

**AP - 37**

**STAGE 1 & 2  
REPORTS**

**DATE:**

**3/2006**



AP-037

## 2005 ANNUAL MONITORING REPORT

**PLAINS PIPELINE, L.P.  
LOVINGTON DEEP 6"  
PLAINS REF: 2002-10312  
(COMPANY #231735)**

**SE $\frac{1}{4}$  OF THE NE $\frac{1}{4}$  OF SECTION 6, TOWNSHIP 17 SOUTH, RANGE 36 EAST  
LEA COUNTY, NEW MEXICO**

**~5.8 MILES SOUTHWEST (195°) OF  
LOVINGTON, LEA COUNTY, NEW MEXICO  
LATITUDE: N32° 52' 1.13"      LONGITUDE: W103° 23' 16.6"**

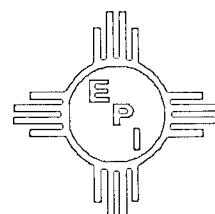
**MARCH 2006**

**PREPARED BY:**

*Environmental Plus, Inc.*

2100 Avenue O  
P.O. Box 1558  
Eunice, NM 88231

Phone: (505)394-3481  
FAX: (505)394-2601  
[iolness@envplus.net](mailto:iolness@envplus.net)



**Distribution List****2005 Annual Monitoring Report****Plains Pipeline, L.P.****Lovington Deep 6" (Ref. #2002-10312)**

Name	Title	Company or Agency	Mailing Address	e-mail
Ed Martin	Environmental Engineer	New Mexico Oil Conservation Division - Santa Fe	1220 South St. Francis Drive Santa Fe, NM 87505	ed.martin@state.nm.us
Larry Johnson	Environmental Engineer	New Mexico Oil Conservation Division - Hobbs	1625 French Dr. Hobbs, NM 88231	larry.johnson@state.nm.us
Camille Reynolds	Remediation Coordinator	Plains All American Pipeline	P. O. Box 3119 Midland, TX 79702-3119	cireynolds@paalp.com
Jeff Dann	Senior Environmental Specialist	Plains All American Pipeline	P. O. Box 4648 Houston, TX 77210-4648	jpdann@paalp.com
File	--	Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231	iolness@envplus.net

## STANDARD OF CARE

### Annual Monitoring Report

**Lovington Deep 6"**  
**Ref. # 2002-10312**

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  
Iain A. Olness, P.G.  
Hydrogeologist

1 March 2006  
Date

This report was reviewed by:

David Duncan  
David Duncan  
Environmental Consultant

1 March 2006  
Date

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## I Background and Previous Remedial Activities

The Lovington Deep 6" release site is located approximately 5.8 miles southwest of Lovington in Lea County, New Mexico, at an elevation of approximately 3,912 feet above mean sea level (reference Figures 1 and 2). The release occurred on property owned by Darr Angell and is utilized as pasture land. The site is located in a rural area within the West Lovington oil field, with no residences or surface water within a 1,000-foot radius of the release site. The remediation area is surrounded by a barbed wire fence and is gated.

In December 2002, a release of approximately 25 barrels of crude oil, of which ten barrels were recovered, occurred at the site due to corrosion (internal and/or external) of the pipeline. Approximately 6,000 square feet ( $\text{ft}^2$ ) of surface area was impacted by the release. Surficial soil impacted by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

In an effort to delineate the extent of impacted soil at the site, six soil borings were advanced at the site to depths of approximately 75 feet below ground surface (bgs). During the advancement of the soil borings, groundwater encountered at approximately 65 feet bgs was found to be impacted by the release. Based on this, five of the soil borings were completed as groundwater monitoring wells in order to monitor groundwater impacts at the site.

An *Annual Monitoring Report* was submitted to the NMOCD in April 2004 documenting the results of gauging, PSH recovery efforts and sampling of the groundwater monitoring well network during 2003. Analytical results for samples collected from the groundwater monitoring well network during the initial sampling event conducted during 2003 indicated benzene concentrations ranged from 38.5 micrograms per liter ( $\mu\text{g}/\text{L}$ ) to 7,480  $\mu\text{g}/\text{L}$ , above the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standard of 10  $\mu\text{g}/\text{L}$ . In addition, reported concentrations for toluene and total xylenes in the sample collected from groundwater monitoring well MW-3 were above the NMWQCC Groundwater Standards of 750  $\mu\text{g}/\text{L}$  and 620  $\mu\text{g}/\text{L}$ , respectively. Analytical results for samples collected during the second sampling event conducted during 2003 indicated benzene concentrations ranged from 1.24  $\mu\text{g}/\text{L}$  to 9,740  $\mu\text{g}/\text{L}$ . Benzene concentrations were below the NMWQCC Groundwater Standard of 10  $\mu\text{g}/\text{L}$  for three wells; however, reported benzene concentrations in the sample collected from groundwater monitoring well MW-3 were in excess of the NMWQCC Groundwater Standard of 10  $\mu\text{g}/\text{L}$ . In addition, reported concentrations for ethylbenzenes in the sample collected from groundwater monitoring well MW-3 were above the NMWQCC Groundwater Standard of 750  $\mu\text{g}/\text{L}$ . Phase separated hydrocarbons (PSH) were detected on the water column in groundwater monitoring well MW-2 during 2003, ranging from 7.73 feet in June to 4.42 feet in November. Although documentation pertaining to the quantity of PSH recovered during 2003 is incomplete, it was estimated that approximately 70 gallons were recovered.

A *Stage I and Stage II Abatement Plan* was submitted to the NMOCD in August 2004 and NMOCD approval was received in April 2005 (reference *Appendix B*).

During November and December 2004, six additional groundwater monitoring wells (MW-6 through MW-11) were installed to further delineate the lateral extents of groundwater impacts at the site (reference *Figure 3*).

An *Annual Monitoring Report* was submitted to the NMOCD in March 2005 documenting the results of the gauging, PSH recovery efforts and sampling of the groundwater monitoring well network during 2004. Analytical results for samples collected during sampling events conducted in 2004 indicated contaminant concentrations remained essentially unchanged from 2003. Analytical results indicated the lateral extent of contamination had not been fully defined as evidenced by analytical results for the samples collected from groundwater monitoring wells MW-1, MW-7 and MW-10. PSH levels in the impacted groundwater monitoring well (MW-2) generally showed a decrease during the year, with the exception of the increase seen at the beginning of October 2004. Approximately 203 gallons of PSH were recovered from groundwater monitoring well MW-2 during 2004. Except for minor fluctuations, groundwater levels generally remained stable during the first two-thirds of 2004, experienced a sharp increase during the end of September, decreased through the beginning of November and increased the remainder of the year. Based on data collected during the four sampling events, groundwater is flowing easterly.

## **II Field Activities**

Site visits were made on January 10, January 25, February 18, May 3, and December 18, 2005 to gauge water and phase-separated hydrocarbon (PSH) levels in groundwater monitoring well MW-2 and recover PSH present in the well casing. In addition, the remaining groundwater monitoring wells were gauged to determine the depth to groundwater and to check for the presence of PSH.

Site visits were made on March 30, May 20, August 23, and November 22, 2004 to complete the aforementioned activities and to collect samples for laboratory analyses.

## **III Groundwater Gradient and PSH Thickness**

Monitoring wells were gauged prior to bailing to determine the depth to groundwater and the thickness of any PSH. Except for minor fluctuations, groundwater levels have risen an average of approximately 0.20 feet during 2005 (reference *Figures 15 and 16*). PSH levels in impacted groundwater monitoring well MW-2 have generally remained steady during the past year. A summary of groundwater elevations and PSH thickness is included in Table 1.

Based on data collected during the four sampling events, groundwater is flowing easterly (reference Figures 17, 19, 21 and 23) and is consistent with historical data.

## **IV PSH Recovery**

Recovery of the PSH present on the groundwater surface in the vicinity of groundwater monitoring well MW-2 was accomplished via hand bailing during the past year. A total of 77.5

gallons of PSH were recovered during the past year, resulting in a cumulative recovery of approximately 350 gallons to date.

## V Groundwater Sampling

The groundwater monitoring well network, with the exception of groundwater monitoring well MW-2, was sampled on March 30, May 20, August 23 and November 22, 2005, and the samples submitted for quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8260b. In addition, the samples collected on August 23, 2005 were submitted for the quantification of polycyclic aromatic hydrocarbons (PAH) using EPA Methods 610 and 8270c.

All wells were purged a minimum of three well volumes or dry and samples collected utilizing dedicated or disposable sample bailers. Samples were then placed in laboratory provided containers, put on ice and shipped to an independent laboratory under standard chain-of-custody protocols for analyses.

## VI Groundwater Analytical Results

Analytical results for samples collected from groundwater monitoring well MW-1 were reported as non-detectable (ND) for all analytes, at or above each analytes respective laboratory method detection limits (MDL) for all sampling events conducted in 2005 (reference *Figure 4, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-3 indicated benzene concentrations ranged from 4,410 µg/L to 25,700 µg/L, toluene concentrations ranging from 76.3 µg/L to 744 µg/L, ethylbenzene concentrations ranging from 403 µg/L to 2,280 µg/L and total xylene concentrations ranging from 26.7 µg/L to 1,837 µg/L. Benzene concentrations were reported above NMWQCC Groundwater Standards for all four sampling events conducted during 2005. In addition, ethylbenzene and total xylene concentrations were reported above the NMWQCC Groundwater Standard for the sample collected on May 20, 2005. All other analytes were reported at concentrations below the NMWQCC groundwater standards for all samples (reference *Figure 6, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-4 indicated benzene concentrations ranged from non-detectable (ND) at or above laboratory MDL to 3.89 µg/L. Analytical results for all other analytes were reported as ND at or above each analytes respective MDL for all sampling events conducted during 2005 (reference *Figure 7, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-5 indicated benzene concentrations ranged from ND at or above laboratory MDL to 2.17 µg/L. Analytical results for all other analytes were reported as ND at or above each analytes respective MDL for all sampling events conducted during 2005 (reference *Figure 8, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-6 were reported as ND for all analytes, at or above each analytes respective MDL for all sampling events conducted in 2005, with the exception of the sample collected on August 23, 2005. Analytical results for this sample indicated the presence of toluene and naphthalene at 1.12 µg/L and 0.109 µg/L, respectively (reference *Figure 9, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-7 were reported as ND for all analytes, at or above each analytes respective MDL for all sampling events conducted in 2005, with the exception of the sample collected on March 30, 2005. Analytical results for this sample indicated the presence of benzene and toluene at 5.32 µg/L and 2.65 µg/L, respectively (reference *Figure 9, Table 2, Table 3 and Appendix A*).

Analytical results for the samples collected from groundwater monitoring wells MW-8 and MW-9 were reported as ND for all analytes, at or above each analytes respective laboratory MDL for all sampling events conducted in 2005 (reference *Figure 11, Figure 12, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-10 indicated benzene concentrations ranged from 116 µg/L to 13,900 µg/L, toluene concentrations ranging from 889 µg/L to 1,640 µg/L, ethylbenzene concentrations ranging from 578 µg/L to 901 µg/L and total xylene concentrations ranging from 742 µg/L to 1,950 µg/L. BTEX concentrations were reported above the respective NMWQCC Groundwater Standards for all four sampling events conducted during 2005, with the exception of ethylbenzene concentrations reported for the final sampling event of 2005. Analytical results for the sample collected on August 23, 2005 also indicated the presence of naphthalene (32 µg/L), fluorene (0.698 µg/L), phenanthrene (0.405 µg/L) and anthracene (0.429 µg/L). Only naphthalene concentrations (32 µg/L) were reported above the NMWQCC Groundwater Standard of 30 µg/L (reference *Figure 13, Table 2, Table 3 and Appendix A*).

Analytical results for samples collected from groundwater monitoring well MW-11 indicated benzene concentrations ranged from 1.13 µg/L to 3.07 µg/L. Analytical results for all other analytes were reported as ND at or above each analytes respective MDL for all sampling events conducted during 2005 (reference *Figure 14, Table 2, Table 3 and Appendix A*).

## VII Additional Activities Completed During 2005

In response to the NMOCD's request in the *Annual Monitoring Report Recommendations Approval Letter* (April 6, 2005), a *Soil Closure Letter Report* was completed and submitted to the NMOCD on September 23, 2005. The report recommended backfilling the excavation as proposed in the *Stage 1 and Stage 2 Abatement Plan* previously submitted, with the exception of soil sampling activities. On October 20, 2005, the NMOCD approved the *Soil Closure Letter Report* and associated recommendations; however, they required the sampling activities to be completed (reference *Appendix D*).

## VIII Conclusions

Analytical results for 2005 indicated contaminant concentrations decreased in samples collected from groundwater monitoring wells MW-1, MW-4, MW-5, MW-7 and MW-10, remained ND in samples collected from groundwater monitoring wells MW-6, MW-8 and MW-10 and increased slightly in samples collected from groundwater monitoring wells MW-3 and MW-11 from 2004. Analytical results for 2005 indicated only samples collected from groundwater monitoring wells MW-3 and MW-10 were impacted above NMWQCC Groundwater Standards.

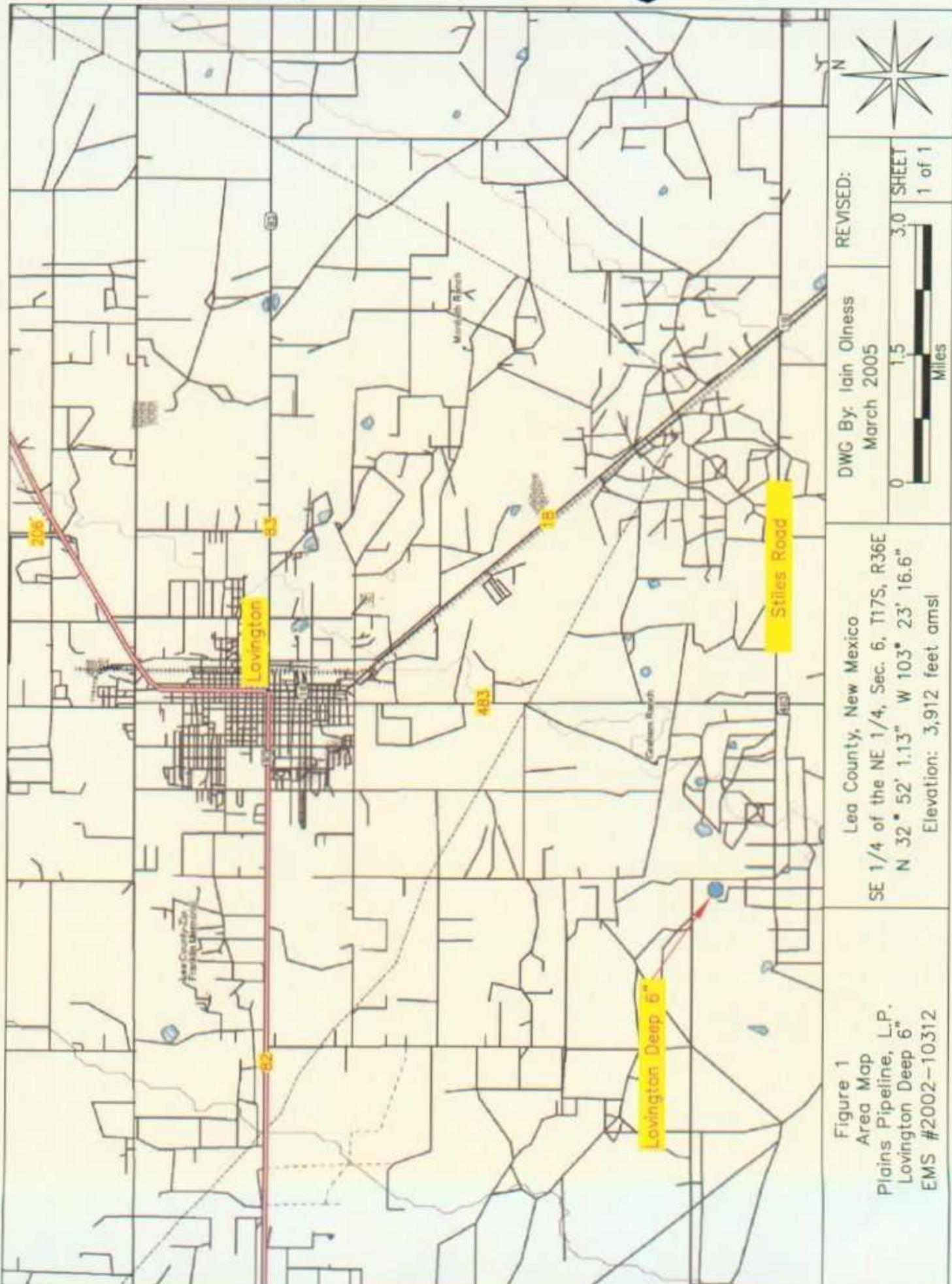
PSH levels in the impacted groundwater monitoring well (MW-2) have generally remained steady during the past year. Approximately 77.5 gallons of PSH were recovered from groundwater monitoring well MW-2 during 2005. Except for minor fluctuations, groundwater levels have raised an average of approximately 0.20 feet during 2005. Based on data collected during the four sampling events, groundwater is flowing easterly.

## IX Recommendations

Based on field monitoring and analytical results collected during the past year and analyzed in conjunction with data collected during the past two years, the following changes are recommended in the sampling protocol:

- 1) Increase site visitation from semi-monthly to weekly to implement a more aggressive PSH recovery schedule, until such time the proposed automated recovery system is installed.
- 2) Gauge all groundwater monitoring wells for water levels and the presence of PSH on a semi-monthly basis.
- 3) Sample the groundwater monitoring well network on a quarterly basis and submit the samples for quantification of BTEX. The samples should be analyzed annually for the presence of PAH. Please reference Table 4 for a summary of groundwater sampling recommendations for the site. In the event PSH are not detected during a quarterly sampling event in a groundwater monitoring well currently impacted with PSH, said well will be included in the sampling schedule as outlined in Table 4.
- 4) Install an additional groundwater monitoring well at the site to further delineate the lateral extent of groundwater impacts (reference *Figure 25*).
- 5) The excavation is scheduled to be backfilled during the second or third quarter of 2006. Prior to backfilling the excavation, soil samples will be collected from the stockpiled soil per NMOCD requirements (reference *Appendices B and C*). Upon completion of backfilling activities, three to five additional recovery wells will be installed and an automated product recovery system will be installed.

## **FIGURES**



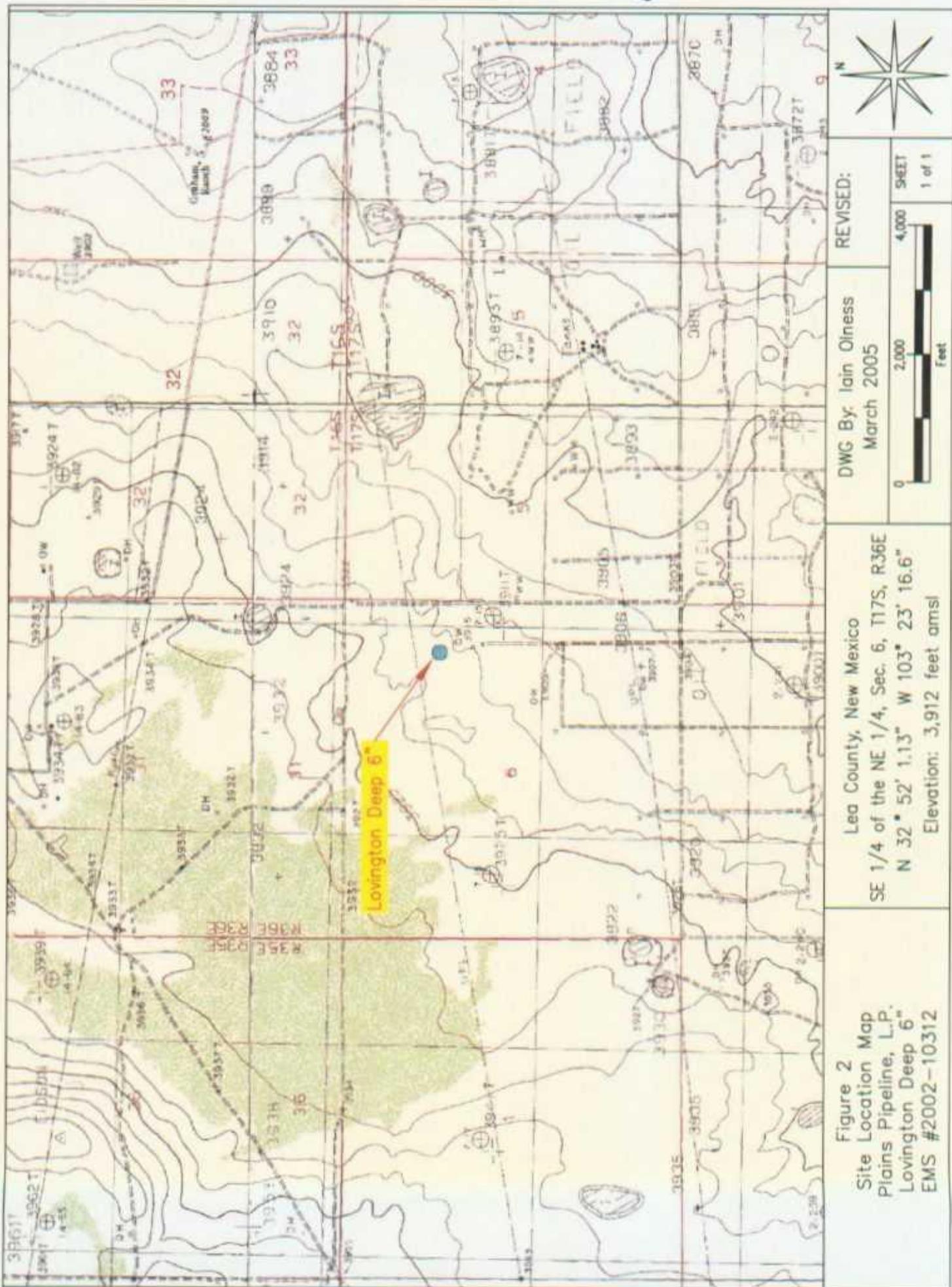
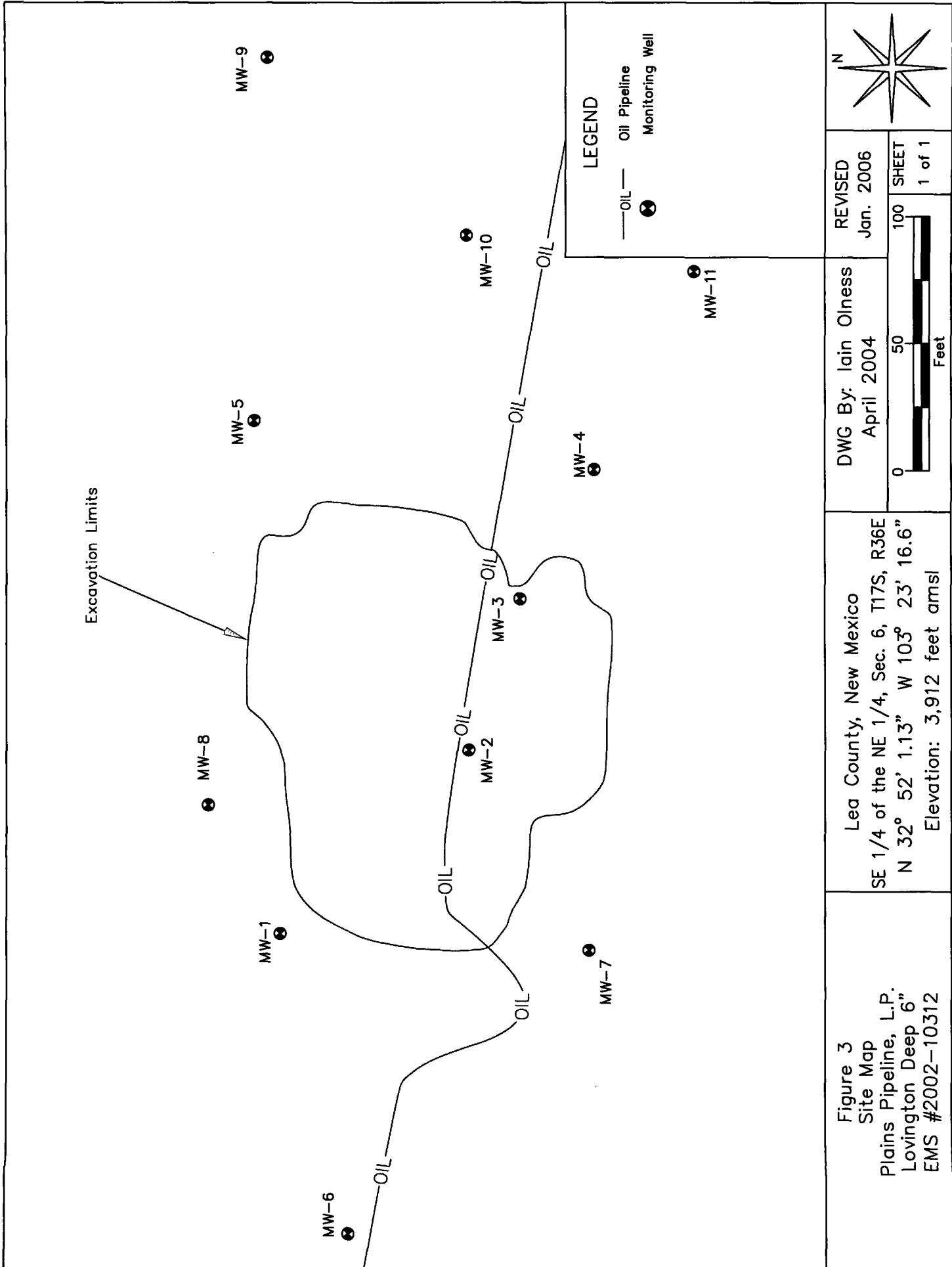


Figure 2  
 Site Location Map  
 Plains Pipeline, L.P.  
 Lovington Deep 6  
 EMS #20002-10312



