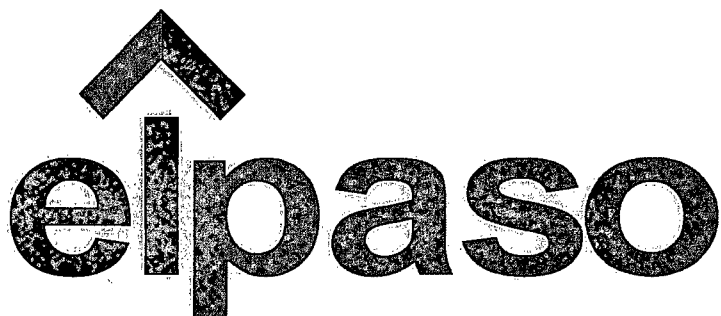


3R - 407
ANNUAL
MONITORING
REPORT

03/2006



El Paso Tennessee
Pipeline Company

San Juan Basin Pit Program
Groundwater Sites Project

Final 2005 Annual Report
Navajo Sites (Volume 3)

March 2006



MWH

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2005 ANNUAL GROUNDWATER REPORT

NAVAJO SITES VOLUME III

MAR 17 2006

EL PASO TENNESSEE PIPELINE COMPANY

Oil Conservation Division

Environmental Bureau

TABLE OF CONTENTS

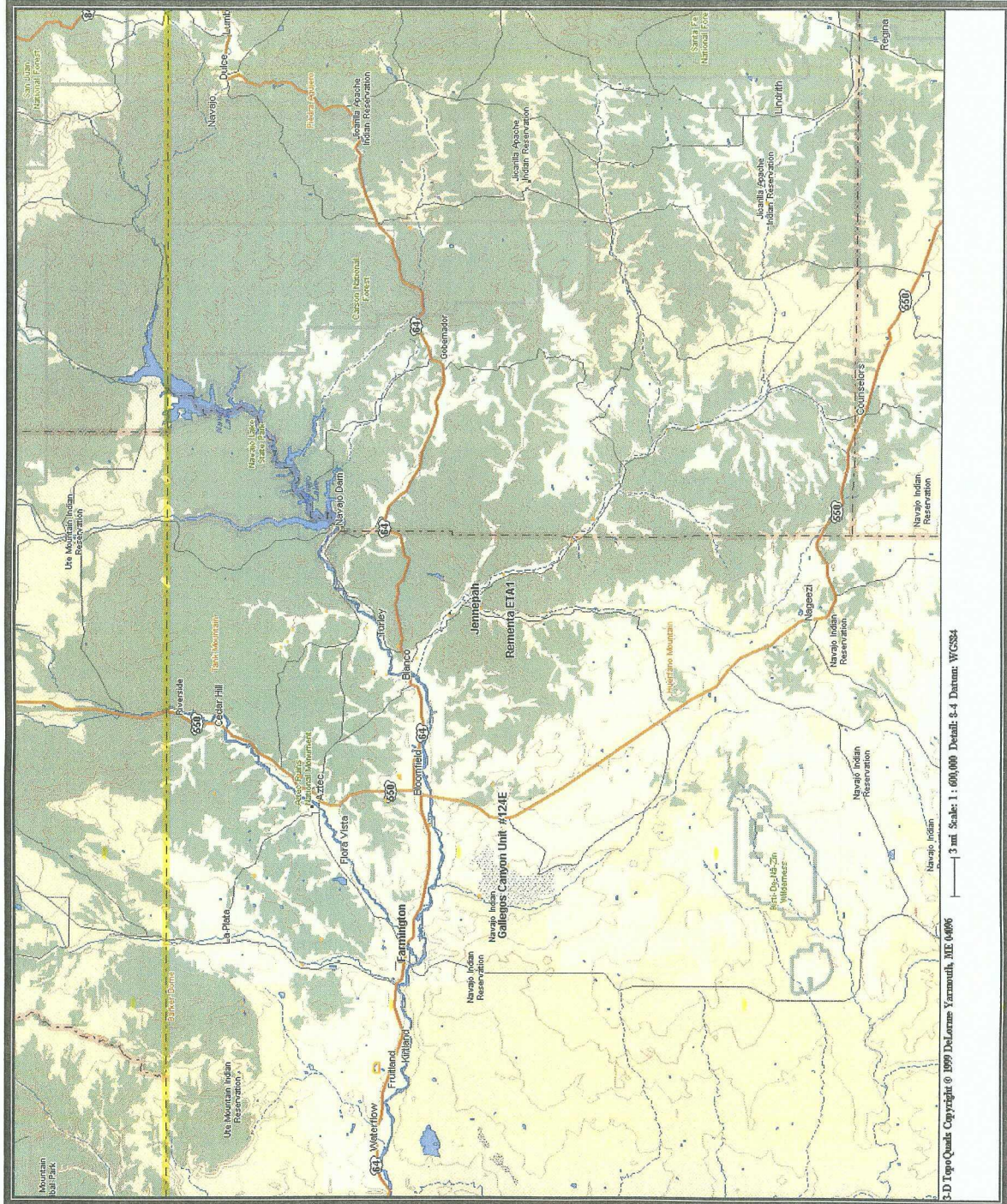
METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
95608	Gallegos Canyon Unit #124E	28N	12W	35	N



MWH

MONTGOMERY WATSON HARZA

Navajo Groundwater Site Map



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

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**GCU #124E
Meter Code: 95608**

SITE DETAILS

Legal Description:	Town: 28N	Range: 12W	Sec: 35	Unit: N
NMOCD Haz Ranking:	20	Land Type:	Navajo	Operator: BP / Amoco Production

PREVIOUS ACTIVITIES

Site Assessment:	Jan/95	Excavation:	Oct/95 (196 cy)	Soil Boring:	Mar/98
Monitor Well:	Jun/98	Geoprobe:	NA	Additional MWs:	*
Downgradient MWs:	*	Replace MW:	NA	Quarterly Initiated:	Jun/98
ORC Nutrient Injection:	NA	Re-Excavation:	NA	PSH Removal Initiated:	Apr/99
Annual Initiated:	NA	Quarterly Resumed:	NA		

* Attempts were made in November 2000 to install additional wells that resulted in dry holes.

SUMMARY OF 2005 ACTIVITIES

MW-1: Quarterly free-product removal and water sampling were performed in 2005.

Site-Wide Activities: A technology review and data assessment were performed to evaluate free-product removal protocol and methodologies for sites with free-product.

SITE MAP

Site maps (April, June, and October) are attached as Figures 1-3.

SUMMARY TABLES AND GRAPHS

- Analytical data from 2005 are summarized in Table 1, and historic data are presented graphically in Figure 4.
- Product removal data from 2005 are summarized in Table 2 and historic data are presented graphically in Figure 5.
- Laboratory analytical data is presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**GCU #124E
Meter Code: 95608**

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 generated for this site. However, the attached site map presents the depth to water and product removal data collected during 2005.

CONCLUSIONS

- Free-product recovery efforts at MW-1, utilizing a passive skimmer, did not appear to yield any free product in the well or on the water bailed from the well. Only an oily sheen was detected in the water from the well. The skimmer was removed in January 2005
- The majority of free-product was removed from MW-1 by 2002 (approximately 19 gallons); In 2003 and 2004, a total of only 0.03 gallons of product were removed and periodically an oily sheen was detected on the water.
- Based on the technology review and free-product removal data for this site, it was concluded that a skimmer is no longer necessary for this site; oil-absorbent socks may be the most efficient and cost-effective product removal technique in MW-1 at this time if free product is detected.

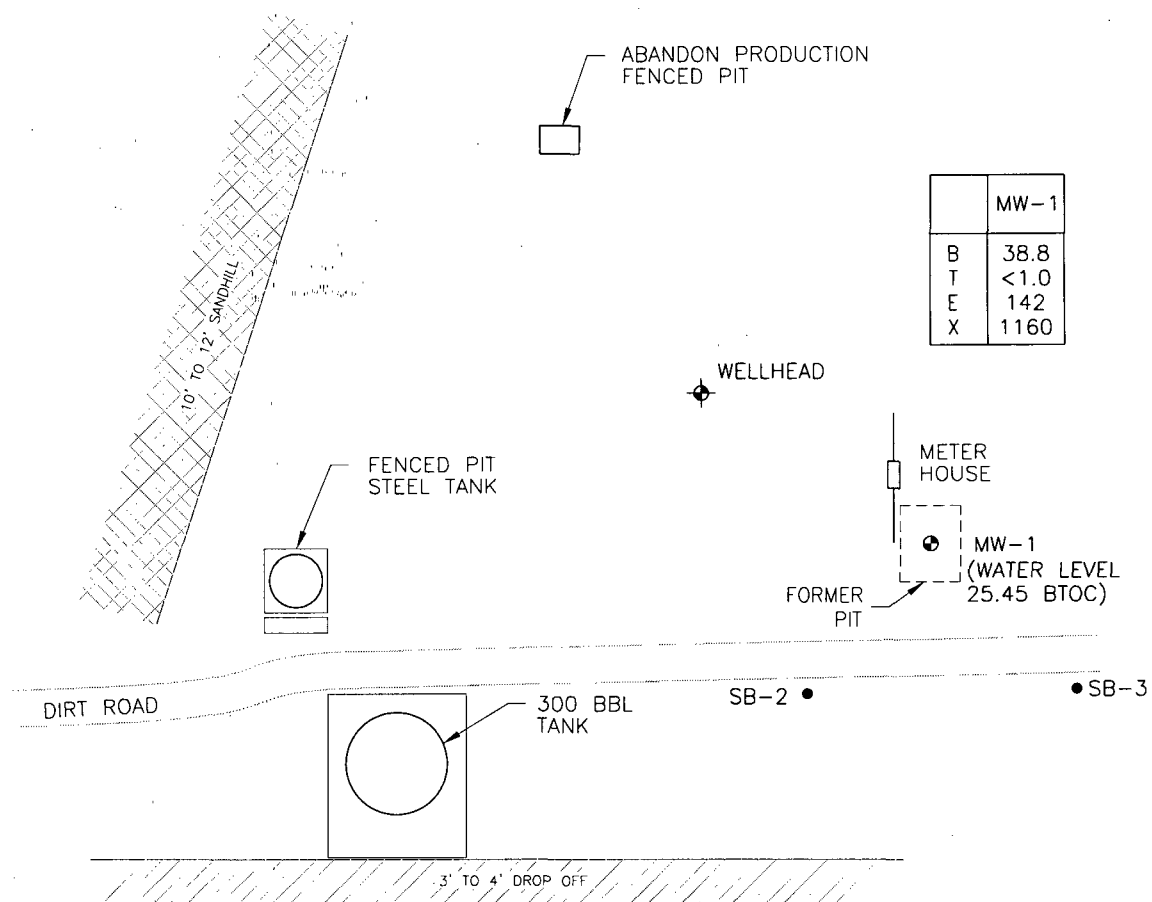
**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**GCU #124E
Meter Code: 95608**

RECOMMENDATIONS

- If free-product is not present during the quarterly monitoring, EPTPC recommends that a groundwater sample be collected from MW-1 and analyzed for BTEX constituents.
- EPTPC will continue quarterly free-product recovery efforts at MW-1; however, the frequency of monitoring will be adjusted based on the amount of product recovered during the monitoring visits.
- MW-1 will be sampled until BTEX constituents approach federal and NMOCD standards. Sampling will continue on a quarterly basis until BTEX concentrations are below federal standards for three consecutive quarters, and NMOCD standards for four consecutive quarters.
- Following approval for closure by both the Navajo Nation EPA and NMOCD, the monitoring well will be removed according to the approved EPTPC Monitoring Well Abandonment Plan.

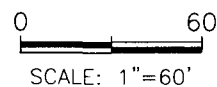
gallegos_04-05.dwg



LEGEND

- ⊕ MW-1 Approximate Monitoring Well Location and Number
- Dry 2000 Borehole
- BTOC Below Top of Casing (ft.)

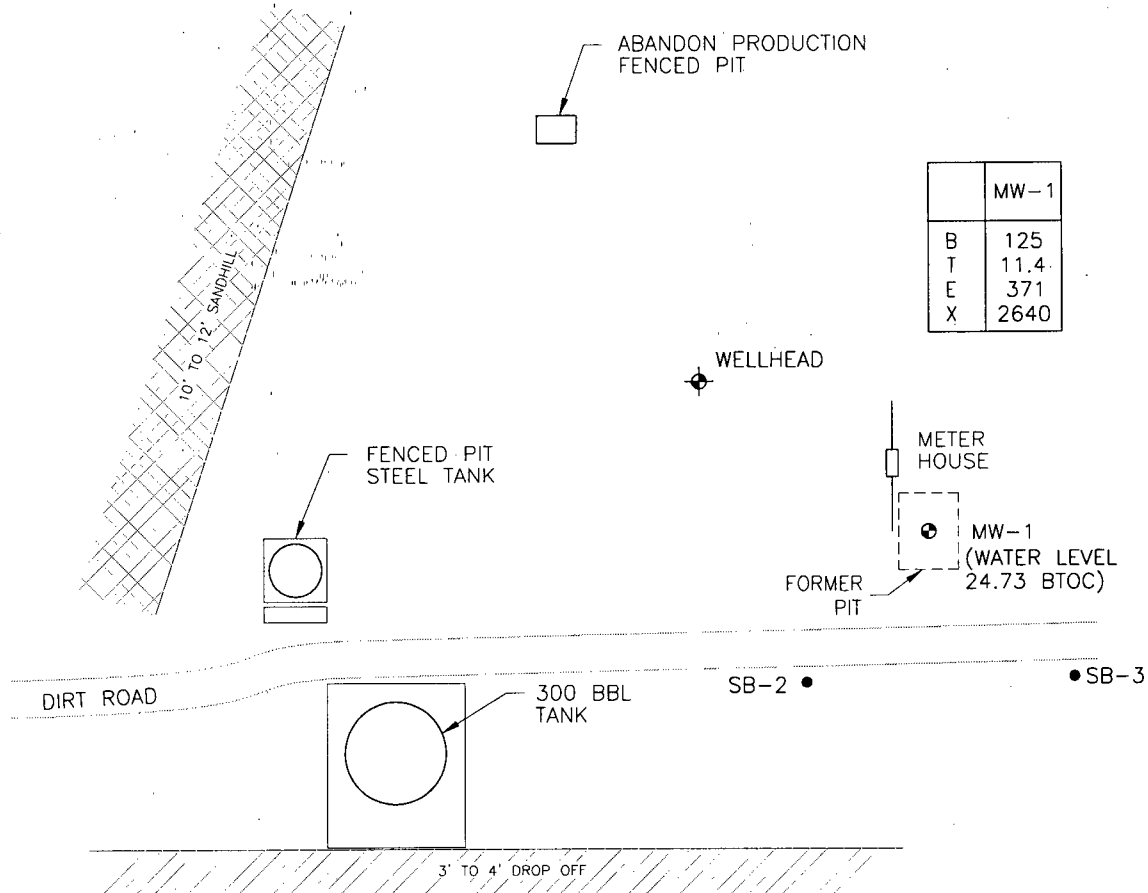
B Benzene (ug/L)
T Toluene
E Ethylbenzene
X Total Xylenes



GALLEGOS CANYON UNIT 124E, METER 95608
APRIL 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1



LEGEND

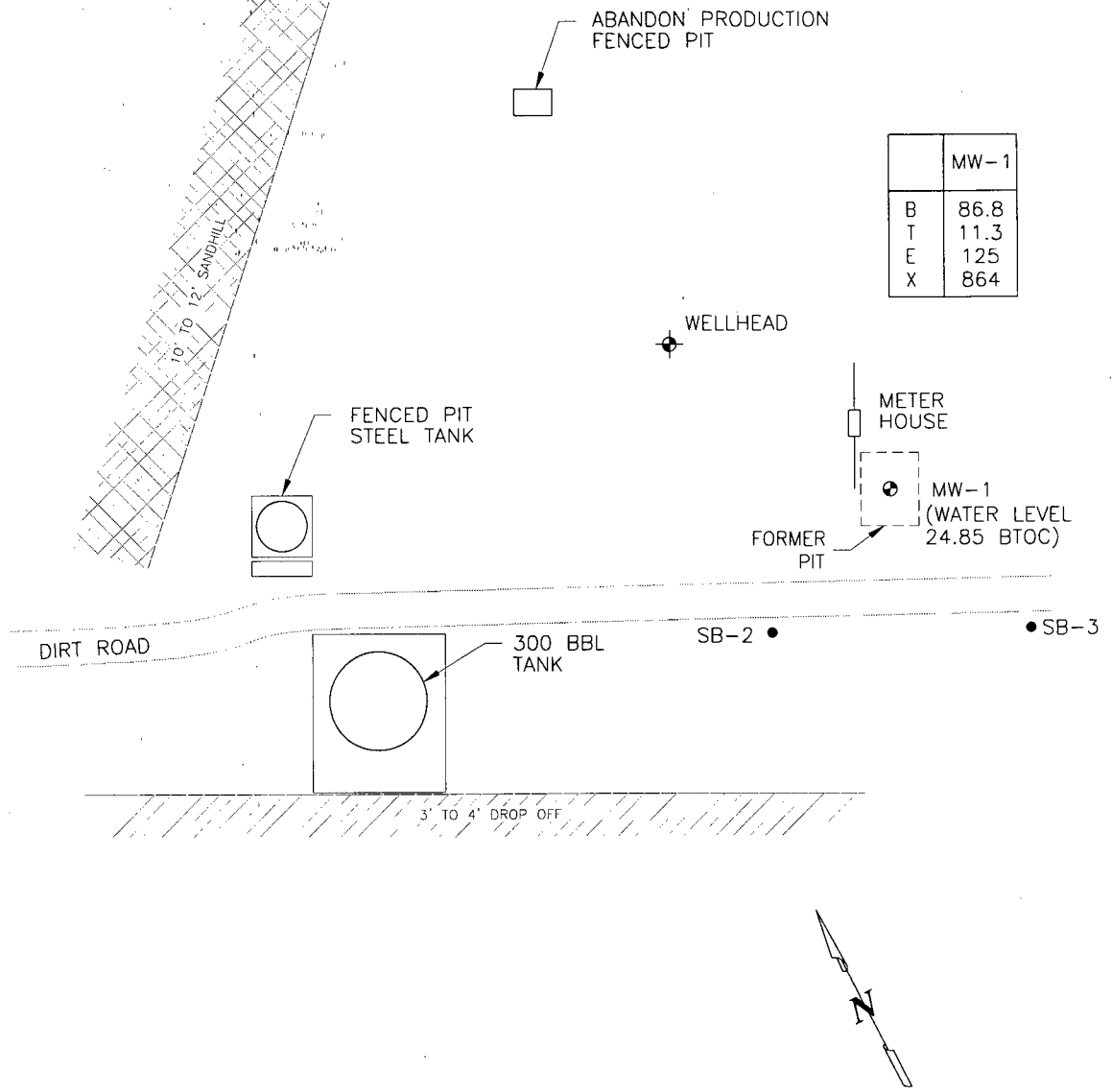
- ⊕ MW-1 Approximate Monitoring Well Location and Number
- Dry 2000 Borehole
- BTOC Below Top of Casing (ft.)

- B Benzene (ug/L)
- T Toluene
- E Ethylbenzene
- X Total Xylenes

GALLEGOS CANYON UNIT 124E, METER 95608
JULY 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 2



LEGEND

- MW-1 Approximate Monitoring Well
 Location and Number
 • Dry 2000 Borehole
 BTOC Below Top of Casing (ft.)

- B Benzene
 T Toluene
 E Ethylbenzene
 X Total Xylenes
- (ug/L)
- ↓

0 60
SCALE: 1"=60'

GALLEGOS CANYON UNIT 124E, METER 95608
OCTOBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 3

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
GCU #124E (METER #95608)

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet)
GCU #124E	4/19/05	MW-1	38.8	1	142	1160	25.45
GCU #124E	7/20/05	MW-1	125	11.4	371	2640	24.73
GCU #124E	10/20/05	MW-1	86.8	11.3	125	864	24.85

TABLE 2

SUMMARY OF FREE-PRODUCT REMOVAL DURING 2005
GCU #124E (METER #95608)

Site Name	Monitoring Well	Removal Date	Depth to Product (feet) btoc)	Depth to Water (feet) btoc)	Product Thickness (feet)	Volume of Product Removed (gallons)	Cummulative Volume of Product Removed (gallons)
GCU #124E	MW-1	1/17/05	0	25.49	0	0	19.01
GCU #124E	MW-1	4/19/05	0	25.45	0	0	19.01
GCU #124E	MW-1	7/20/05	0	24.73	0	0	19.01
GCU #124E	MW-1	1/27/05	0	24.59	0	0	19.01

FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
GCU #124E
MW-1

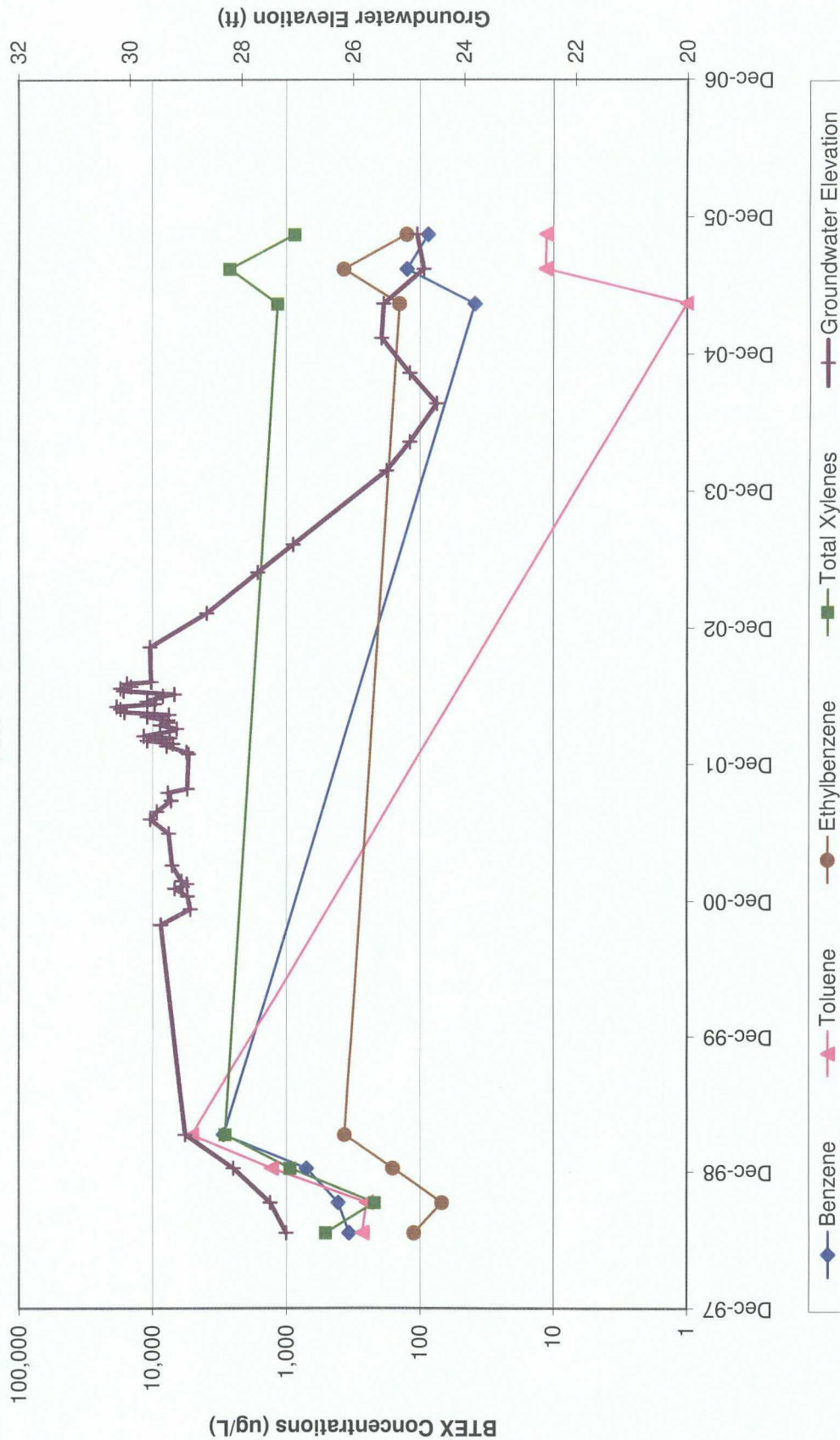


FIGURE 5
HISTORIC FREE-PRODUCT RECOVERY
GCU #124E
MW-1

