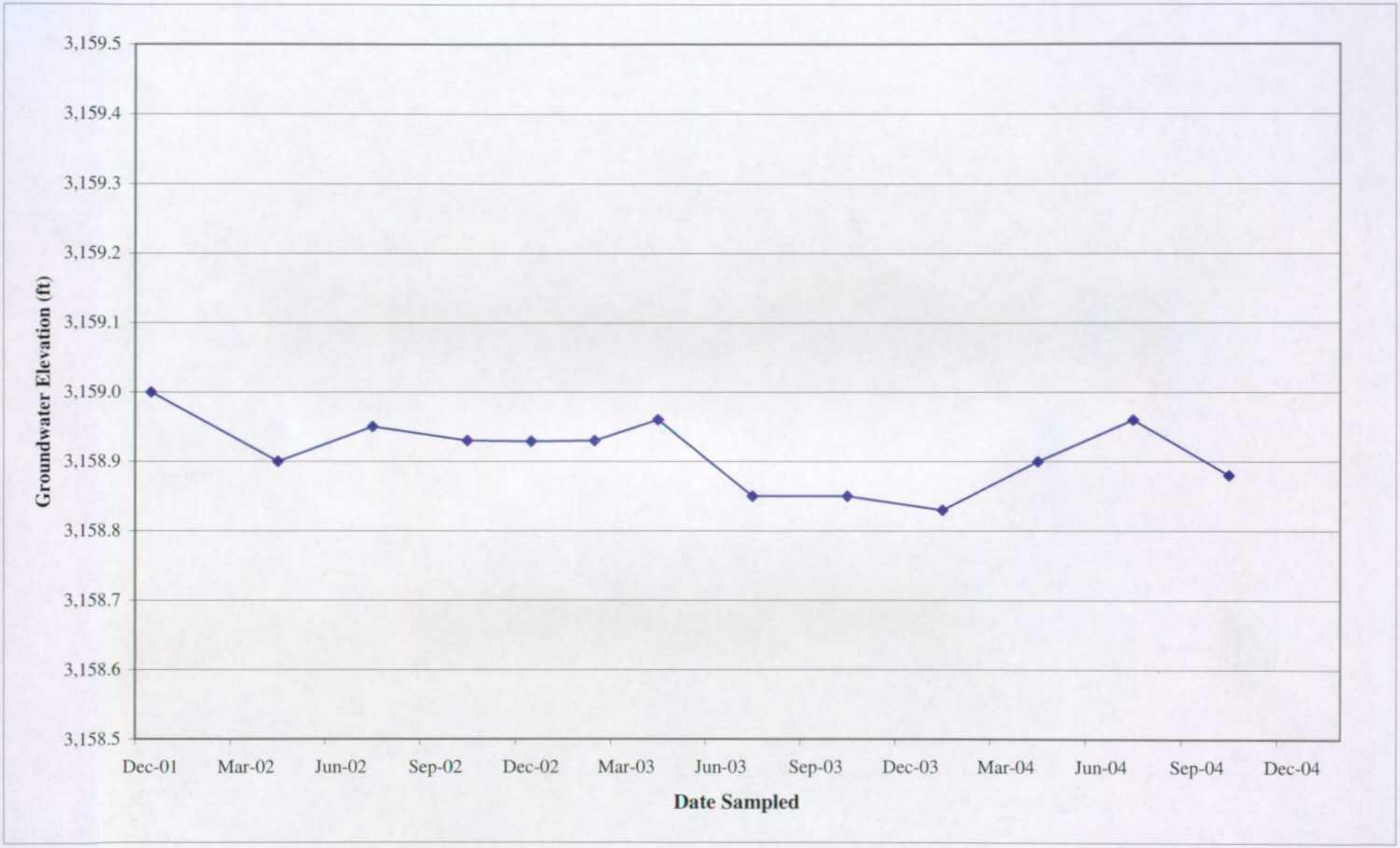

Figure 5: Hydrograph for Monitoring Well MW-1, Plains All American Pipeline, LP South Mattix Sump, Lea County, New Mexico from 12/28/01 through 12/31/04.

