3R - 213

ANNUAL MONITORING REPORTS

DATE: 3/2006

2005 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I

RECEIVED
MAR 17 2006
Oil Conservation Division
Environmental Bureau

EL PASO TENNESSEE PIPELINE COMPANY

TABLE OF CONTENTS

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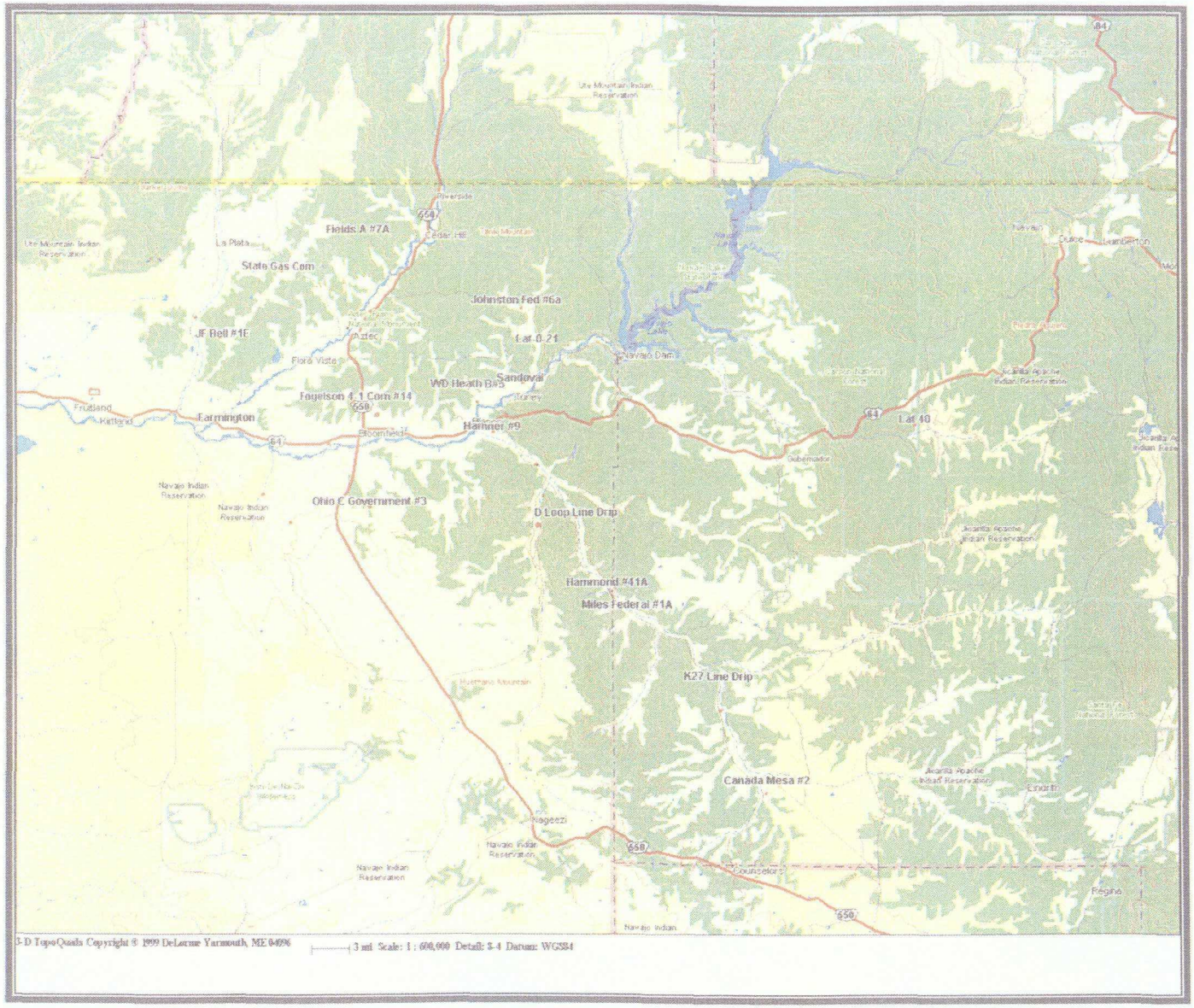
MWH
MONTGOMERY WATSON HARZA

LIST OF ACRONYMS

B	benzene
btoc	below top of casing
E	ethylbenzene
EPFS	El Paso Field Services
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitoring well
PSH	phase-separated hydrocarbons
NMWQCC	New Mexico Water Quality Control Commission
T	toluene
TOC	top of casing
NA	not applicable
NE	not established
NM	not measured
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
ppb	parts per billion
µg/L	micrograms per liter
X	total xylenes

Federal Groundwater Site Map



EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT

3R213

Lat 0-21 Line Drip
Meter Code: LD151

SITE DETAILS

Legal Description:	**Town:**	30N	**Range:**	9W	**Sec:** 12	**Unit:**	O
NMOCD Haz Ranking:	40	**Land Type:**	Federal	**Operator:**	Enterprise		

PREVIOUS ACTIVITIES

Site Assessment:	1/95	**Excavation:**	1/95	**Soil Boring:**	10/95
Monitor Well:	10/95	**Geoprobe:**	11/96	**Additional MWs:**	7/00
Downgradient MWs:	7/00	**Replace MW:**	NA	**Quarterly Initiated:**	11/96
ORC Nutrient Injection:	NA	**Re-Excavation:**	NA	**PSH Removal Initiated:**	NA
Annual Initiated:	5/97	**Quarterly Resumed:**	NA		

SUMMARY OF 2005 ACTIVITIES

MW-1: Semi-annual groundwater sampling and water level monitoring (April and October) were performed during 2005.

MW-2: Semiannual water level monitoring (April and June) was performed during 2005.

MW-3: Semi-annual groundwater sampling and water level monitoring (April and October) were performed during 2005.

Site-Wide Activities: The need for additional investigation was evaluated. A plan was developed to gather additional information to include down gradient sources, natural attenuation potential, and potential modeling was performed for this site in 2005. Right of way permits and access grants for geoprobe investigation were procured in 2005; right of way permit and access grant applications for additional monitoring well installation were prepared for submission in 2006.

SITE MAP

Site maps (April, October, and showing the location of MW-4) are attached in Figures 1, 2, and 3.

Lat 0-21 Line Drip
Meter Code: LD151

SUMMARY TABLES AND GRAPHS

- Analytical data for 2005 are summarized in Table 1, and historic data are presented graphically in Figures 4 through 6.
- Free-product recovery data from 2005 are summarized in Table 2, and historic data are presented graphically in Figures 7 and 8.
- The laboratory report is presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2005.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station. Phase separated hydrocarbons are stored in a 55 gallon drum and are periodically picked up by Mesa Oil for recycling.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this site, however, the attached site maps present the water level and analytical data collected during 2005.

CONCLUSIONS

- Groundwater flow is toward the southeast at this site.
- Free-product was not detected in MW-1 or MW-3 in 2005, and only minimal amounts of product were removed in 2002 and 2003.
- The BTEX sample from MW-1 exceeded the standard for benzene (66.6 µg/L), and all other parameters were below standards in April, however in the October sample, the BTEX concentration was below NMWQCC standards. This represents a significant decrease since the high benzene concentration of 5,380 µg/L in 1997.
- BTEX concentrations in MW-3 were all below standards in 2005, demonstrating an overall decline in concentrations since 2000 when the benzene concentration was 190 µg/L.
- Site-wide decreases in BTEX concentrations provide evidence that natural attenuation is occurring at the site.

RECOMMENDATIONS

- EPTPC recommends semi-annual (April and October) water level monitoring at MW-1, MW-2 and MW-3.

- Assuming that free-product does not return to MW-1 or MW-3, EPTPC recommends that MW-1 and MW-3 continue to be sampled on a semi-annual basis in 2006. As concentrations approach standards, these wells will be sampled quarterly until BTEX concentrations are below NMWQCC standards for four consecutive quarters, at which time this site will be submitted for closure.