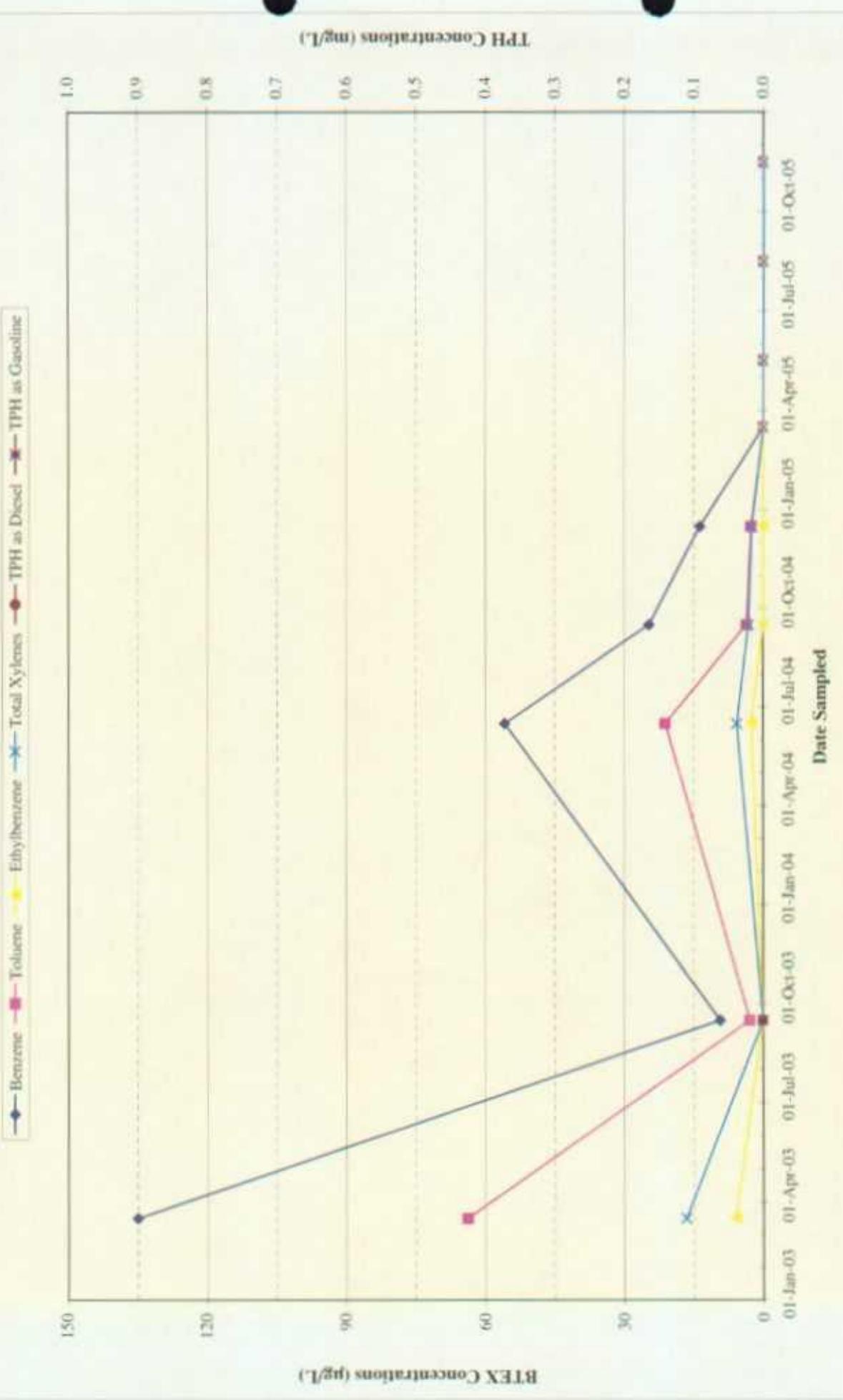


Figure 4: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-1 from 03/04/03 through 12/31/05,  
Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

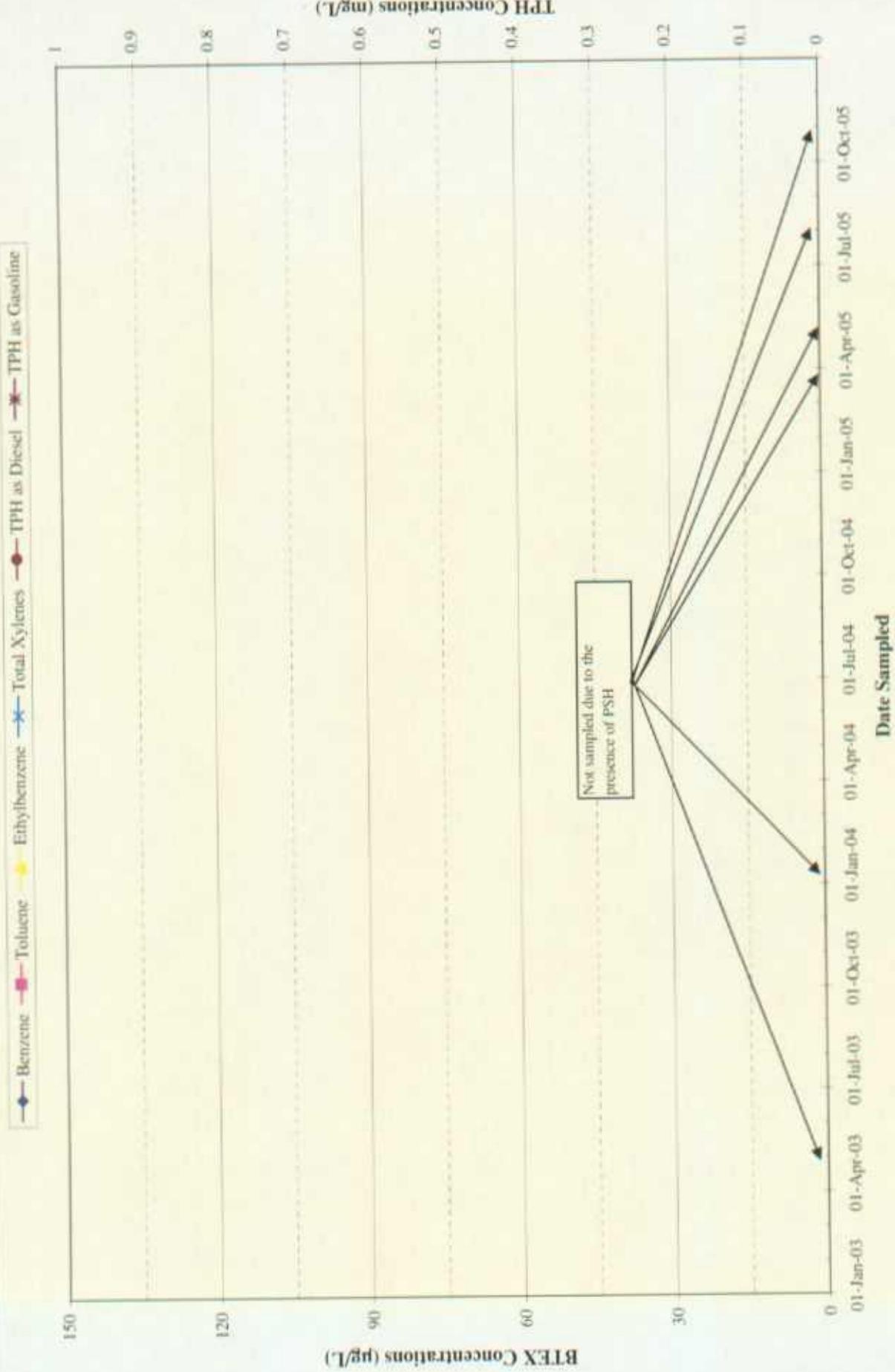


Figure 5: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-2 from 03/04/03 through 12/31/05.  
Plains Pipeline, L.P., Livingston Deep 6", Lea County, New Mexico.

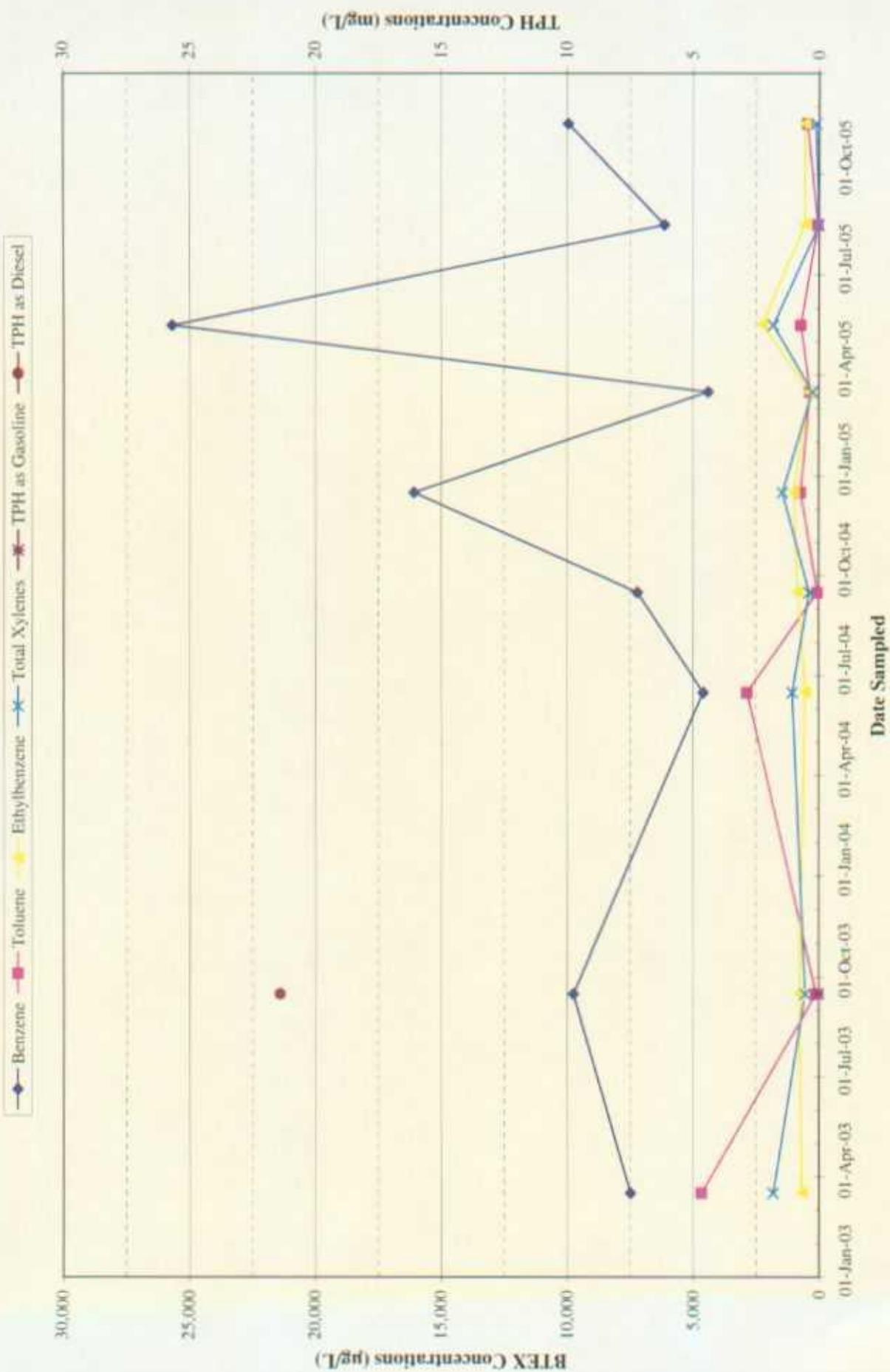


Figure 6: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-3 from 03/04/03 through 12/31/05.  
Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

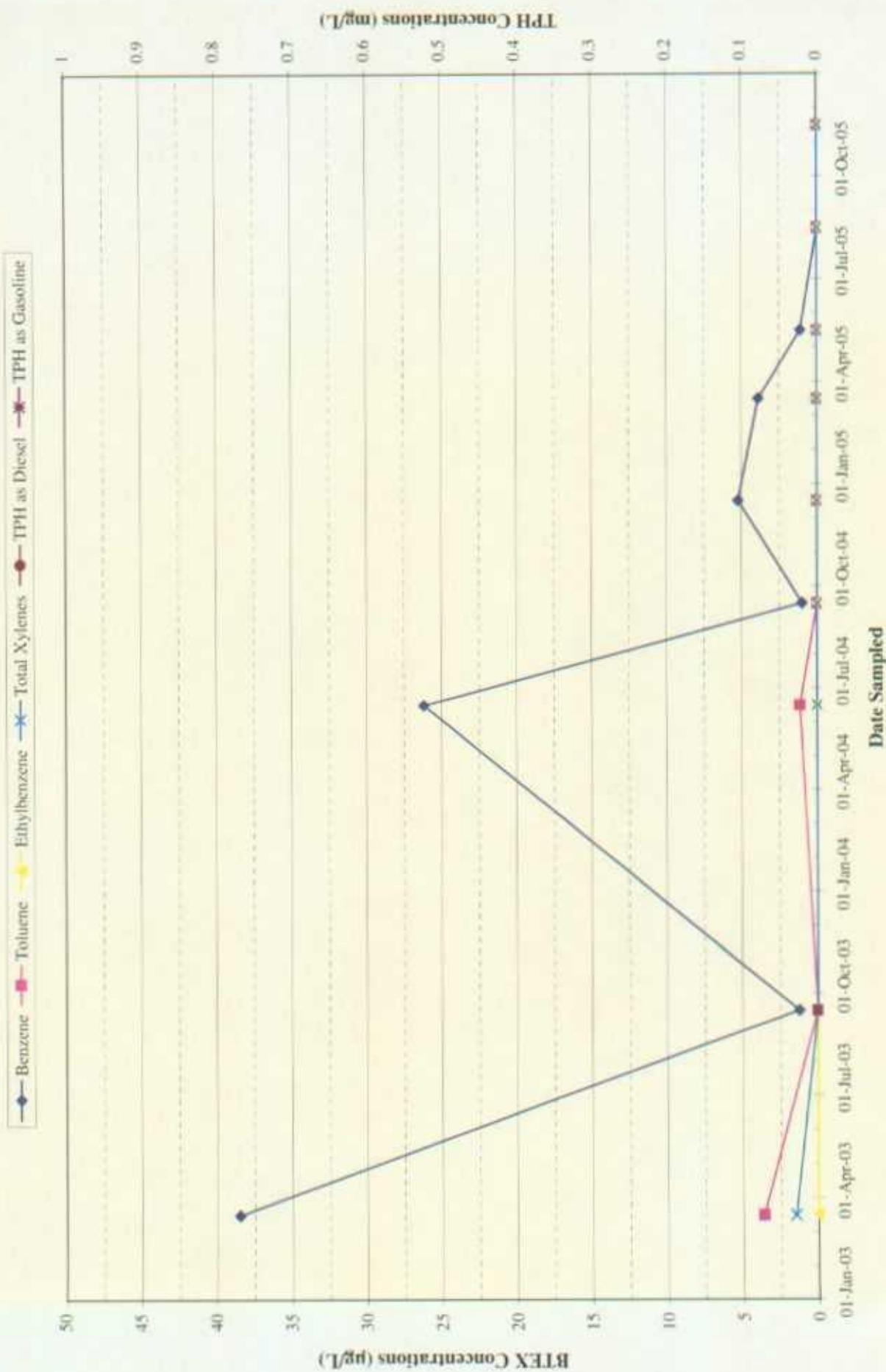


Figure 7: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-4 from 03/04/03 through 12/31/05, Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

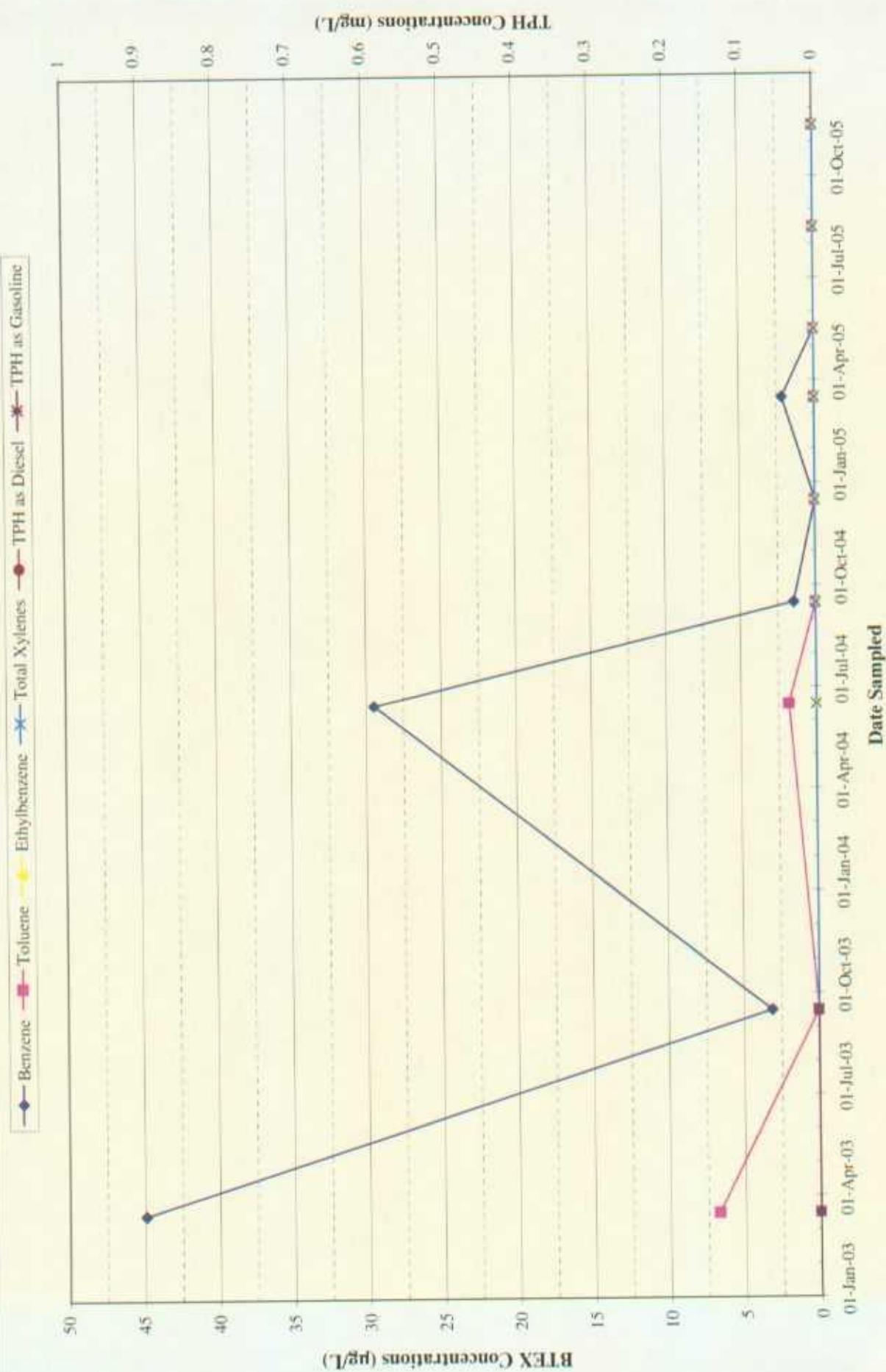


Figure 8: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-5 from 03/04/03 through 12/31/05,  
Plains Pipeline, I.P., Lovington Deep 6", Lea County, New Mexico.

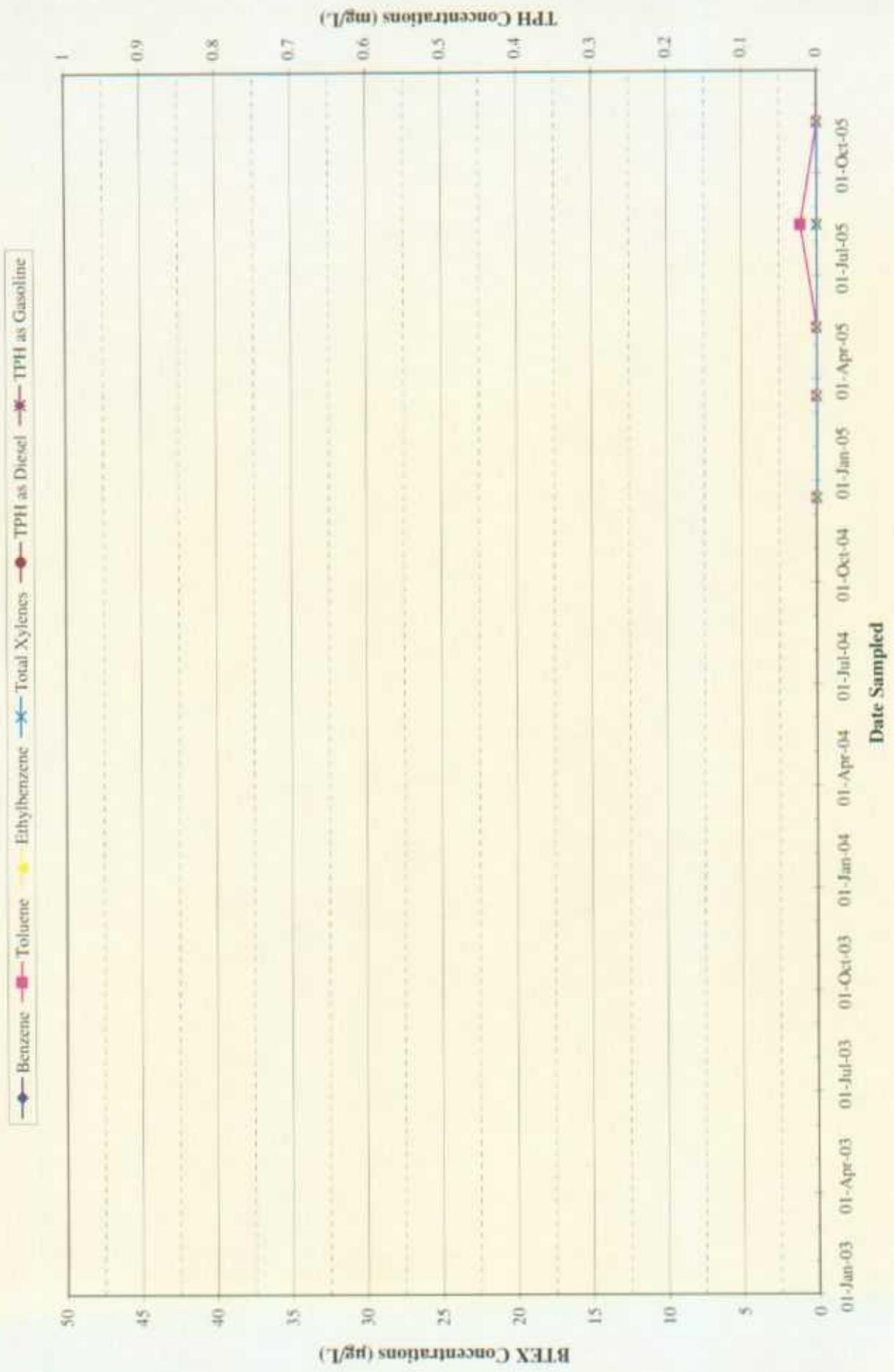


Figure 9: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-6 from 12/1/3/04 through 12/31/05,  
Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

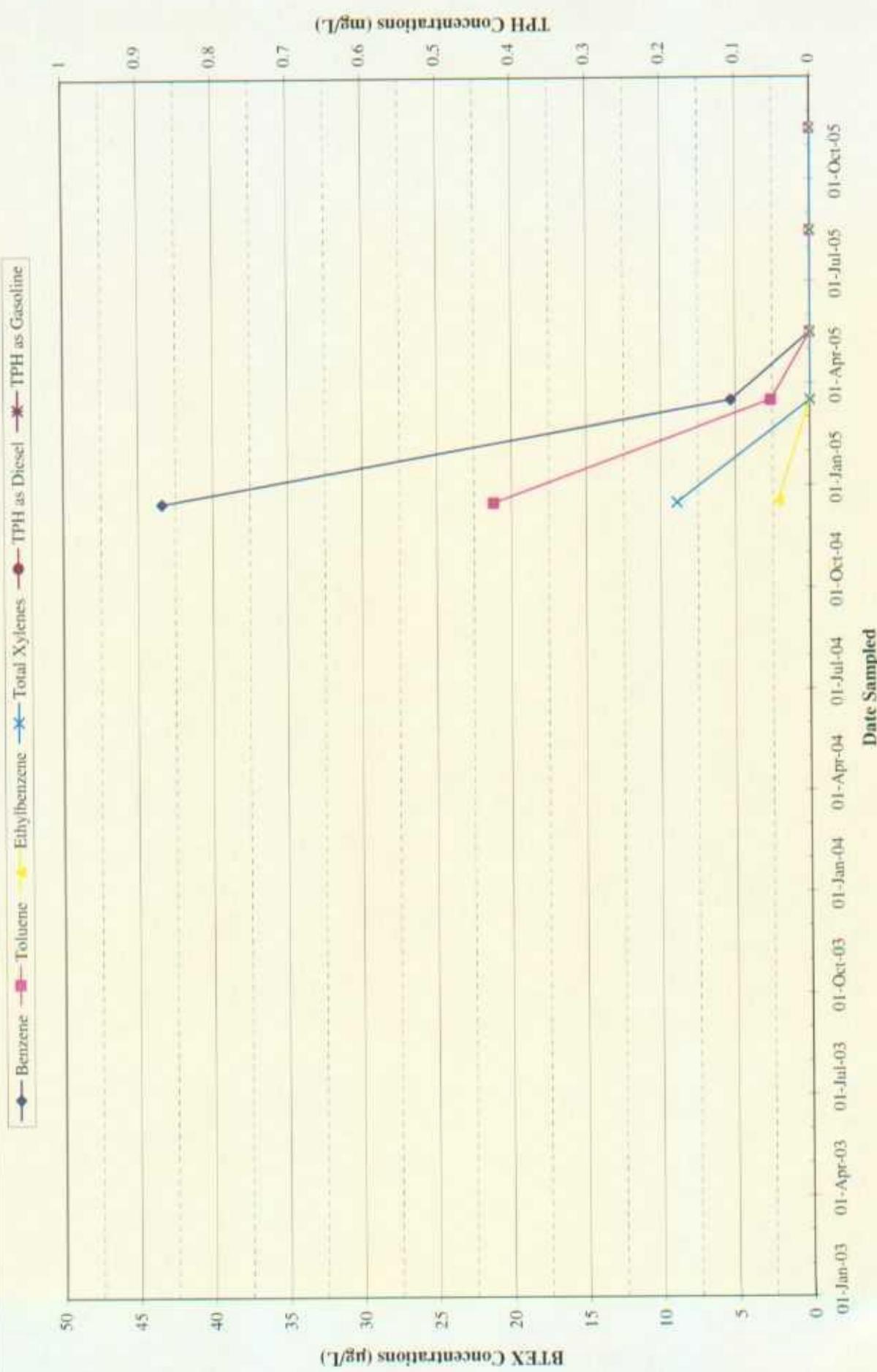


Figure 10: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-7 from 12/13/05 through 12/31/04.  
Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