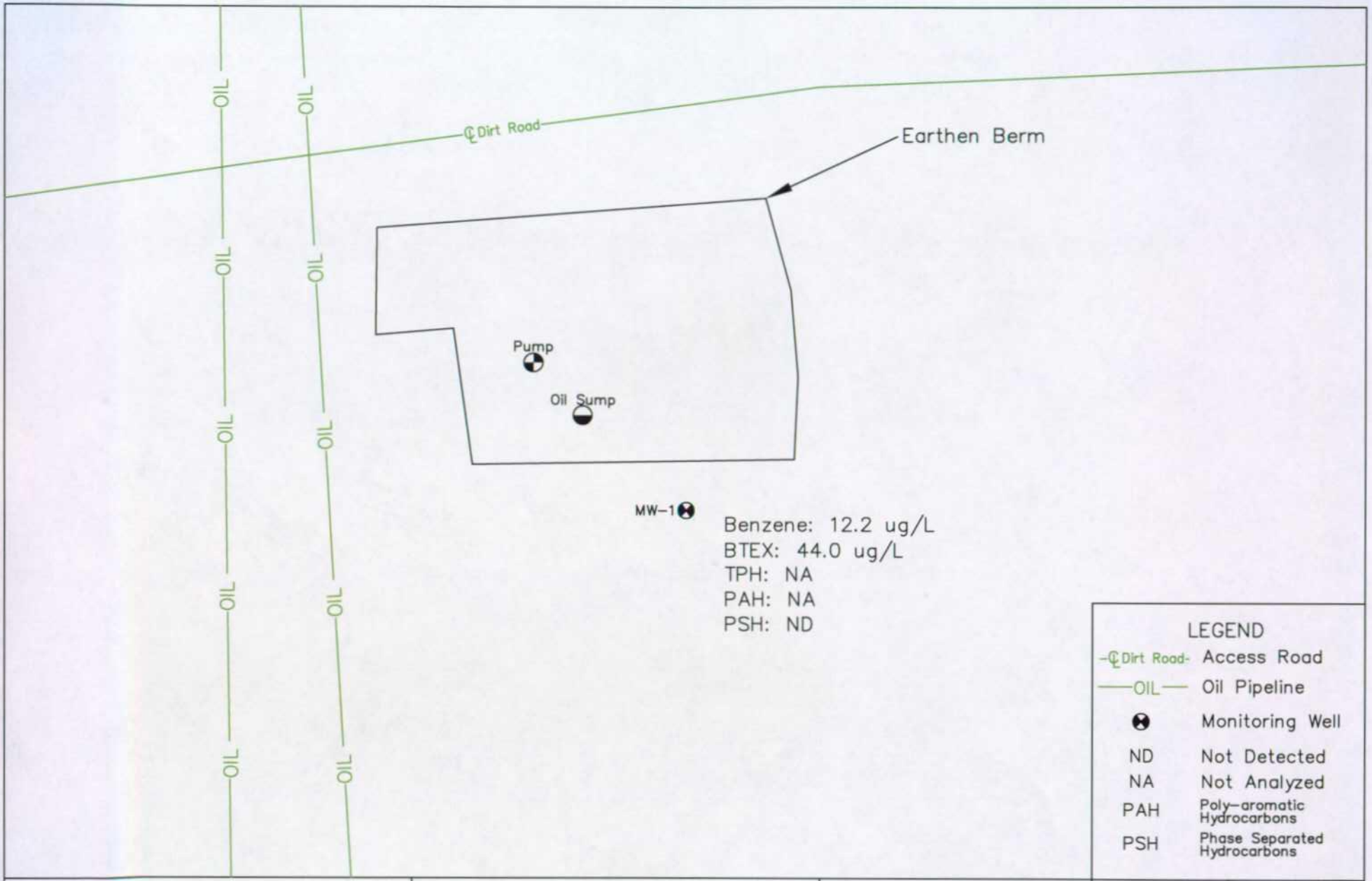

Figure 6 Contaminant Concentration Map – 01/27/04 Plains All American Pipeline, LP South Mattix	Lea County, New Mexico SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E N 32° 13' 1.19" W 103° 08' 57.1" Elevation: 3,245 feet amsl	DWG By: Iain Olness June 2004	REVISED: Jan. 2005	N
		0 65 130 Feet	SHEET 1 of 1	

