3R - 068

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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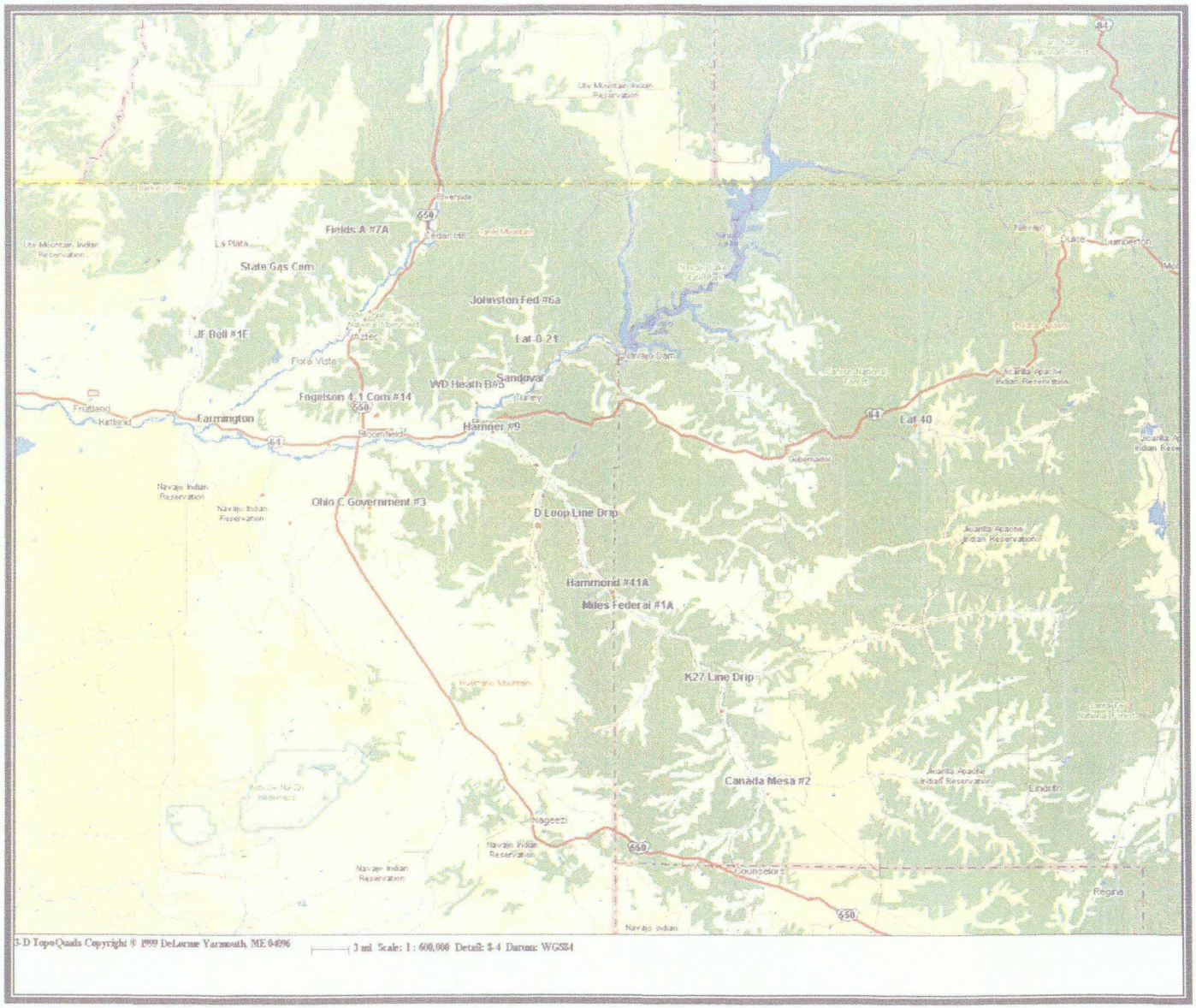
MWH
MONTGOMERY WATSON HARZA