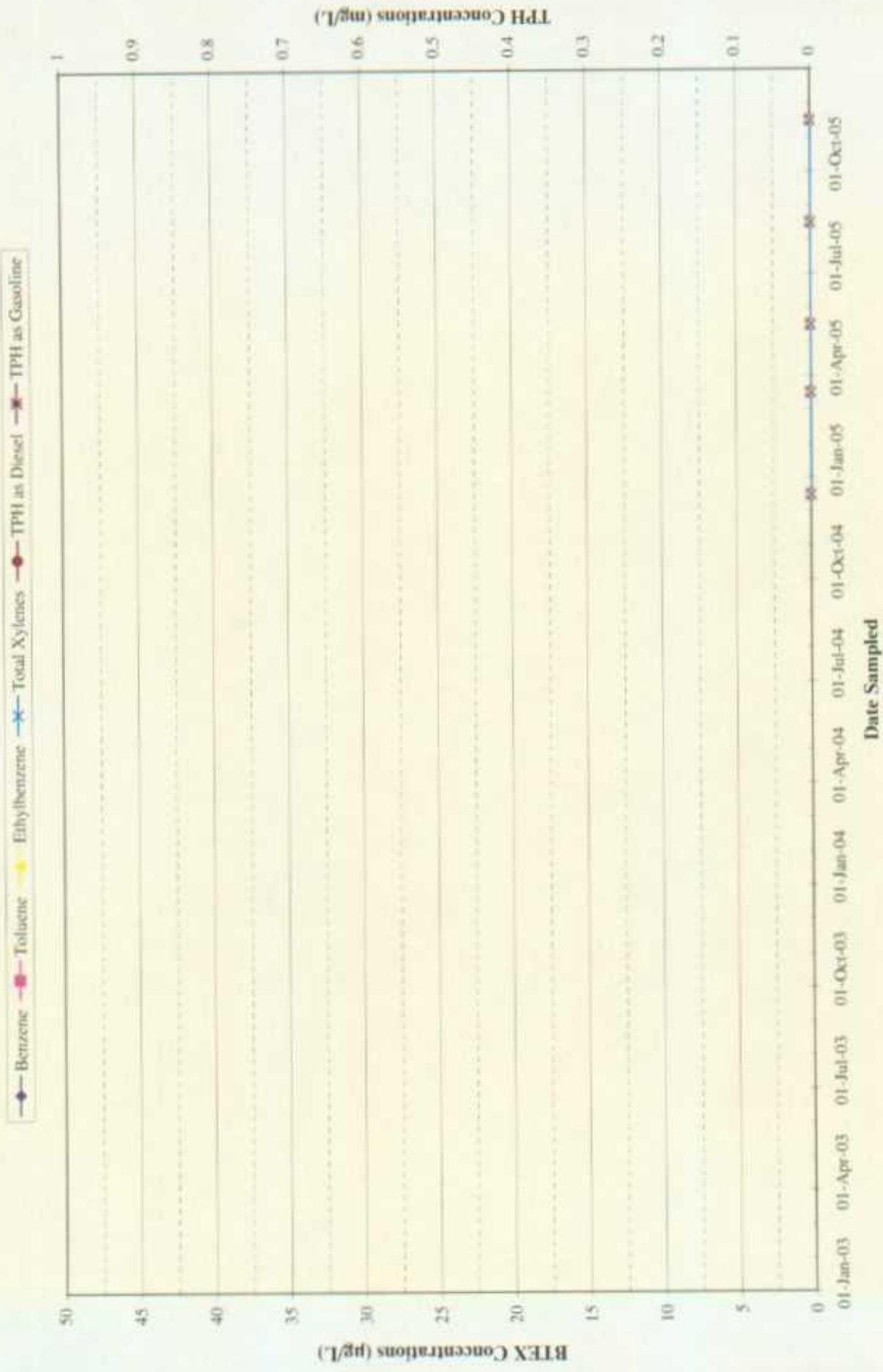


Figure 11: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-8 from 12/13/04 through 12/31/05,  
Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

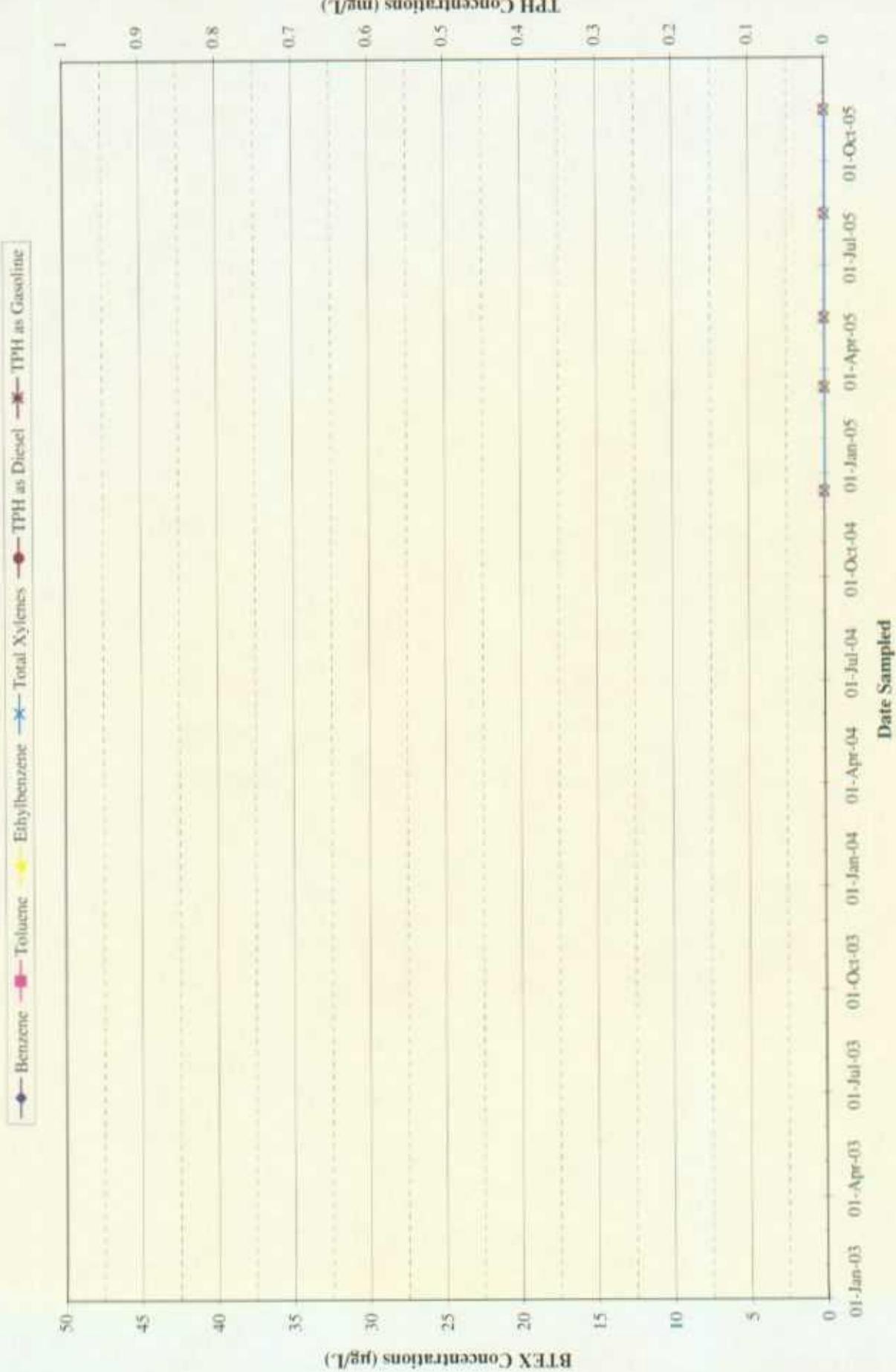


Figure 12: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-9 from 12/1/30/04 through 12/31/05, Plains Pipeline, L.P., Lovington Deep 6', Lea County, New Mexico.

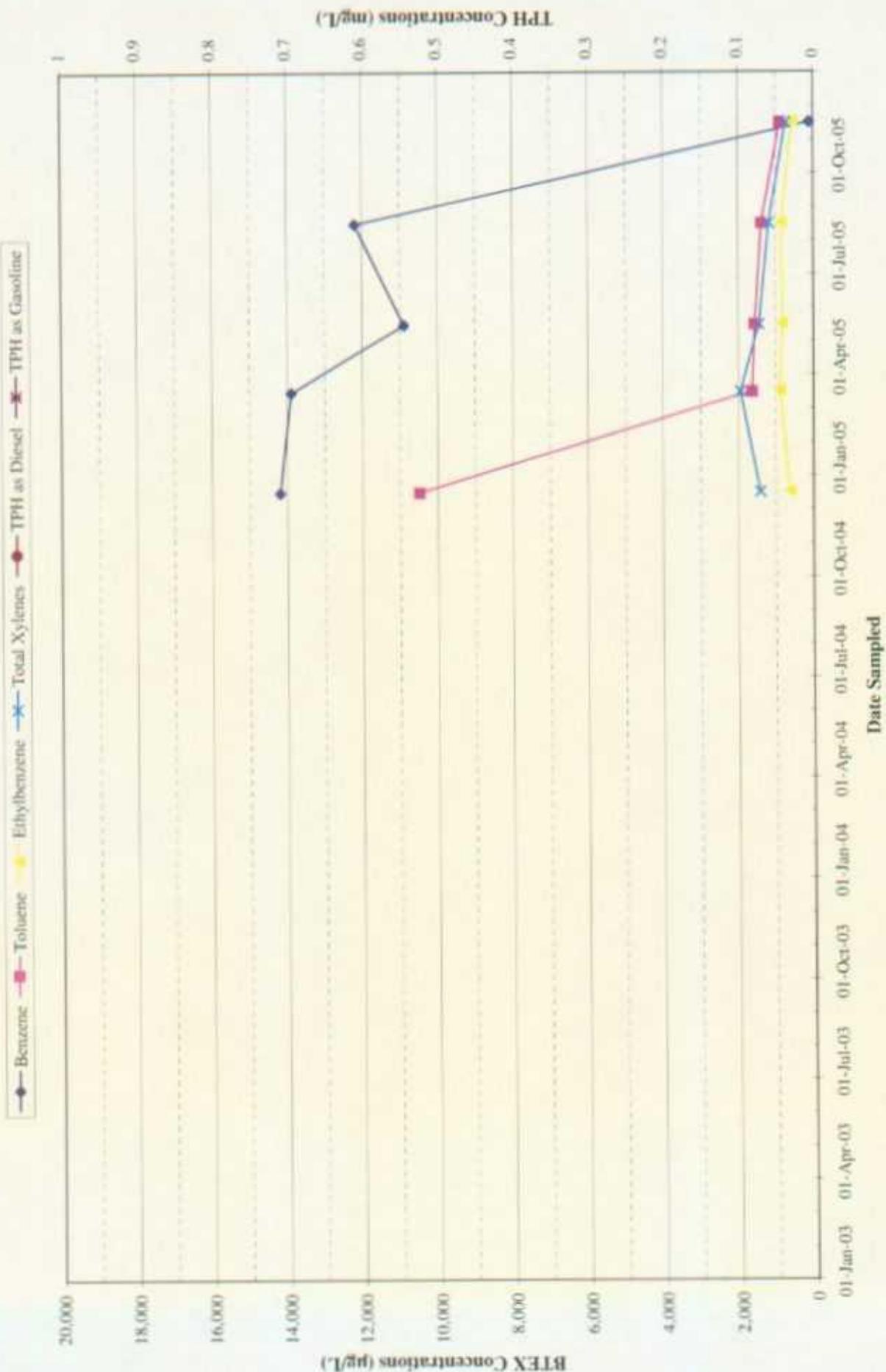


Figure 13: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-10 from 1/21/3004 through 1/2/31ADS, Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

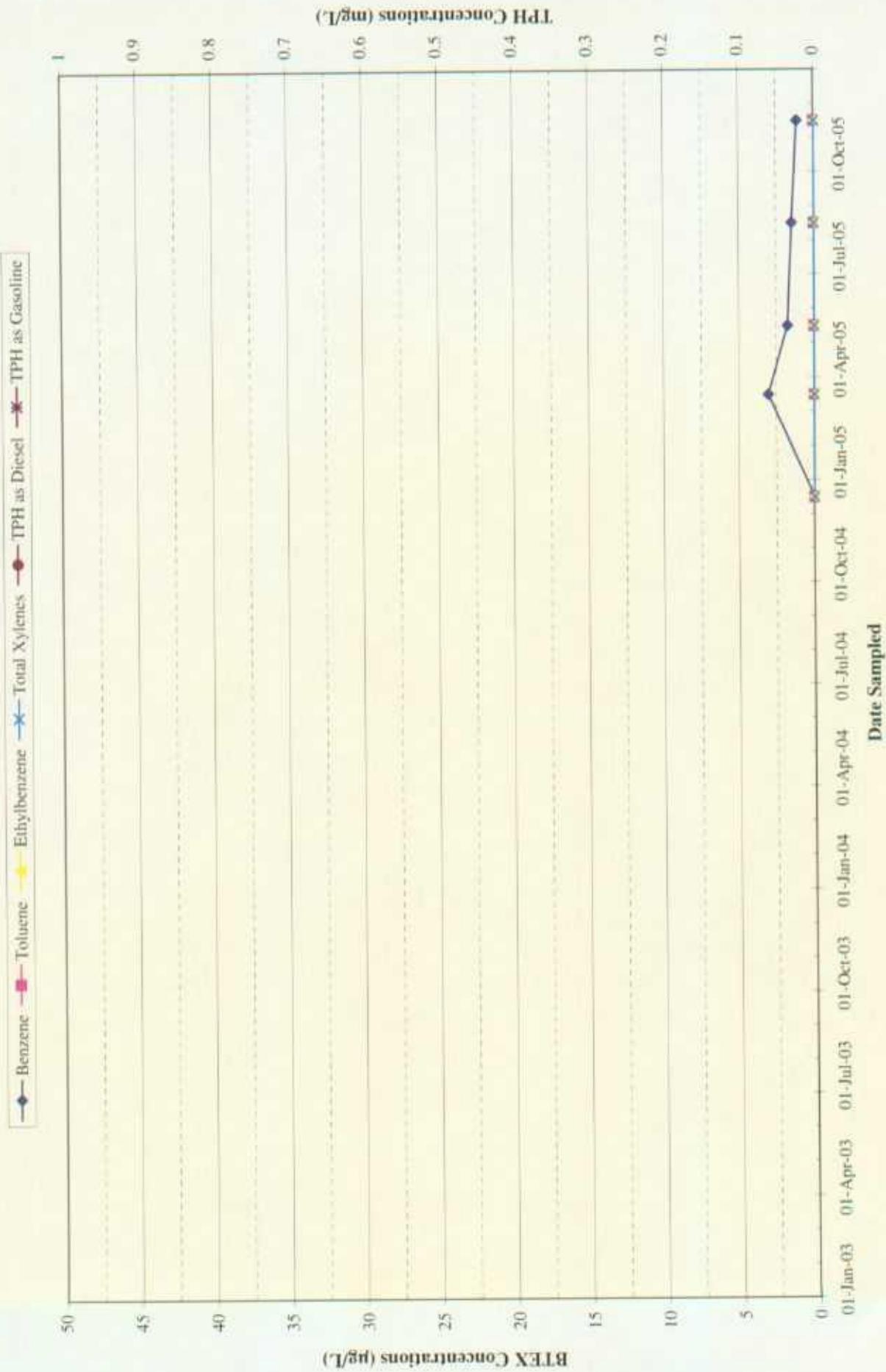


Figure 14: TPH and BTEX Concentrations in Groundwater Monitoring Well MW-11 from 1/2/3/04 through 12/31/05, Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico.

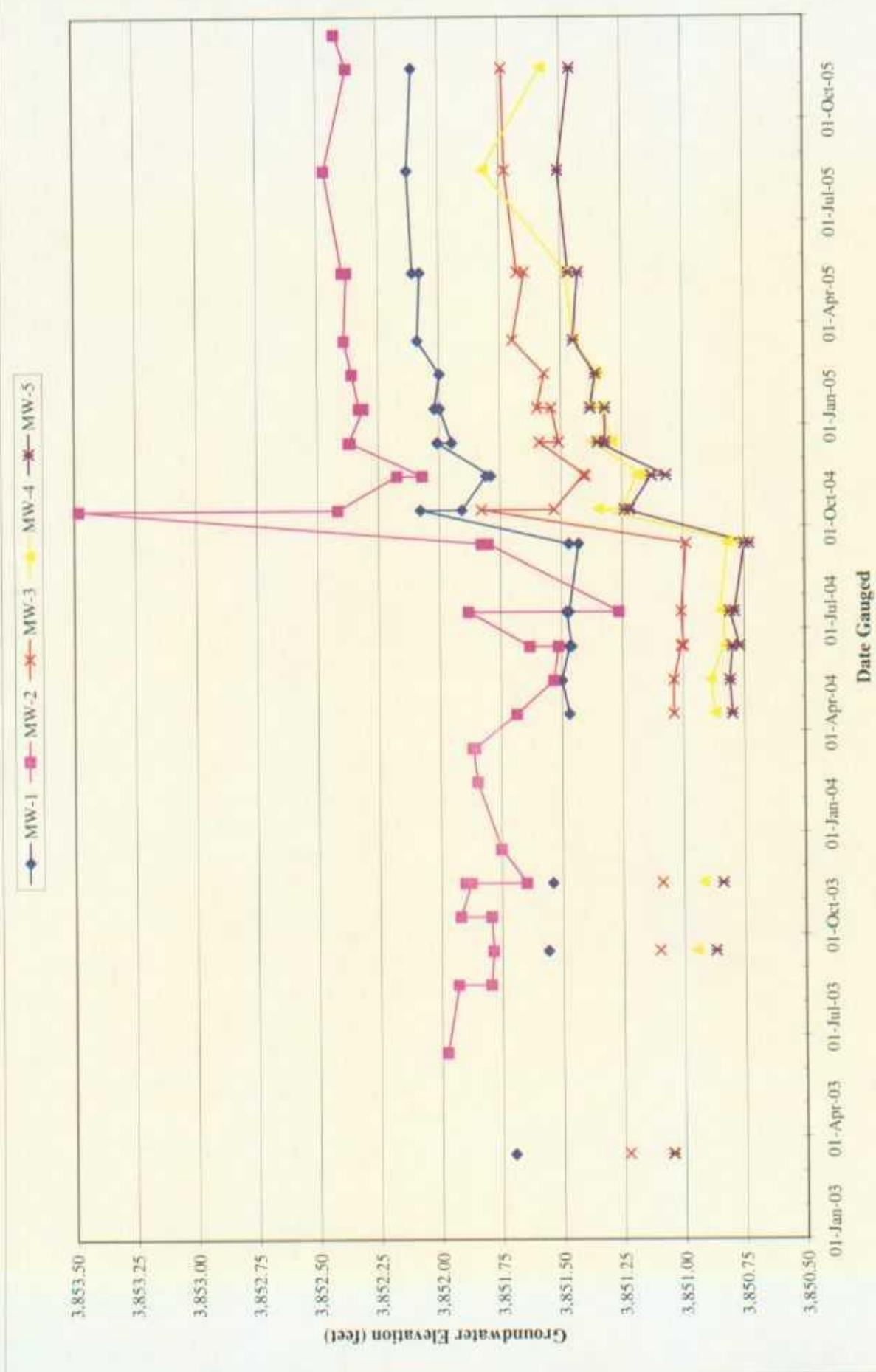


Figure 15: Hydrograph for the Groundwater Monitoring Wells MW-1 through MW-5, Plains Pipeline, L.P., Lovington Deep 6", Lea County, New Mexico from 06/02/04 through 12/31/05.

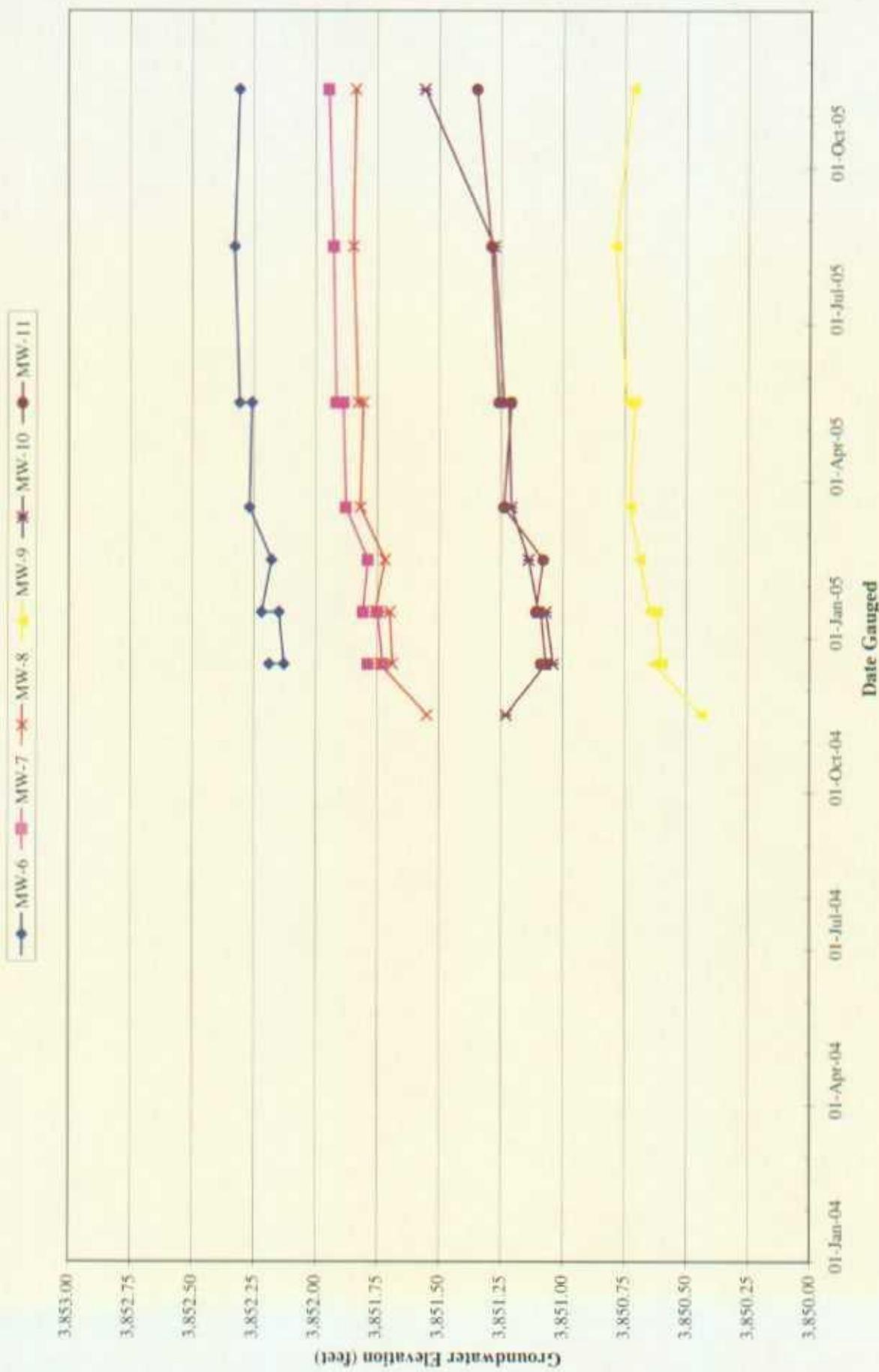


Figure 16: Hydrograph for the Groundwater Monitoring Wells MW-6 through MW-11, Plains Pipeline, L.P., Lovington Deep 6, Lea County, New Mexico from 11/18/04 through 12/31/05.