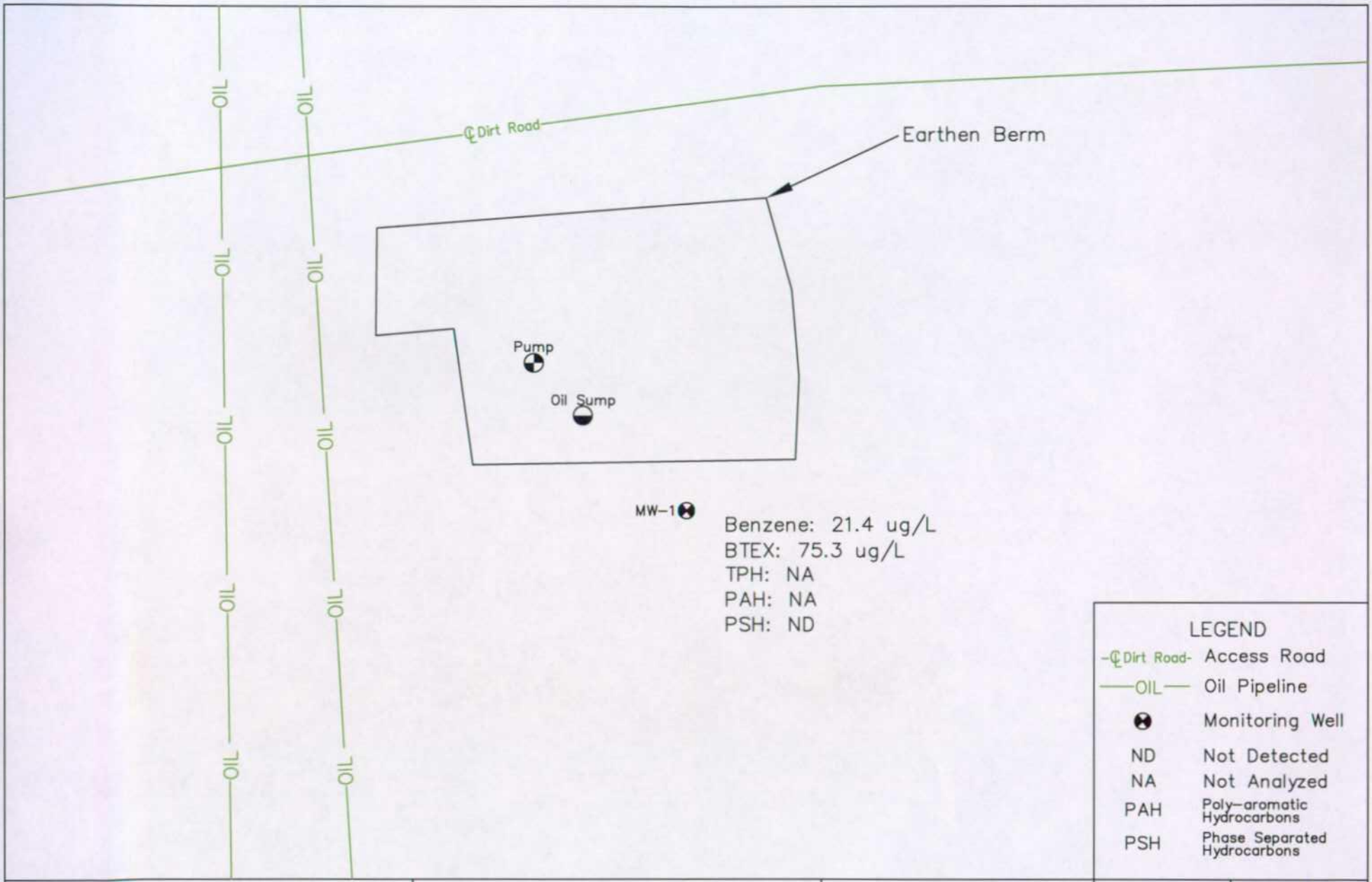

Figure 7 Contaminant Concentration Map – 04/21/04 Plains All American Pipeline, LP South Mattix	Lea County, New Mexico SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E N 32° 13' 1.19" W 103° 08' 57.1" Elevation: 3,245 feet amsl	DWG By: Iain Olness June 2004	REVISED: Jan. 2005	N
		0 65 130 Feet	SHEET 1 of 1	

