

**3R - 074**

**ANNUAL  
MONITORING  
REPORT**

**04/02/2008**



**MWH**

**BUILDING A BETTER WORLD**

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2008 APR 4 PM 1 38

April 2, 2008

Mr. Glenn von Gonten  
New Mexico Oil Conservation Division (NMOCD)  
1220 South St., Francis Drive  
Santa Fe, New Mexico 87505

**RE: El Paso Tennessee Pipeline Company Pit Groundwater Remediation Sites  
2007 Annual Reports**

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Tennessee Pipeline Company (EPTPC), is submitting the enclosed 2007 Annual Reports for each of EPTPC's 21 remaining San Juan River Basin pit groundwater remediation Sites. The reports present the 2007 sampling and product recovery data and include recommendations for 2008 activities at these Sites.

Copies of the reports for Sites located on Federal or Navajo lands are also being sent under separate cover to the Bureau of Land Management and the Navajo Nation Environmental Protection Agency.

If you have any questions concerning the enclosed reports, please call either Nancy Prince of EPTPC (719-520-4690) or me (303-291-2276).

Sincerely,

Jed Smith  
Project Manager

cc: Brandon Powell – NMOCD, Aztec, NM  
Nancy Prince – EPTPC  
MWH Project File

**2007 ANNUAL GROUNDWATER REPORT  
NON-FEDERAL SITES VOLUME II  
EL PASO TENNESSEE PIPELINE COMPANY**

**TABLE OF CONTENTS**

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT	
71669	State Gas Com N #1	31N	12W	16	H	3R239
93388	Horton #1E	31N	09W	28	H	3R192
72556	Knight #1	30N	13W	5	A	3R207
03906	GCU Com A #142E	29N	12W	25	G	3R179
70445	Standard Oil Com #1	29N	09W	36	N	3R074
LD087	K-31 Line Drip	25N	06W	16	N	3R205
94967	*Lindrith B #24	24N	03W	9	N	3R214

\* Lindrith B#24 Site has been submitted for closure, and is pending approval from NMOCD.

OGRW 221654  
181398



**MWH**

EPTPC GROUNDWATER SITES  
2007 ANNUAL GROUNDWATER REPORT

3R074

Standard Oil Com #1  
Meter Code: 70445

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**SITE DETAILS**

**Legal Description:**            **Town:** 29N            **Range:** 9W            **Sec:** 36            **Unit:** N  
**NMOCD Haz**            30            **Land Type:** State            **Operator:** Burlington Resources  
**Ranking:**

**PREVIOUS ACTIVITIES**

<b>Site Assessment:</b>	5/94	<b>Excavation:</b>	5/94 (60 cy)	<b>Soil Boring:</b>	9/95
<b>Monitor Well:</b>	9/95	<b>Geoprobe:</b>	7/97	<b>Additional MWs:</b>	12/01
<b>Downgradient MWs:</b>	12/01	<b>Replace MW:</b>	NA	<b>Quarterly Initiated:</b>	11/96
<b>ORC Nutrient Injection:</b>	NA	<b>Re-Excavation:</b>	NA	<b>PSH Removal Initiated:</b>	NA
<b>Annual Initiated:</b>	NA	<b>Quarterly Resumed:</b>	NA	<b>PSH Removal in 2007?</b>	No

**SUMMARY OF 2007 ACTIVITIES**

**MW-1:** Annual groundwater sampling was performed during June 2007.

**MW-2:** Annual groundwater sampling was performed during June 2007.

**MW-3:** Annual water level monitoring was performed during June 2007.

**MW-4:** Annual water level monitoring was performed during June 2007.

**MW-5:** Annual water level monitoring was performed during June 2007.

**Site-Wide Activities:** All wells were surveyed in January 2007.

**SITE MAPS**

A Site map (June 2007) is attached as Figure 1.

**EPTPC GROUNDWATER SITES  
2007 ANNUAL GROUNDWATER REPORT**

**Standard Oil Com #1  
Meter Code: 70445**

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**SUMMARY TABLES AND GRAPHS**

- Analytical data are summarized in Table 1 and presented graphically in Figures 2 through 6.
- 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 conducted during 2007.

**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 map present water level and analytical data collected during 2007.