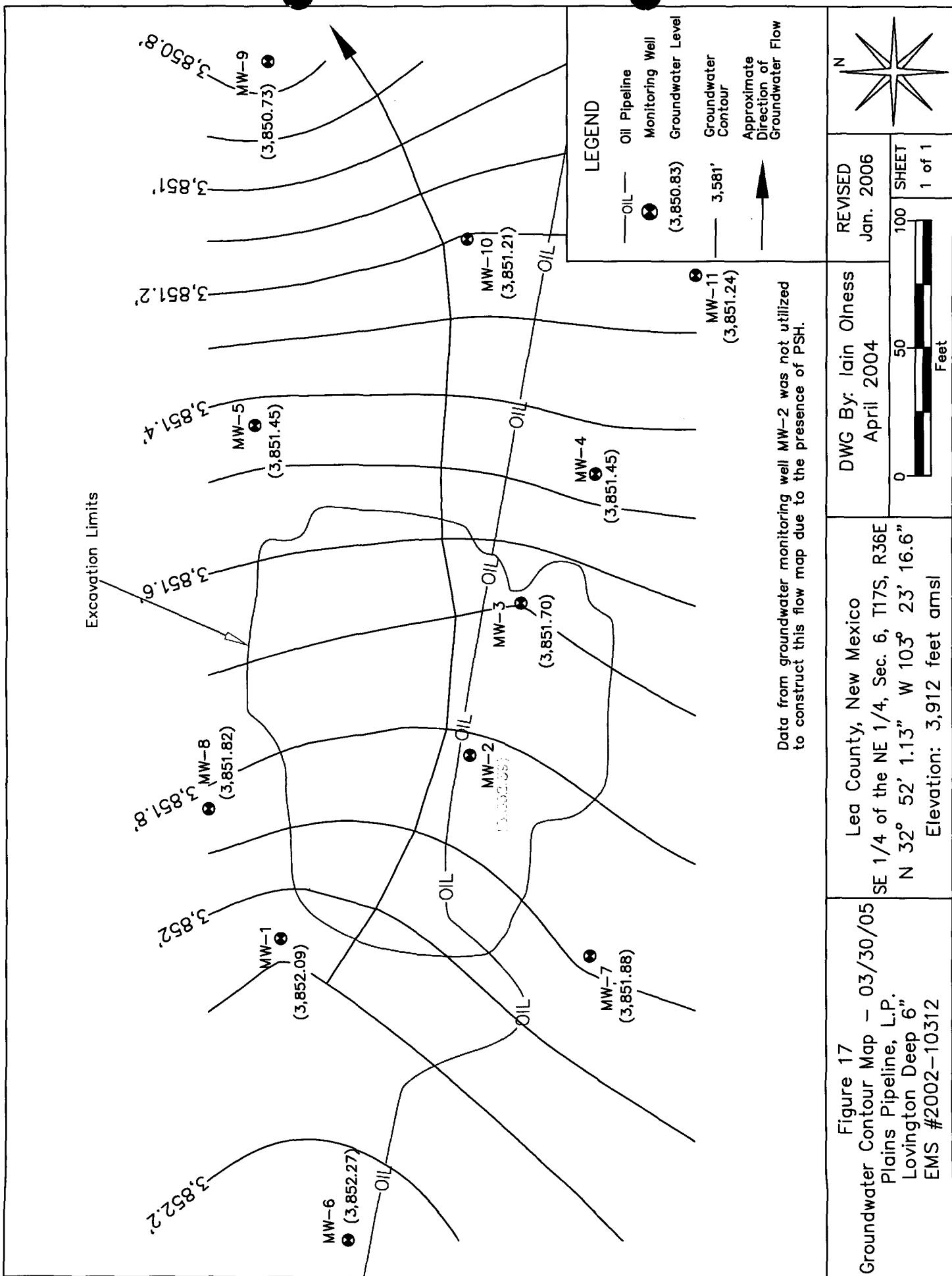
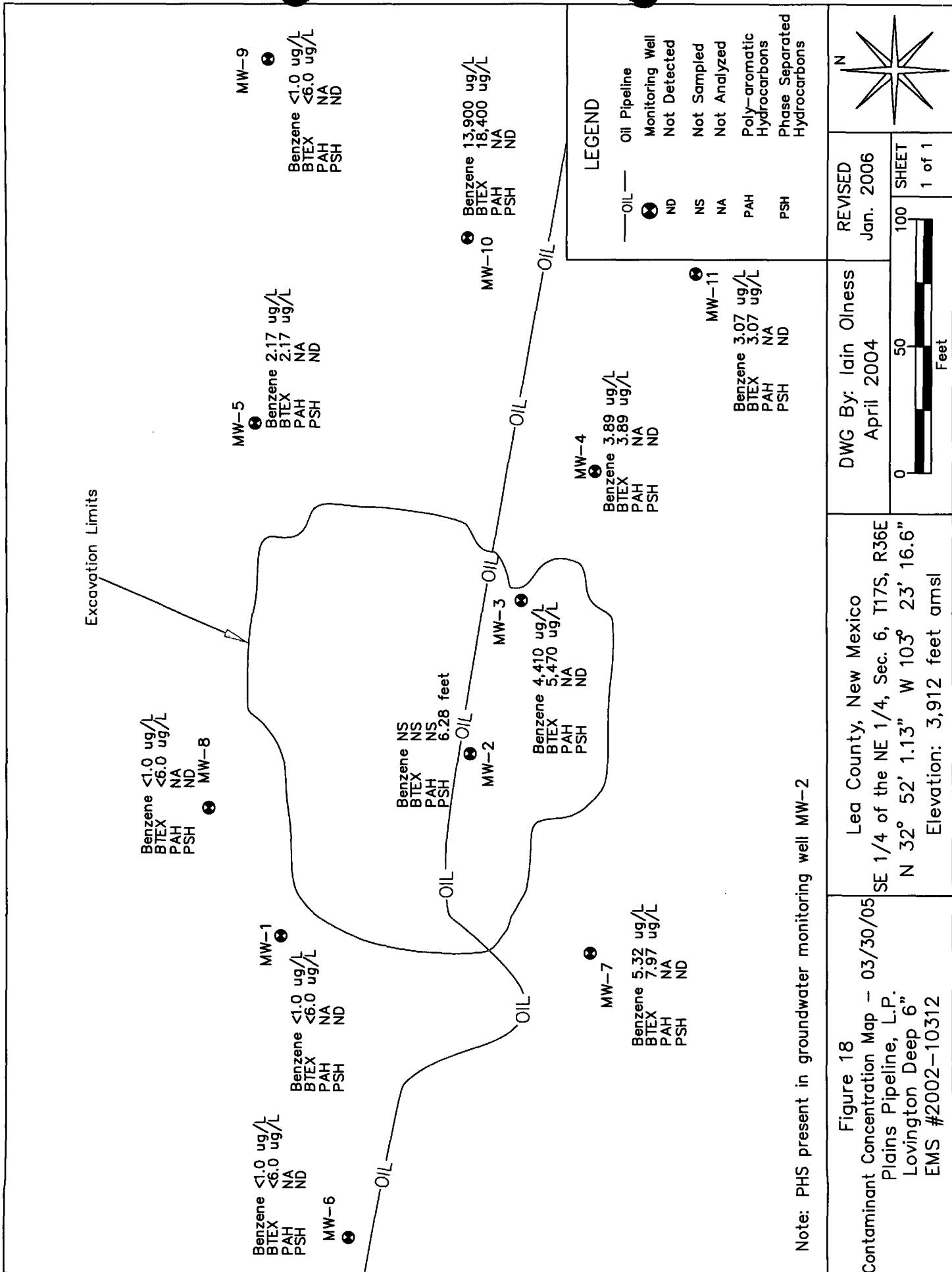
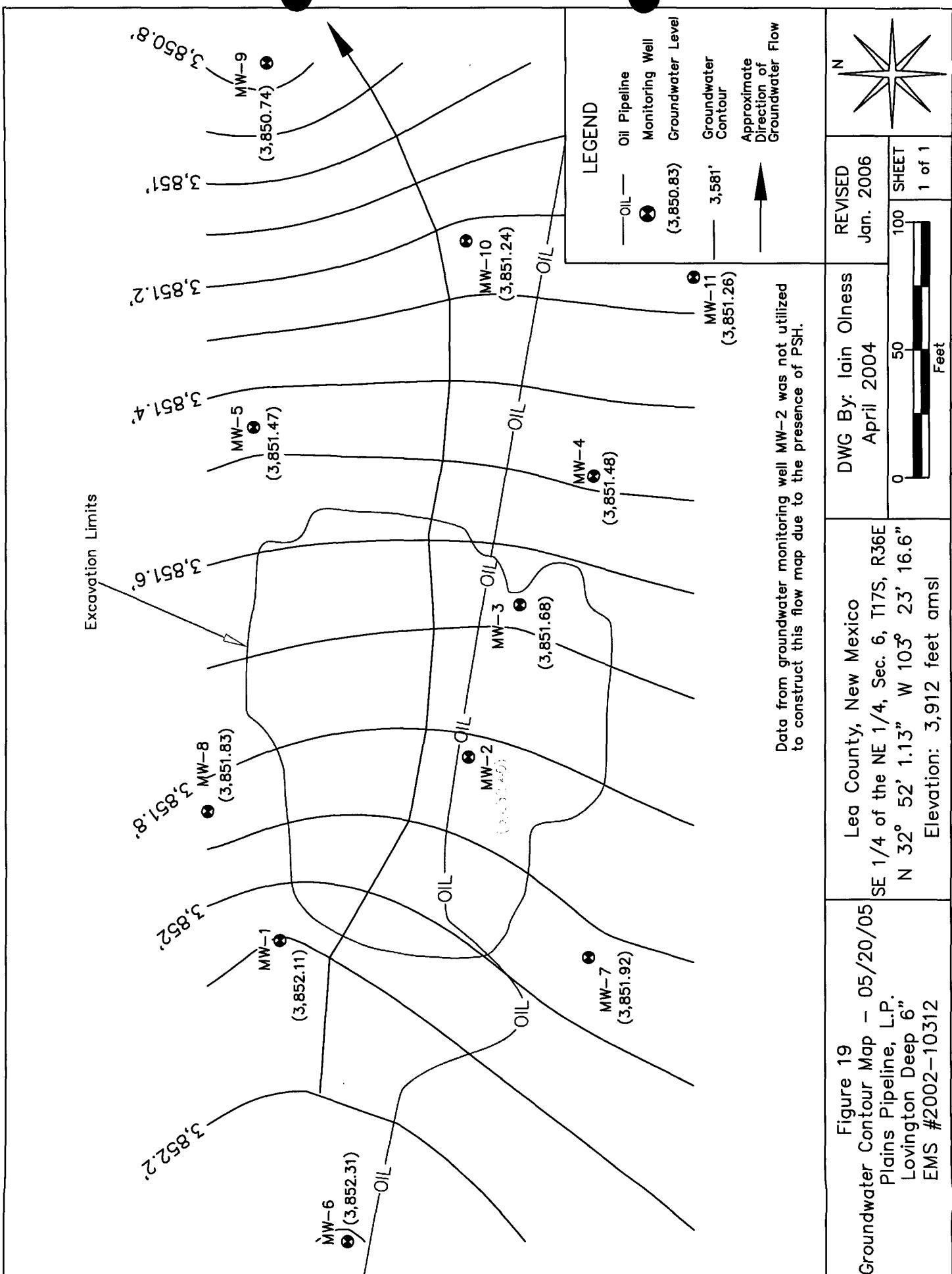
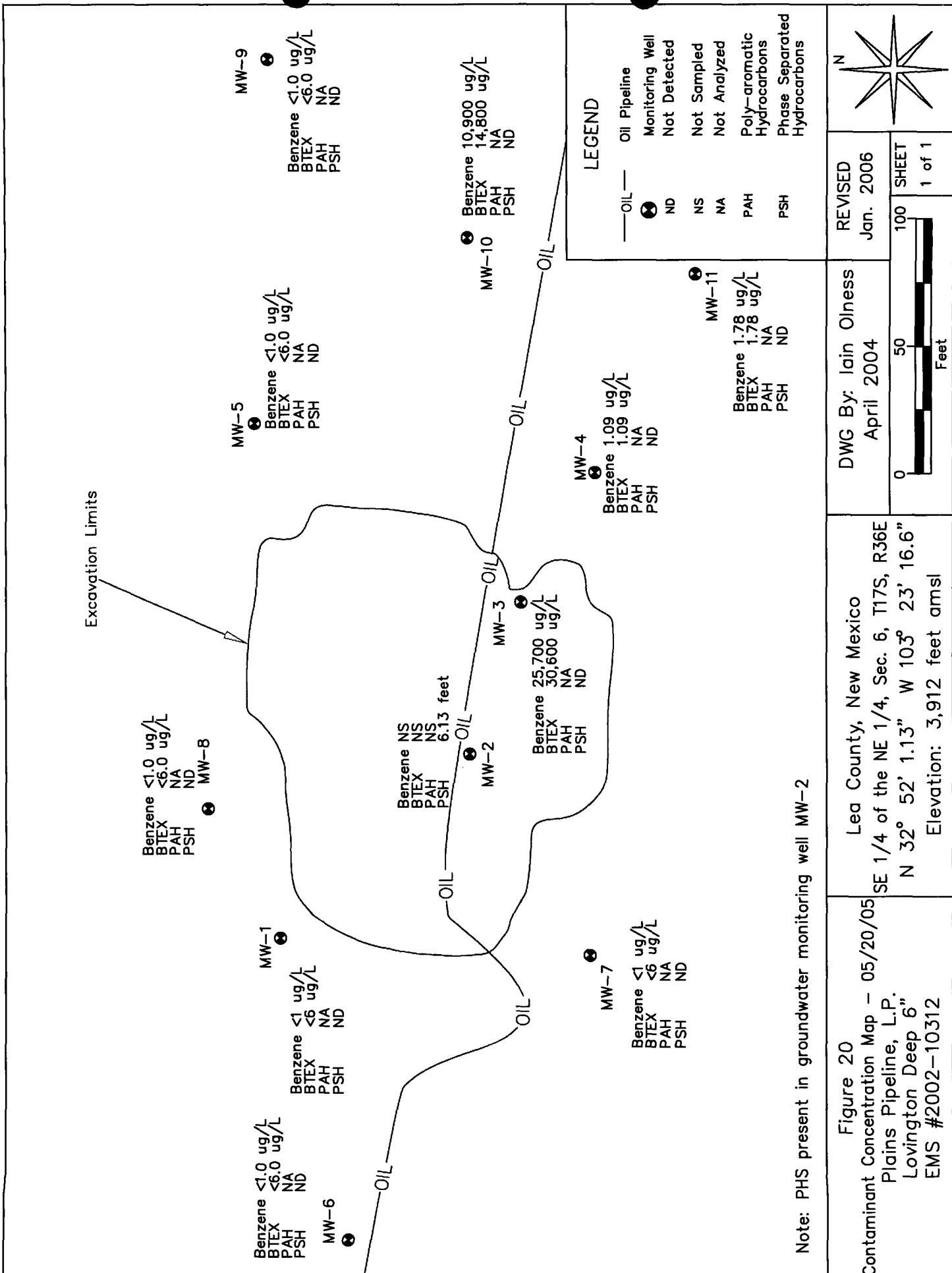


Figure 17  
Groundwater Contour Map – 03/30/05  
Plains Pipeline, L.P.  
Lovington Deep 6"  
EMS #2002-10312







Contaminant Concentration Map - 05/20/05 Plains Pipeline, L.P. Lovington Deep 6" EMS #2002-10312	Lea County, New Mexico SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E N 32° 52' 1.13" W 103° 23' 16.6" Elevation: 3,912 feet amsl	DWG By: Iain Olness April 2004	REVISED Jan. 2006	N SHEET 1 of 1
0	50	100	Feet	

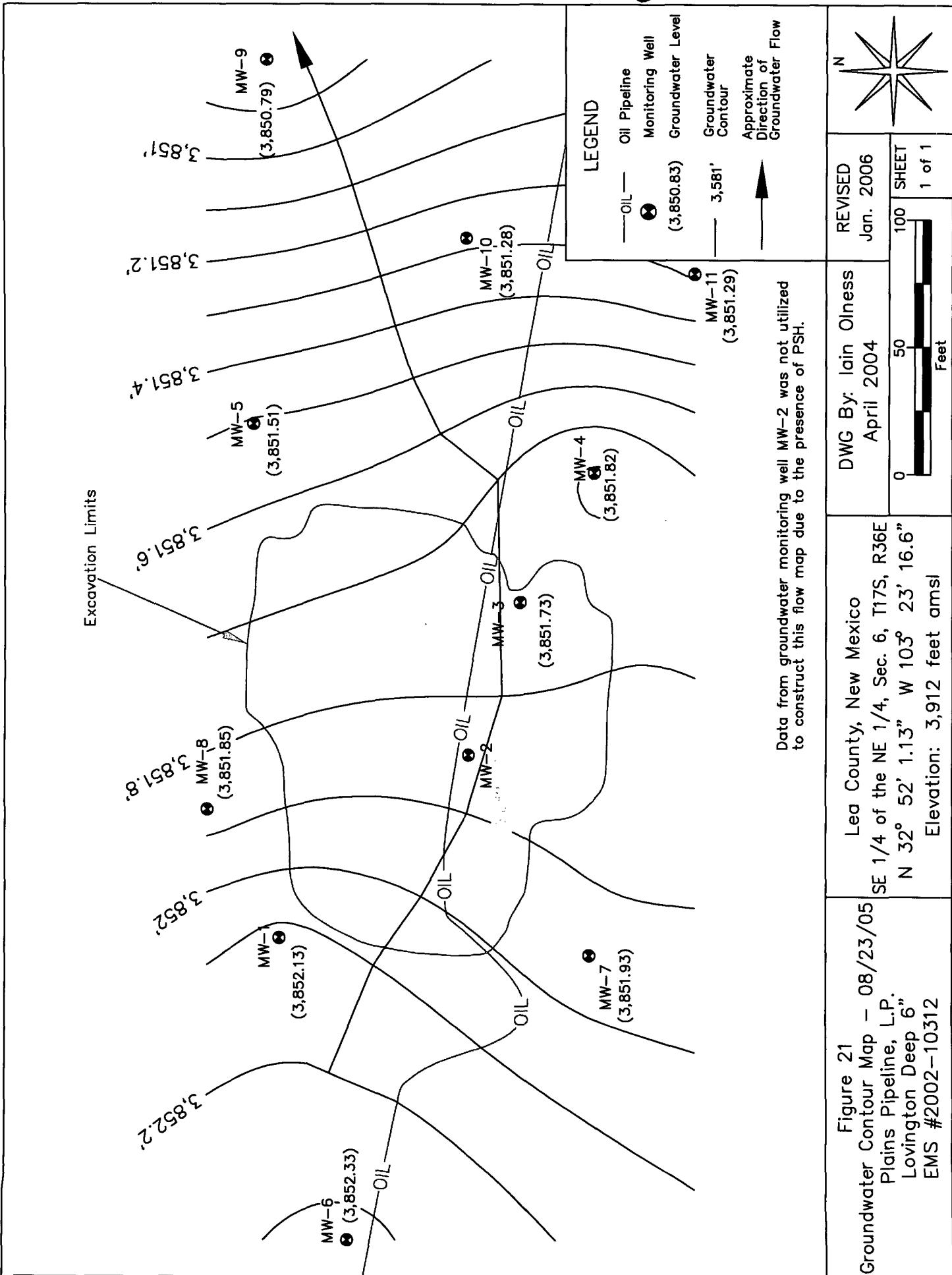
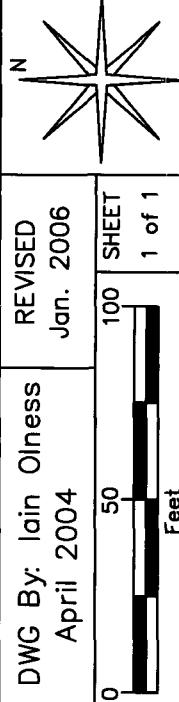
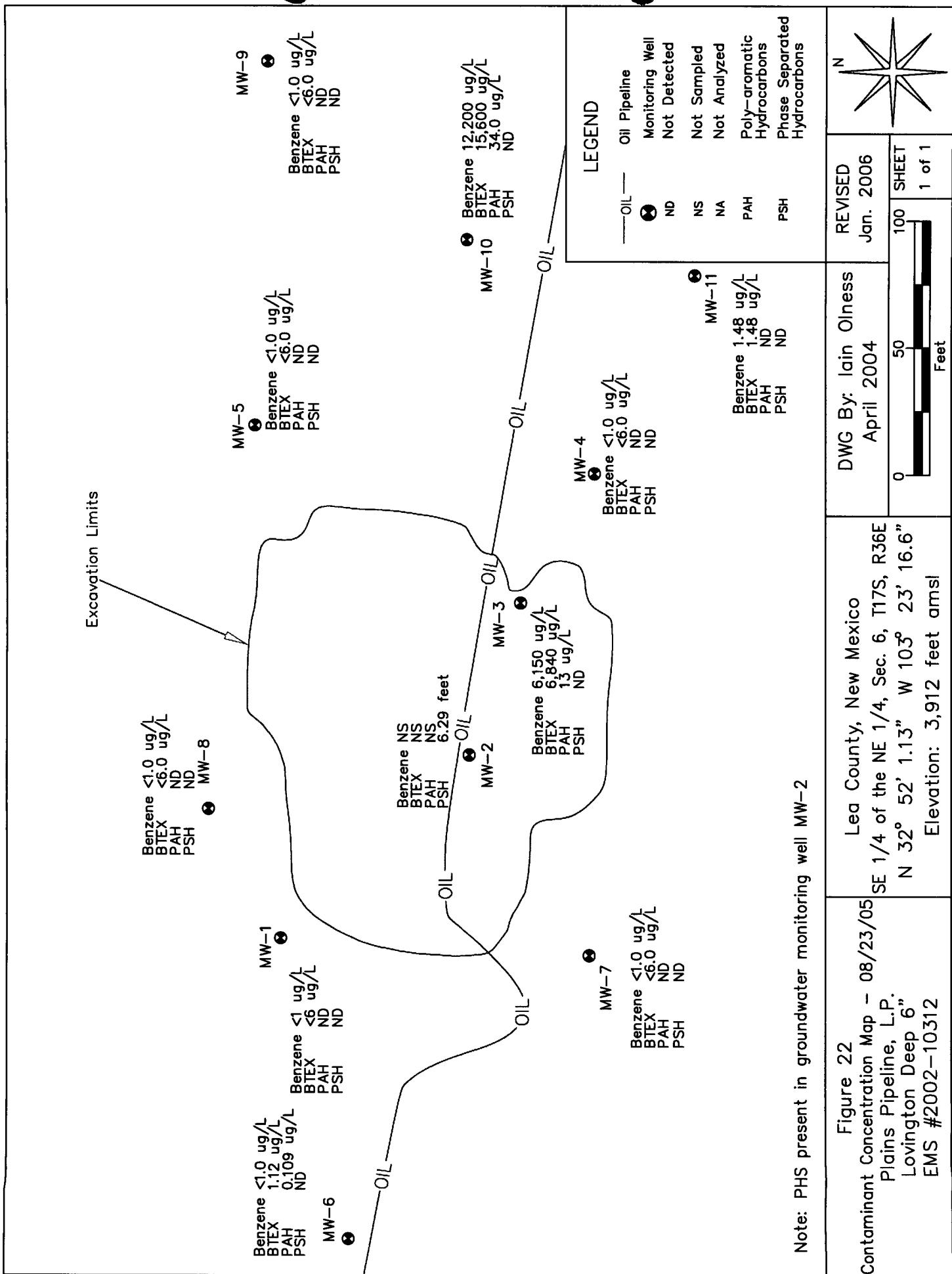
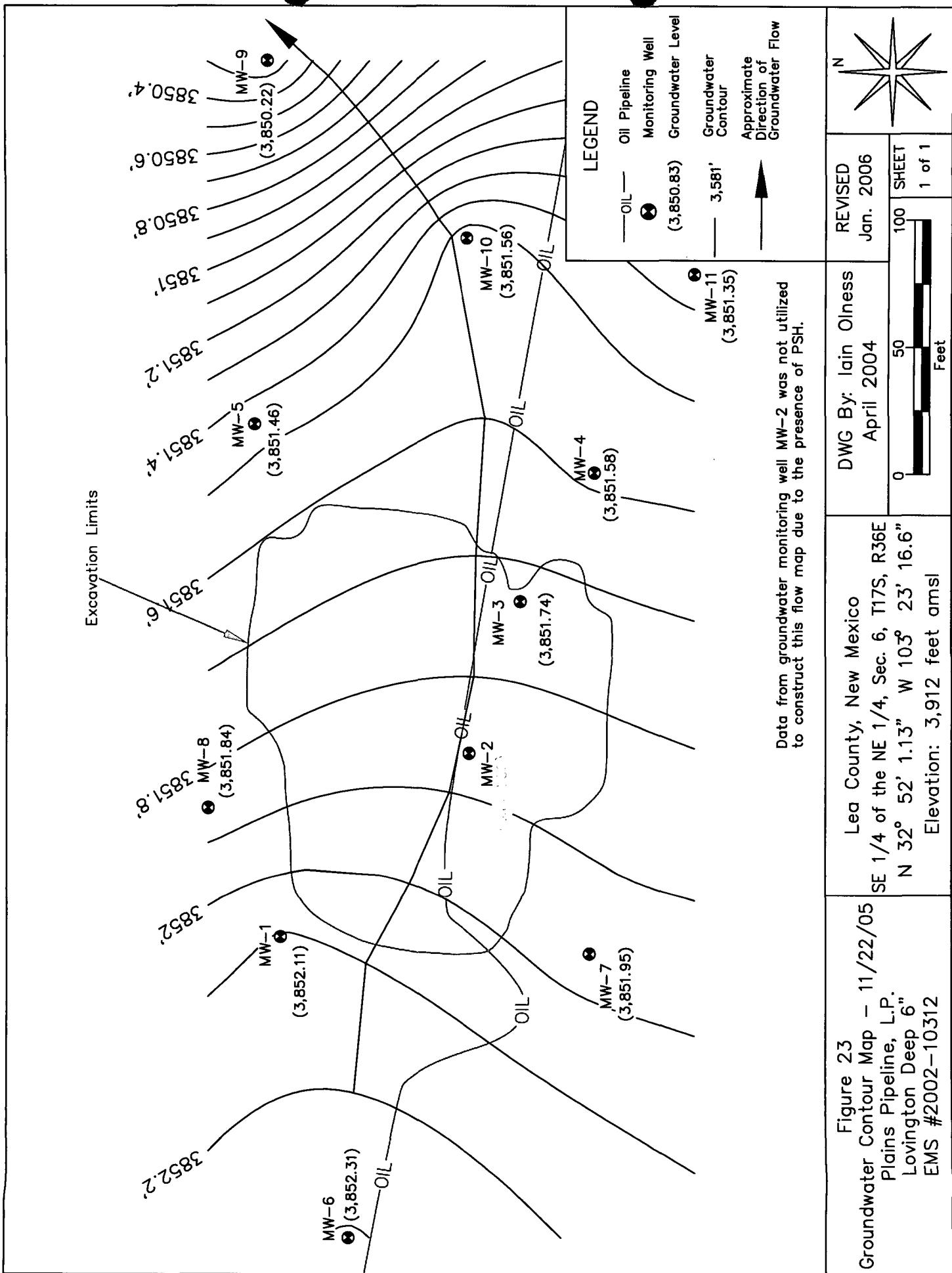


Figure 21  
Groundwater Contour Map - 08/23/05  
Plains Pipeline, L.P.  
Lovington Deep 6"  
EMS #2002-10312

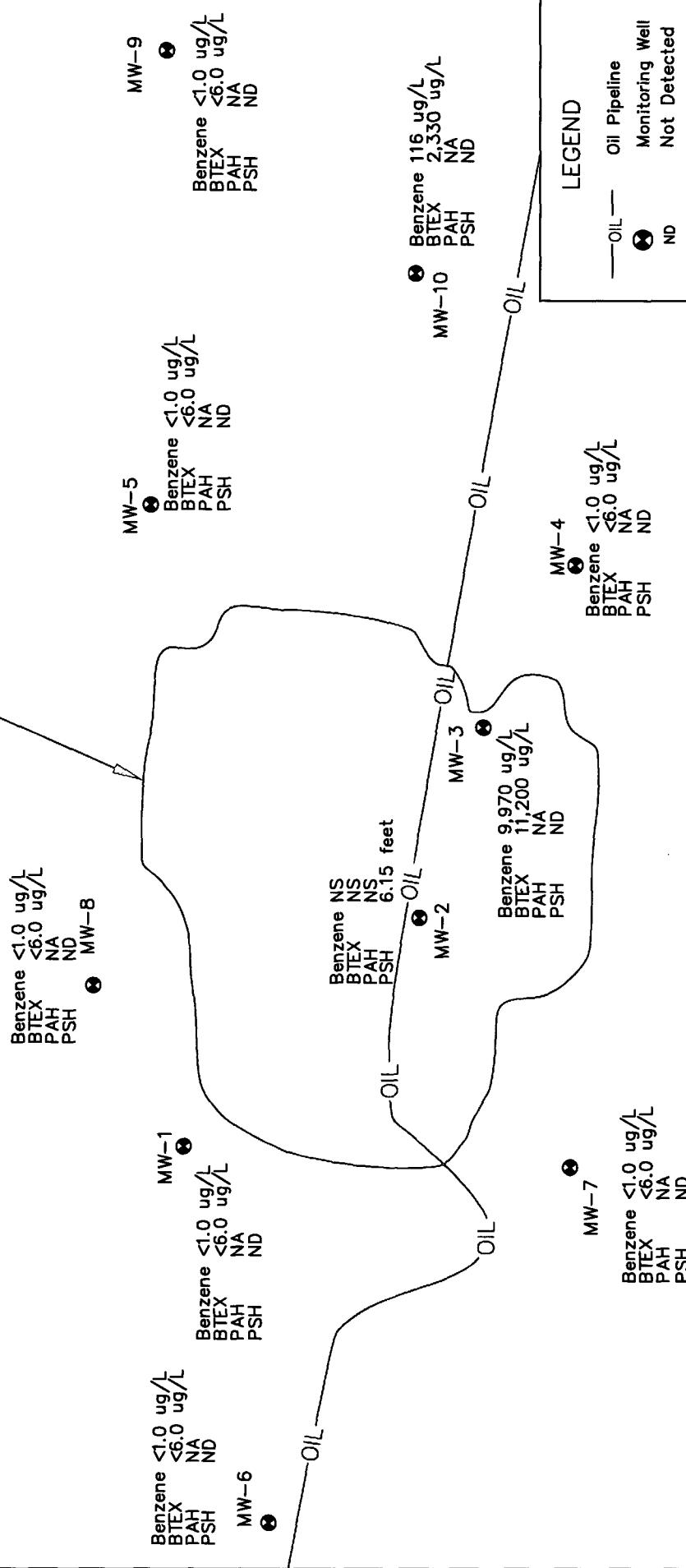
Lea County, New Mexico  
SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E  
N 32° 52' 1.13" W 103° 23' 16.6"  
Elevation: 3,912 feet amsl