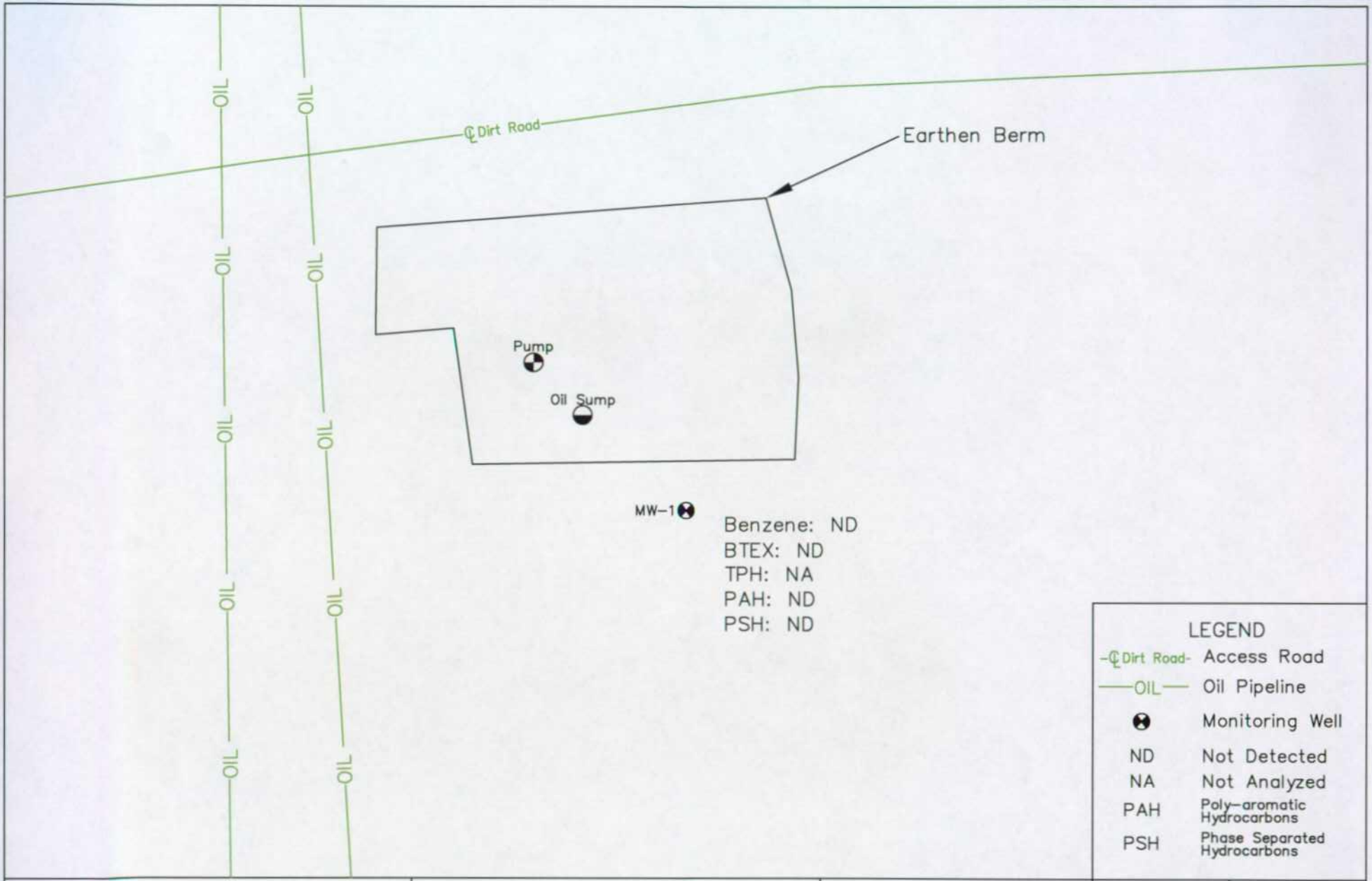

Figure 8 Contaminant Concentration Map – 07/14/04 Plains All American Pipeline, LP South Mattix	Lea County, New Mexico SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E N 32° 13' 1.19" W 103° 08' 57.1" Elevation: 3,245 feet amsl	DWG By: Iain Olness June 2004	REVISED: Jan. 2005	N
		0 65 130 Feet	SHEET 1 of 1	