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

3R068

Fogelson 4-1 Com #14
Meter Code: 73220

SITE DETAILS

Legal Description:	**Town:**	29N	**Range:**	11W	**Sec:**	4	**Unit:** P
NMOCD Haz Ranking:	10	**Land Type:**	Federal	**Operator:**	Burlington Resources		

PREVIOUS ACTIVITIES

Site Assessment:	3/94	**Excavation:**	4/94 (65cy)	**Soil Boring:**	10/95
Monitor Well:	10/95	**Geoprobe:**	12/96	**Additional MWs:**	6/00
Downgradient MWs:	6/00	**Replace MW:**	NA	**Quarterly Initiated:**	12/96
ORC Nutrient Injection:	8/01	**Re-Excavation:**	NA	**PSH Removal Initiated:**	NA
Annual Initiated:	6/98	**Quarterly Resumed:**	NA		

SUMMARY OF 2005 ACTIVITIES

MW-1: Annual groundwater sampling and dissolved oxygen measurements were collected in November 2005. Oxygen releasing compound (ORC) socks were replaced during November 2005.

MW-2: Annual water level monitoring was performed in November 2005.

MW-3: Annual water level monitoring was performed in November 2005.

Site-Wide Activities: No other activities were performed at this site during 2005.

SITE MAPS

Site map (November) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Analytical data from 2005 are summarized in Table 1, and historic data are presented graphically in Figures 2 through 4.
- Laboratory reports are presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

Fogelson 4-1 Com #14
Meter Code: 73220

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.

ISOCONCENTRATION MAPS

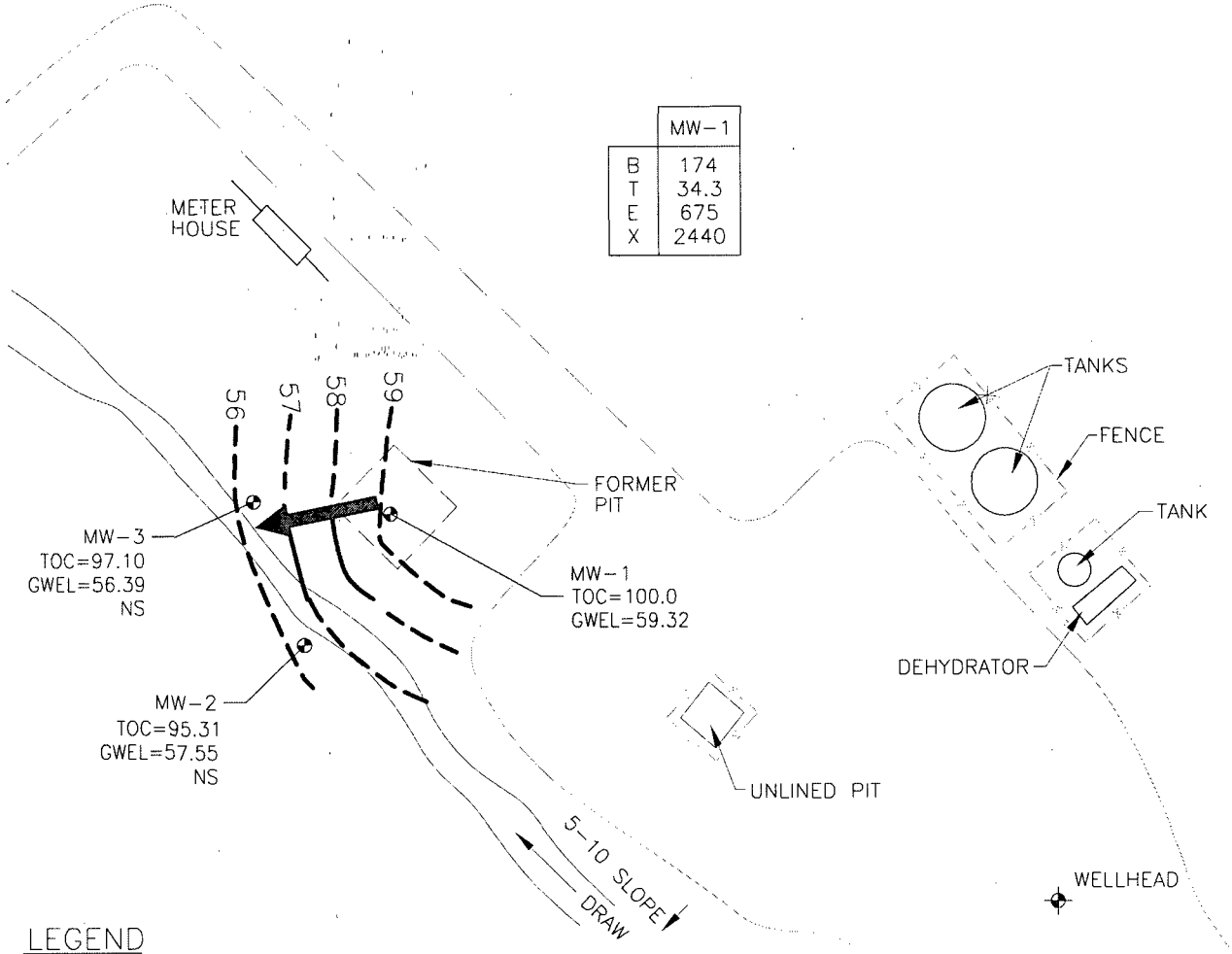
No isoconcentration maps were prepared for this site, however, the attached site maps present both water level and analytical data collected during 2005.