Excavation Limits



LEGEND

—Oil	Oil Pipeline
● Monitoring Well	Monitoring Well
ND	Not Detected
NS	Not Sampled
PAH	Not Analyzed
PSH	Poly-aromatic Hydrocarbons
	Phase Separated Hydrocarbons

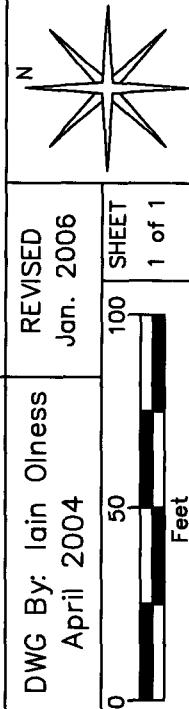
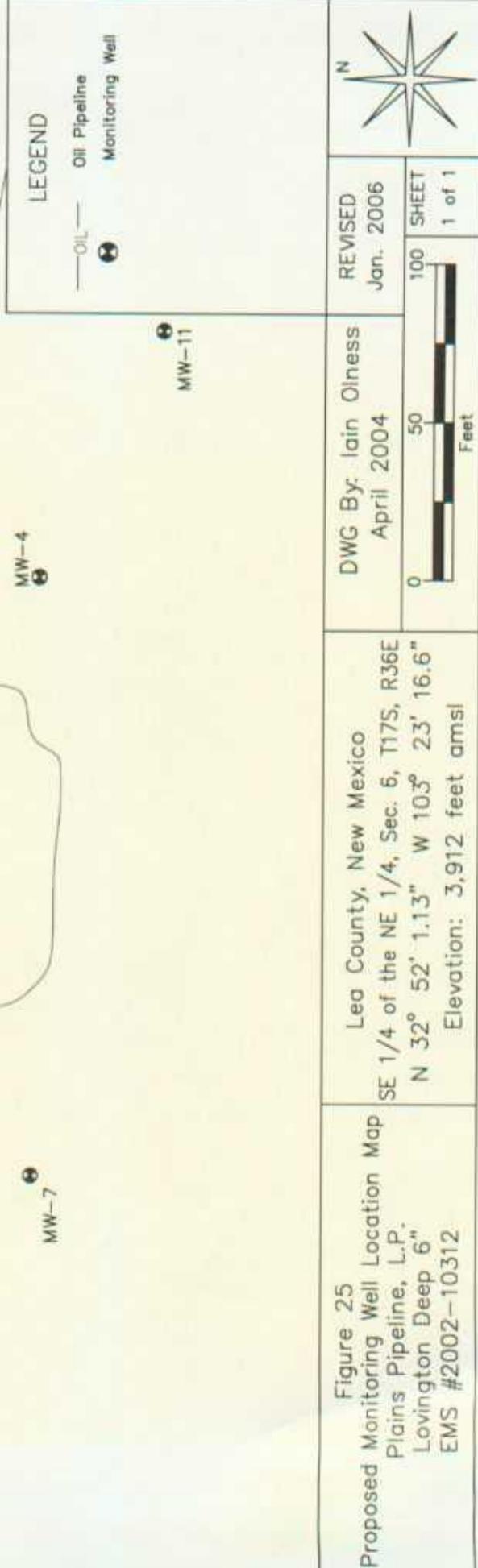
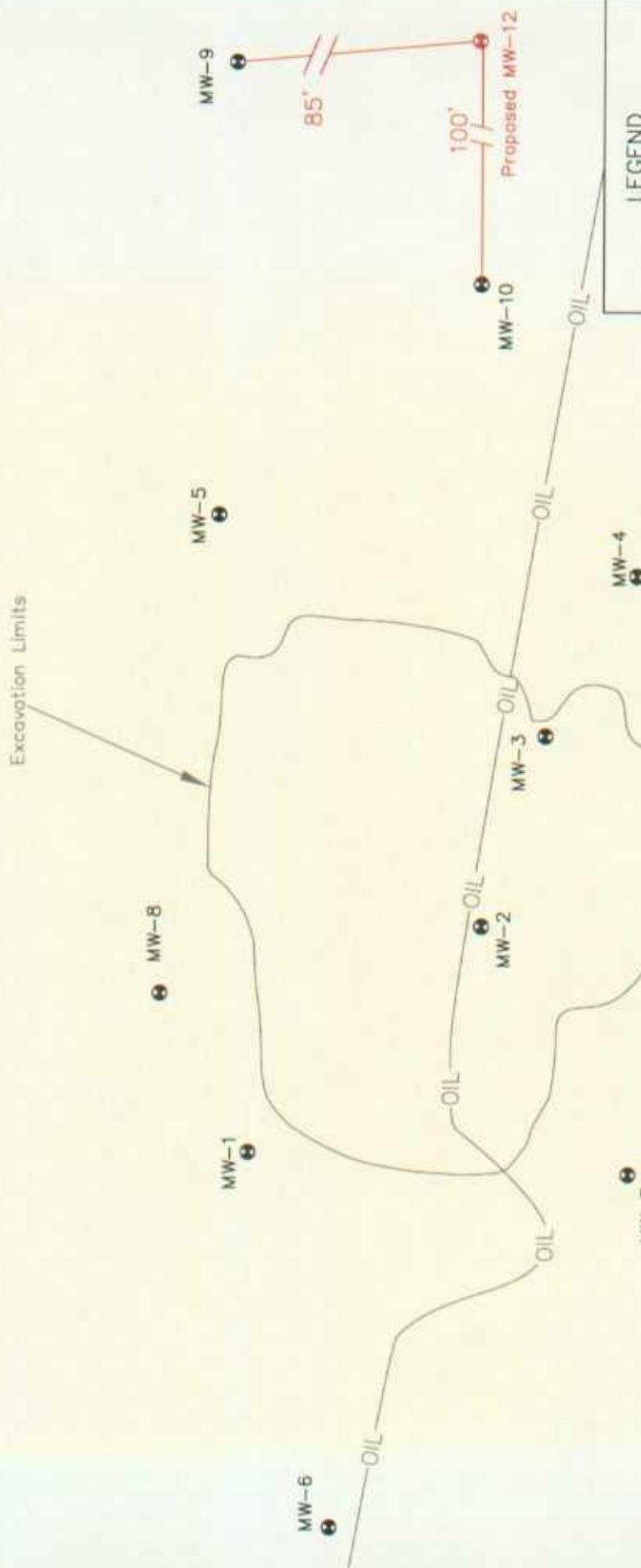


Figure 24  
Contaminant Concentration Map – 11/22/05  
Plain Pipeline, L.P.  
Lovington Deep 6"  
EMS #2002-10312

Lea County, New Mexico  
SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E  
N 32° 52' 1.13" W 103° 23' 16.6"  
Elevation: 3,912 feet amsl

DWG By: Ian Olness April 2004	REVISED Jan. 2006
0	100
50	SHEET 1 of 1
Feet	



## **TABLES**

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-1	04-Mar-03	3,915.51	--	63.81	3,851.70	ND	
	17-Jun-03						
	14-Aug-03						
	28-Aug-03						
	18-Sep-03		--	63.95	3,851.56	ND	
	13-Oct-03						
	24-Oct-03						
	10-Nov-03		--	63.97	3,851.54	ND	
	17-Nov-03						
	18-Nov-03						
	04-Dec-03						
	09-Feb-04						
	15-Mar-04						
	25-Mar-04						
	14-Apr-04		--	64.04	3,851.47	ND	
	06-May-04		--	64.01	3,851.50	ND	
	04-Jun-04		--	64.04	3,851.47	ND	
	16-Jun-04		--	64.05	3,851.46	ND	
	09-Jul-04		--	64.03	3,851.48	ND	
	20-Jul-04		--	64.04	3,851.47	ND	
	10-Sep-04		--	64.08	3,851.43	ND	
	23-Sep-04		--	64.04	3,851.47	ND	
	01-Oct-04		--	63.43	3,852.08	ND	
	21-Oct-04		--	63.60	3,851.91	ND	
	03-Nov-04		--	63.70	3,851.81	ND	
	18-Nov-04		--	63.72	3,851.79	ND	
	13-Dec-04		--	63.50	3,852.01	ND	
	20-Dec-04		--	63.56	3,851.95	ND	
	10-Jan-05		--	63.51	3,852.00	ND	
	25-Jan-05		--	63.49	3,852.02	ND	
	18-Feb-05		--	63.51	3,852.00	ND	
	30-Mar-05		--	63.42	3,852.09	ND	
	03-May-05		--	63.43	3,852.08	ND	
	20-May-05		--	63.40	3,852.11	ND	
	23-Aug-05		--	63.38	3,852.13	ND	
	22-Nov-05		--	63.40	3,852.11	ND	
	08-Dec-05						
MW-2	04-Mar-03	3,915.04					

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-2 (cont.)	17-Jun-03		62.29	70.02	3,851.98	7.73	
	14-Aug-03		62.34	70.04	3,851.93	7.70	
	28-Aug-03		62.50	69.94	3,851.80	7.44	8.97
	18-Sep-03		62.51	69.95	3,851.79	7.44	
	13-Oct-03		62.50	69.96	3,851.79	7.46	
	24-Oct-03		62.35	70.05	3,851.92	7.70	
	10-Nov-03		62.45	69.59	3,851.88	7.14	
	17-Nov-03		62.38	69.98	3,851.90	7.60	
	18-Nov-03		62.95	67.37	3,851.65	4.42	
	04-Dec-03		62.57	69.75	3,851.75	7.18	
	09-Feb-04		62.45	69.87	3,851.85	7.42	
	15-Mar-04		62.42	69.95	3,851.87	7.53	
	25-Mar-04		62.43	69.95	3,851.86	7.52	10
	14-Apr-04		62.68	69.42	3,851.69	6.74	
	06-May-04		62.75	70.31	3,851.53	7.56	
	04-Jun-04		62.77	70.33	3,851.51	7.56	5.72
	16-Jun-04		62.73	69.51	3,851.63	6.78	20
	09-Jul-04		62.40	69.97	3,851.88	7.57	17
	20-Jul-04		63.20	68.95	3,851.27	5.75	35
	10-Sep-04		62.52	69.70	3,851.80	7.18	25
	23-Sep-04		62.49	69.69	3,851.83	7.20	11
	01-Oct-04		60.50	71.07	3,853.48	10.57	30
	21-Oct-04		61.96	68.57	3,852.42	6.61	13
	03-Nov-04		62.27	68.22	3,852.18	5.95	12
	18-Nov-04		62.43	67.81	3,852.07	5.38	8
	13-Dec-04		62.05	68.29	3,852.37	6.24	8
	20-Dec-04		62.04	68.31	3,852.37	6.27	8.5
	10-Jan-05		62.11	68.29	3,852.31	6.18	8
	25-Jan-05		62.10	68.21	3,852.33	6.11	8
	18-Feb-05		62.06	68.27	3,852.36	6.21	8.5
	30-Mar-05		62.02	68.30	3,852.39	6.28	3
	03-May-05		62.04	68.24	3,852.38	6.20	10
	20-May-05		62.03	68.16	3,852.40	6.13	10
	23-Aug-05		61.94	68.23	3,852.47	6.29	10
	22-Nov-05		62.05	68.20	3,852.38	6.15	10
	08-Dec-05		61.99	68.25	3,852.42	6.26	10
MW-3	04-Mar-03	3,915.24	--	64.01	3,851.23	ND	
	17-Jun-03						

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-3 (cont.)	14-Aug-03						
	28-Aug-03						
	18-Sep-03		--	64.14	3,851.10	ND	
	13-Oct-03						
	24-Oct-03						
	10-Nov-03		--	64.15	3,851.09	ND	
	17-Nov-03						
	18-Nov-03						
	04-Dec-03						
	09-Feb-04						
	15-Mar-04						
	25-Mar-04						
	14-Apr-04		--	64.20	3,851.04	ND	
	06-May-04		--	64.20	3,851.04	ND	
	04-Jun-04		--	64.23	3,851.01	ND	
	16-Jun-04		--	64.24	3,851.00	ND	
	09-Jul-04		--	64.23	3,851.01	ND	
	20-Jul-04		--	64.23	3,851.01	ND	
	10-Sep-04		--	64.25	3,850.99	ND	
	23-Sep-04		--	64.25	3,850.99	ND	
	01-Oct-04		--	63.41	3,851.83	ND	
	21-Oct-04		--	63.71	3,851.53	ND	
	03-Nov-04		--	63.83	3,851.41	ND	
	18-Nov-04		--	63.84	3,851.40	ND	
	13-Dec-04		--	63.65	3,851.59	ND	
	20-Dec-04		--	63.73	3,851.51	ND	
	10-Jan-05		--	63.70	3,851.54	ND	
	25-Jan-05		--	63.64	3,851.60	ND	
	18-Feb-05		--	63.67	3,851.57	ND	
	30-Mar-05		--	63.54	3,851.70	ND	
	03-May-05		--	63.59	3,851.65	ND	
	20-May-05		--	63.56	3,851.68	ND	
	23-Aug-05			63.51	3,851.73	ND	
	22-Nov-05			63.50	3,851.74	ND	
	08-Dec-05						
MW-4	04-Mar-03	3,915.30	--	64.25	3,851.05	ND	
	17-Jun-03						
	14-Aug-03						

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-4 (cont.)	28-Aug-03						
	18-Sep-03		--	64.35	3,850.95	ND	
	13-Oct-03						
	24-Oct-03						
	10-Nov-03		--	64.38	3,850.92	ND	
	17-Nov-03						
	18-Nov-03						
	04-Dec-03						
	09-Feb-04						
	15-Mar-04						
	25-Mar-04						
	14-Apr-04		--	64.43	3,850.87	ND	
	06-May-04		--	64.41	3,850.89	ND	
	04-Jun-04		--	64.47	3,850.83	ND	
	16-Jun-04		--	64.47	3,850.83	ND	
	09-Jul-04		--	64.47	3,850.83	ND	
	20-Jul-04		--	64.45	3,850.85	ND	
	10-Sep-04		--	64.48	3,850.82	ND	
	23-Sep-04		--	64.53	3,850.77	ND	
	01-Oct-04		--	63.95	3,851.35	ND	
	21-Oct-04		--	64.05	3,851.25	ND	
	03-Nov-04		--	64.11	3,851.19	ND	
	18-Nov-04		--	64.13	3,851.17	ND	
	13-Dec-04		--	63.93	3,851.37	ND	
	20-Dec-04		--	64.01	3,851.29	ND	
	10-Jan-05		--	63.96	3,851.34	ND	
	25-Jan-05		--	63.92	3,851.38	ND	
	18-Feb-05		--	63.95	3,851.35	ND	
MW-5	30-Mar-05		--	63.85	3,851.45	ND	
	03-May-05		--	63.82	3,851.48	ND	
	20-May-05		--	63.82	3,851.48	ND	
	23-Aug-05		--	63.48	3,851.82	ND	
	22-Nov-05		--	63.72	3,851.58	ND	
	08-Dec-05						
	04-Mar-03	3,915.26	--	64.21	3,851.05	ND	
	17-Jun-03						
	14-Aug-03						
	28-Aug-03						

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-5 (cont.)	18-Sep-03		--	64.39	3,850.87	ND	
	13-Oct-03						
	24-Oct-03						
	10-Nov-03		--	64.42	3,850.84	ND	
	17-Nov-03						
	18-Nov-03						
	04-Dec-03						
	09-Feb-04						
	15-Mar-04						
	25-Mar-04						
	14-Apr-04		--	64.46	3,850.80	ND	
	06-May-04		--	64.45	3,850.81	ND	
	04-Jun-04		--	64.46	3,850.80	ND	
	16-Jun-04		--	64.49	3,850.77	ND	
	09-Jul-04		--	64.45	3,850.81	ND	
	20-Jul-04		--	64.47	3,850.79	ND	
	10-Sep-04		--	64.51	3,850.75	ND	
	23-Sep-04		--	64.53	3,850.73	ND	
	01-Oct-04		--	64.02	3,851.24	ND	
	21-Oct-04		--	64.04	3,851.22	ND	
	03-Nov-04		--	64.13	3,851.13	ND	
	18-Nov-04		--	64.19	3,851.07	ND	
	13-Dec-04		--	63.91	3,851.35	ND	
	20-Dec-04		--	63.94	3,851.32	ND	
	10-Jan-05		--	63.94	3,851.32	ND	
	25-Jan-05		--	63.88	3,851.38	ND	
	18-Feb-05		--	63.90	3,851.36	ND	
	30-Mar-05		--	63.81	3,851.45	ND	
	03-May-05		--	63.83	3,851.43	ND	
	20-May-05		--	63.79	3,851.47	ND	
	23-Aug-05		--	63.75	3,851.51	ND	
	22-Nov-05		--	63.80	3,851.46	ND	
	08-Dec-05						
MW-6	18-Nov-04	3,915.45					
	13-Dec-04		--	63.26	3,852.19	ND	
	20-Dec-04		--	63.32	3,852.13	ND	
	10-Jan-05		--	63.30	3,852.15	ND	
	25-Jan-05		--	63.23	3,852.22	ND	

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
<b>MW-6</b> (cont.)	18-Feb-05		--	63.27	3,852.18	ND	
	30-Mar-05		--	63.18	3,852.27	ND	
	03-May-05		--	63.19	3,852.26	ND	
	20-May-05		--	63.14	3,852.31	ND	
	23-Aug-05		--	63.12	3,852.33	ND	
	22-Nov-05		--	63.14	3,852.31	ND	
	08-Dec-05						
<b>MW-7</b>	18-Nov-04	3,914.73					
	13-Dec-04		--	62.94	3,851.79	ND	
	20-Dec-04		--	63.00	3,851.73	ND	
	10-Jan-05		--	62.98	3,851.75	ND	
	25-Jan-05		--	62.92	3,851.81	ND	
	18-Feb-05		--	62.94	3,851.79	ND	
	30-Mar-05		--	62.85	3,851.88	ND	
	03-May-05		--	62.84	3,851.89	ND	
	20-May-05		--	62.81	3,851.92	ND	
	23-Aug-05		--	62.80	3,851.93	ND	
	22-Nov-05		--	62.78	3,851.95	ND	
	08-Dec-05						
<b>MW-8</b>	18-Nov-04	3,915.19	--	63.64	3,851.55	ND	
	13-Dec-04		--	63.45	3,851.74	ND	
	20-Dec-04		--	63.50	3,851.69	ND	
	10-Jan-05		--	63.49	3,851.70	ND	
	25-Jan-05		--	63.43	3,851.76	ND	
	18-Feb-05		--	63.47	3,851.72	ND	
	30-Mar-05		--	63.37	3,851.82	ND	
	03-May-05		--	63.38	3,851.81	ND	
	20-May-05		--	63.36	3,851.83	ND	
	23-Aug-05		--	63.34	3,851.85	ND	
	22-Nov-05		--	63.35	3,851.84	ND	
	08-Dec-05						
<b>MW-9</b>	18-Nov-04	3,913.92	--	63.48	3,850.44	ND	
	13-Dec-04		--	63.29	3,850.63	ND	
	20-Dec-04	3,913.92	--	63.32	3,850.60	ND	
	10-Jan-05		--	63.30	3,850.62	ND	
	25-Jan-05		--	63.27	3,850.65	ND	
	18-Feb-05		--	63.23	3,850.69	ND	
	30-Mar-05		--	63.19	3,850.73	ND	

TABLE 1

Relative Groundwater Elevations and  
Phase Separated Hydrocarbon Thicknesses

Lovington Deep 6" - Ref. #2002-10312

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)	PSH Recovery Volume (gallons)
MW-9 (cont.)	03-May-05		--	63.21	3,850.71	ND	
	20-May-05		--	63.18	3,850.74	ND	
	23-Aug-05		--	63.13	3,850.79	ND	
	22-Nov-05		--	63.20	3,850.72	ND	
	08-Dec-05						
MW-10	18-Nov-04	3,914.96	--	63.73	3,851.23	ND	
	13-Dec-04		--	63.89	3,851.07	ND	
	20-Dec-04		--	63.92	3,851.04	ND	
	10-Jan-05		--	63.89	3,851.07	ND	
	25-Jan-05		--	63.86	3,851.10	ND	
	18-Feb-05		--	63.82	3,851.14	ND	
	30-Mar-05		--	63.75	3,851.21	ND	
	03-May-05		--	63.74	3,851.22	ND	
	20-May-05		--	63.72	3,851.24	ND	
	23-Aug-05		--	63.68	3,851.28	ND	
	22-Nov-05		--	63.40	3,851.56	ND	
	08-Dec-05						
MW-11	18-Nov-04	3,914.40					
	13-Dec-04		--	63.31	3,851.09	ND	
	20-Dec-04		--	63.33	3,851.07	ND	
	10-Jan-05		--	63.31	3,851.09	ND	
	25-Jan-05		--	63.29	3,851.11	ND	
	18-Feb-05		--	63.32	3,851.08	ND	
	30-Mar-05		--	63.16	3,851.24	ND	
	03-May-05		--	63.19	3,851.21	ND	
	20-May-05		--	63.14	3,851.26	ND	
	23-Aug-05		--	63.11	3,851.29	ND	
	22-Nov-05		--	63.05	3,851.35	ND	
	08-Dec-05						

Top of casing elevations referenced to groundwater monitoring well MW-3, which was assigned an elevation of 3,760 feet and

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

-- = Not Detected

If the cell is blank, the well was not gauged.

Gray highlighted cells indicate current year's data

Yellow highlighted indicated sampling events

TABLE 2

## Summary of Groundwater Analytical Results

## Lovington Deep 6" - Ref. #2002-10312

Well #	Date	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	<i>o</i> -Xylene	Total Xylenes	TPH	
		( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	GRO	DRO
MW1	04-Mar-03	1.35	63.8	5.88	8.32	8.27	16.6		
	18-Sep-03	9.28	2.86	<1	<1	<1	<2	<0.5	<0.5
	04-Jun-04	55.9	21.2	2.62	2.21	3.52	5.73		
	10-Sep-04	24.7	3.65	<1	<2	3.21	3.21		
	13-Dec-04	13.7	2.67	<1	<2	2.45	2.45		
	30-Mar-05	<1	<1	<1	<2	<1	<3		
	20-May-05	<1	<1	<1	<2	<1	<3		
	23-Aug-05	<1	<1	<1	<2	<1	<3		
	22-Nov-05	<1	<1	<1	<2	<1	<3		
MW2	04-Mar-03	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	18-Sep-03	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	04-Jun-04	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	10-Sep-04	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	13-Dec-04	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	30-Mar-05	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	20-May-05	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	23-Aug-05	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
	22-Nov-05	Not Sampled Due to the Presence of Phase Separated Hydrocarbons							
MW3	04-Mar-03	7,480	4,660	669	1,250	570	1,820		
	18-Sep-03	9,740	114	782	522	36.3	558	<0.5	21.4
	04-Jun-04	4,660	2,870	541	817	249	1,070		

TABLE 2

Summary of Groundwater Analytical Results

Lovington Deep 6" - Ref. #2002-10312

Well #	Date	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene	Total Xylenes	TPH	
		( $\mu\text{g/L}$ )	( $\text{mg/L}$ )	( $\text{mg/L}$ )					
MW-3 (cont.)	10-Sep-04	7,210	73.3	833	342	53.7	396		
	13-Dec-04	16,100	747	1,020	1,080	386	1,470		
	30-Mar-05	4,410	376	403	125	159	284		
	20-May-05	25,700	744	2,280	827	1,010	1,847		
	23-Aug-05	6,150	76.3	582	<20	26.7	26.7		
	22-Nov-05	9,970	486	586	44.6	109	154		
MW4	04-Mar-03	38.5	3.62	<1	<1	1.5	1.5		
	18-Sep-03	1.24	<1	<1	<1	<1	<2	<0.5	<0.5
	04-Jun-04	26.2	1.16	<1	<2	<1	<3		
	10-Sep-04	1.01	<1	<1	<2	<1	<3		
	13-Dec-04	5.23	<1	<1	<2	<1	<3		
	30-Mar-05	3.89	<1	<1	<2	<1	<3		
MW5	20-May-05	1.09	<1	<1	<2	<1	<3		
	23-Aug-05	<1	<1	<1	<2	<1	<3		
	22-Nov-05	<1	<1	<1	<2	<1	<3		
	04-Mar-03	44.9	6.72	5	5	5	<10	5	5
	18-Sep-03	3.12	<1	<1	<1	<1	<3	<0.5	<0.5
	04-Jun-04	29.5	1.84	<1	<2	<1	<3		
	10-Sep-04	1.46	<1	<1	<2	<1	<3		
	13-Dec-04	<1	<1	<1	<2	<1	<3		
	30-Mar-05	2.17	<1	<1	<2	<1	<3		

TABLE 2

## Summary of Groundwater Analytical Results

## Lovington Deep 6" - Ref. #2002-10312

Well #	Date	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	<i>o</i> -Xylene	Total Xylenes	TPH	
		( $\mu\text{g/L}$ )	GRO	DRO					
MW-5 (cont.)	20-May-05	<1	<1	<1	<2	<1	<3		
	23-Aug-05	<1	<1	<1	<2	<1	<3		
	22-Nov-05	<1	<1	<1	<2	<1	<3		
MW-6	13-Dec-04	<1	<1	<1	<2	<1	<1	<1	
	30-Mar-05	<1	<1	<1	<2	<1	<1	<3	
	20-May-05	<1	<1	<1	<2	<1	<1	<3	
	23-Aug-05	<1	1.12	<1	<2	<1	<1	<3	
	22-Nov-05	<1	<1	<1	<2	<1	<1	<3	
	13-Dec-04	43.4	21.2	2.2	5.07	3.86	8.93		
MW-7	30-Mar-05	5.32	2.65	<1	<2	<1	<1	<3	
	20-May-05	<1	<1	<1	<2	<1	<1	<3	
	23-Aug-05	<1	<1	<1	<2	<1	<1	<3	
	22-Nov-05	<1	<1	<1	<2	<1	<1	<3	
	13-Dec-04	<1	<1	<1	<2	<1	<1	<3	
MW-8	30-Mar-05	<1	<1	<1	<2	<1	<1	<3	
	20-May-05	<1	<1	<1	<2	<1	<1	<3	
	23-Aug-05	<1	<1	<1	<2	<1	<1	<3	
	22-Nov-05	<1	<1	<1	<2	<1	<1	<3	
	13-Dec-04	<1	<1	<1	<2	<1	<1	<3	
MW-9	30-Mar-05	<1	<1	<1	<2	<1	<1	<3	
	20-May-05	<1	<1	<1	<2	<1	<1	<3	
	23-Aug-05	<1	<1	<1	<2	<1	<1	<3	
	22-Nov-05	<1	<1	<1	<2	<1	<1	<3	
	13-Dec-04	<1	<1	<1	<2	<1	<1	<3	
	30-Mar-05	<1	<1	<1	<2	<1	<1	<3	
	20-May-05	<1	<1	<1	<2	<1	<1	<3	

TABLE 2

Summary of Groundwater Analytical Results

## Lovington Deep 6" - Ref. #2002-10312

Well #	Date	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	<i>o</i> -Xylene	Total Xylenes	TPH	
		( $\mu\text{g/L}$ )							
MW-9 (cont.)	23-Aug-05	<1	<1	<1	<1	<1	<1	<3	<3
MW-10	22-Nov-05	<1	<1	<1	<1	<1	<1	<3	<3
	13-Dec-04	14,200	10,500	628	852	567	1,420		
	30-Mar-05	13,900	13,940	401	1,520	430	1,950		
	20-May-05	16,900	1,571	833	1130	324	1,454		
	23-Aug-05	12,200	1,260	858	856	332	1,188		
	22-Nov-05	116	889	578	384	358	742		
MW-11	13-Dec-04	<1	<1	<1	<1	<2	<1	<3	<3
	30-Mar-05	3,07	<1	<1	<1	<2	<1	<3	<3
	20-May-05	1.78	<1	<1	<1	<2	<1	<3	<3
	23-Aug-05	1.48	<1	<1	<1	<2	<1	<3	<3
	22-Nov-05	1.13	<1	<1	<2	<1	<3	<3	<3
NMWQCC Standards	10	750	750				620		

 $\mu\text{g/L}$  - micrograms per liter

mg/L - milligrams per liter

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

Gray highlighted cells indicate current year's data

Blank cells indicate that analyses was not performed.