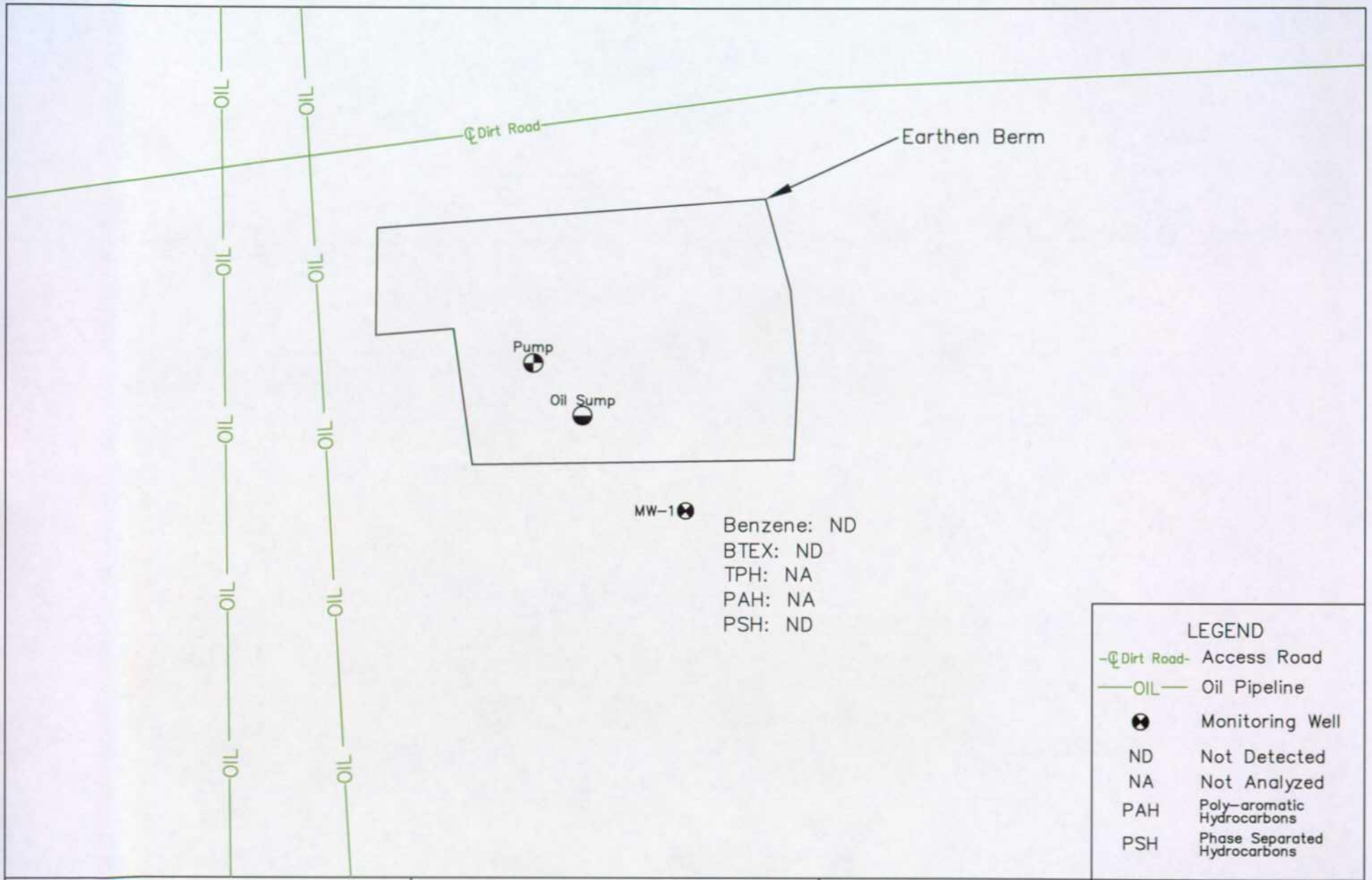

Figure 9
Contaminant Concentration Map – 10/20/04
Plains All American Pipeline, LP
South Mattix

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Jan. 2005

0 65 130
Feet

SHEET
1 of 1

N

TABLES

TABLE 1

RELATIVE GROUNDWATER ELEVATIONS AND PHASE SEPARATED HYDROCARBON THICKNESSES

South Mattix - Ref #2000-10410

Monitor Well	Date Gauged	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)
MW-1	28-Dec-01	3,245	- -	86.00	3,159.00	
	30-Apr-02		- -	86.10	3,158.90	- -
	9-Jul-02		- -	86.05	3,158.95	- -
	5-Oct-02		- -	86.07	3,158.93	- -
	13-Dec-02		86.07	86.08	3,158.93	0.01
	17-Feb-03		- -	86.07	3,158.93	- -
	2-Apr-03		- -	86.04	3,158.96	- -
	25-Jul-03		- -	86.15	3,158.85	- -
	1-Oct-03		- -	86.15	3,158.85	- -
	27-Jan-04		- -	86.17	3,158.83	- -
	21-Apr-04		- -	86.10	3,158.90	- -
	14-Jul-04		- -	86.04	3,158.96	- -
	20-Oct-04		- -	86.12	3,158.88	- -

** = Top of casing elevation set from USGS Topographical map*

*** Corrected Groundwater Elevation = Top of Casing Elevation - (Depth to Water Below Top of Casing - (SG)(PSH Thickness)*

- - = Not detected

If cell is blank, the well was not gauged

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (BTEX & TPH)

PLAINS ALL AMERICAN PIPELINE, L.P.
SOUTH MATTIX - REF. #2000-10410
LEA COUNTY, NEW MEXICO

Monitor Well Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)	Chloride (mg/L)	Total Dissolved Solids (mg/L)	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	Total TPH (mg/L)
MW-1	28-Dec-01	2	1	1	7	2	9	46	655	<3	<3	<6
	3-Apr-02	**26.1**	26	10.1	25.5	13.2	38.7					
	9-Jul-02	**26.1**	13.4	5.93	16.7	7.48	24.18	38	667			
	5-Oct-02	**16**	5.82	2.88	7.89	2.54	10.43					
	13-Dec-02	**10.2**	<1	1.06	5.18	<1	5.18					
	17-Feb-03	<1	<1	<1	<1	<1	<2					
	2-Apr-03	7.63	<1	<1	4.54	1.3	5.84					
	25-Jul-03	4.68	3.07	1.41	3.32	1.63	4.95			<0.5	<0.5	<1
	1-Oct-03	<1	<1	<1	<1	<1	<2					
	27-Jan-04	**12.2**	**9.57**	**4.19**	**12.3**	**5.71**	**18.0**					
	21-Apr-04	**21.4**	**21.1**	**6.78**	**17.2**	**8.8**	**26.0**					
	14-Jul-04	<1	<1	<1	<2	<1	<3					
	20-Oct-04	<1	<1	<1	<2	<1	<3					
NMOCD Remedial Thresholds		**10**	**750**	**750**			**620**	**250**	**1,000**			

Red, bolded values are in excess of the NMOCD Remediation Thresholds or Other Standards for Domestic Water Supply.

If cell is blank, that parameter was not analyzed

TABLE 3

CONCENTRATIONS OF SEMI-VOLATILES IN GROUNDWATER

PLAINS ALL AMERICAN PIPELINE, L.P.
SOUTH MATTIX - REF. #2000-10410
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	14-Jul-04	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	<0.05
New Mexico Water Quality Commission Groundwater Standards						0.7									30				

NA = Not Analyzed

APPENDIX

APPENDIX A

Analytical Reports
and
Chain-of-Custody Forms

AnalySys, Inc.

3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.
Attn: Pat McCasland
Address: 2100 Ave. O
Eunice NM 88231

Phone: (505) 394-3481 **FAX:** (505) 394-2601

Report#/Lab ID#: 152329 **Report Date:** 02/03/04
Project ID: 2000-10410
Sample Name: WLESM12704MW
Sample Matrix: water
Date Received: 01/30/2004 **Time:** 09:50
Date Sampled: 01/27/2004 **Time:** 10:00

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		02/02/04	8260b(5030/5035)	---	---	---	---	---
Benzene	12.2	µg/L	1	<1	02/02/04	8260b	---	11.1	94	87.1	88
Ethylbenzene	4.19	µg/L	1	<1	02/02/04	8260b	---	4.2	124.6	120	118.2
m,p-Xylenes	12.3	µg/L	2	<2	02/02/04	8260b	---	3.2	124.5	117.8	120.4
o-Xylene	5.71	µg/L	1	<1	02/02/04	8260b	---	4.2	126.4	119.7	120.8
Toluene	9.57	µg/L	1	<1	02/02/04	8260b	---	11.6	96.1	86.1	90.7

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Elton

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B =Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC.

3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc. **Attn:** Pat McCasland	**Project ID:** 2000-10410 **Sample Name:** WLESM12704MW	**Report#/Lab ID#:** 152329 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	102	74-124	---
Toluene-d8	8260b	107	89-115	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

[redacted] CHAIN OF CUSTODY

AnalySys Inc.
4221 Freidrich Lane, Suite 190, Austin, TX 78744
(512) 444-5896

Send Report to:
Company Name: Environmental Plus
Address: 200 Ave O
City: Eunice State: N.M. Zip: 88231
ATTN: Pat McCasland
Phone: 505-394-3481 Fax: 505-394-2601

Bill to (if different):
Company Name: Link Energy
Address: 5805 Hwy 80
City: Midland State: TX Zip: 79701
ATTN: Frank Hernandez
Phone: 505-631-3095 Fax: 505-396-2754

Rush Status (must be confirmed with lab mgr.): _____
Project Name/PO#: 2000-10110 Sampler: [redacted]

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	8021								Comments
WLESM 12704 MW	1-27-04	10:00	2		X		152329	X								

Analyses Requested (1)
Please attach explanatory information as required

)Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting nits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants or SI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

T: 2.5 C

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
[redacted]	Environmental Plus	1-27-04		[redacted]	ASI	1/30/04	0950

'endering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

ANALYSYS INC.

3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Link Energy
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 432 638-3799 **FAX:** 432 684-3456

Report#/Lab ID#: 155121 **Report Date:** 04/30/04
Project ID: 2000-10410
Sample Name: SLSM042104
Sample Matrix: water
Date Received: 04/27/2004 **Time:** 10:00
Date Sampled: 04/21/2004 **Time:** 11:45

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		04/29/04	8260b(5030/5035)	---	---	---	---	---
Benzene	21.4	µg/L	1	<1	04/29/04	8260b	---	2.3	105.6	102.2	105.6
Ethylbenzene	6.78	µg/L	1	<1	04/29/04	8260b	---	0.9	107.2	103.7	104.6
m,p-Xylenes	17.2	µg/L	2	<2	04/29/04	8260b	---	0.4	108.7	103.7	106
o-Xylene	8.8	µg/L	1	<1	04/29/04	8260b	---	0.5	108.3	103.5	108.1
Toluene	21.1	µg/L	1	<1	04/29/04	8260b	---	1.2	109.8	106.2	112.1

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Elton

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B =Analyte detected in associated method blank(s). S & S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC.

3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Link Energy	**Project ID:** 2000-10410	**Report#/Lab ID#:** 155121
Attn: Frank Hernandez	**Sample Name:** SLSM042104	**Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	108	74-124	---
Toluene-d8	8260b	100	89-115	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

CHAIN-OF-CUSTODY

WWW.ANALYSYSINC.COM

AnalySys Inc.