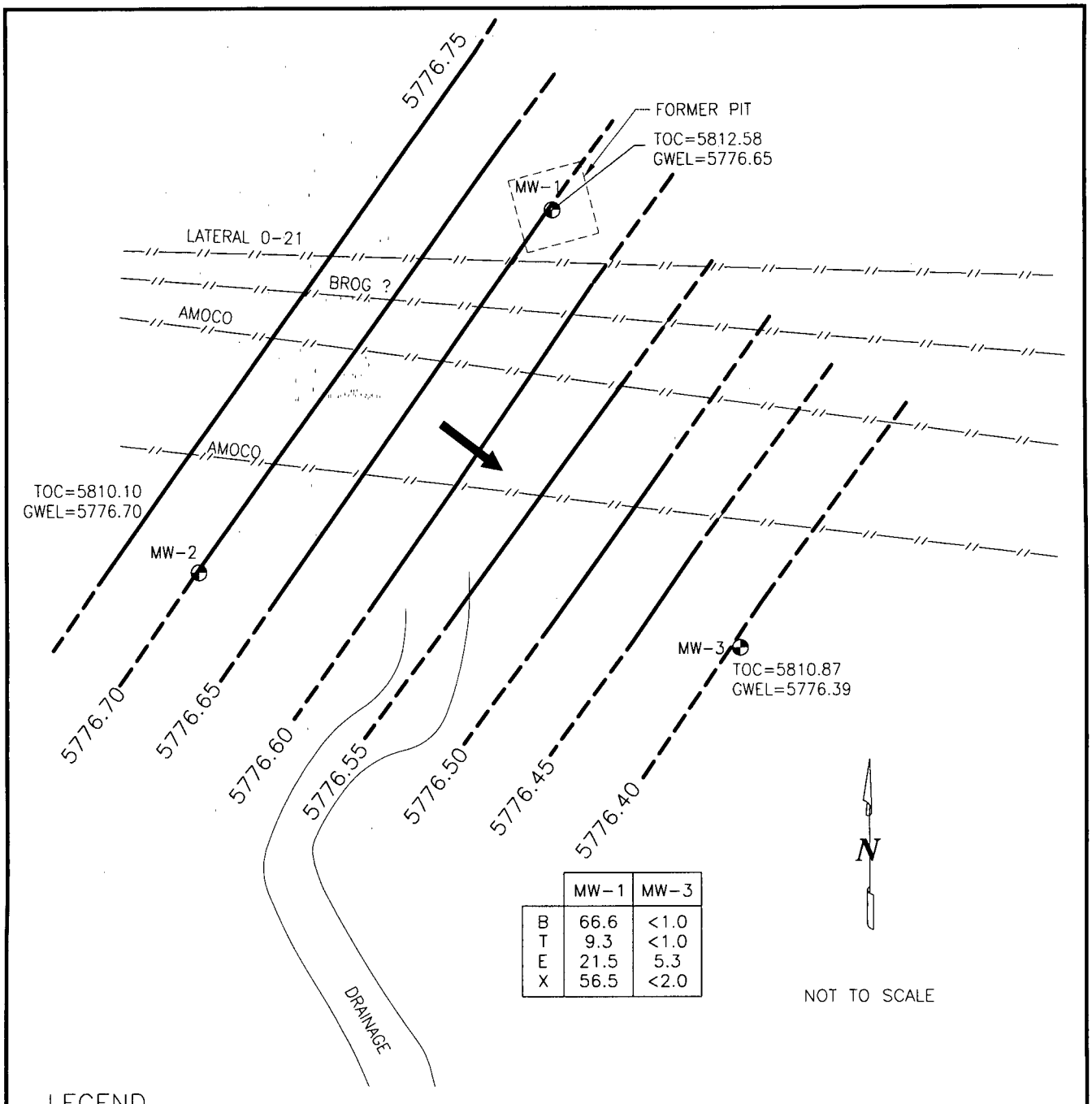
- Because BTEX concentrations at MW-2 have remained below closure criteria, EPTPC recommends that this well not be sampled again until closure.

- In order to assess potential upgradient sources and the extent of contamination, EPTPC will perform a geoprobe investigation in January 2006 (shown on Figure 3).

- Depending on the results of the geoprobe investigation, EPTPC will attempt to install MW-4, east of MW-1 to help define the extent of contamination at this site in March 2006.

- If installation of MW-4 is successful, EPTPC will perform slug testing at this well to assess hydraulic conductivity at this site.

- MW-2 will be sampled for parameters to assess natural attenuation potential in March 2006.



	MW-1	MW-3
B	66.6	<1.0
T	9.3	<1.0
E	21.5	5.3
X	56.5	<2.0

LEGEND

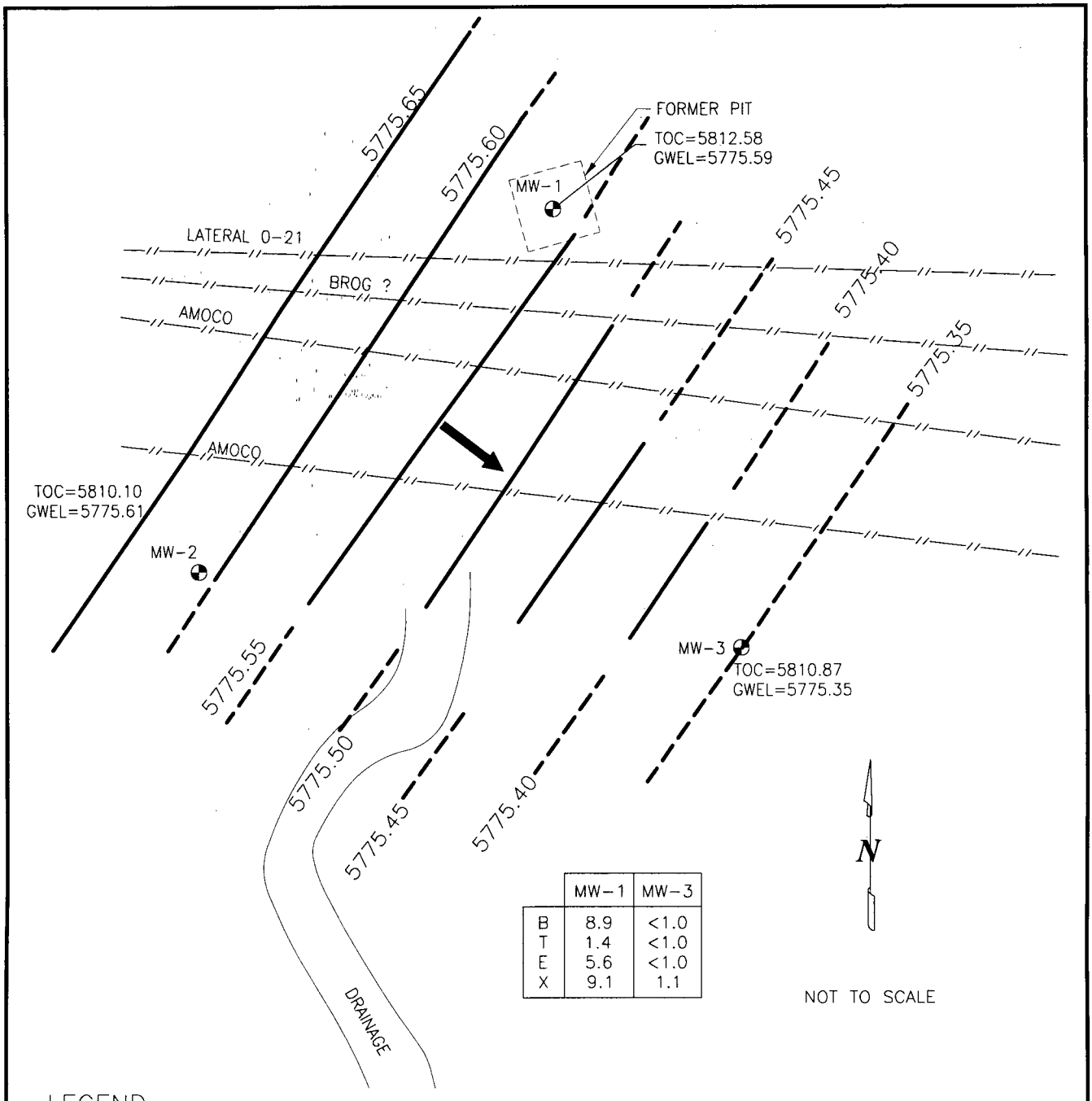
MW-1	Approximate Monitoring Well Location and Number
——//——//——	Pipe Line
B	Benzene (μg/L)
T	Toluene (μg/L)
E	Ethylbenzene (μg/L)
X	Total Xylenes (μg/L)
5777	Potentiometric Surface (Approximate & Assumed Where Dashed)
→	Direction of Groundwater Flow (Estimated)
GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing

LATERAL 0-21 LINE DRIP, LD151
APRIL 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1

lat1021 4_05.dwg



	MW-1	MW-3
B	8.9	<1.0
T	1.4	<1.0
E	5.6	<1.0
X	9.1	1.1

LEGEND

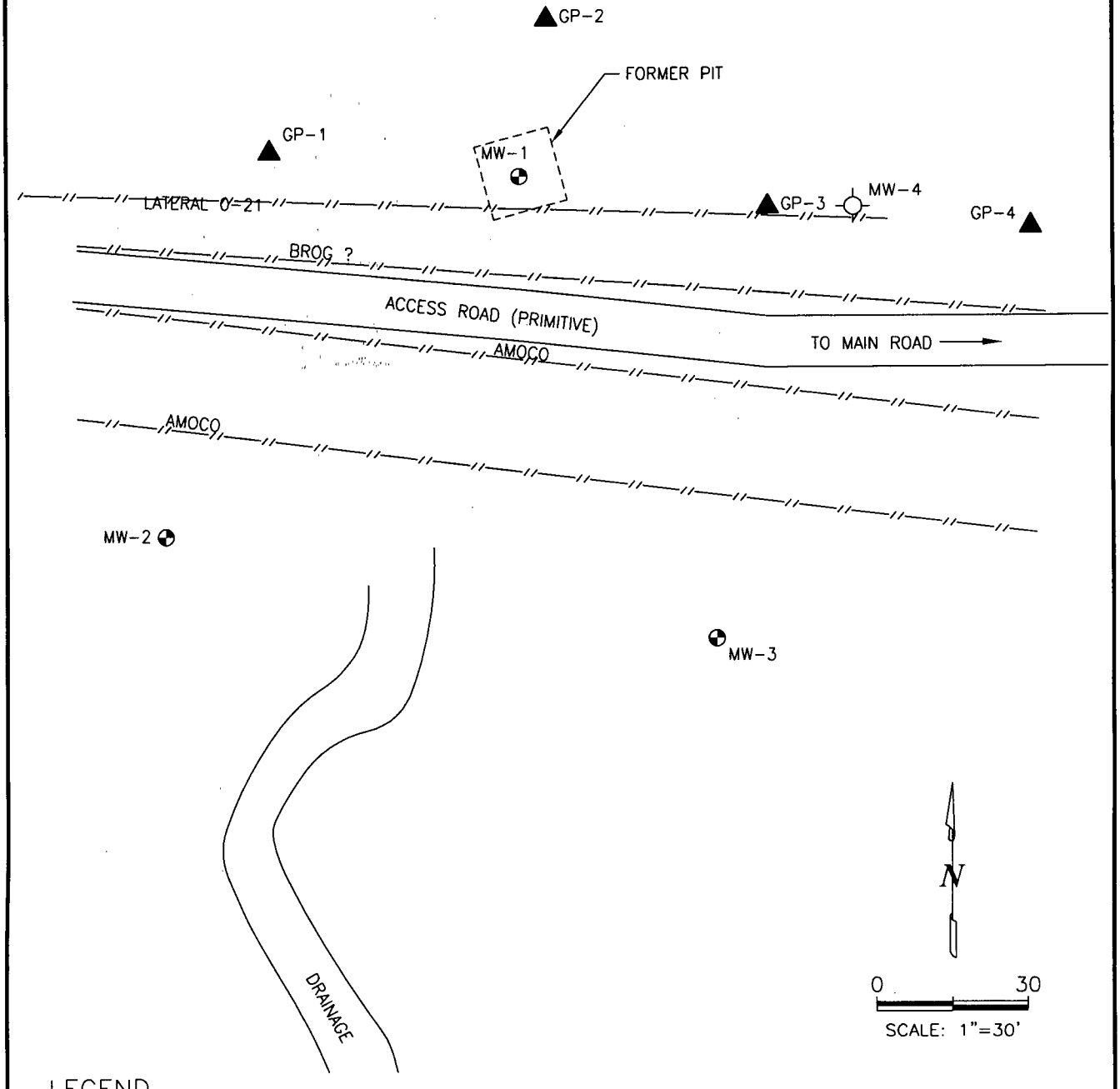
MW-1	Approximate Monitoring Well Location and Number
——//——//——	Pipe Line
B	Benzene (µg/L)
T	Toluene (µg/L)
E	Ethylbenzene (µg/L)
X	Total Xylenes (µg/L)
5777	Potentiometric Surface (Approximate & Assumed Where Dashed)
→	Direction of Groundwater Flow (Estimated)
GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing

LATERAL 0-21 LINE DRIP, LD151
OCTOBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 2

lat1021 10_05.dwg



LEGEND

⊕	MW-1	Approximate Monitoring Well Location and Number
⊙	MW-4	Proposed New Monitoring Well/Boring Location and Number
▲	MW-1	Proposed Geoprobe Location
//—//		Pipeline

lat1021 9_05.dwg

LATERAL O-21 LINE DRIP, LD151
PROPOSED NEW MONITORING WELL LOCATION

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 3

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
LAT O-21 LINE DRIP (METER #LD151)

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet btoc)
Lat 0-21 Line Drip	4/18/05	MW-1	66.6	9.3	21.5	56.5	35.93
Lat 0-21 Line Drip	10/25/05	MW-1	8.9	1.4	5.6	9.1	36.99
Lat 0-21 Line Drip	4/18/05	MW-3	1	1	5.3	2	34.48
Lat 0-21 Line Drip	10/25/05	MW-3	1	1	1	1.1	35.52

TABLE 2

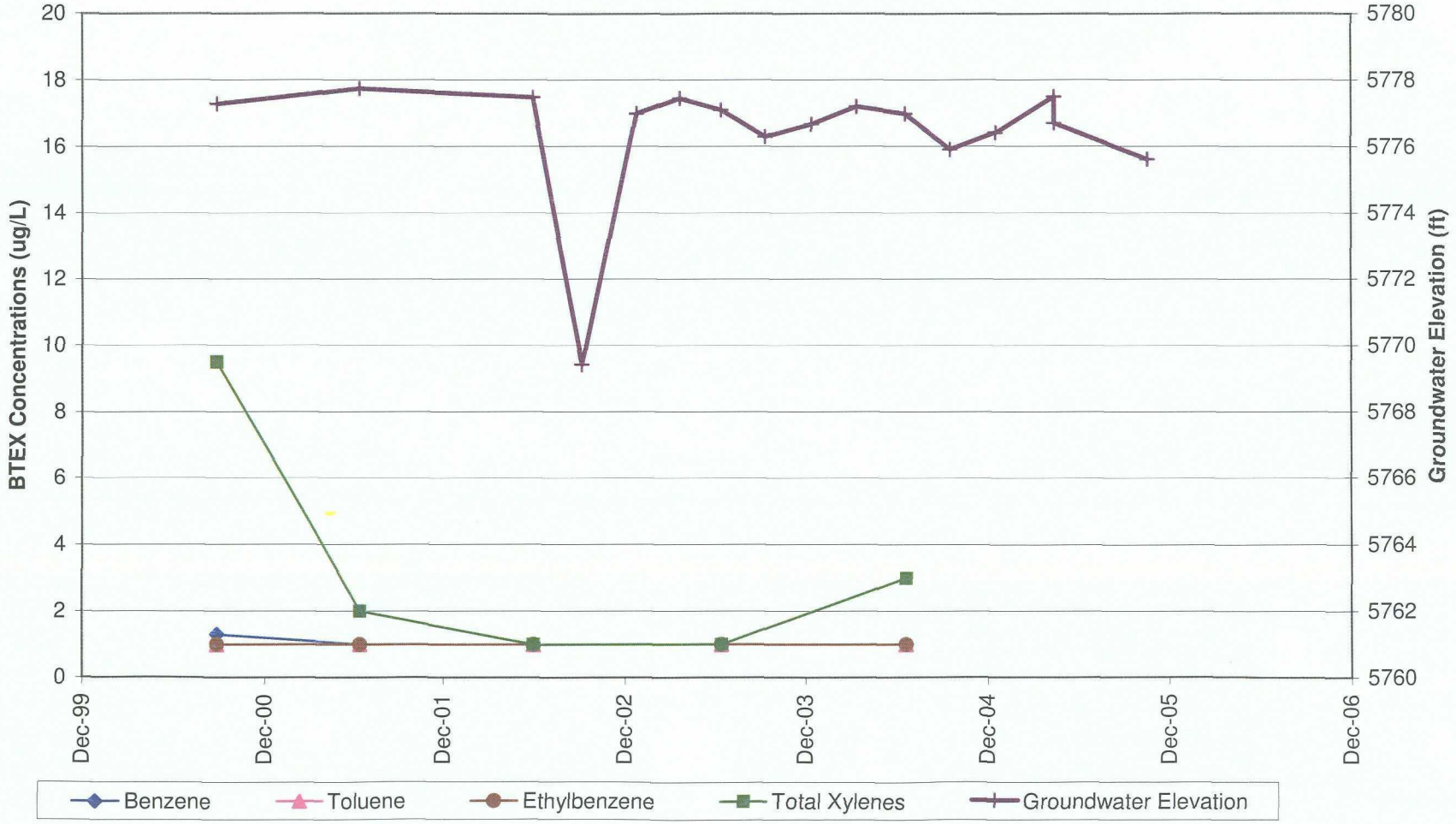
SUMMARY OF FREE-PRODUCT REMOVAL DURING 2005
LAT O-21 LINE DRIP (METER #LD151)

Site Name	Monitoring Well	Removal Date	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	Volume of Product Removed (gallons)	Cumulative Volume of Product Removed (gallons)
Lat 0-21 Line Drip	MW-1	4/18/05		35.93	0.00	0.00	0.25
Lat 0-21 Line Drip	MW-3	4/18/05		34.48	0	0	0.008

FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
LAT O-21 LINE DRIP
MW-1

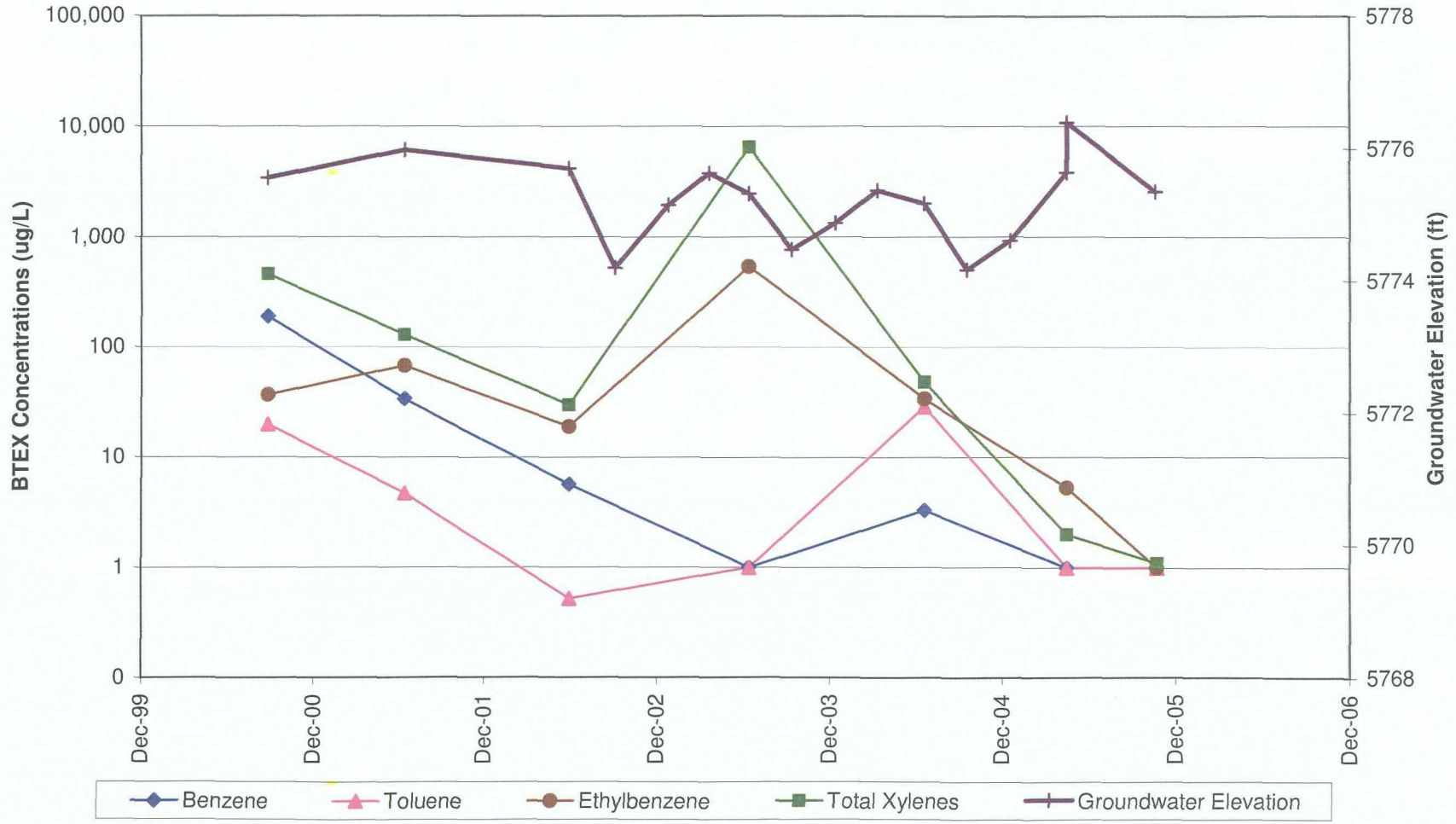
2005 LAT O-21.xls,Lat O21 MW1

FIGURE 5
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
LAT O-21 LINE DRIP
MW-2



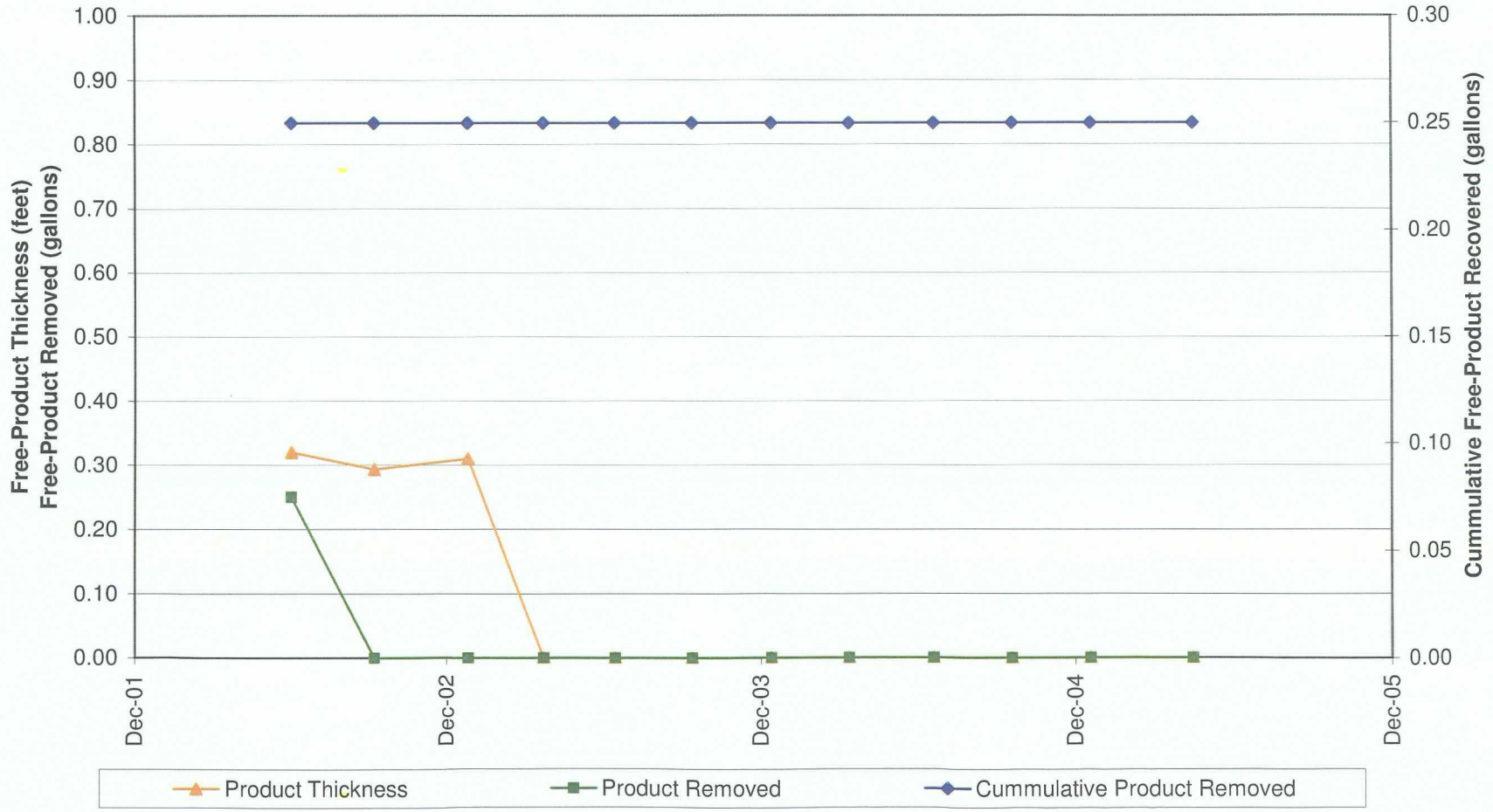
2005 LAT O-21.xls,Lat O21 MW2

FIGURE 6
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
LAT O-21 LINE DRIP
MW-3



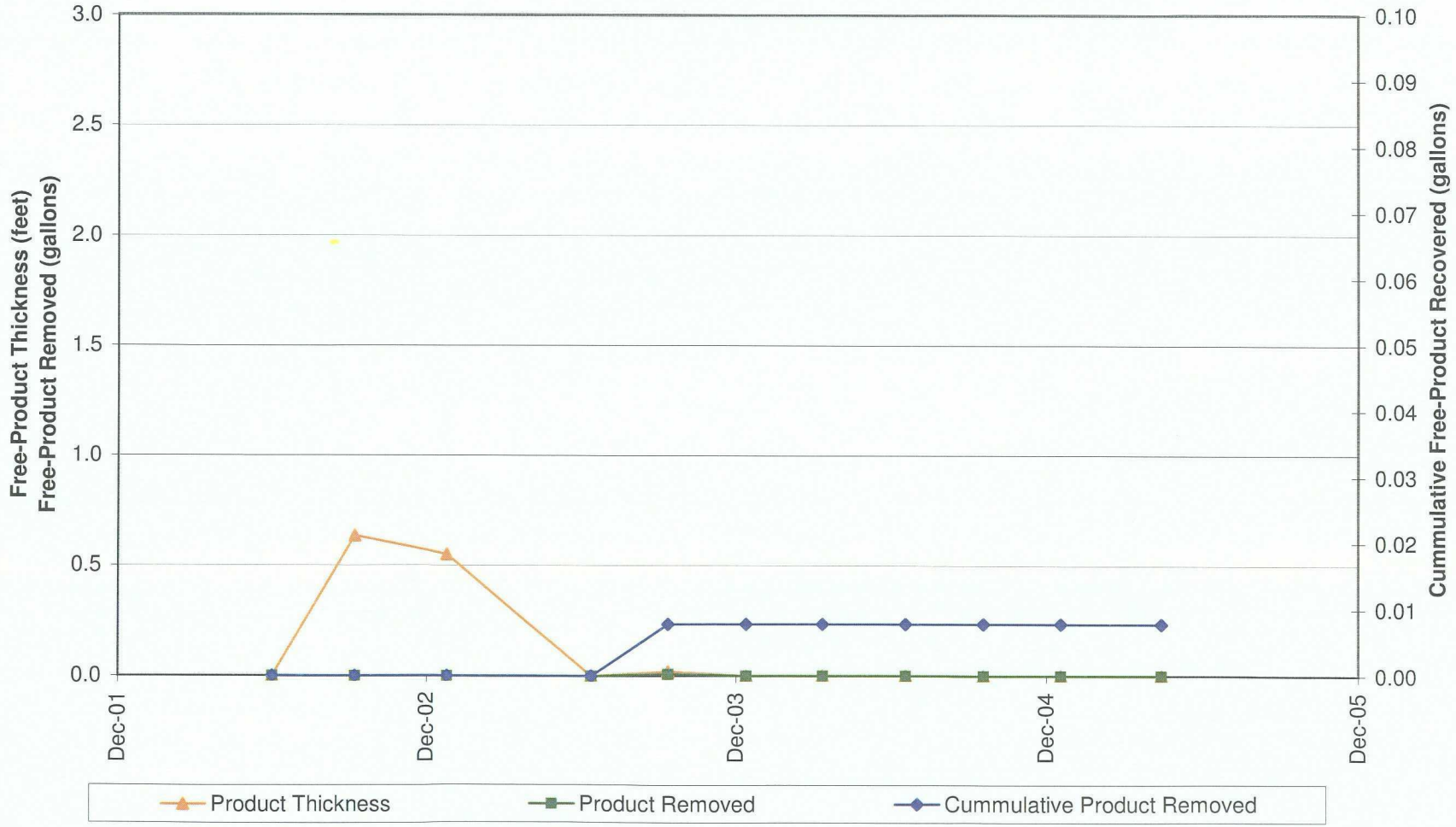
2005 LAT O-21.xls,Lat O21 MW3

FIGURE 7
HISTORIC FREE-PRODUCT RECOVERY
LAT O-21 LINE DRIP
MW-1



2005 LAT O-21.xls, Lat O21 PR1

FIGURE 8
HISTORIC FREE-PRODUCT RECOVERY
LAT O-21 LINE DRIP
MW-3



2005 LAT O-21.xls, Lat O21 PR3