Red, bolded results are above the NMWQCC Standards for drinking water

NMWQCC - New Mexico Water Quality Control Commission

TABLE 3

## Summary of Groundwater Polycyclic Aromatic Hydrocarbons (PAH) Analytical Results

Lovington Deep 6" - Ref #2002-10312.

Monitor Well location	Date	Naphthalene (ng/L)	Acenaphthene (ng/L)	Fluorene (ng/L)	Phenanthrene (ng/L)	Anthracene (ng/L)	Fluoranthene (ng/L)	Pyrene (ng/L)	Chrysene (ng/L)	Benz(a)-anthracene (ng/L)	Benz(a)-phenanthrene (ng/L)	Benz(a)-pyrene (ng/L)	Dibenz(a,h)-anthracene (ng/L)	Dibenz(a,h)-phenanthrene (ng/L)	Dibenz(a,h)-pyrene (ng/L)	Benz(a,h)-perylene (ng/L)	Benz(a,h)-perylene pyridine (ng/L)
MW-1	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-2	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-3	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-4	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-5	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-6	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-7	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-8	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-9	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-10	23-Aug-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	<0.05	<0.05	<0.05	<0.05
MW-11	23-Aug-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	<0.05	<0.05	<0.05	<0.05
NMOC-D Remedial Thresholds	30																0.70

Bolded values are in excess of the NMOC-D Remediation Thresholds for Domestic Water Supply.

a. Parameters were not analyzed.

**TABLE 4**  
**Summary of Groundwater Sampling Recommendations**  
**Lovington Deep 6" - Ref. #2002-10312**

Monitoring Well	Eight Quarters Below NMOCD Standards	Sampling Schedule				Notes
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
MW-1	No	X	X	X	X	Recommend Annual PAH analysis
MW-2	No	X	X	X	X	Recommend Annual PAH analysis
MW-3	No	X	X	X	X	Recommend Annual PAH analysis
MW-4	No	X	X	X	X	Recommend Annual PAH analysis
MW-5	No	X	X	X	X	Recommend Annual PAH analysis
MW-6	No	X	X	X	X	Recommend Annual PAH analysis
MW-7	No	X	X	X	X	Recommend Annual PAH analysis
MW-8	No	X	X	X	X	Recommend Annual PAH analysis
MW-9	No	X	X	X	X	Recommend Annual PAH analysis
MW-10	No	X	X	X	X	Recommend Annual PAH analysis
MW-11	No	X	X	X	X	Recommend Annual PAH analysis

## **APPENDICES**

**APPENDIX A**

**GROUNDWATER LABORATORY ANALYTICAL RESULTS**

**AND**

**CHAIN-OF-CUSTODY FORMS**

## Sample Analysis Case Narrative

Client: Environmetal Plus, Inc. Project ID: 2002-10312

Attn: Iain Olness

for Sample #'s: 165409 thru 165418

Analyzed by AnalySys, Inc.

Final Review Date: 4/20/2005 By: D. Wagner (D. Wagner)

### Case Narrative:

The recovery of m,p-Xylenes in the Matrix Spikes (MS and/or MSD) for the analytical batch that contained sample #'s 165409 thru 165418 was outside normal laboratory acceptance criteria due to matrix effects in the randomly selected spiked sample. The Laboratory Control Sample (LCS) run with this batch met recovery criteria for m,p-Xylenes indicating the analytical method was operating correctly and in control. When viewed within the context of the passing LCS data, this deviation in spike recovery should have minimal impact on data usability.

**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: Iain Olness  
 Address: 2100 Ave. O  
 Eunice,  
 NM 88231

Phone: (505) 394-2481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	04/07/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	04/07/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	µg/L	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	<1	µg/L	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

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. M =Matrix interference.

# QnlyS<sup>y</sup>s 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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-1

Report#/Lab ID#: 165409  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	113	74-124	---
Toluene-d8	8260b	110	89-115	---

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

**Exceptions Report:**

Report #/Lab ID#:	165409	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Ohness
Project ID:	2002-10312		
Sample Name:	MW-1		

**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 (e.g. 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
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

**Notes:**

**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:** Iain Ohness  
**Address:** 2100 Ave. O  
 Eunice,  
 NM 88231  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Method ID#	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	04/07/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	4410	µg/L	100	<100	04/11/05	8260b	---	0.2	93.6	94.4	92.7	
Ethylbenzene	403	µg/L	10	<10	04/07/05	8260b	---	1.9	94.2	100.8	96.9	
m,p-Xylenes	125	µg/L	20	<20	04/07/05	8260b	S,M	2	89.5	95.4	93.1	
o-Xylene	159	µg/L	10	<10	04/07/05	8260b	---	2.7	97.3	104.4	101.3	
Toluene	376	µg/L	10	<10	04/07/05	8260b	---	12.1	95.1	101.4	108.2	

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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 and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

# *analySIS*

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.	Project ID:	2002-10312
Attn:	Iain Olness	Sample Name:	MW-3

## **REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	113	74-124	---
Toluene-d8	8260b	109	89-115	---

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

Report#/Lab ID#:	165410
Sample Matrix:	water

## Exceptions Report:

Report #/Lab ID#:	165410	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID:	2002-10312		
Sample Name:	MW-3		

**Sample Temperature/Condition:**  $\leq 6^{\circ}\text{C}$ 

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . 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:**

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**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	S.M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits: indicative of potential matrix interference as evidenced by M-flag.

Notes:

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INC.3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
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Client: Environmental Plus, Inc.  
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 Eunice,  
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**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		04/07/05	8260b(5030/5035)	---	---	---	---	---
Benzene	3.89	µg/L	1	<1	04/07/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	µg/L	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	<1	µg/L	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2

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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. M =Matrix interference.

Report#/Lab ID#:	165411	Report Date:	04/14/05
Project ID:	2002-10312		
Sample Name:	MW-4		
Sample Matrix:	water		
Date Received:	04/01/2005	Time:	08:00
Date Sampled:	03/30/2005	Time:	08:55

# ONLYS<sup>ys</sup> 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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-4

Report#Lab ID#: 165411  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	115	74-124	--
Toluene-d8	8260b	109	89-115	--

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

**Exceptions Report:**

Report #/Lab ID#:	165411	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		
Sample Name:	MW-4		

**Sample Temperature/Condition:**  $\leq 6^{\circ}\text{C}$ 

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . 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 (e.g. 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
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

**Notes:**

**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: Iain Ohness  
 Address: 2100 Ave. O  
 Eunice,  
 NM 88231

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

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	--		--		04/07/05	8260b(5030/5035)	--	--	--	--	--
Benzene	2.17	µg/L	1	<1	04/07/05	8260b	--	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	--	1.9	94.2	100.8	96.9
n,p-Xylenes	<2	µg/L	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	--	2.7	97.3	104.4	101.3
Toluene	<1	µg/L	1	<1	04/07/05	8260b	--	12.1	95.1	101.4	108.2

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

Dale Wagner

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*Environmental Services*

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: Iain Ohness

Project ID: 2002-10312  
Sample Name: MW-5

Report# /Lab ID#: 165412  
Sample Matrix: water

#### REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	111	74-124	---
Toluene-d8	8260b	111	89-115	---

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

## Exceptions Report:

Report #/Lab ID#: 165412 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Ohness  
Project ID: 2002-10312  
Sample Name: MW-5

### 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 (e.g. 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
mP-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

Notes:

**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:** Ian Olness  
**Address:** 2100 Ave. O  
Eunice,  
NM 88231  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	04/07/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	04/07/05	8260b	J	0.2	93.6	94.4	92.7	
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9	
m,p-Xylenes	<2	µg/L	2	>2	04/07/05	8260b	S,M	2	89.5	95.4	93.1	
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	---	2.7	97.3	104.4	101.3	
Toluene	<1	µg/L	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2	

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Respectfully Submitted,



Dale Wagner

Report#/Lab ID#: 165413    Report Date: 04/14/05  
Project ID: 2002-10312  
Sample Name: MW-6  
Sample Matrix: water  
Date Received: 04/01/2005    Time: 08:00  
Date Sampled: 03/30/2005    Time: 09:45

**QUALITY ASSURANCE DATA 1**



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.

# *Analysis* 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.	Project ID:	2002-10312
Attn:	Iain Ohness	Sample Name:	MW-6

## REPORT OF SURROGATE RECOVERY

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

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

## Exceptions Report:

Report #/Lab ID#:	165413	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID:	2002-10312		
Sample Name:	MW-6		

### 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 TCBQ-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
Benzene	J	See J-flag discussion above.
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

Notes:

**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: Iain Ohness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		04/07/05	8260b(5030/5035)	---	---	---	---	---
Benzene	5.32	µg/L	1	<1	04/07/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	µg/L	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	J	2.7	97.3	104.4	101.3
Toluene	2.65	µg/L	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2

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Dale Wagner

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Report#Lab ID#: 165414  
Project ID#: 2002-10312  
Sample Name: MW-7  
Sample Matrix: water  
Date Received: 04/01/2005  
Date Sampled: 03/30/2005  
Time: 08:00  
Time: 09:25

**QUALITY ASSURANCE DATA 1**

# CHILDS 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: Iain Ohness

Project ID: 2002-10312  
Sample Name: MW-7

Report#Lab ID#: 165414  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

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

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

## Exceptions Report:

Report #/Lab ID#:	165414	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		
Sample Name:	MW-7		

**Sample Temperature/Condition:** <=6°C

The typical sample temperature criteria (except for metals by ICP, GFQA 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).

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**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.
o-Xylene	J	See J-flag discussion above.

**Notes:**

**AnalySys<sup>inc.</sup>**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: Iain Ohness  
Address: 2100 Ave. O  
Eunice,  
NM 88231

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

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	04/07/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	04/07/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	µg/L	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/07/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	<1	µg/L	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2

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Dale Wagner

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# CHROMASYS

Client: Environmental Plus, Inc.  
Attn: Iain Ohness

## REPORT OF SURROGATE RECOVERY

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

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

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

Project ID: 2002-10312  
Sample Name: MW-8

Report# /Lab ID#: 165415  
Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#:	165415	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		
Sample Name:	MW-8		

**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).

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**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

Notes:

# AnalySys Inc.

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2209 N. Padre Island Dr., Corpus Christi, TX 78498  
(512) 385-5886 • FAX (512) 385-7411

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		04/11/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	04/11/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	µg/L	1	<1	04/11/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	µg/L	2	<2	04/11/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	µg/L	1	<1	04/11/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	<1	µg/L	1	<1	04/11/05	8260b	---	12.1	95.1	101.4	108.2

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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 & SI =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.

**CHROMASYS**

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.	Project ID:	2002-10312
Attn:	Iain Ohess	Sample Name:	MW-9

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	95	74-124	---
Toluene-d8	8260b	98.7	89-115	---

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

## Exceptions Report:

Report #/Lab ID#:	165416	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Ohness
Project ID:	2002-10312		
Sample Name:	MW-9		

### 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
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

### Notes:

**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: Iain Ohness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	04/13/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	13900	µg/L	1000	<1000	04/11/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	901	µg/L	10	<10	04/13/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	1520	µg/L	20	>20	04/13/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	430	µg/L	10	<10	04/13/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	1640	µg/L	10	<10	04/13/05	8260b	---	12.1	95.1	101.4	108.2

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Respectfully Submitted,



Dale Wagner

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Report#Lab ID#: 165417	Report Date: 04/14/05
Project ID: 2002-10312	
Sample Name: MW-10	
Sample Matrix: water	
Date Received: 04/01/2005	Time: 08:00
Date Sampled: 03/30/2005	Time: 08:20

**CHROMASYS**

Client: Environmental Plus, Inc.  
Attn: Iain Olness

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	114	74-124	---
Toluene-d8	8260b	93.6	89-115	---

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

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Project ID: 2002-10312  
Sample Name: MW-10

Report# /Lab ID#: 165417

Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#: 165417 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Ohness  
Project ID: 2002-10312  
Sample Name: MW-10

### 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).

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- Sample received in appropriate container(s). State of sample preservation unknown.
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### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualifier	Comment
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

Notes:

# AnaLyS yS Inc.

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(512) 385-5886 • FAX (512) 385-7411

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		04/07/05	8260b(5030/5035)	---	---	---	---	---
Benzene	3.07	$\mu\text{g/L}$	1	<1	04/07/05	8260b	---	0.2	93.6	94.4	92.7
Ethylbenzene	<1	$\mu\text{g/L}$	1	<1	04/07/05	8260b	---	1.9	94.2	100.8	96.9
m,p-Xylenes	<2	$\mu\text{g/L}$	2	<2	04/07/05	8260b	S,M	2	89.5	95.4	93.1
o-Xylene	<1	$\mu\text{g/L}$	1	<1	04/07/05	8260b	---	2.7	97.3	104.4	101.3
Toluene	<1	$\mu\text{g/L}$	1	<1	04/07/05	8260b	---	12.1	95.1	101.4	108.2

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Respectfully Submitted,

Dale Wagner

Dale Wagner

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**CHROMASYS** Inc.

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(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Plus, Inc.	Project ID:	2002-10312	Report# /Lab ID#:	165418
Attn:	Iain Ohess	Sample Name:	MW-11	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

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

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

## Exceptions Report:

Report #/Lab ID#:	165418	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Ohness
Project ID#:	2002-10312		
Sample Name:	MW-11		

**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).

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**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.

**Notes:**

# AnalySys Inc.

4221 Freidrich Lane, Suite 190, Austin, TX 78744  
512-444-5896 FAX: 512-447-4766

2209 N. Padre Island Dr., Corpus Christi, TX 78408

## Chain of Custody Form

12121

Company Name		Environmental Plus, Inc.		Billed To		ANALYSIS REQUESTED	
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	Lovington Deep 6"						
Project Reference	2002-10312						
EPI Sampler Name	John Robinson						
	SAMPLE I.D.						
LAB I.D.		MATRIX	PRESERV.	SAMPLING			
		GRAIN OR (C)OMP.	ACID/BASE	OTHER	DATE	TIME	
		GROUND WATER	SLUDGE	SOLID			
		# CONTAINERS	CRUDE OIL	WASTEWATER			
		(G)					
		RAB OR (C)OMP.					
		G	X	X	30-Mar	7:00	X
165409	1 MW-1	G	X	X	30-Mar	9:05	X
165410	2 MW-3	G	X	X	30-Mar	8:55	X
165411	3 MW-4	G	X	X	30-Mar	7:40	X
165412	4 MW-5	G	X	X	30-Mar	9:45	X
165413	5 MW-6	G	X	X	30-Mar	9:25	X
165414	6 MW-7	G	X	X	30-Mar	8:00	X
165415	7 MW-8	G	X	X	30-Mar	8:20	X
165416	8 MW-9	G	X	X	30-Mar	8:35	X
165417	9 MW-10	G	X	X	30-Mar		
165418	10 MW-11	G	X	X	30-Mar		
Sampler Relinquished: <i>Iain Olness</i>		Date 3/31/05	Received By: <i>John</i>	Time 6:30	Received By: (lab staff)	E-mail results to: iolness@hotmail.com and cjreynolds@ppalp.com	
Relinquished by:		Date Time	Sample Cool & Intact Yes No		Checked By:	REMARKS: T. 55° U	
Delivered by:							

# AnalySys Inc.

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

Client: Environmental Plus, Inc.  
Attn: Ian Ohness  
Address: 2100 Ave. O  
Eunice,  
NM 88231

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	---	05/26/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/26/05	8260b	---	2.6	84.9	84.8	83.6
Ethylbenzene	<1	µg/L	1	<1	05/26/05	8260b	---	3.1	102.6	97.6	102.7
m,p-Xylenes	<2	µg/L	2	<2	05/26/05	8260b	---	2.5	103	97.9	103.3
o-Xylene	<1	µg/L	1	<1	05/26/05	8260b	---	14.7	107.8	102.8	106.3
Toluene	<1	µg/L	1	<1	05/26/05	8260b	---	1.2	93.5	91.9	93.7

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Respectfully Submitted,



Dale Wagner

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Report#/Lab ID#: 167476 Report Date: 05/26/05

Project ID: 2003-10312

Sample Name: MW-1

Sample Matrix: water

Date Received: 05/24/2005

Date Sampled: 05/20/2005

Time: 09:00

Time: 10:21

## QUALITY ASSURANCE DATA<sup>1</sup>

**CHLORINE 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.	Project ID:	2003-10312	Report#/Lab ID#:	167476
Attn:	Iain Oiness	Sample Name:	MW-1	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	93.7	70-130	---
Toluene-d8	8260b	101	80-127	---

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

# AnalySys Inc.

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

REPORT OF ANALYSIS	
Parameter	Result
Volatile organics-8260b/BTEX	---
Benzene	25700
Ethylbenzene	2280
m,p-Xylenes	827
o-Xylene	1010
Toluene	744

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	05/25/05	8260b(5030/5035)	---	---	---	---	---
Benzene	25700	µg/L	100	<100	05/25/05	8260b	---	0.2	85.9	87.9	84.9
Ethylbenzene	2280	µg/L	100	<100	05/25/05	8260b	---	0.5	104	108.1	103.3
m,p-Xylenes	827	µg/L	200	>200	05/25/05	8260b	---	0	105.4	108.9	103.9
o-Xylene	1010	µg/L	100	<100	05/25/05	8260b	---	0.3	95.9	111.5	109.1
Toluene	744	µg/L	100	<100	05/25/05	8260b	---	0.1	95.5	96.8	96.1

Report#Lab ID#: 167477 Project ID: 2003-10312 Sample Name: MW-3 Sample Matrix: water Date Received: 05/24/2005 Date Sampled: 05/20/2005	Report Date: 05/26/05 Time: 09:00 Time: 12:41
<b>QUALITY ASSURANCE DATA 1</b>	

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**ANALYSIS 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: Iain Olness	Project ID: 2003-10312 Sample Name: MW-3	Report#/Lab ID#: 167477 Sample Matrix: water
---	---	---

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	90.7	70-130	---
Toluene-d8	8260b	102	80-127	---

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

**AnalySys**

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(512) 385-5886 • FAX (512) 385-7411

**REPORT OF ANALYSIS**

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

**Report#**/Lab ID#: 167478    Report Date: 05/26/05  
**Project ID:** 2003-10312  
**Sample Name:** MW-4  
**Sample Matrix:** water  
**Date Received:** 05/24/2005    **Time:** 09:00  
**Date Sampled:** 05/20/2005    **Time:** 11:37

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	8260b(5030/5035)	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	05/26/05	8260b	---	---	---	---	---	---
Benzene	1.09	µg/L	1	<1	05/26/05	8260b	---	2.6	84.9	84.8	83.6	---
Ethylbenzene	<1	µg/L	1	<1	05/26/05	8260b	---	3.1	102.6	97.6	102.7	---
m,p-Xylenes	<2	µg/L	2	<2	05/26/05	8260b	---	2.5	103	97.9	103.3	---
o-Xylene	<1	µg/L	1	<1	05/26/05	8260b	---	14.7	107.8	102.8	106.3	---
Toluene	<1	µg/L	1	<1	05/26/05	8260b	---	1.2	93.5	91.9	93.7	---

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**CHILDS 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: Iain Olness

Project ID: 2003-10312  
Sample Name: MW-4

Report# /Lab ID#: 167478  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.8	70-130	---
Toluene-d8	8260b	102	80-127	---

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

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

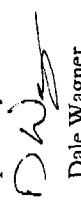
Client: Environmental Plus, Inc.  
Attn: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method	6	Data Qual.	7	Prec.	2	Recov.	3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/26/05	8260b(5030/5035)		---	---	---	---	---	---	---	
Benzene	<1	µg/L	1	<1	05/26/05	8260b	J	2.6	84.9	84.8	84.8	83.6	83.6	83.6	
Ethylbenzene	<1	µg/L	1	<1	05/26/05	8260b	---	3.1	102.6	97.6	97.6	102.7	102.7	102.7	
m,p-Xylenes	<2	µg/L	2	<2	05/26/05	8260b	---	2.5	103	97.9	97.9	103.3	103.3	103.3	
o-Xylene	<1	µg/L	1	<1	05/26/05	8260b	---	14.7	107.8	102.8	102.8	106.3	106.3	106.3	
Toluene	<1	µg/L	1	<1	05/26/05	8260b	---	1.2	93.5	91.9	91.9	93.7	93.7	93.7	

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Respectfully Submitted,



Dale Wagner

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Report#Lab ID#:	167479	Report Date:	05/26/05
Project ID:	2003-10312		
Sample Name:	MW-5		
Sample Matrix:	water		
Date Received:	05/24/2005	Time:	09:00
Date Sampled:	05/20/2005	Time:	09:20

**ATOLYSES**  
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.	Project ID:	2003-10312
Attn:	Iain Olness	Sample Name:	MW-5

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	86.4	70-130	--
Toluene-d8	8260b	102	80-127	--

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

## Exceptions Report:

Report #/Lab ID#: 167479 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Ohness  
Project ID: 2003-10312  
Sample Name: MW-5

**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 (e.g. 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
Benzene	J	See J-flag discussion above.

Notes:

**ANALYSYS**

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:** Iain Olness  
**Address:** 2100 Ave. O  
 Eunice,  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
Volatile organics-8260b/BTEX	---		---		05/25/05	8260b(5030/5035)
Benzene	<1	µg/L	1	<1	05/25/05	8260b
Ethylbenzene	<1	µg/L	1	<1	05/25/05	8260b
m,p-Xylenes	<2	µg/L	2	<2	05/25/05	8260b
o-Xylene	<1	µg/L	1	<1	05/25/05	8260b
Toluene	<1	µg/L	1	<1	05/25/05	8260b

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Respectfully Submitted,

Dale Wagner

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Report#/ <b>Lab ID#:</b> 167480	Report Date: 05/26/05
Project ID: 2003-10312	
Sample Name: MW-6	
Sample Matrix: water	
Date Received: 05/24/2005	Time: 09:00
Date Sampled: 05/20/2005	Time: 10:48

**QUALITY ASSURANCE DATA** <sup>1</sup>

	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>6</sup>
	---	---	---	---	---

# CHILLYS 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: Iain Ohness

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	89.7	70-130	---
Toluene-d8	8260b	102	80-127	---

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

Client: Environmental Plus, Inc.	Project ID: 2003-10312
Attn: Iain Ohness	Sample Name: MW-6

Report# /Lab ID#: 167480  
Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#: 167480 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Olness  
Project ID: 2003-10312  
Sample Name: MW-6

### Sample Temperature/Condition: $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFQA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . 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 (e.g. 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
Benzene	J	See J-flag discussion above.

Notes:

**ANALYSYS**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: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	05/25/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/25/05	8260b	---	0.2	85.9	87.9	84.9
Ethylbenzene	<1	µg/L	1	<1	05/25/05	8260b	---	0.5	104	108.1	103.3
m,p-Xylenes	<2	µg/L	2	<2	05/25/05	8260b	---	0	105.4	108.9	103.9
o-Xylene	<1	µg/L	1	<1	05/25/05	8260b	---	0.3	95.9	111.5	109.1
Toluene	<1	µg/L	1	<1	05/25/05	8260b	---	0.1	95.5	96.8	96.1

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Respectfully Submitted,  
  
Dale Wagner

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Report# / Lab ID#: 167481 Report Date: 05/26/05  
Project ID: 2003-10312  
Sample Name: MW-7  
Sample Matrix: water  
Date Received: 05/24/2005 Time: 09:00  
Date Sampled: 05/20/2005 Time: 11:10

**ANALYSIS**

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.	Project ID:	2003-10312	Report# /Lab ID#:	167481
Attn:	Iain Ohness	Sample Name:	MW-7	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	91.2	70-130	---
Toluene-d8	8260b	103	80-127	---

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

# 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:** Iain Olness  
**Address:** 2100 Ave. O  
 Eunice,  
**Phone:** (505) 394-3481      **FAX:** (505) 394-2601

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	05/25/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/25/05	8260b	---	2.6	84.9	84.8	83.6
Ethylbenzene	<1	µg/L	1	<1	05/25/05	8260b	---	3.1	102.6	97.6	102.7
m,p-Xylenes	<2	µg/L	2	<2	05/25/05	8260b	---	2.5	103	97.9	103.3
o-Xylene	<1	µg/L	1	<1	05/25/05	8260b	---	14.7	107.8	102.8	106.3
Toluene	<1	µg/L	1	<1	05/25/05	8260b	---	1.2	93.5	91.9	93.7

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Dale Wagner

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Report#/Lab ID#: 167482      Report Date: 05/26/05  
 Project ID: 2003-10312  
 Sample Name: MW-8  
 Sample Matrix: water  
 Date Received: 05/24/2005      Time: 09:00  
 Date Sampled: 05/20/2005      Time: 10:00

## QUALITY ASSURANCE DATA 1

**ONTRYS 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.	Project ID:	2003-10312	Report# /Lab ID#:	167482
Attn:	Iain Ohness	Sample Name:	MW-8	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.4	70-130	---
Toluene-d8	8260b	102	80-127	---

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

# 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: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method	6	Data Qual.	7	Prec.	2	Recov.	3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/25/05	8260b(S030/S035)		---	---	---	---	---	---	---	
Benzene	<1	µg/L	1	<1	05/25/05	8260b		---	2.6	84.9	84.8	83.6		---	
Ethylbenzene	<1	µg/L	1	<1	05/25/05	8260b		---	3.1	102.6	97.6	102.7		---	
m,p-Xylenes	<2	µg/L	2	<2	05/25/05	8260b		---	2.5	103	97.9	103.3		---	
o-Xylene	<1	µg/L	1	<1	05/25/05	8260b		---	14.7	107.8	102.8	106.3		---	
Toluene	<1	µg/L	1	<1	05/25/05	8260b		---	1.2	93.5	91.9	93.7		---	

## QUALITY ASSURANCE DATA <sup>1</sup>

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Dale Wagner

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3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample.
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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.
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Report#/Lab ID#: 167483 Report Date: 05/26/05  
Project ID: 2003-10312  
Sample Name: MW-9  
Sample Matrix: water  
Date Received: 05/24/2005 Time: 09:00  
Date Sampled: 05/20/2005 Time: 08:15

**CHROMAS**  
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.	Project ID:	2003-10312
Attn:	Iain Ohness	Sample Name:	MW-9

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	94.2	70-130	---
Toluene-d8	8260b	104	80-127	---

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

Report#/Lab ID#: 167483  
Sample Matrix: water

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

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	
Volatile organics-8260b/BTEX	---	µg/L	---	---	05/26/05	8260b(5030/5035)	
Benzene	10900	µg/L	100	<100	05/26/05	8260b	
Ethylbenzene	833	µg/L	100	<100	05/26/05	8260b	
m,p-Xylenes	1130	µg/L	200	>200	05/26/05	8260b	
o-Xylene	324	µg/L	100	<100	05/26/05	8260b	
Toluene	1570	µg/L	100	<100	05/26/05	8260b	

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Dale Wagner

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Report#/Lab ID#:	167484	Report Date:	05/26/05
Project ID#:	2003-10312		
Sample Name:	MW-10		
Sample Matrix:	water		
Date Received:	05/24/2005	Time:	09:00
Date Sampled:	05/20/2005	Time:	08:37

# CHROMAS 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.	Project ID: 2003-10312	Report#/Lab ID#: 167484
Attn: Iain Olness	Sample Name: MW-10	Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.7	70-130	---
Toluene-d8	8260b	103	80-127	---

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

# AnalySys Inc.

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	05/26/05	8260b(5030/5035)	---	---	---	---	---
Benzene	1.78	µg/L	1	<1	05/26/05	8260b	---	2.6	84.9	84.8	83.6
Ethylbenzene	<1	µg/L	1	<1	05/26/05	8260b	---	3.1	102.6	97.6	102.7
m,p-Xylenes	<2	µg/L	2	<2	05/26/05	8260b	---	2.5	103	97.9	103.3
o-Xylene	<1	µg/L	1	<1	05/26/05	8260b	---	14.7	107.8	102.8	106.3
Toluene	<1	µg/L	1	<1	05/26/05	8260b	---	1.2	93.5	91.9	93.7

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

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.