3512 Montopolis Drive, Austin, TX 78744
Phone: (512) 385-5886 Fax: (512) 385-7411

2209 N.P.I.D., Ste K, Corpus Christi, TX 7840
Phone: (361) 289-6384 Fax: (361) 289-0875

Send Reports To:

Company Name Link energy
Address
City State Zip
ATTN: Frank Hernandez
Phone Fax

Bill to (if different):

Company Name
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: 2000-10410 Sampler: Sergio Prieto

Analyses Requested (1)
Please attach explanatory information as requir

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	BTEX	Comments
SLSIII 042104	4-21-04	11:45	2		✓		155121	X	

(1)Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reportin limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

T: 3.5°C

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Sergio Prieto	EPI	4-21-04		D Flynn	ASI	4/27/04	1000

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

ANALYSYS INC.
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.
Attn: Iain Olness
Address: 2100 Ave. O
Eunice, NM 88231
Phone: (505) 394-3481 **FAX:** (505) 394-2601

Report#/Lab ID#: 157745 **Report Date:** 08/02/04
Project ID: 2001-10410
Sample Name: LESM071407MW1
Sample Matrix: water
Date Received: 07/20/2004 **Time:** 09:15
Date Sampled: 07/14/2004 **Time:** 14:30

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA [1]

Parameter	Result	Units	RQL [5]	Blank	Date	Method [6]	Data Qual.[7]	Prec. [2]	Recov. [3]	CCV[4]	LCS[4]
A/BN Extraction-PAH	---	---	---	---	07/21/04	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	07/30/04	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---		---		07/21/04	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	07/21/04	8260b	---	1.6	100.5	103.8	100.1
Ethylbenzene	<1	µg/L	1	<1	07/21/04	8260b	J	7.2	101.4	105	103.9
m,p-Xylenes	<2	µg/L	2	<2	07/21/04	8260b	---	13.7	99.6	100.7	106.2
o-Xylene	<1	µg/L	1	<1	07/21/04	8260b	J	12	108	111.3	114.2
Toluene	<1	µg/L	1	<1	07/21/04	8260b	---	4.3	100.6	106.7	104.6
Acenaphthene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	51.7	59.2	100.1	51.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	53.1	59.1	109.8	51.7
Anthracene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	28.8	66.7	103.2	54.3
Benzo[a]anthracene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	21.6	84.4	87.9	71.9
Benzo[a]pyrene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	18.2	71.9	89.1	64
Benzo[b]fluoranthene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	14.5	85.4	88	73.3
Benzo[g,h,i]perylene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	15.1	85.1	103.8	72.8
Benzo[j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	17.6	78.4	100.5	67.8
Chrysene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	10.9	71.4	96.7	62.9
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	15.9	80.1	93.1	67.7
Fluoranthene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	24.3	76.8	104	59.9
Fluorene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	39.5	58.7	102.4	50.7
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	16.4	80	95.3	67.6

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Elton

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B =Analyte detected in associated method blank(s). S & S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

INC.
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.	**Project ID:** 2001-10410	**Report#/Lab ID#:** 157745
Attn: Iain Olness	**Sample Name:** LESM071407MW1	**Sample Matrix:** water

REPORT OF ANALYSIS-cont.

QUALITY ASSURANCE DATA [1]

Parameter	Result	Units	RQL [5]	Blank	Date	Method [6]	Data Qual.[7]	Prec. [2]	Recov. [3]	CCV[4]	LCS [4]
Naphthalene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	57.3	45	117.7	39.6
Phenanthrene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	P	28	69.4	99.3	54.7
Pyrene	<0.05	µg/L	0.05	<0.05	07/30/04	610 & 8270c	---	24.2	77.1	99.7	61.2

2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc. **Attn:** Iain Olness	**Project ID:** 2001-10410 **Sample Name:** LESM071407MW1	**Report#/Lab ID#:** 157745 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
2-Fluorobiphenyl	610 & 8270c	58.2	39-110	---
Nitrobenzene-d5	610 & 8270c	41.5	12-110	---
Terphenyl-d14	610 & 8270c	77.4	25-110	---
1,2-Dichloroethane-d4	8260b	104	74-124	---
Toluene-d8	8260b	110	89-115	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

[redacted]

Report #/Lab ID#: 157745 **Matrix:** water
Client: Environmental Plus, Inc. **Attn:** Iain Olness
Project ID: 2001-10410
Sample Name: LESM071407MW1

Sample Temperature/Condition: <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

Sample Bottles & Preservation:

☒ Sample received in appropriate container(s) and appear to be appropriately preserved.
☐ Sample received in appropriate container(s). State of sample preservation unknown.
☐ Sample received in inappropriate container(s) and/or with unknown state of preservation.