CONCLUSIONS

- The groundwater flow direction is to the west.
- The benzene concentration in MW-1 continued to decrease from 401 µg/L in 2003, to 174 µg/L in 2005, but remained above standards. Historically, benzene concentrations in MW-1 have decreased significantly from 1,520 µg/L in 1995, when sampling was initiated.
- The dissolved oxygen concentration in MW-1 was 1.1 mg/L in November, indicating that oxygen from the ORC socks was being used up in the process of enhanced natural biodegradation, and that the socks were due for replacement.
- Decreasing BTEX concentrations at the site indicate that enhanced natural attenuation is occurring.

RECOMMENDATION

- EPTPC will continue the use of ORC socks in MW-1 to enhance biodegradation of dissolved-phase contaminants. The ORC socks will continue to be replaced annually.
- EPTPC will continue annual groundwater sampling at MW-1 until BTEX concentrations approach closure criteria. Sampling will then continue on a quarterly basis until closure criteria are met.
- Because BTEX sampling at MW-2 and MW-3 have historically indicated concentrations less than closure criteria, EPTPC recommends that these wells not be sampled until closure.



LEGEND

MW-1	Approximate Monitoring Well Location and Number
	Fence Line
6566.0	Potentiometric Surface (Assumed Where Dashed)
→	Direction of Groundwater Flow (Estimated)
B	Benzene (μg/L)
T	Toluene (μg/L)
E	Ethylbenzene (μg/L)
X	Total Xylenes (μg/L)
GWEL	Groundwater Elevation (Relative Elevation)
TOC	Top of Casing
NS	Not Sampled

N

NOT TO SCALE

FOGELSON 4-1 COM #14, METER 73220
NOVEMBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1