**CONCLUSIONS**

- The groundwater flow direction at this Site is generally toward the west-northwest.
- Benzene in the sample collected from MW-1 during 2007 was slightly above NMWQCC standards, at 29.8 µg/L.
- The benzene and total xylenes concentrations in the sample collected from MW-2 during 2007 were also above standards, at 781 µg/L and 733 µg/L, respectively. MW-2 is located approximately 37 feet from and slightly upgradient of EPTPC's former pit.
- In 1997, temporary piezometer data were collected that indicated other potential sources of contamination at the Site. Piezometer locations are shown on Figure 1.
- Monitoring wells MW-3 and MW-4 have historically had high levels of BTEX constituents that are not believed to be from the former EPTPC pit. These wells are therefore only used for water level monitoring.

**EPTPC GROUNDWATER SITES  
2007 ANNUAL GROUNDWATER REPORT**

**Standard Oil Com #1  
Meter Code: 70445**

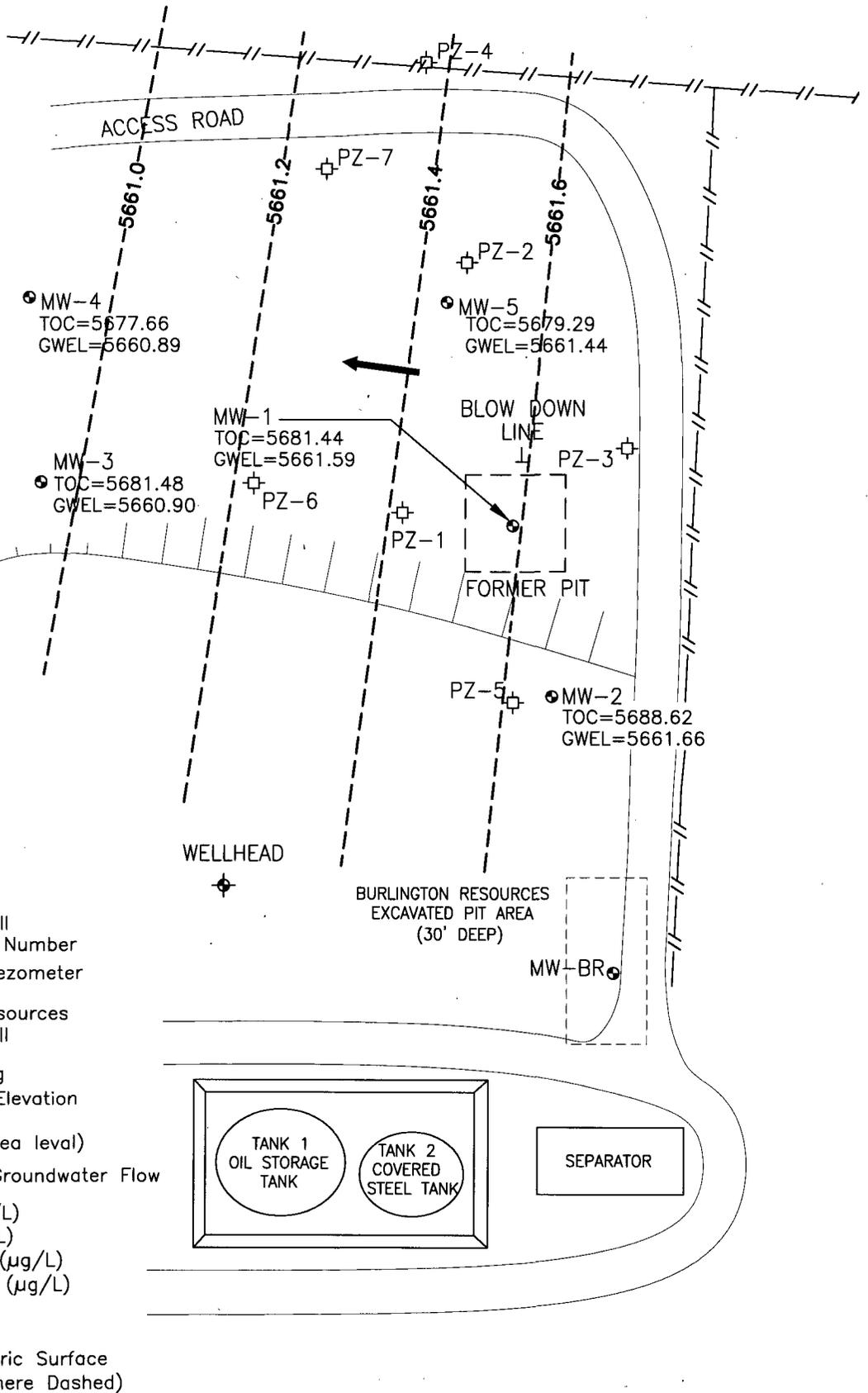
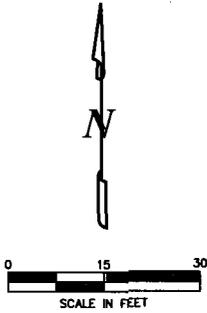
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**RECOMMENDATIONS**

- EPTPC recommends that sampling at MW-1, MW-2, and MW-5 be performed on an annual basis until BTEX concentrations approach closure criteria. These wells will then be scheduled for quarterly sampling until four consecutive samples are below closure standards.
- New well MW-5 helped to clarify the gradient direction at the Site. EPTPC will evaluate this Site further, and particularly the impacts observed in monitoring wells MW-2, MW-3, and MW-4, in 2008 and present any additional recommendations in the 2008 Annual Report.

	MW-1	MW-2	MW-5
B	29.8	781	<1
T	38.2	<25	<1
E	116	286	<1
X	477	733	15.6



**LEGEND**

- MW-1 Monitoring Well Location and Number
- ⊕ PZ-5 Temporary Piezometer
- MW-BR Burlington Resources Monitoring Well
- TOC Top of Casing
- GWEL Groundwater Elevation June 2007 (feet above sea level)
- ← Direction of Groundwater Flow
- B Benzene (µg/L)
- T Toluene (µg/L)
- E Ethylbenzene (µg/L)
- X Total Xylenes (µg/L)
- //—//— Pipe Line
- 5657 - Potentiometric Surface (Inferred where Dashed)

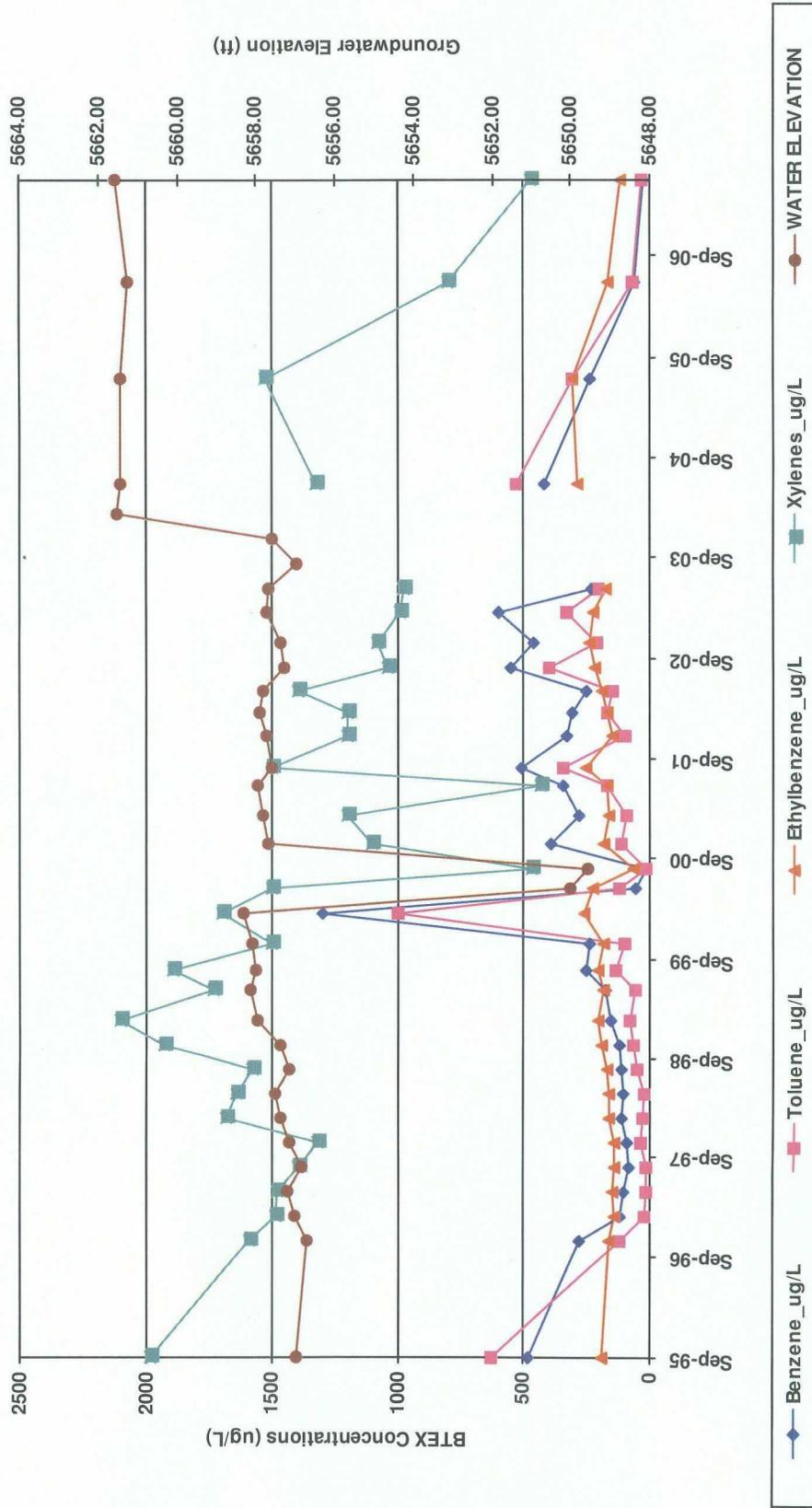
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REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
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			AutoCAD FILE: StandardOil		
			SCALE: As Shown	FIGURE No: 1	



EL PASO TENNESSEE PIPELINE COMPANY  
STANDARD OIL COM #1, METER 70445

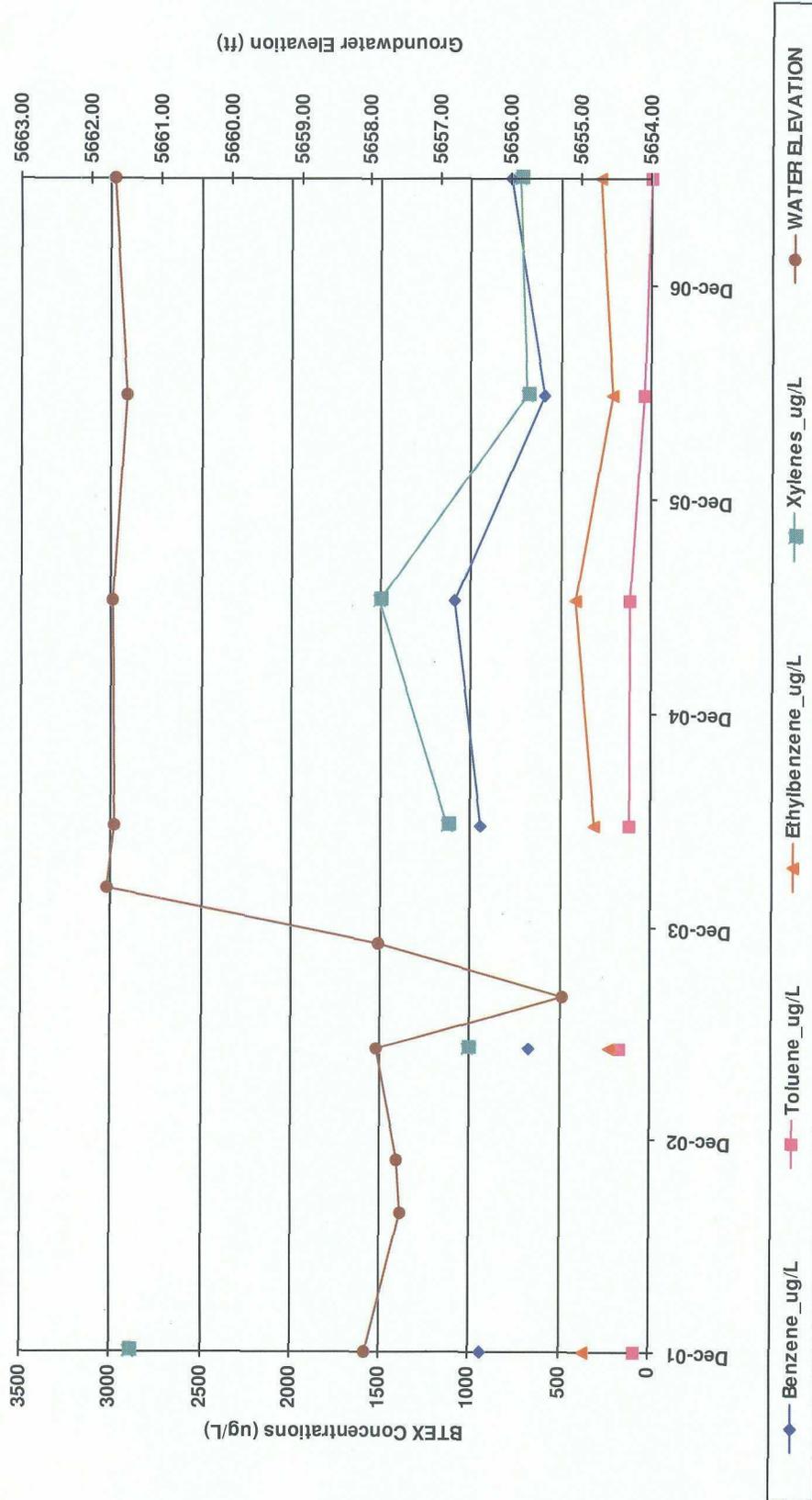
**GROUNDWATER POTENTIOMETRIC SURFACE  
CONTOURS AND BTEX CONCENTRATIONS  
JUNE 2007**

FIGURE 2  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 STANDARD OIL COM #1 (METER #70445)  
 MW01



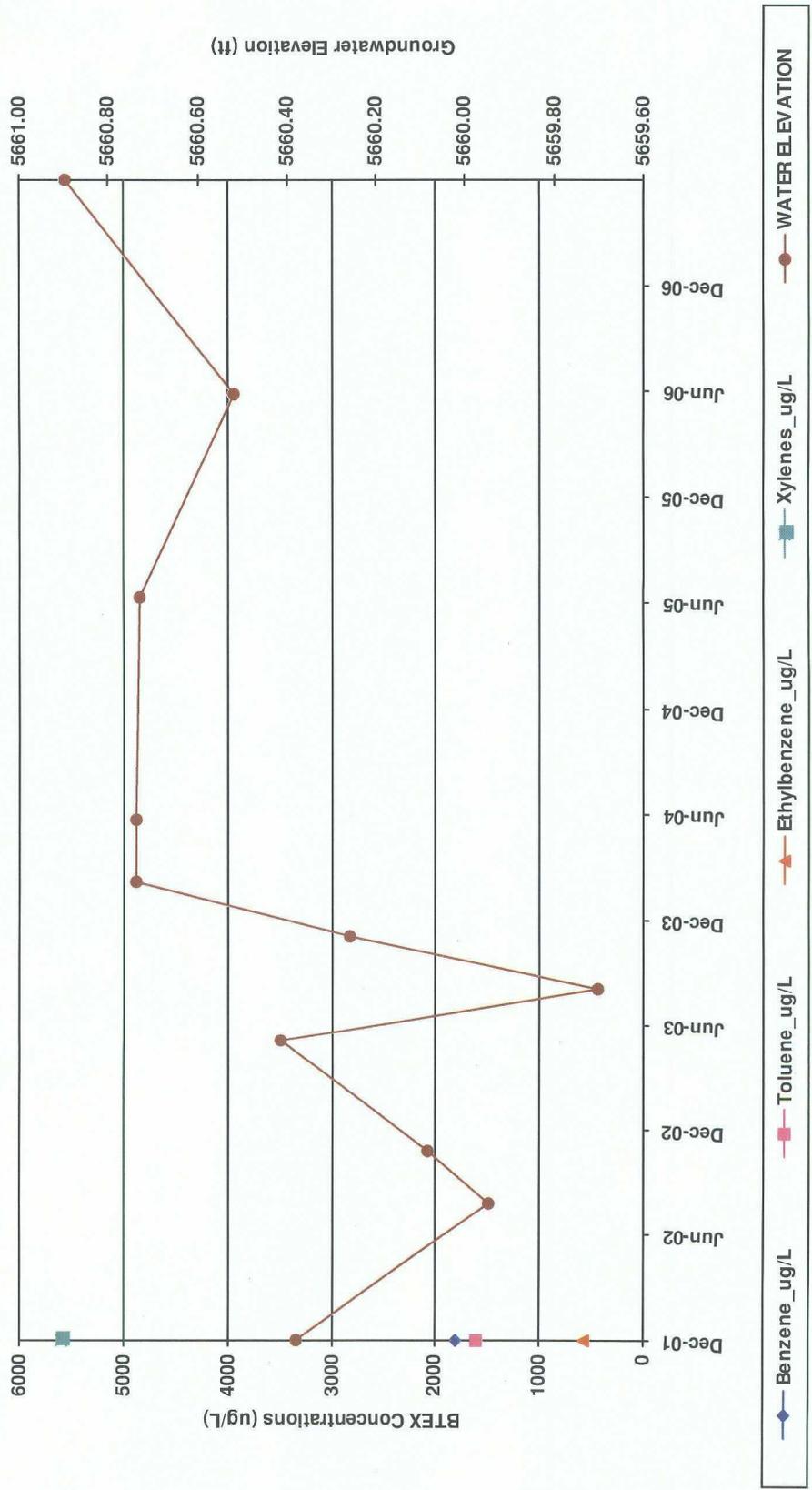
Note: Non Detects are represented by a value of 1.

FIGURE 3  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 STANDARD OIL COM #1 (METER #70445)  
 MW02



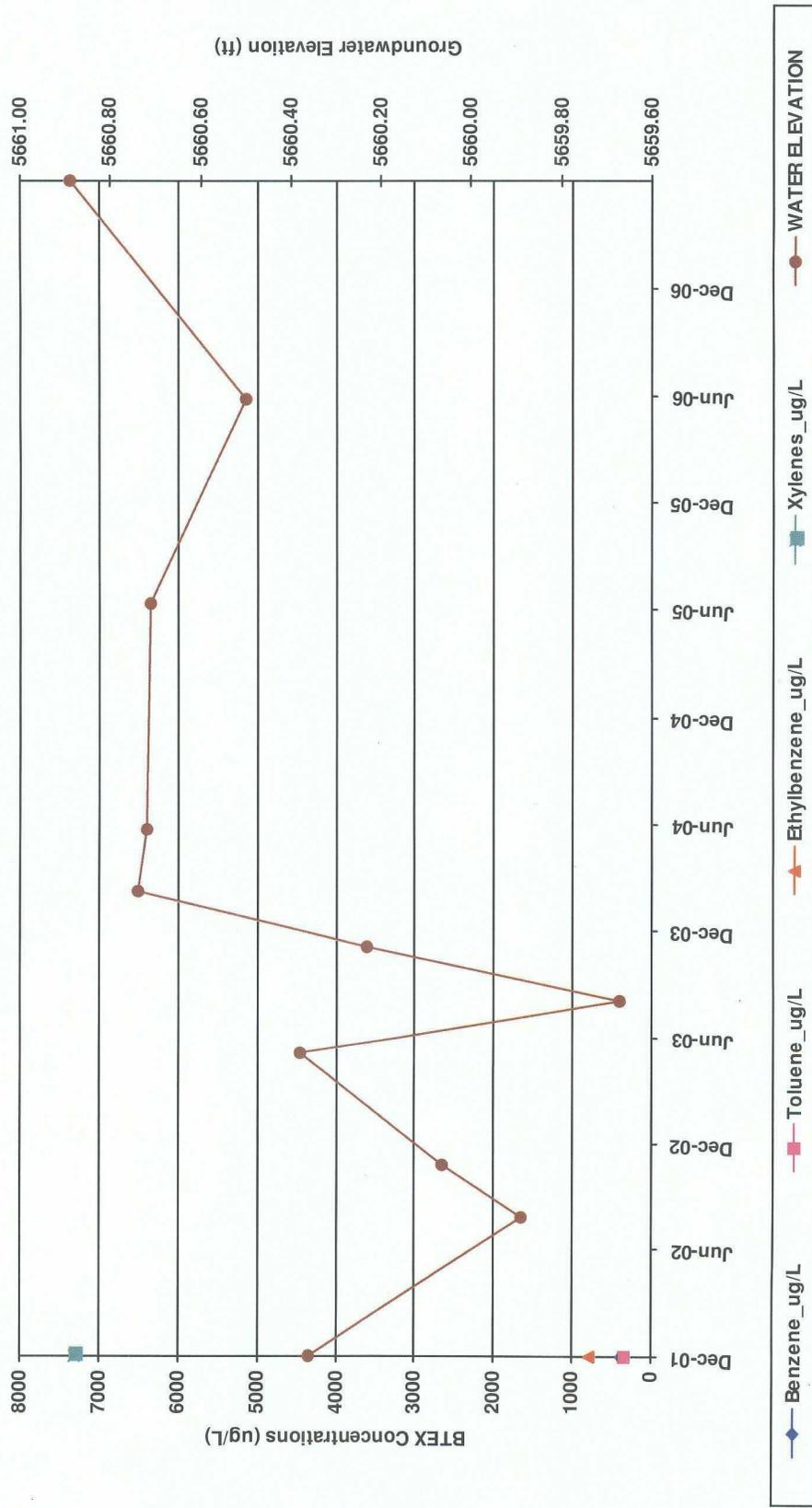
Note: Non Detects are represented by a value of 1.