J flag Discussion:

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Ethylbenzene	J	See J-flag discussion above.
o-Xylene	J	See J-flag discussion above.
Acenaphthene Acenaphthene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Acenaphthylene Acenaphthylene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Anthracene Anthracene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Benzo[a]anthracene Benzo[a]anthracene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Dibenz[a,h]anthracene Dibenz[a,h]anthracene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Fluorene Fluorene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Indeno[1,2,3-cd]pyrene Indeno[1,2,3-cd]pyrene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Naphthalene Naphthalene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.
Phenanthrene Phenanthrene	P P	The precision of the MS & MSD (or sample and sample duplicate for those analyseswhere MS/MSD are not run) is outside advisory/acceptance limits.

Notes:

AnalySys Inc.

Chain of Custody Form

4221 Freidrich Lane, Suite 190, Austin, TX 78744 *2209 N. Padre Island Dr., Corpus Christi, TX 78408*
512-444-5896 FAX: 512-447-4766

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Plains All American
Facility Name	South Mattix
Project Reference	2000-10410
EPI Sampler Name	Manuel Gonzales

Bill To

PLAINS ALL AMERICAN PIPELINE, L.P.

Attn: Jimmy Bryant
PO Box 1660,
Midland, TX 79701

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
157745	LESM071407MW1	G	4	X						X	X		14-Jul	14:30	X							X
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: iolness@hotmail.com and enviplus1@aol.com
Relinquished by: Iain Olness	Date 7/14/04 Time 1630	Received By: (lab staff)	REMARKS: ASI - 7/15/04 @ 0915
Delivered by:	Sample Cool & Intact Yes / No	Checked By:	

Sample Analysis Case Narrative

Client: Environmental Plus, Inc. **Project ID:** 2001-10410

Attn: Iain Olness

for Sample #'s: 157745

Analyzed by AnalySys, Inc.

Final Review Date: 8/3/2004 **By:** _____ for (R. Elton)

Case Narrative:

The precisions of several Semivolatile organic compounds in the analytical batch associated with sample # 157745 were higher than normal laboratory acceptance criteria. However, in each case, the Matrix Spikes (MS & MSD), and the Laboratory Control Sample (LCS) were within analyte recovery limits indicating that the analytical process was working appropriately. This deviation in the precision between the MS and MSD when viewed in conjunction with the acceptable analyte recovery seen in the MS, MSD, and LCS should have minimal impact on data usability.

ANALYSYS INC.
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.
Attn: Iain Olness
Address: 2100 Ave. O
Eunice, NM 88231
Phone: (505) 394-3481 **FAX:** (505) 394-2601

Report#/Lab ID#: 160881 **Report Date:** 10/28/04
Project ID: 2000-10410
Sample Name: PAASM102004MW1
Sample Matrix: water
Date Received: 10/22/2004 **Time:** 10:30
Date Sampled: 10/20/2004 **Time:** 07:21

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA [1]

Parameter	Result	Units	RQL [5]	Blank	Date	Method [6]	Data Qual.[7]	Prec. [2]	Recov. [3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		10/26/04	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	10/26/04	8260b	---	5.8	101.3	97.8	96.6
Ethylbenzene	<1	µg/L	1	<1	10/26/04	8260b	---	7.8	108.7	102.2	109.2
m,p-Xylenes	<2	µg/L	2	<2	10/26/04	8260b	---	10.9	108.4	100.8	110.2
o-Xylene	<1	µg/L	1	<1	10/26/04	8260b	---	13.6	101.4	103.4	113.7
Toluene	<1	µg/L	1	<1	10/26/04	8260b	---	12.6	112.9	97.9	106.4

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Dale Wagner

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B =Analyte detected in associated method blank(s). S & S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC.
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.	**Project ID:** 2000-10410	**Report#/Lab ID#:** 160881
Attn: Iain Olness	**Sample Name:** PAASM102004MW1	**Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	86.1	74-124	---
Toluene-d8	8260b	103	89-115	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

AnalySys Inc.

Chain of Custody Form

4221 Freidrich Lane, Suite 190, Austin, TX 78744 *2209 N. Padre Island Dr., Corpus Christi, TX 78408*
512-444-5896 FAX: 512-447-4766

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Plains All American
Facility Name	South Mattix
Project Reference	2000-10410
EPI Sampler Name	Manuel Gonzales

Bill To

PLAINS ALL AMERICAN PIPELINE, L.P.

Attn: ENV Accounts Payable
PO Box 4648,
Houston, TX 77210-4648

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH
160881 1	PAASM102004MW1	G	3	X						X	X		20-Oct	7:21	X							
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished: Iain Olness	Date 10/21/04 Time 1630	Received By:	E-mail results to: iolness@hotmail.com and enviplus1@aol.com
Relinquished by:	Date 10/22/04 Time 10:30	Received By: (lab staff) Jimmy Jarocki, AS	REMARKS: 10:30
Delivered by:	Sample Cool & Intact Yes No	Checked By:	T:30 c