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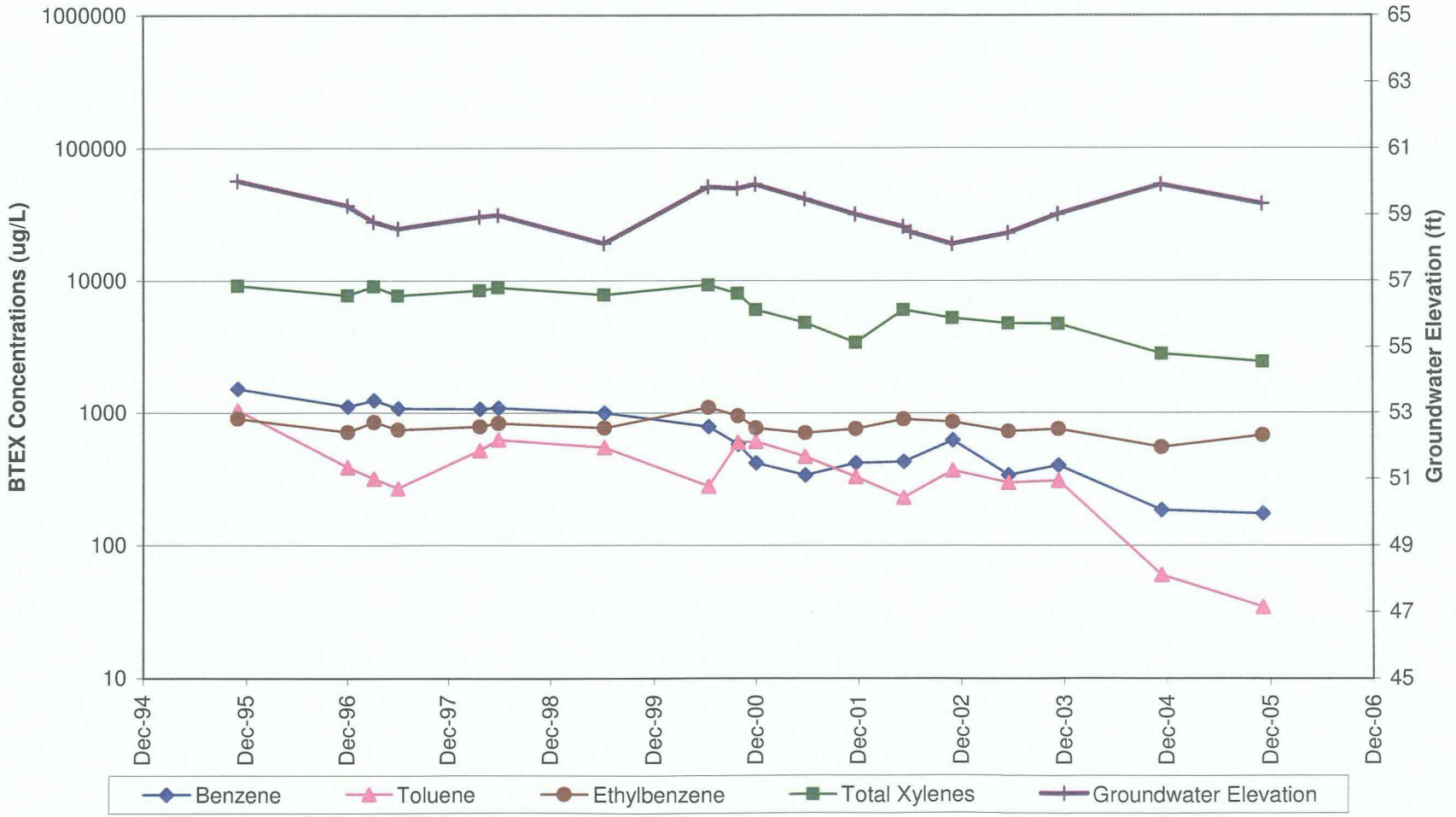
TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
FOGELSON 4-1 COM #14 (METER #73220)

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet btoc)
Fogelson 4-1 Com. #14	11/8/2005	MW-1	174	34.3	675	2440	40.10

FIGURE 2
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
FOGELSON 4-1 COM #14
MW-1



2005 Fogelson.xls,Fogl MW1

FIGURE 3
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
FOGELSON 4-1 COM #14
MW-2