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

Report# / Lab ID#:	167485	Report Date:	05/26/05
Project ID:	2003-10312		
Sample Name:	MW-11		
Sample Matrix:	water		
Date Received:	05/24/2005	Time:	09:00
Date Sampled:	05/20/2005	Time:	08:54

**Environmental Plus, 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: Iain Olness

Project ID: 2003-10312  
Sample Name: MW-11

Report# / Lab ID#: 167485  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1,2-Dichloroethane-d4	8260b	90.7	70-130	---
Toluene-d8	8260b	101	80-127	---

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

# AnalySys Inc.

4221 Friedrich Lane, Suite 190, Austin, TX 78744

512-444-5896 FAX: 512-447-4766

2209 N. Padre Island Dr., Corpus Christi, TX 78408

## Chain of Custody Form

12542

Company Name		Environmental Plus, Inc.		BILLED TO		ANALYSIS REQUEST											
EPI Project Manager	Iain Olness	P.O. BOX 1558															
Mailing Address																	
City, State, Zip	Eunice New Mexico 88231																
EPI Phone#/Fax#	505-394-3481 / 505-394-2601																
Client Company	Plains All American																
Facility Name	Lovington Deep 6"																
Project Reference	2002-10312																
EPI Sampler Name	Manuel Gonzales																
LAB I.D.	SAMPLE I.D.	# CONTAINERS		(G)RAB OR (C)OMP.		WASTEWATER		SOIL		CRUDE OIL		SLUDGE		ACID/BASE		ICE/COOL	
		MATRIX	PRESERV.	DATE	TIME	DATE	TIME	OTHER	OTHER	DATE	TIME	OTHER	OTHER	DATE	TIME	OTHER	DATE
167476	1 MW-1 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 10:21 X
167477	2 MW-3 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 12:41 X
167478	3 MW-4 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 11:37 X
167479	4 MW-5 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 9:20 X
167480	5 MW-6 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 10:48 X
167481	6 MW-7 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 11:10 X
167482	7 MW-8 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 10:00 X
167483	8 MW-9 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 8:15 X
167484	9 MW-10 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 8:37 X
167485	10 MW-11 ✓	G	4 X	G	4 X	X	X	X	X	X	X	X	X	X	X	X	20-May 8:54 X

T.5.9 ✓

E-mail results to: iolness@hotmail.com and cjreynolds@paalp.com

REMARKS:

Sample Relinquished:  
*Iain Olness*

Received By:  
Date: 5/23/05 Time: 6:00  
Date: 5/24/05 Time: 8:00

Sample Cod & Intact:  
Yes No  
Checked By:  
*J. Bondell*

Delivered by:

**AnalySys**  
m.

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

#### REPORT OF ANALYSIS

Report#/Lab ID#:	170212	Report Date:	09/02/05
Project ID:	2002-10312		
Sample Name:	MW-1		
Sample Matrix:	water		
Date Received:	08/25/2005	Time:	10:00
Date Sampled:	08/23/2005	Time:	07:00

#### QUALITY ASSURANCE DATA 1

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>8</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	--	--	--	--	--
Extractable organics-PAH	---	---	---	---	09/01/05	610 & 8270C	--	--	--	--	--
Volatile organics-8260b/BTEX	---	---	---	---	08/30/05	8260b(5030/5035)	--	--	--	--	--
Benzene	<1	µg/L	1	<1	08/30/05	8260b	S,M	8.6	108	106.6	107.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	--	2.2	117.5	115.7	115.9
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	--	2.9	116.9	113.6	115.1
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	--	1.5	115.4	111.9	113
Toluene	<1	µg/L	1	<1	08/30/05	8260b	--	7.1	110.1	105.6	110.6
Acenaphthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	5.8	47	92	44.2
Benzof[a]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	19.1	55.8	93.5	57.3
Benzof[a]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	25.7	57.4	92.8	58.1
Benzof[b]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	J	16.3	60.6	96.3	63.2
Benzof[g,h,i]perylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	J	13.5	58.1	104.1	60.4
Benzof[j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	J	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	12.9	51.1	88	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	--	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270C	J	15.4	55.7	101.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

Dale Wagner

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# Qnalysis

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: Iain Olness

Project ID: 2002-10312  
 Sample Name: MW-1

Report#Lab ID#: 170212  
 Sample Matrix: water

## REPORT OF ANALYSIS-cont.

Parameter      Result      Units      RQL<sup>5</sup>      Blank      Date      Method<sup>6</sup>      Data Qual.<sup>7</sup>      Prec. 2      Recov. 3

Naphthalene	<0.05	$\mu\text{g/L}$	0.05	<0.05	09/01/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	09/01/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	09/01/05	610 & 8270c	---	13.4	54.4	101.3	51.7

## QUALITY ASSURANCE DATA 1

CCV4      LCS<sup>4</sup>

# ENVIRO-SYS INC.

Client: Environmental Plus, Inc.  
Attn: Iain Ohness

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	27	15-110	---
2-Fluorobiphenyl	610 & 8270c	30.7	30-110	---
1,2-Dichloroethane-d4	8260b	121	70-130	---
Toluene-d8	8260b	111	80-127	---

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

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

Project ID: 2002-10312  
Sample Name: MW-1  
Report#Lab ID#: 170212  
Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#: 170212 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Olness  
Project ID#: 2002-10312  
Sample Name: MW-1

### 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
Benzene	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.
Benzo[b]fluoranthene	J	See I-flag discussion above.
Benzo[g,h,i]perylene	J	See I-flag discussion above.
Benzo[j,k]fluoranthene	J	See J-flag discussion above.
Indeno[1,2,3-cd]pyrene	J	See I-flag discussion above.

### Notes:

**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: Ian Olness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	09/01/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	08/31/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	6150	µg/L	100	<100	08/31/05	8260b	S,M	8.6	108	106.6	107.7
Ethylbenzene	582	µg/L	10	<10	08/31/05	8260b	---	2.2	117.5	115.7	115.9
m,p-Xylenes	<20	µg/L	20	<20	08/31/05	8260b	J	2.9	116.9	113.6	115.1
o-Xylene	26.7	µg/L	10	<10	08/31/05	8260b	---	1.5	115.4	111.9	113
Toluene	76.3	µg/L	10	<10	08/31/05	8260b	---	7.1	110.1	105.6	110.6
Acenaphthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	J	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	5.8	47	92	44.2
Benzof[a]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzof[al]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzof[b]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzof,g,h,i]perylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	13.5	58.1	104.1	60.4
Benzof,j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	0.818	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	15.4	55.7	101.3	58.3

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Dale Wagner

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Report#/Lab ID#:	170213	Report Date:	09/02/05
Project ID#:	2002-10312		
Sample Name:	MW-3		
Sample Matrix:	water		
Date Received:	08/25/2005	Time:	10:00
Date Sampled:	08/23/2005	Time:	07:30

**Q70Lys<sup>y</sup>S<sub>mC</sub>**

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:** Iain Ohness

**Project ID:** 2002-10312  
**Sample Name:** MW-3

**Report#/Lab ID#:** 170213  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	11.7	$\mu\text{g/L}$	0.5	<0.5	08/30/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	0.289	$\mu\text{g/L}$	0.05	<0.05	09/01/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	09/01/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA<sup>1</sup>**

# CHROMASYS 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: Iain Ohness

Project ID: 2002-10312  
Sample Name: MW-3

Report#/Lab ID#: 170213  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	51.4	15-110	---
2-Fluorobiphenyl	610 & 8270c	47.7	30-110	---
1,2-Dichloroethane-d4	8260b	111	70-130	---
Toluene-d8	8260b	111	80-127	---

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

## Exceptions Report:

Report #/Lab ID#:	170213	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		

Sample Name: MW-3

**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
Benzene	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.
m,p-Xylenes	J	See J-flag discussion above.
Acenaphthylene	J	See J-flag discussion above.

Notes:

**ANALYSYS INC.**

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

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/B/N Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	09/01/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/30/05	8260b	J,SM	8.6	108	106.6	107.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	---	2.2	117.5	115.7	115.9
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	---	2.9	116.9	113.6	115.1
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	---	1.5	115.4	111.9	113
Toluene	<1	µg/L	1	<1	08/30/05	8260b	---	7.1	110.1	105.6	110.6
Acenaphthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	5.8	47	92	44.2
Benzol[a]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzol[a]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzol[b]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzol[g,h,i]perylene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	13.5	58.1	104.1	60.4
Benzol[j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	15.4	55.7	101.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,  
  
Dale Wagner

I. 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.

Report#Lab ID#: 170214

Project ID: 2002-10312

Sample Name: MW-4

Sample Matrix: water

Date Received: 08/25/2005

Date Sampled: 08/23/2005

Time: 10:00

Time: 08:00

#### QUALITY ASSURANCE DATA 1

**GTTLYSSES**

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: Iain Ohness

**REPORT OF ANALYSIS-cont.**

Project ID: 2002-10312  
Sample Name: MW-4

Report# / Lab ID#: 170214

Sample Matrix: water

**QUALITY ASSURANCE DATA 1**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	13.4	54.4	101.3	51.7

# CHROMASYS 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.	Project ID: 2002-10312
Attn: Ian Olinss	Sample Name: MW-4
	Report#/Lab ID#: 170214 Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	40.4	15-110	---
2-Fluorobiphenyl	610 & 8270c	46.3	30-110	---
1,2-Dichloroethane-d4	8260b	114	70-130	---
Toluene-d8	8260b	111	80-127	---

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

## Exceptions Report:

Report #/Lab ID#:	170214	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		
Sample Name:	MW-4		

**Sample Temperature/Condition:**

&lt;=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
Benzene	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.
Benzene	J	See J-flag discussion above.

**Notes:**

סמלים ימיים

**Client:** Environmental Plus, Inc.  
**Attn:** Iain Ohness  
**Address:** 2100 Ave. O  
Eunice, NM 88231

REPORT OF ANALYSIS

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the written consent of AnalySys, Inc.

- Quality assurance data is for the sample batch which included this sample.
- Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements.
- Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample.
- Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix.
- Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method.
- Method numbers typically denote USEPA procedures. Less than (" $<$ ") values reflect nominal quantitation limits adjusted for any required dilutions.
- Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S & SI =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.

Dale Wagner

**QnQLyS 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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-5

Report# /Lab ID#: 170215  
Sample Matrix: water

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recovery <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	09/01/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA 1**

# ANALYSIS INC.

Client: Environmental Plus, Inc.  
Attn: Iain Ohness

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

Project ID: 2002-10312  
Sample Name: MW-5

Report# /Lab ID#: 170215  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	37.3	15-110	--
2-Fluorobiphenyl	610 & 8270c	42.6	30-110	--
1,2-Dichloroethane-d4	8260b	110	70-130	--
Toluene-d8	8260b	111	80-127	--

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

## Exceptions Report:

Report #/Lab ID#: 170215 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Olness  
Project ID: 2002-10312  
Sample Name: MW-5

### 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
Benzene	S,M	MS and/or MSD recoveries outside target recov. limits. LCS recovery in-limits; indicative of potential matrix interference as evidenced by M-flag.
Benzene	J	See J-flag discussion above.

### Notes:

**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: Iain Ohness  
Address: 2100 Ave. O.  
Eunice,  
Phone: (505) 394-3481      FAX: (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/29/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/30/05	8260b	J	0.4	96.3	94.1	96.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	J	0.2	104.4	108.2	103
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	J	0.5	104.4	107.8	103.3
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	J	0.5	98.8	95.8	97.2
Toluene	1.12	µg/L	1	<1	08/30/05	8260b	---	0.2	102.5	102.2	102.8
Acenaphthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	5.8	47	92	44.2
Benzol[al]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzol[a]pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzol[b]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzol,g,h,i]perylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	13.5	58.1	104.1	60.4
Benzol,j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	15.4	55.7	101.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

Dale Wagner

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**Q70L4S ME.**

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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-6

Report# /Lab ID#: 170190  
Sample Matrix: water

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	0.109	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA 1**

**CHROMAS 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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-6

Report# /Lab ID#: 170190  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	32.5	15-110	---
2-Fluorobiphenyl	610 & 8270c	43.6	30-110	---
1,2-Dichloroethane-d4	8266b	93.5	70-130	---
Toluene-d8	8266b	109	80-127	---

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

## Exceptions Report:

Report #/Lab ID#: 170190 Matrix: water

Client: Environmental Plus, Inc.

Project ID#: 2002-10312

Attn: Iain Ohness

Sample Name: MW-6

### 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
Benzene	J	See J-flag discussion above.
Ethylbenzene	J	See J-flag discussion above.
m,p-Xylenes	J	See J-flag discussion above.
o-Xylene	J	See J-flag discussion above.
Benzof[g,h]perylene	J	See J-flag discussion above.
Dibenz[a,h]anthracene	J	See J-flag discussion above.
Fluorene	J	See J-flag discussion above.
Indenol[1,2,3-d]pyrene	J	See J-flag discussion above.
Phenanthrene	J	See J-flag discussion above.

Notes:

**Analytical Services**

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: Iain Ohness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/29/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/30/05	8260b	---	0.4	96.3	94.1	96.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	104.4	108.2	103
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	---	0.5	104.4	107.8	103.3
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	J	0.5	98.8	95.8	97.2
Toluene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	102.5	102.2	102.8
Acenaphthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	5.8	47	92	44.2
Benzo[a]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzo[a]pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzo[b]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzo[g,h,i]perylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	13.5	58.1	104.1	60.4
Benzo[j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-c]diphenene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	15.4	55.7	101.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

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 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. M =Matrix interference.

**Q7QLY5**  
**ML.**

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: Iain Olness

**REPORT OF ANALYSIS cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	---	13.4	54.4	101.3	51.7

Client ID:	Environmental Plus, Inc.
Attn:	Iain Olness
Project ID:	2002-10312
Sample Name:	MW-7

**QUALITY ASSURANCE DATA 1**

Report# /Lab ID#:

170191

Sample Matrix: water

**770LTSYS INC.**

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

Client: Environmental Plus, Inc.	Project ID: 2002-10312
Attn: Iain Olness	Sample Name: MW-7

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	37.5	15-110	---
2-Fluorobiphenyl	610 & 8270c	49.5	30-110	---
1,2-Dichloroethane-d4	8260b	98.9	70-130	---
Toluene-d8	8260b	106	80-127	---

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

Report#/Lab ID#: 170191  
Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#: 170191 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Olness  
Project ID: 2002-10312  
Sample Name: MW-7

### 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 <=7°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
o-Xylene	J	See J-flag discussion above.
Benzol[g,h,i]perylene	J	See J-flag discussion above.
Dibenz[a,h]anthracene	J	See J-flag discussion above.
Indeno[1,2,3-c]pyrene	J	See J-flag discussion above.

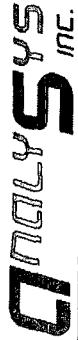
Notes:

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

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

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/29/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	$\mu\text{g/L}$	1	<1	08/30/05	8260b	---	0.4	96.3	94.1	96.7
Ethylbenzene	<1	$\mu\text{g/L}$	1	<1	08/30/05	8260b	---	0.2	104.4	108.2	103
m,p-Xylenes	<2	$\mu\text{g/L}$	2	<2	08/30/05	8260b	---	0.5	104.4	107.8	103.3
o-Xylene	<1	$\mu\text{g/L}$	1	<1	08/30/05	8260b	---	0.5	98.8	95.8	97.2
Toluene	<1	$\mu\text{g/L}$	1	<1	08/30/05	8260b	---	0.2	102.5	102.2	102.8
Acenaphthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	0.6	44.1	103.2	42.8
Anthracene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	5.8	47	92	44.2
Benzo[a]anthracene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzo[a]pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzo[b]fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzo[g,h,i]perylene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	J	13.5	58.1	104.1	60.4
Benzo[j,k]fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/29/05	610 & 8270c	J	15.4	55.7	101.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

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.

*770Lysine*

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: Iain Ohness

Project ID: 2002-10312  
Sample Name: MW-8

Report#/Lab ID#: 170192  
Sample Matrix: water

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA 1**

*G* / *T* *T* *O* *L* *Y* *S* *Y* *S*  
*INC.*

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

Project ID: 2002-10312  
Sample Name: MW-8

Report#/Lab ID#: 170192  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	27.2	15-110	--
2-Fluorobiphenyl	610 & 8270c	34.8	30-110	--
1,2-Dichloroethane-d4	8266b	102	70-130	--
Toluene-d8	8266b	106	80-127	--

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

## Exceptions Report:

Report #/Lab ID#:	170192	Matrix:	water
Client:	Environmental Plus, Inc.	Attn:	Iain Olness
Project ID#:	2002-10312		
Sample Name:	MW-8		

**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
Benzol[g,h]perylene	J	See J-flag discussion above.
Indeno[1,2,3-cd]pyrene	J	See J-flag discussion above.

**Notes:**

**ANALYST**

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

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/29/05	610 & 8270c	---	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/30/05	8260b	---	0.4	96.3	94.1	96.7	96.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	104.4	108.2	103	103
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	---	0.5	104.4	107.8	103.3	103.3
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	---	0.5	98.8	95.8	97.2	97.2
Toluene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	102.5	102.2	102.8	102.8
Acenaphthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	1.2	39.8	94.2	38.5	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	0.6	44.1	103.2	42.8	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	5.8	47	92	44.2	44.2
Benzo[a]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	19.1	55.8	93.5	57.3	57.3
Benzo[al]pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	25.7	57.4	92.8	58.1	58.1
Benzo[b]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.3	60.6	96.3	63.2	63.2
Benzo[g,h,i]perylene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	13.5	58.1	104.1	60.4	60.4
Benzo[j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.1	56.4	87.8	57.6	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	16.5	52.3	85.1	52.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	11.8	48.7	99.3	51.2	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	12.9	51.1	88	48.1	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	3	34.2	81.5	32.8	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	J	15.4	55.7	101.3	58.3	58.3

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

Date 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. M =Matrix interference.

**GTOLY5** *ME.*

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: Iain Olness

Project ID: 2002-10312  
Sample Name: MW-9

Report# /Lab ID#: 170193  
Sample Matrix: water

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/29/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA 1**

**CHROMASYS**

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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.

Attn: Jain Olness

Project ID: 2002-10312  
Sample Name: MW-9

Report#/Lab ID#: 170193  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	37.4	15-110	--
2-Fluorobiphenyl	610 & 8270c	50.1	30-110	--
1,2-Dichloroethane-d4	8260b	98.7	70-130	--
Toluene-d8	8260b	107	80-127	--

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

## Exceptions Report:

Report #/Lab ID#: 170193 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Ohness  
Project ID: 2002-10312  
Sample Name: MW-9

**Sample Temperature/Condition:**  $\leq 6^{\circ}\text{C}$ 

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . 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 (e.g. 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
Benzol[g,h]perylene	J	See J-flag discussion above.
Indeno[1,2,3-cd]pyrene	J	See J-flag discussion above.

**Notes:**

**Analytical Services**

Client: Environmental Plus, Inc.  
 Attn: Iain Olness  
 Address: 2100 Ave. O  
 Eunice,  
 NM 88231

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

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/30/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	08/31/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	12200	$\mu\text{g/L}$	100	<100	08/31/05	8260b	---	0.4	96.3	94.1	96.7
Ethylbenzene	858	$\mu\text{g/L}$	100	<100	08/31/05	8260b	---	0.2	104.4	108.2	103
m,p-Xylenes	856	$\mu\text{g/L}$	200	<200	08/31/05	8260b	---	0.5	104.4	107.8	103.3
o-Xylene	332	$\mu\text{g/L}$	100	<100	08/31/05	8260b	---	0.5	98.8	95.8	97.2
Toluene	1390	$\mu\text{g/L}$	100	<100	08/31/05	8260b	---	0.2	102.5	102.2	102.8
Acenaphthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	J	0.6	44.1	103.2	42.8
Anthracene	0.429	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	5.8	47	92	44.2
Benzo[a]anthracene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzo[a]pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzo[b]fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzo[g,h,i]perylene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	J	13.5	58.1	104.1	60.4
Benzo[j,k]fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	0.698	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	$\mu\text{g/L}$	0.05	<0.05	08/30/05	610 & 8270c	---	15.4	55.7	101.3	58.3

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.

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

Dale Wagner

**GTGOLYSE 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: Tain Ohness

**REPORT OF ANALYSIS-cont.**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	32	µg/L	0.5	<0.5	08/30/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	0.405	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	13.4	54.4	101.3	51.7

**QUALITY ASSURANCE DATA 1**

Project ID:	2002-10312
Sample Name:	MW-10

Report#/Lab ID#: 170194

Sample Matrix: water

*Environmental Plus, Inc.*

Attn: Iain Ohnes

Project ID: 2002-10312  
Sample Name: MW-10

Report# / Lab ID #: 170194  
Sample Matrix: water

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

#### REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 82270c	51.5	15-110	---
2-Fluorobiphenyl	610 & 82270c	44.7	30-110	---
1,2-Dichloroethane-d4	8260b	100	70-130	---
Toluene-d8	8260b	104	80-127	---

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

## Exceptions Report:

Report #/Lab ID#: 170194 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Ohness  
Project ID: 2002-10312  
Sample Name: MW-10

### 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
Acenaphthylene	J	See J-flag discussion above.
Benzol[g,h]perylene	J	See J-flag discussion above.

Notes:

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

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. 2	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/B/N Extraction-PAH	---	---	---	---	08/26/05	3520	---	---	---	---	---
Extractable organics-PAH	---	---	---	---	08/30/05	610 & 8270c	---	---	---	---	---
Volatile organics-8260b/BTEX	---	---	---	---	08/30/05	8260b(5030/5035)	---	---	---	---	---
Benzene	1.48	µg/L	1	<1	08/30/05	8260b	---	0.4	96.3	94.1	96.7
Ethylbenzene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	104.4	108.2	103
m,p-Xylenes	<2	µg/L	2	<2	08/30/05	8260b	---	0.5	104.4	107.8	103.3
o-Xylene	<1	µg/L	1	<1	08/30/05	8260b	---	0.5	98.8	95.8	97.2
Toluene	<1	µg/L	1	<1	08/30/05	8260b	---	0.2	102.5	102.2	102.8
Acenaphthene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	1.2	39.8	94.2	38.5
Acenaphthylene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	0.6	44.1	103.2	42.8
Anthracene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	5.8	47	92	44.2
Benzof[a]anthracene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	19.1	55.8	93.5	57.3
Benzof[a]pyrene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	25.7	57.4	92.8	58.1
Benzol[b]fluoranthene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	16.3	60.6	96.3	63.2
Benzol,g,h,i]perylene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	J	13.5	58.1	104.1	60.4
Benzol,j,k]fluoranthene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	16.1	56.4	87.8	57.6
Chrysene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	16.5	52.3	85.1	52.1
Dibenz[a,h]anthracene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	J	11.8	48.7	99.3	51.2
Fluoranthene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	12.9	51.1	88	48.1
Fluorene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	3	34.2	81.5	32.8
Indeno[1,2,3-cd]pyrene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	J	15.4	55.7	101.3	58.3

QUALITY ASSURANCE DATA 1											
Report#	Lab ID#:	170195	Report Date:	08/31/05							
Project ID#:		2002-10312									
Sample Name:	MW-11										
Sample Matrix:	water										
Date Received:	08/25/2005	Time:	10:00								
Date Sampled:	08/23/2005	Time:	12:30								

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.

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Date Wagner

**GTG** 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: Iain Olness

**REPORT OF ANALYSIS-cont.**

Project ID: 2002-10312  
Sample Name: MW-11

Report#/Lab ID#: 170195  
Sample Matrix: water

**QUALITY ASSURANCE DATA 1**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Naphthalene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	9.4	36.3	98.2	37.8
Phenanthrene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	3.5	45.4	88.5	40.5
Pyrene	<0.05	µg/L	0.05	<0.05	08/30/05	610 & 8270c	---	13.4	54.4	101.3	51.7

# Q770Lysys ME.

Client: Environmental Plus, Inc.  
Attn: Iain Ohness

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Data Qualifiers
1-Fluoronaphthalene	610 & 8270c	33.5	15-110	---
2-Fluorobiphenyl	610 & 8270c	52	30-110	---
1,2-Dichloroethane-d4	8260b	96.8	70-130	---
Toluene-d8	8260b	105	80-127	---

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

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

Project ID: 2002-10312  
Sample Name: MW-11

Report#/Lab ID#: 170195  
Sample Matrix: water

## Exceptions Report:

Report #/Lab ID#: 170195 Matrix: water  
Client: Environmental Plus, Inc. Attr: Iain Olness  
Project ID: 2002-10312  
Sample Name: MW-11

**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
Benzol[g,h]perylene	J	See J-flag discussion above.
Dibenz[a,h]anthracene	J	See J-flag discussion above.
Indeno[1,2,3-cd]pyrene	J	See J-flag discussion above.