FIGURE 4  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 STANDARD OIL COM #1 (METER #70445)  
 MW03



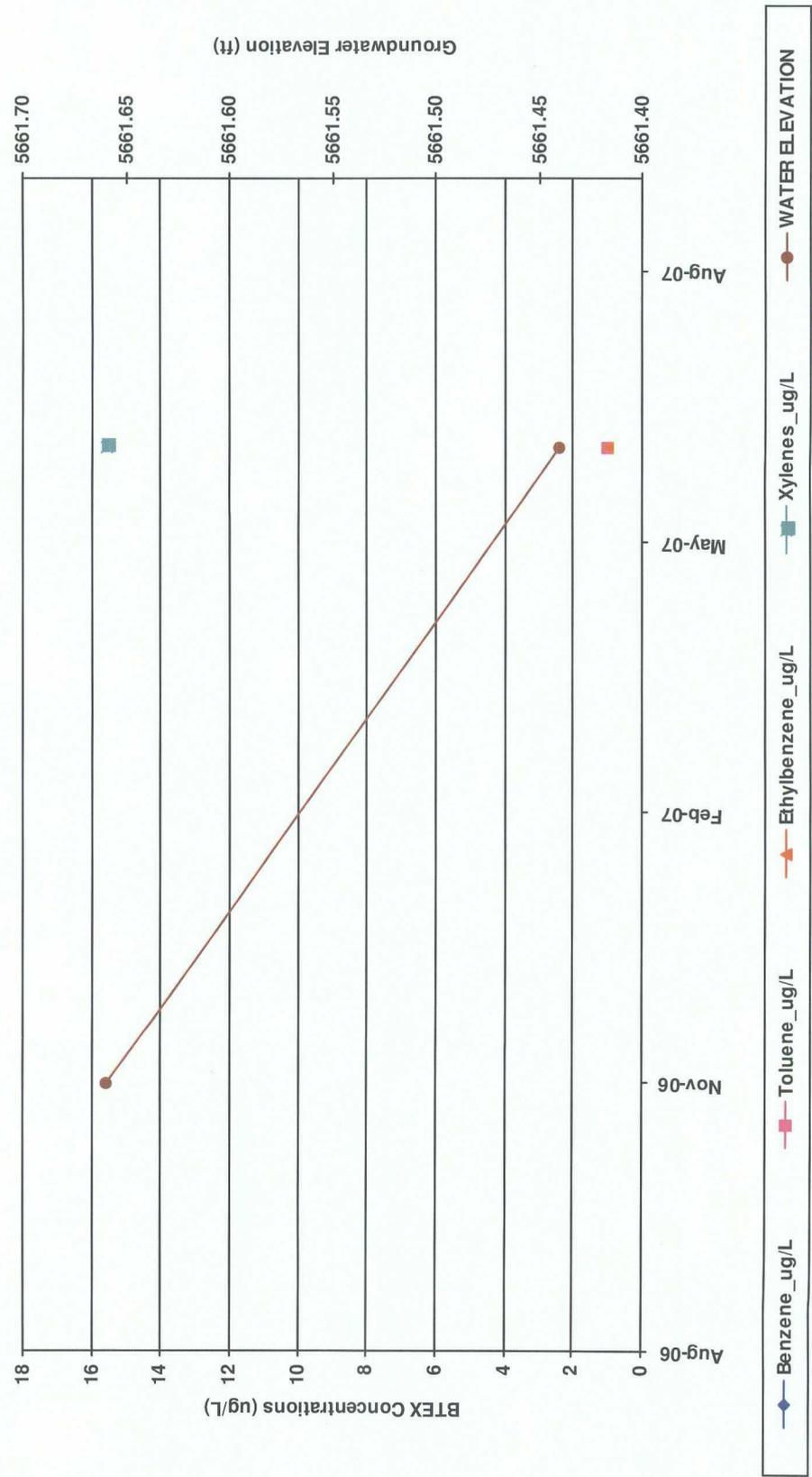
Note: Non Detects are represented by a value of 1.

FIGURE 5  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 STANDARD OIL COM #1 (METER #70445)  
 MW04



Note: Non Detects are represented by a value of 1.

FIGURE 6  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 STANDARD OIL COM #1 (METER #70445)  
 MW05



Note: Non Detects are represented by a value of 1.

TABLE 1

**SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
STANDARD OIL COM #1 (METER #70445)**

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	9/12/1995	482	629	188	1980	21.03
	11/7/1996	277	121	161	1590	21.30
	2/7/1997	119	20.2	139	1490	20.96
	5/9/1997	105	14.2	145	1480	20.78
	8/8/1997	82.6	15.6	140	1400	21.13
	11/4/1997	91.4	32.4	141	1320	20.86
	2/3/1998	109	31	163	1680	20.61
	5/7/1998	107	24.2	161	1640	20.47
	8/4/1998	113	48.7	167	1580	20.85
	11/3/1998	122	61.3	190	1930	20.62
	2/2/1999	157	75.8	204	2100	20.02
	5/19/1999	178	55.2	184	1730	19.86
	8/4/1999	252	136	203	1890	19.98
	11/9/1999	240	98	180	1500	19.91
	2/25/2000	1300	1000	260	1700	19.69
	5/24/2000	56	120	220	1500	28.00
	8/8/2000	12	11	66	470	28.42
	11/6/2000	390	110	180	1100	20.29
	2/15/2001	280	88	160	1200	20.18
	6/4/2001	340	170	170	430	20.05
	8/7/2001	510	340	250	1500	20.41
	12/4/2001	330	98	150	1200	20.26
	2/25/2002	310	170	170	1200	20.06
	5/14/2002	250	150	190	1400	20.17
	8/6/2002	551	398	214	1041	20.69
	11/4/2002	464	207	235	1085	20.60
	2/27/2003	600	330	225	993	20.24
	5/19/2003	230	206	172	977	20.31
	6/2/2004	416	534	287	1330	19.99
	6/24/2005	234	310	305	1530	19.98
6/7/2006	66	71.9	165	804	20.18	
6/12/2007	29.8	38.2	116	477	19.85	
MW02	12/13/2001	940	74	360	2900	27.15
	5/19/2003	673	167	228	1010	27.29
	6/2/2004	943	120	309	1130	26.94

Note: Non Detects are represented by a value of 1.

**TABLE 1****SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
STANDARD OIL COM #1 (METER #70445)**

<b>Monitoring Well</b>	<b>Sample Date</b>	<b>Benzene (ug/L)</b>	<b>Toluene (ug/L)</b>	<b>Ethylbenzene (ug/L)</b>	<b>Total Xylenes (ug/L)</b>	<b>Depth to Water (ft BTOC)</b>
<b>MW02</b>	6/24/2005	1090	120	418	1510	26.92
	6/7/2006	592	37.7	216	692	27.12
	6/12/2007	781	1	286	733	26.96
<b>MW03</b>	12/13/2001	1800	1600	570	5600	21.10
<b>MW04</b>	12/13/2001	380	340	780	7300	17.30
<b>MW05</b>	6/12/2007	1	1	1	15.6	17.85

Note: Non Detects are represented by a value of 1.