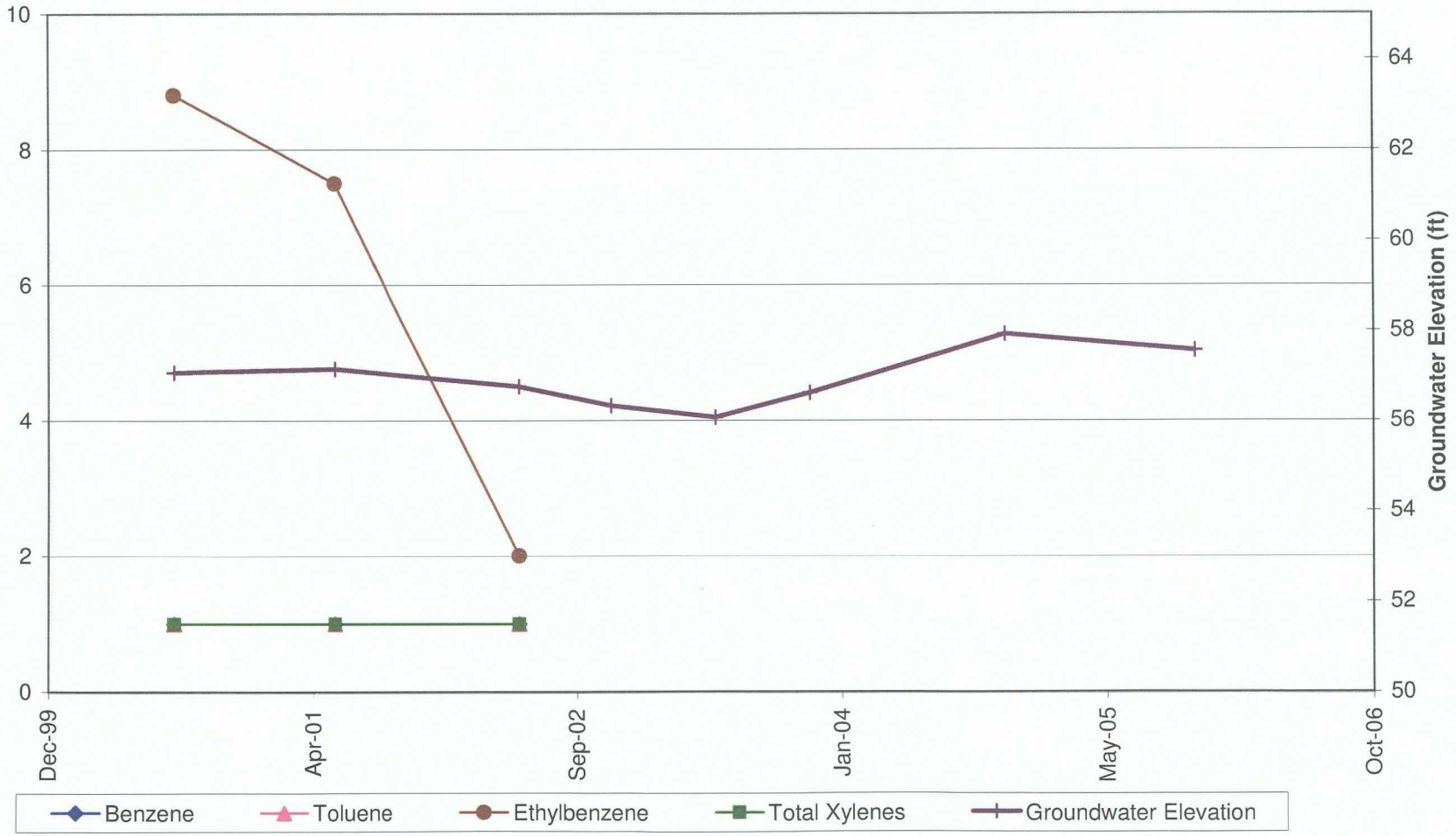


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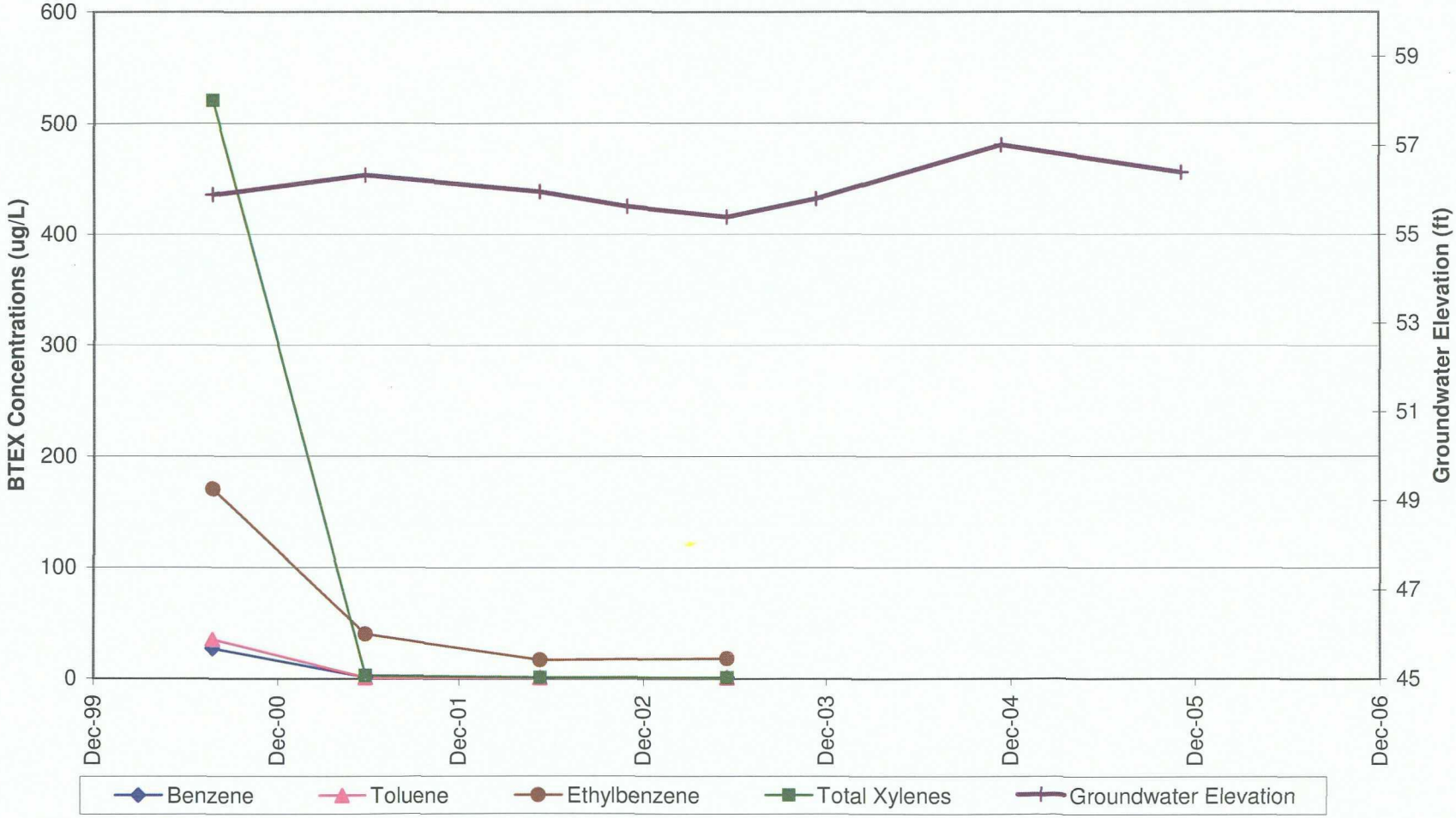
FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
FOGELSON 4-1 COM #14
MW-3



2005 Fogelson.xls,Fogl MW3