**Notes:**

13270

# AnalySys Inc.

4221 Friedrich Lane, Suite 190, Austin, TX 78744  
512-444-5896 FAX: 512-447-4766

2209 N. Padre Island Dr., Corpus Christi, TX 78408

## Chain of Custody Form

Company Name	Environmental Plus, Inc.	ANALYSIS REQUEST									
		BILL TO:									
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	Lovington Deep 6"										
Project Reference	2002-10312										
EPI Sampler Name	George Blackburn										
		SAMPLE I.D.		MATRIX		PRESERV.		SAMPLING			
LAB I.D.											
170212	1 MW-1	G 6 X		X X		X X		23-Aug-05		7:00 X	
170213	2 MW-3	G 6 X		X X		X X		23-Aug-05		7:30 X X	
170214	3 MW-4	G 6 X		X X		X X		23-Aug-05		8:00 X X	
170215	4 MW-5	G 6 X		X X		X X		23-Aug-05		8:30 X X	
	5										
	6										
	7										
	8										
	9										
	10										
Sample relinquished:		Date 8/24/05		Received By: <i>A. Bodish</i>		Time 1630		8/15/05		E-mail results to: <a href="mailto:iolness@envplus.net">iolness@envplus.net</a> and <a href="mailto:cjreynolds@paip.com">cjreynolds@paip.com</a>	
Relinquished by:										REMARKS:	
Delivered by:				Sample Cool & Intact Yes		Checked By: No					

+3.1

13265

# AnalySys Inc.

4221 Friedrich Lane, Suite 190, Austin, TX 78744  
512-444-5896 FAX: 512-447-4766

2209 N. Padre Island Dr., Corpus Christi, TX 78408

## Chain of Custody Form

Company Name	EPI Project Manager	Environmental Plus, Inc.	Bill To:		ANALYSIS REQUEST										
Mailing Address	Iain Olness	P.O. BOX 1558													
City, State, Zip	Eunice New Mexico 88231	505-394-3481 / 505-394-2601													
EPI Phone#/Fax#															
Client Company	Plains All American														
Facility Name	Lovington Deep 6"														
Project Reference	2002-10312														
EPI Sampler Name	George Blackburn														
LAB I.D.	SAMPLE I.D.		MATRIX	PRESERV.	SAMPLING										
						DATE	TIME								
170190	1 MW-6	G 6 X	X X	23-Aug-05	9:00	X									
170191	2 MW-7	G 6 X	X X	23-Aug-05	9:30	X									
170192	3 MW-8	G 6 X	X X	23-Aug-05	10:00	X									
4															
5															
6															
7															
8															
9															
10															
			Date: 8/24/05	Received By:	E-mail results to: ioness@envplus.net and cjreynolds@paalp.com										
			Time: 1630	Received By: (lab staff)	REMARKS:										
Delivered by:			Date	Time											
			Sample Cool & Intact Yes	No	Checked By:										

+ = 3.1

3266

Analysys Inc.

4221 Freidrich Lane, Suite 190, Austin, TX 78744  
512-444-5896 FAX: 512-447-4766

2209 N Padre Island Dr Corpus Christi TX 78408

Chain of Custody Form

**2209 N Padre Island Dr Corpus Christi TX 78408**

# AnaLyS<sup>y</sup>s 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: Ian Ohness  
 Address: 2100 Ave. O  
 Eunice,  
 NM 88231  
 Phone: (505) 394-3481 FAX: (505) 394-2601

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	12/01/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/01/05	8260b	---	3.3	100.9	105	103.3
Ethylbenzene	<1	µg/L	1	<1	12/01/05	8260b	---	7.8	109.7	117.2	111.2
m,p-Xylenes	<2	µg/L	2	<2	12/01/05	8260b	---	7.2	108.2	116.2	109.1
o-Xylene	<1	µg/L	1	<1	12/01/05	8260b	---	8.5	108	118.4	111
Toluene	<1	µg/L	1	<1	12/01/05	8260b	---	6.6	108.8	115.7	112

This analytical report is respectfully submitted by AnaLyS<sup>y</sup>s, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnaLyS<sup>y</sup>s, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnaLyS<sup>y</sup>s, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnaLyS<sup>y</sup>s, Inc.

  
 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 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.

Report#/Lab ID#: 173959	Report Date: 12/06/05
Project ID#: 2002-10312 Lovington Deep 6'	
Sample Name: MW-1	
Sample Matrix: water	
Date Received: 11/23/2005	Time: 10:30
Date Sampled: 11/22/2005	Time: 08:30

## QUALITY ASSURANCE DATA 1

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	12/01/05	8260b(5030/5035)	---	---	---	---	---

# CHROMYSSES

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.	Project ID: 2002-10312 Lovington Deep 6"	Report# / Lab ID#: 173959
Attn: Iain Ohnes	Sample Name: MW-1	Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.8	70-130	12/01/05	--
Toluene-d8	8260b	92.9	80-127	12/01/05	--

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

**AnalySys**  
mC.

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: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	8260b(5030/5035)	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	12/02/05	8260b	---	---	---	---	---	---
Benzene	997.0	µg/L	200	<200	12/02/05	8260b	---	3.3	100.9	105	103.3	---
Ethylbenzene	586	µg/L	5	<5	12/02/05	8260b	---	7.8	109.7	117.2	111.2	---
m,p-Xylenes	44.6	µg/L	10	<10	12/02/05	8260b	---	7.2	108.2	116.2	109.1	---
o-Xylene	109	µg/L	5	<5	12/02/05	8260b	---	8.5	108	118.4	111	---
Toluene	486	µg/L	5	<5	12/02/05	8260b	---	6.6	108.8	115.7	112	---

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Richard Elton

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Report#/ <u>Lab ID#:</u> 173960	Report Date: 12/06/05
Project ID: 2002-10312 Lovington Deep 6'	
Sample Name: MW-3	
Sample Matrix: water	
Date Received: 11/23/2005	Time: 10:30
Date Sampled: 11/22/2005	Time: 09:00

**CHROMASYS**

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.	Project ID:	2002-10312 Lovington Deep 6"	Report# /Lab ID#:	173960
Attn:	Iain Olness	Sample Name:	MW-3	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	97.6	70-130	12/02/05	---
Toluene-d8	8260b	96.4	80-127	12/02/05	---

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

**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: Iain Ohness  
Address: 2100 Ave. O  
Eunice,  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	12/01/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/01/05	8260b	---	3.3	100.9	105	103.3	---
Ethylbenzene	<1	µg/L	1	<1	12/01/05	8260b	---	7.8	109.7	117.2	111.2	---
m,p-Xylenes	<2	µg/L	2	<2	12/01/05	8260b	---	7.2	108.2	116.2	109.1	---
o-Xylene	<1	µg/L	1	<1	12/01/05	8260b	---	8.5	108	118.4	111	---
Toluene	<1	µg/L	1	<1	12/01/05	8260b	---	6.6	108.8	115.7	112	---

**QUALITY ASSURANCE DATA 1**

Sample Name:	MW-4	Report Date:	12/06/05
Project ID#:	173961	Report Date:	12/06/05
Project ID#:	2002-10312 Lovington Deep 6"	Time:	10:30
Sample Matrix:	water	Time:	09:30

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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.	Project ID:	2002-10312 Lovington Deep 6"	Report#/Lab ID#:	173961
Attn:	Iain Olness	Sample Name:	MW-4	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.5	70-130	12/01/05	---
Toluene-d8	8260b	92.7	80-127	12/01/05	---

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

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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:** Iain Ohness  
**Address:** 2100 Ave. O  
Eunice,  
  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	12/01/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<	12/01/05	8260b	---	3.3	100.9	105	103.3
Ethylbenzene	<1	µg/L	1	<	12/01/05	8260b	---	7.8	109.7	117.2	111.2
m,p-Xylenes	<2	µg/L	2	<	12/01/05	8260b	---	7.2	108.2	116.2	109.1
o-Xylene	<1	µg/L	1	<	12/01/05	8260b	---	8.5	108	118.4	111
Toluene	<1	µg/L	1	<	12/01/05	8260b	---	6.6	108.8	115.7	112

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Richard Elton

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Report#/ <b>Lab ID#:</b> 173962	Report Date: 12/06/05
Project ID#:	2002-10312 Lovington Deep 6"
Sample Name:	MW-5
Sample Matrix:	water
Date Received:	11/23/2005
Date Sampled:	11/22/2005
Time:	10:30
Time:	10:00

**Catalysis 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: Iain Olness	Project ID: 2002-10312 Lovington Deep 6" Sample Name: MW-5	Report# /Lab ID#: 173962 Sample Matrix: water
---	---	--

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	91.1	70-130	12/01/05	---
Toluene-d8	8260b	93	80-127	12/01/05	---

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

**AnalySys**  
17E.

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: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
NM 88231  
Phone: (505) 394-3481 FAX: (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	8260b/5030/5035	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	12/01/05	8260b	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/01/05	8260b	---	3.3	100.9	105	103.3	
Ethylbenzene	<1	µg/L	1	<1	12/01/05	8260b	---	7.8	109.7	117.2	111.2	
m,p-Xylenes	<2	µg/L	2	<2	12/01/05	8260b	---	7.2	108.2	116.2	109.1	
o-Xylene	<1	µg/L	1	<1	12/01/05	8260b	---	8.5	108	118.4	111	
Toluene	<1	µg/L	1	<1	12/01/05	8260b	---	6.6	108.8	115.7	112	

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Report#/Lab ID#:	173963	Report Date:	12/06/05
Project ID#:	2002-10312 Lovington Deep 6"		
Sample Name:	MW-6		
Sample Matrix:	water		
Date Received:	11/23/2005	Time:	10:30
Date Sampled:	11/22/2005	Time:	10:30

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
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Client: Environmental Plus, Inc. Attn: Iain Olness	Project ID: 2002-10312 Lovington Deep 6" Sample Name: MW-6	Report# /Lab ID#: 173963 Sample Matrix: water
---	---	--

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	87.3	70-130	12/01/05	---
Toluene-d8	8260b	93.6	80-127	12/01/05	---

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

# AnalySys<sup>TM</sup>

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		12/01/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/01/05	8260b	---	3.3	100.9	105	103.3
Ethylbenzene	<1	µg/L	1	<1	12/01/05	8260b	---	7.8	109.7	117.2	111.2
m,p-Xylenes	<2	µg/L	2	<2	12/01/05	8260b	---	7.2	108.2	116.2	109.1
o-Xylene	<1	µg/L	1	<1	12/01/05	8260b	---	8.5	108	118.4	111
Toluene	<1	µg/L	1	<1	12/01/05	8260b	---	6.6	108.8	115.7	112

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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: Iain Olness	Project ID: 2002-10312 Lowington Deep 6" Sample Name: MW-7	Report#/Lab ID#: 173964 Sample Matrix: water
---	---	---

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	91.5	70-130	12/01/05	---
Toluene-d8	8260b	91.7	80-127	12/01/05	---

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

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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: Iain Olness  
Address: 2100 Ave. O  
Eunice,  
Phone: (505) 394-3481 FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	12/02/05	8260b(5030/5035)	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/02/05	8260b	---	6.3	113.5	116.3	112.8
Ethylbenzene	<1	µg/L	1	<1	12/02/05	8260b	---	6.2	111.7	113.8	108.6
m,p-Xylenes	<2	µg/L	2	<2	12/02/05	8260b	---	6.8	109.9	111.3	107.8
o-Xylene	<1	µg/L	1	<1	12/02/05	8260b	---	1.2	115.1	104.5	111.8
Toluene	<1	µg/L	1	<1	12/02/05	8260b	---	9.6	113.2	119.1	111

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Report#/ <b>Lab ID#:</b>	173965	<b>Report Date:</b>	12/06/05
Project ID#:	2002-10312 Lovington Deep 6"		
Sample Name:	MW-8		
Sample Matrix:	water		
Date Received:	11/23/2005	Time:	10:30
Date Sampled:	11/22/2005	Time:	11:30

**CHIQUROS**

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.	Project ID:	2002-10312 Lovington Deep 6"	Report# /Lab ID#:	173965
Attn:	Iain Ohness	Sample Name:	MW-8	Sample Matrix:	water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	116	70-130	12/02/05	---
Toluene-d8	8260b	118	80-127	12/02/05	---

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

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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: Iain Ohness  
 Address: 2100 Ave. O  
 Eunice,  
 NM 88231  
 Phone: (505) 394-3481      FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. 2	Recov. 3	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	12/02/05	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/02/05	8260b	---	6.3	113.5	116.3	112.8
Ethylbenzene	<1	µg/L	1	<1	12/02/05	8260b	---	6.2	111.7	113.8	108.6
m,p-Xylenes	<2	µg/L	2	<2	12/02/05	8260b	---	6.8	109.9	111.3	107.8
o-Xylene	<1	µg/L	1	<1	12/02/05	8260b	---	1.2	115.1	104.5	111.8
Toluene	<1	µg/L	1	<1	12/02/05	8260b	---	9.6	113.2	119.1	111

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Report#/ <b>Lab ID#:</b> 173966	<b>Report Date:</b> 12/06/05
<b>Project ID:</b> 2002-10312 Lovington Deep 6"	
Sample Name: MW-9	
Sample Matrix: water	
Date Received: 11/23/2005	Time: 10:30
Date Sampled: 11/22/2005	Time: 12:30

# Analysts 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: Iain Olness

Project ID: 2002-10312 Lovington Deep 6"  
Sample Name: MW-9

Report#/Lab ID#: 173966  
Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	113	70-130	12/02/05	---
Toluene-d8	8260b	115	80-127	12/02/05	---

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

# AnalySys Inc.

3512 Montopolis Drive, Austin, TX 78744 &  
2289 N. Padre Island Dr., Corpus Christi, TX 78498  
(512) 385-5886 • FAX (512) 385-7411

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

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	12/02/05	8260b(5030/5035)	---	---	---	---	---
Benzene	116	µg/L	1	<1	12/02/05	8260b	---	6.3	113.5	116.3	112.8
Ethylbenzene	578	µg/L	1	<1	12/02/05	8260b	---	6.2	111.7	113.8	108.6
m,p-Xylenes	384	µg/L	2	<2	12/02/05	8260b	---	6.8	109.9	111.3	107.8
o-Xylene	358	µg/L	1	<1	12/02/05	8260b	---	1.2	115.1	104.5	111.8
Toluene	889	µg/L	1	<1	12/02/05	8260b	---	9.6	113.2	119.1	111

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

  
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.

Report#/ <b>Lab ID#:</b> 173967	Report Date: 12/06/05
Project ID: 2002-10312 Lovington Deep 6"	
Sample Name: MW-10	
Sample Matrix: water	
Date Received: 11/23/2005	Time: 10:30
Date Sampled: 11/22/2005	Time: 12:00

**Catalysis 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.	Project ID: 2002-10312 Lovington Deep 6"	Report# /Lab ID#: 173967
Attn: Iain Olness	Sample Name: MW-10	Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	128	70-130	12/02/05	---
Toluene-d8	8260b	124	80-127	12/02/05	---

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

**AnalySys Inc.**3512 Montopolis Drive, Austin, TX 78744 &  
2269 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,  
Phone: (505) 394-3481  
FAX: (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	---	12/02/05	8260b(5030/5035)	---	---	---	---	---
Benzene	1.13	µg/L	1	<1	12/02/05	8260b	---	6.3	113.5	116.3	112.8
Ethylbenzene	<1	µg/L	1	<1	12/02/05	8260b	J	6.2	111.7	113.8	108.6
m,p-Xylenes	<2	µg/L	2	<2	12/02/05	8260b	J	6.8	109.9	111.3	107.8
o-Xylene	<1	µg/L	1	<1	12/02/05	8260b	J	1.2	115.1	104.5	111.8
Toluene	<1	µg/L	1	<1	12/02/05	8260b	J	9.6	113.2	119.1	111

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. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

  
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.

Report#/ <b>Lab ID#:</b> 173968	<b>Report Date:</b> 12/06/05
<b>Project ID:</b> 2002-10312 Lovington Deep 6"	
Sample Name: MW-11	
Sample Matrix: water	
Date Received: 11/23/2005	Time: 10:30
Date Sampled: 11/22/2005	Time: 13:00

# CHROMASYS

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.	Project ID: 2002-10312 Lovington Deep 6"	Report#/Lab ID#: 173968
Attn: Iain Olness	Sample Name: MW-11	Sample Matrix: water

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyze	Data Qualifiers
1,2-Dichloroethane-d4	8260b	122	70-130	12/02/05	---
Toluene-d8	8260b	123	80-127	12/02/05	---

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

## Exceptions Report:

Report #/Lab ID#: 173968 Matrix: water  
Client: Environmental Plus, Inc. Attn: Iain Olness  
Project ID: 2002-10312 Livingston Deep 6"  
Sample Name: MW-11

### 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.
m,p-Xylenes	J	See J-flag discussion above.
o-Xylene	J	See J-flag discussion above.
Toluene	J	See J-flag discussion above.

Notes:

AnalySys Inc.

*4221 Freidrich Lane, Suite 190, Austin, TX 78744  
512-444-5896 FAX: 512-447-4766*

**2209 N. Padre Island Dr., Corpus Christi, TX 78408**

Chain of Custody Form

## **APPENDIX B**

**NMOCD *Stage 1 and Stage 2 Abatement Plan***  
**Approval Letter (April 13, 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 13, 2005

Ms. Camille Reynolds  
Plains Marketing, L.P.  
3112 West Hwy 82  
Lovington, NM 88260

Re: Plains All American Pipeline, L.P.  
Stage 1 and Stage 2 Abatement Plan  
Revision #1 for the  
Lovington Deep 6" Site (Ref. #2002-10312)  
NMOCD Ref. # AP-037  
SE/4 NE/4 of Section 6, T17S, R36E  
Lea County New Mexico

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the above report. This report is hereby approved with the following understandings and conditions:

1. The Hobbs NMOCD office will be notified at least 72 hours in advance of all sampling events.
2. In reference to section 5.5.7 of the plan, it has been determined that the public notice requirements of NMOCD Rule 19 have been previously met and no further action regarding this section of the plan is required.
3. All references to "Link" or "Link Energy" in the plan are understood to mean Plains All American Pipeline, L.P. (Plains).
4. All contaminated materials will be disposed of at an NMOCD-approved surface waste management facility.
5. Per section 4.3.5.3 of the report, it is understood that Plains intends to install additional monitor wells at the site. Plains will submit a report, and obtain NMOCD approval, showing the locations of the proposed wells prior to installation.
6. Per section 5.5 of the report, it is understood that Plains will aggressively recover phase-separated hydrocarbons from the groundwater using an eductor type circulating recovery system, and that contaminated groundwater will be remediated using groundwater sparging until groundwater is remediated to levels below NMOCD regulatory limits.
7. Quarterly monitoring reports mentioned in section 5.5.6 of the report will include a recap of all other activities at the site for the previous quarter and include any analyses of soils as may

have been necessary. Substitute the word annual for quarterly in this section. The NMOCD feels that annual reports will be sufficient to monitor the progress at the site.

8. Section 5.2.2 of the report describes the construction and installation of a clay barrier to prevent further migration of contaminants by isolating the remaining source. Plains will notify the Hobbs NMOCD office 72 hours in advance of the commencement of the installation of the clay barrier, and will subsequently notify the Hobbs NMOCD office 72 hours in advance of any backfilling operations at the site.

NMOCD approval of this plan does not relieve Plains from liability should its operations at this site prove insufficient to protect groundwater, human 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 Ed Martin at (505) 476-3492 or [emartin@state.nm.us](mailto:emartin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION



Roger C. Anderson  
Environmental Bureau Chief

Cc: NMOCD, Hobbs  
Patrick B. McMahon of Heidel, Samberson, Newell, Cox & McMahon  
Pat McCasland, Environmental Plus, Inc.

## **APPENDIX C**

**NMOCD *Annual Monitoring Report* Recommendations  
Approval Letter (April 6, 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 6, 2005

Ms. Camille Reynolds  
Plains All American Pipeline, L.P.  
P.O. Box 3119  
Midland, TX 79702-3119

Re: Annual Monitoring Report  
Plains All American Pipeline  
Lovington Deep 6 (Ref. #2002-10312)  
UL-H, Section 6, T17S, R36E  
Lea County, New Mexico  
NMOCD Ref. 1R-0383

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the report shown above. Please refer to the "Recommendations" section VIII of the report for the following:

1. Item #1 - Approved, with the understanding that a more aggressive phase-separated hydrocarbon recovery system will be installed as described in Part 5.5 of the revised Stage 1 and Stage 2 Abatement Plan, dated August 2004.
2. Item #2 - This will be superseded by Part 5.5.6 of the Stage 1-2 Abatement Plan.
3. Item #3 - Same
4. Item #4 - Approved with the understanding that the Stage 1-2 Abatement Plan will be updated accordingly.
5. Item #5 - No backfilling activities are to take place until a final soil closure report is submitted showing the sample results of the excavation as it exists at that time and sample results of the backfill material.

If you have any questions contact me at (505) 476-3492 or [smartin@state.nm.us](mailto:smartin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin  
Environmental Bureau

cc: NMOCD, Hobbs

## **APPENDIX D**

**NMOCD *Soil Closure Report* Recommendations**  
**Approval Letter (October 20, 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

October 20, 2005

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

Re: Plains Pipeline Soil Closure Report Dated September 16, 2005  
Lovington Deep 6" Release Site  
EMS No. 2002-10312  
SE/4 NE/4 Section 6, Township 17 South, Range 36 East  
NMOCD Reference AP-037

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the report shown above submitted on behalf of Plains Pipeline, L.P. (Plains) by Environmental Plus, Inc. This report is approved with the following understanding and conditions:

1. The soil phase at this site can be closed, and the barrier proposed in the Stage 1 and Stage 2 Abatement Plan Revision #1 dated August 2004 (Abatement Plan) may be installed.
2. The excavation may then be backfilled utilizing the stockpiled soils.
3. Plains' recommendation that the sampling strategy outlined in the Abatement Plan be suspended is not approved. Such sampling shall be completed prior to installation of the barrier.
4. Successful completion of the sampling required, installation of the barrier, backfilling and installation of the covering cap shall be described in the next annual report for this site.

NMOCD approval of this report does not relieve Plains of future liability at this site should its operations further harm to the environment. Nor does it relieve Plains of its responsibility to comply with the rules and regulations of any other local, state or federal governmental entity.

If you have any questions, contact me at (505) 476-3492 or [ed.martin@state.nm.us](mailto:ed.martin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Ed Martin".

Edwin E. Martin  
Environmental Bureau

Copy: NMOCD, Hobbs, NM

**APPENDIX E**

**INFORMATIONAL COPIES OF  
SITE INFORMATION AND METRICS FORM  
AND  
INITIAL C-141**

EOTT Energy Pipeline Site Information and Metrics		Incident Date and NMOCD Notified?: Discovered 12-12-02      NMOCD verbally notified on 12-12-02		
SITE: Lovington Deep 6"		Assigned Site Reference #: #		
Company: EOTT Energy Pipeline				
Street Address: 5805 East Highway 80				
Mailing Address: P.O. Box 1660				
City, State, Zip: Midland, Texas 79703				
Representative: Frank Hernandez, District Environmental Supervisor				
Representative Telephone: 915.638.3799				
Telephone:				
Fluid volume released (bbls): 25 bbls		Recovered (bbls): 10		
>25 bbls : Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)				
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)				
Leak, Spill, or Pit (LSP) Name: Lovington Deep 6"				
Source of contamination: 6" Steel Crude Oil Pipeline				
Land Owner, i.e., BLM, ST, Fee, Other: Darr Angell				
LSP Dimensions 140' X 75'				
LSP Area: Spill Area ~6,000 ft <sup>2</sup>				
Location of Reference Point (RP)				
Location distance and direction from RP				
Latitude: 32° 52' 1.132"N				
Longitude: 103° 23' 16.570"W				
Elevation above mean sea level: ~3,918 'amsl				
Feet from South Section Line				
Feet from West Section Line				
Location- Unit or ¼: UL-H SE ¼ of the NE ¼				
Location- Section: 6				
Location- Township: 17S				
Location- Range: 36E				
Surface water body within 1000 ' radius of site: None				
Domestic water wells within 1000' radius of site: None				
Agricultural water wells within 1000' radius of site: None				
Public water supply wells within 1000' radius of site: None				
Depth from land surface to ground water (DG) ~50.0'below ground surface				
Depth of contamination (DC) - ?				
Depth to ground water (DG - DC = DtGW) - to be determined				
1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body		
If Depth to GW <50 feet: 20 points	If <1000' from water source, or; <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points		
If Depth to GW 50 to 99 feet: 10 points		200-100 horizontal feet: 10 points		
If Depth to GW >100 feet: 0 points	If >1000' from water source, or; >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points		
Ground water Score = 20	Wellhead Protection Area Score= 0	Surface Water Score= 0		
Site Rank (1+2+3) = 20				
Total Site Ranking Score and Acceptable Concentrations				
Parameter	>19 (Surface to 50.0'bgs)	10-19	(0-9)	
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm	
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm	
TPH	100 ppm	1000 ppm	5000 ppm	

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis

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

Form C-141  
Revised March 17, 1999

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

**Release Notification and Corrective Action**

**OPERATOR "INFORMATION ONLY NON-REPORTABLE"**  Initial Report  Final Report

Name of Company  EOTT Energy Pipeline	Contact  Frank Hernandez
Address  5805 East Highway 80 / P.O. Box 1660, Midland, TX 79703	Telephone No.  915.638.3799
Facility Name:  Lovington Deep 6"	Facility Type  Crude Oil Pipeline

Surface Owner  Darr Angell	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: Lea Lat.: 32°52'1.132"N Lon:103°23'16.570"W
H	6	17S	36E					

**NATURE OF RELEASE**

Type of Release  Crude Oil	Volume of Release  25 bbls	Volume Recovered  10 bbls
Source of Release  6" steel pipeline	Date and Hour of Occurrence  12-12-02 8:00 AM	Date and Hour of Discovery  12-12-02 10:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Paul Sheeley and Sylvia Dickie, Hobbs NMOCD (left messages) Confirmed with Sylvia Dickie at 11:45 AM 12-12-02	
By Whom?  Pat McCasland (Environmental Plus, Inc.)	Date and Hour: NMOCD notified on 12-12-02 10:30 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

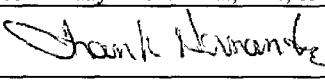
Describe Cause of Problem and Remedial Action Taken.\*

The cause of the leak was internal/external corrosion. The contaminated soil was stockpiled on a plastic barrier. Disposing at South Monument SWF

Describe Area Affected and Cleanup Action Taken.\*

Spill Area = ~6,000 ft<sup>2</sup> Near surface soil will be characterized in accordance with 40 CFR 261 and with NMOCD approval, disposed of in a NMOCD approved facility. The site will be delineated and remediated.

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:  	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Frank Hernandez	Approved by District Supervisor:	
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: December 12, 2002	Phone: 915.638.3799	Conditions of Approval: <input type="checkbox"/> Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary