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**ANNUAL
MONITORING
REPORT**

2/28/2009



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BUILDING A BETTER WORLD

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February 28, 2009

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
2008 Annual Reports**

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Tennessee Pipeline Company (EPTPC), is submitting the enclosed 2008 Annual Reports for each of EPTPC's 21 remaining San Juan River Basin pit groundwater remediation Sites. The reports present the 2008 sampling and product recovery data and include recommendations for 2009 activities at these Sites.

The 2008 Annual Reports are divided into three volumes based on location type. The volumes are as follows:

<u>Volume</u>	<u>Location Type</u>
1	Federal Land
2	Non-Federal Land (Excl. Navajo Nation)
3	Navajo Nation

If you have any questions concerning the enclosed reports, please call either Doug Stavinoha of EPTPC (713-420-5150) or me (303-291-2276).

Sincerely,

Jed Smith
Project Manager

encl.

cc: Bill Freeman – NNEPA, Shiprock, NM (Volume 3 Only)
Bill Liese – BLM, Farmington, NM (Volume 1 Only)
Brandon Powell – NMOCD, Aztec, NM (Volumes 1, 2, and 3)
Doug Stavinoha – EPTPC (Volumes 1, 2, and 3)

**2008 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I**

EL PASO TENNESSEE PIPELINE COMPANY

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
87640	3RP-155-0	Canada Mesa #2	24N	06W	24	I
89961	3RP-170-0	Fields A#7A	32N	11W	34	E
73220	3RP-068-0	Fogelson 4-1 Com. #14	29N	11W	4	P
89894	3RP-186-0	Hammond #41A	27N	08W	25	O
97213	3RP-190-0	Hamner #9	29N	09W	20	A
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	P
70194	3RP-201-0	Johnston Fed #4	31N	09W	33	H
89232	3RP-202-0	Johnston Fed #6A	31N	09W	35	F
LD072	3RP-204-0	K27 LD072	25N	06W	4	E
LD174	3RP-212-0	LAT L 40	28N	04W	13	H
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	12	O
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	C



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**2008 ANNUAL GROUNDWATER REPORT
NON-FEDERAL SITES VOLUME II
EL PASO TENNESSEE PIPELINE COMPANY**

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
03906	3RP-179-0	GCU Com A #142E	29N	12W	25	G
93388	3RP-192-0	Horton #1E	31N	09W	28	H
LD087	3RP-205-0	K-31 Line Drip	25N	06W	16	N
72556	3RP-207-0	Knight #1	30N	13W	5	A
94967	3RP-214-0	*Lindrith B #24	24N	03W	9	N
70445	3RP-074-0	Standard Oil Com #1	29N	09W	36	N
71669	3RP-239-0	State Gas Com N #1	31N	12W	16	H

* Lindrith B#24 Site was submitted for closure in 2006, and is pending approval from NMOCD.
There were no activities for this site in 2008.



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**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Knight #1
Meter Code: 72556**

SITE DETAILS

Legal Description: **Town:** 30N **Range:** 13W **Sec:** 5 **Unit:** A
NMOCD Haz Ranking: 30 **Land Type:** Fee **Operator:** Fuller Petroleum Inc.

PREVIOUS ACTIVITIES

Site Assessment:	1/95	Excavation:	1/95 (60 cy)	Soil Boring:	10/95
Monitor Well:	10/95	Geoprobe:	1/97	Additional MWs:	11/00
Downgradient MWs:	12/95	Replace MW:	NA	Quarterly Initiated:	4/96
ORC Nutrient Injection:	11/96	Re-Excavation:	NA	PSH Removal Initiated:	9/01
Annual Initiated:	NA	Quarterly Resumed:	NA	PSH Removal in 2008?	No

SUMMARY OF 2008 ACTIVITIES

MW-1: Annual groundwater sampling (September) and semiannual water level monitoring were performed in 2008.

MW-2: Annual groundwater sampling (September) and semiannual water level monitoring were performed during 2008.

MW-3: Annual groundwater sampling (September) and semiannual water level monitoring were performed in 2008.

MW-4: Annual groundwater sampling (September) and semiannual water level monitoring were performed during 2008.

MW-5: Semiannual water level monitoring was performed during 2008.

Site-Wide Activities: No other activities were performed at this Site during 2008.

SITE MAP

A Site map (September) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically in Figures 2 through 6.

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Knight #1
Meter Code: 72556**

- Historic free-product recovery data are summarized on Table 2 and presented graphically in Figures 7 and 8.
- The 2008 laboratory report is presented in Attachment 1 (included on CD).
- The 2008 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 2008.

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 generated for this Site; however, the attached Site map presents the analytical data collected during 2008.

RESULTS

- The groundwater flow direction generally trends to the south-southwest.
- The annual sample collected from MW-1 had a benzene concentration of 3,230 µg/L. This result was well above the NMWQCC standard of 10 µg/L. The total xylenes concentration (6,780 µg/L) was also above its NMWQCC. Toluene and ethylbenzene concentrations were below their respective standards. Overall, the MW-1 results were similar to previous years.
- Because there was no measurable free-product in MW-1, no product recovery was possible during 2008, leaving the cumulative total volume recovered at 0.36 gallons. Approximately 0.01 gallons of free-product were removed in 2005, the most recent year with recoverable product.
- The annual sample collected from MW-2 had a benzene concentration of 34.3 µg/L. No other BTEX constituent exceeded its respective standard. Benzene concentrations in this well do tend to fluctuate with water level, and the 2008 sample results are near the low end of the observed concentration range.
- The annual sample collected from MW-3 had a benzene concentration of 805 µg/L and a total xylenes concentration of 1,630 µg/L, both above their respective NMWQCC standards. The toluene and ethylbenzene concentrations were below their respective standards. Concentrations in this well fluctuate significantly with water level, and these results are similar to those observed in prior years.

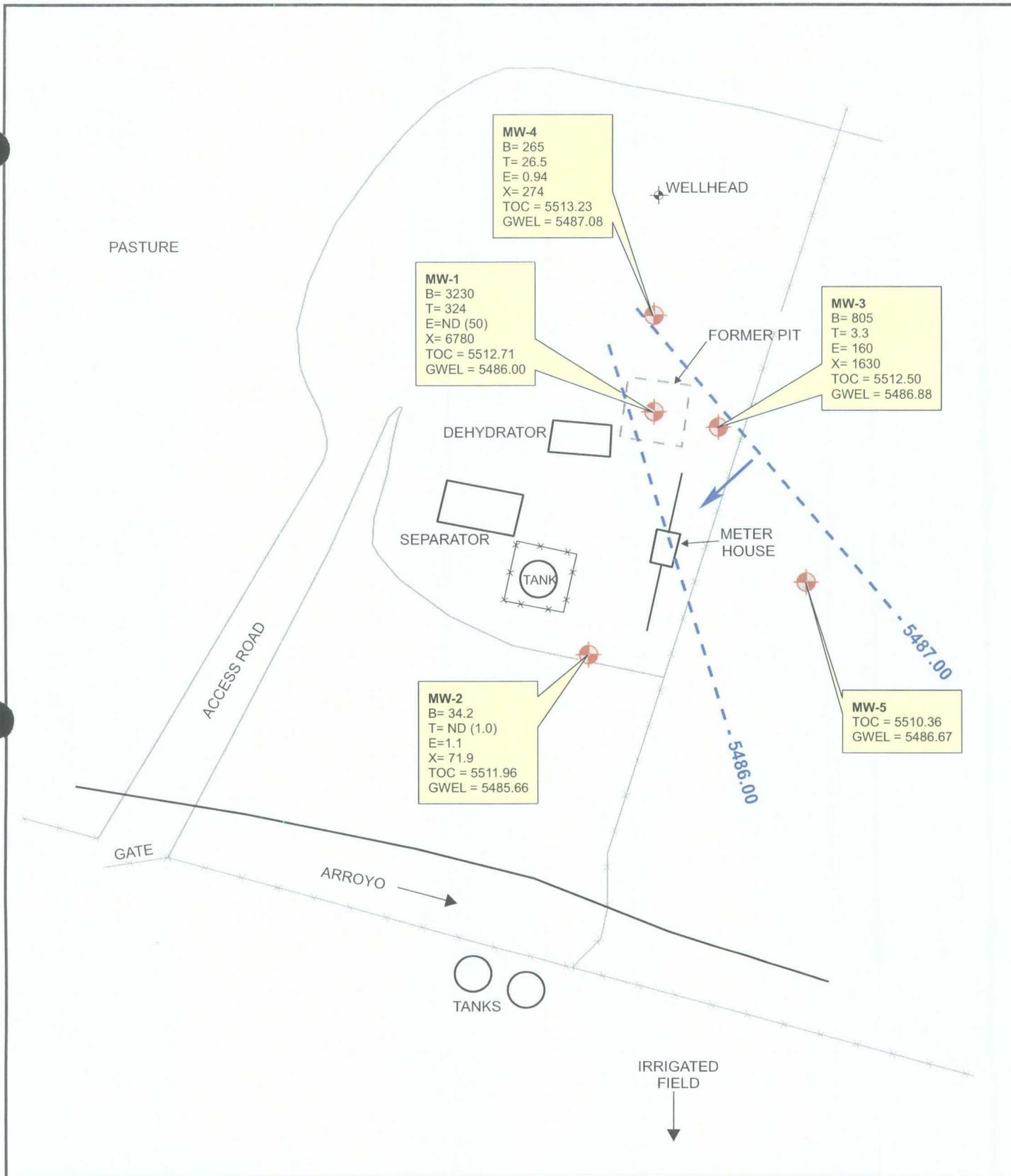
**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Knight #1
Meter Code: 72556**

- The laboratory results from the annual sample collected at MW-4 during 2008 indicated a benzene concentration 265 µg/L. The other BTEX constituents were below their respective standards. Concentrations in this well do fluctuate with water level, and these results are generally similar to those observed in prior years.

RECOMMENDATIONS

- EPTPC recommends annual sampling and semiannual water level gauging at MW-1. EPTPC will also continue semiannual water level gauging at MW-1, and free-product recovery will again be implemented if measurable free-product thicknesses reappear.
- EPTPC recommends annual sampling and semiannual water level gauging at MW-2.
- EPTPC recommends annual sampling and semiannual water level gauging at MW-3. EPTPC will also continue semiannual water level gauging at MW-3, and free-product recovery will again be implemented if measurable free-product thicknesses reappear.
- EPTPC recommends annual sampling and semiannual water level gauging at MW-4.
- Because historical analytical data have indicated that BTEX concentrations are below or near detection limits at MW-5, EPTPC recommends that this well not be sampled again until closure. Water level monitoring at this well will continue on a semiannual basis.



LEGEND

- MW-4 Existing Monitoring / Observation Well
- PZ-01 Abandoned Monitoring Well
- Groundwater Flow Direction
- Potentiometric Surface Contour (Inferred Where Dashed)

- B** Benzene (ug/L)
- T** Toluene (ug/L)
- E** Ethylbenzene (ug/L)
- X** Total Xylenes (ug/L)
- TOC** Top of Casing (ft. AMSL)
- GWEL** Groundwater Elevation (ft. AMSL)



MWH



PROJECT:

KNIGHT #1

TITLE:

Groundwater Potentiometric Surface Map,
 and BTEX Concentrations - September 9, 2008

FIGURE:

1

FIGURE 2
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 KNIGHT #1 (METER #72556)
 MW01

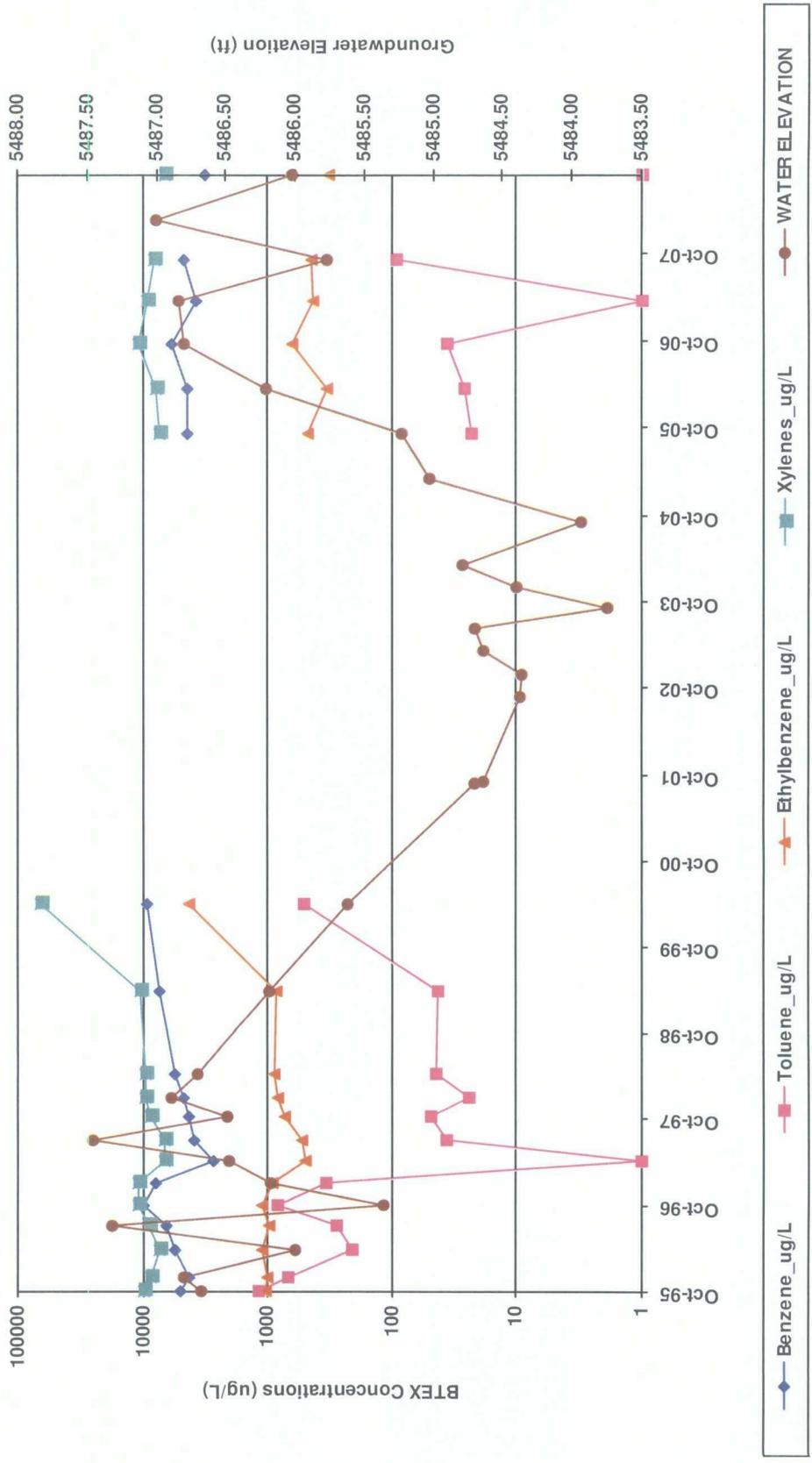


FIGURE 3
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 KNIGHT #1 (METER #72556)
 MW02

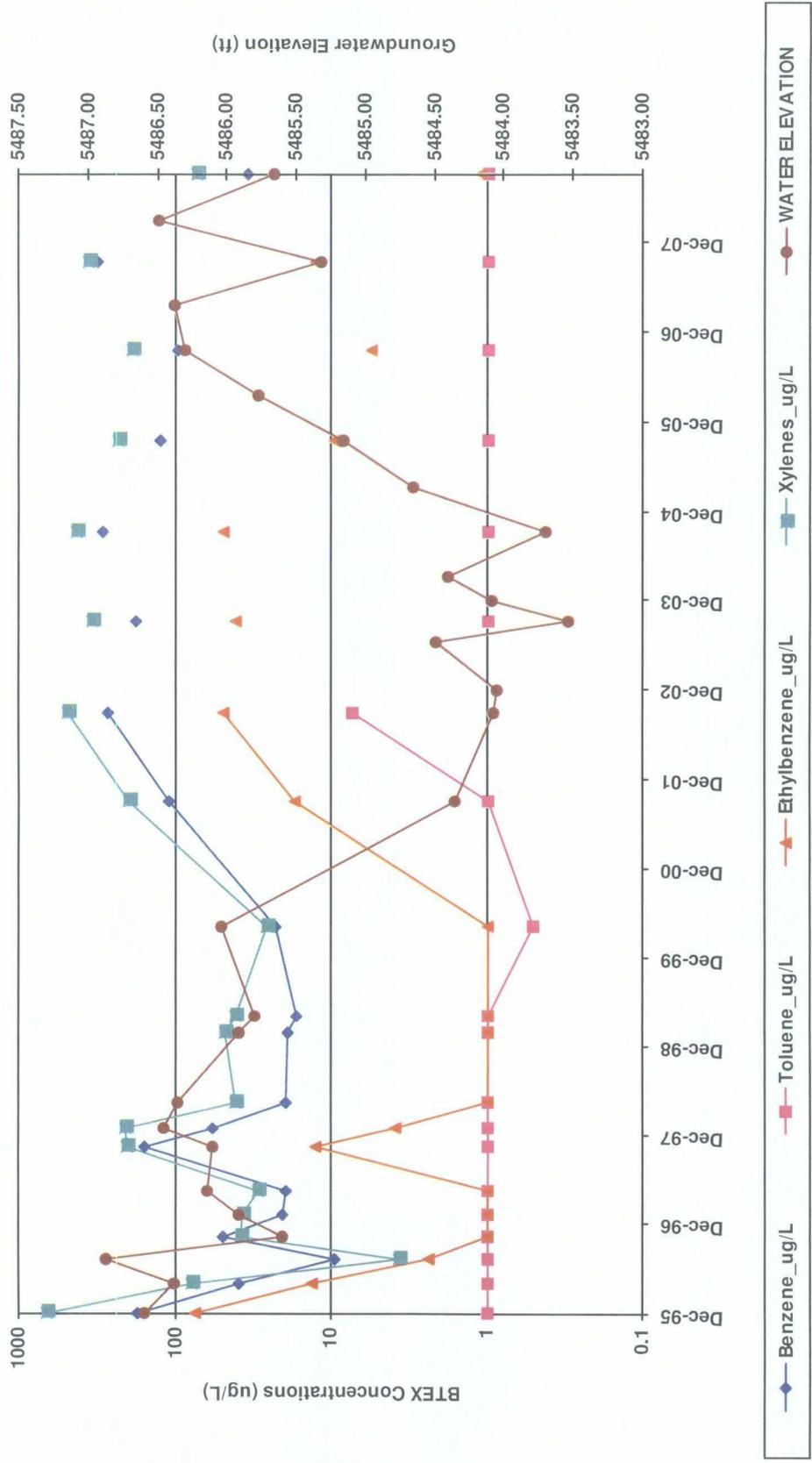


FIGURE 4
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 KNIGHT #1 (METER #72556)
 MW03

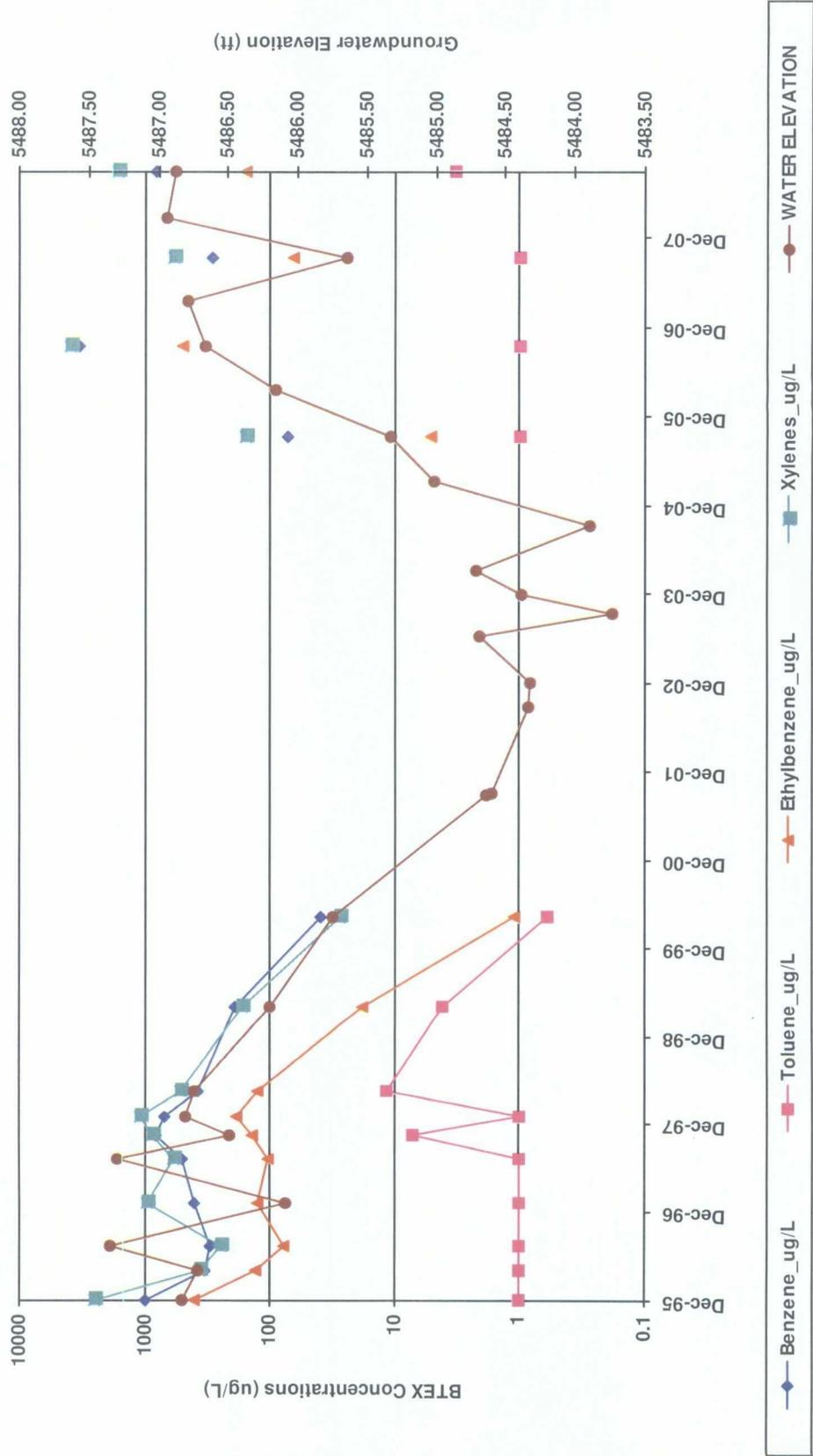


FIGURE 5
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 KNIGHT #1 (METER #72556)
 MW04

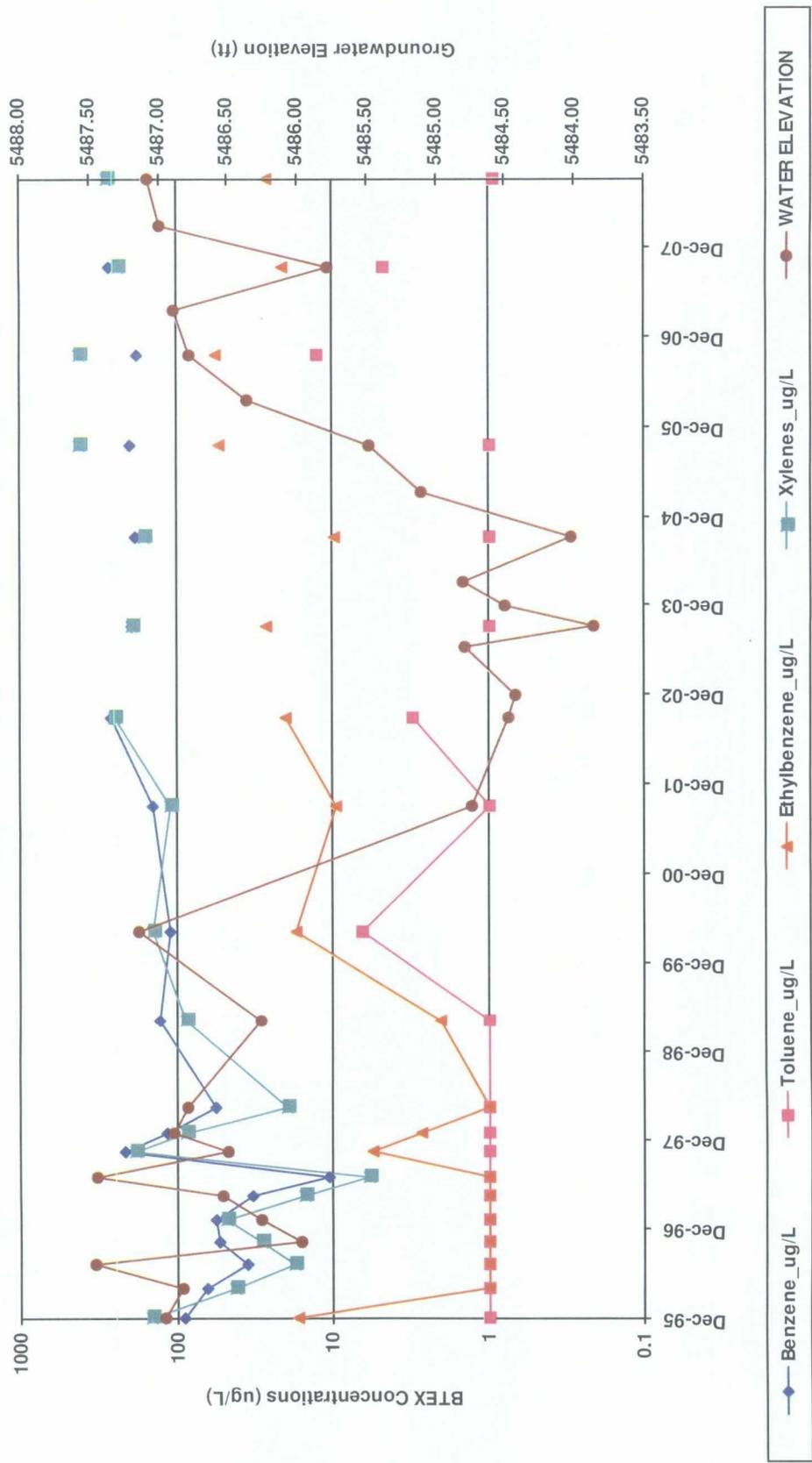


FIGURE 6
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 KNIGHT #1 (METER #72556)
 MW05

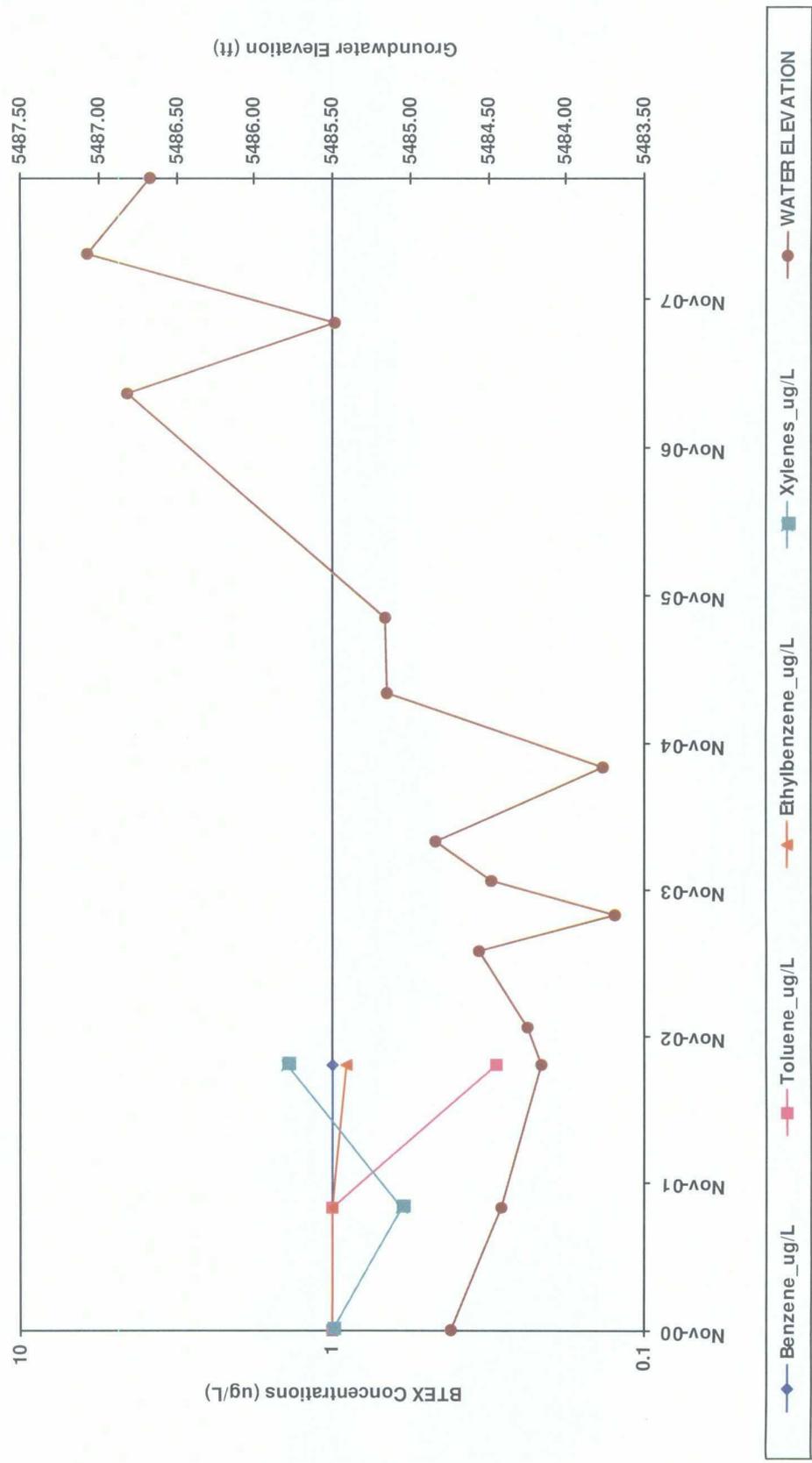


FIGURE 7
 SUMMARY OF FREE-PRODUCT REMOVAL
 KNIGHT #1 (METER #72556)
 MW01

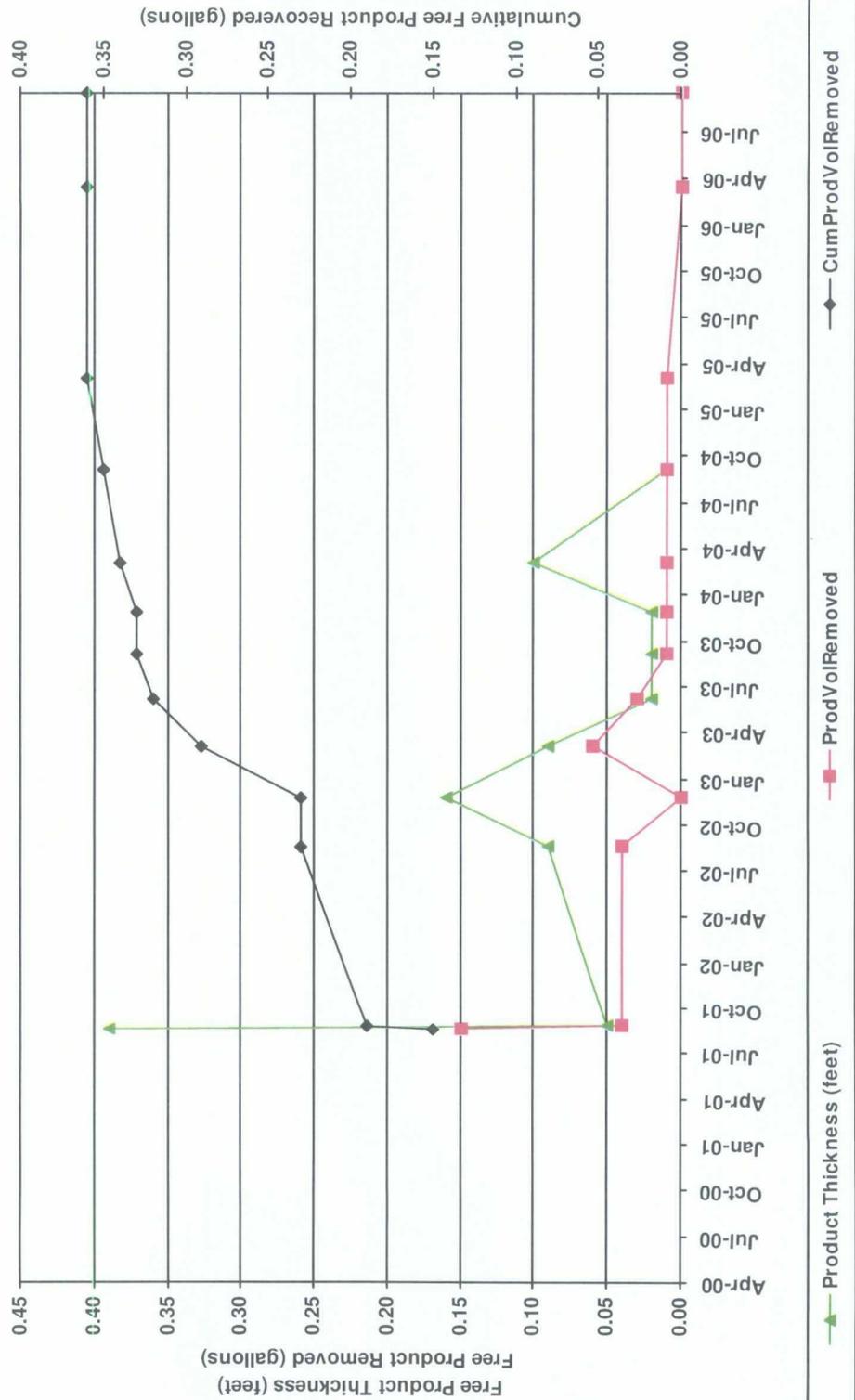


FIGURE 8
 SUMMARY OF FREE-PRODUCT REMOVAL
 KNIGHT #1 (METER #72556)
 MW03

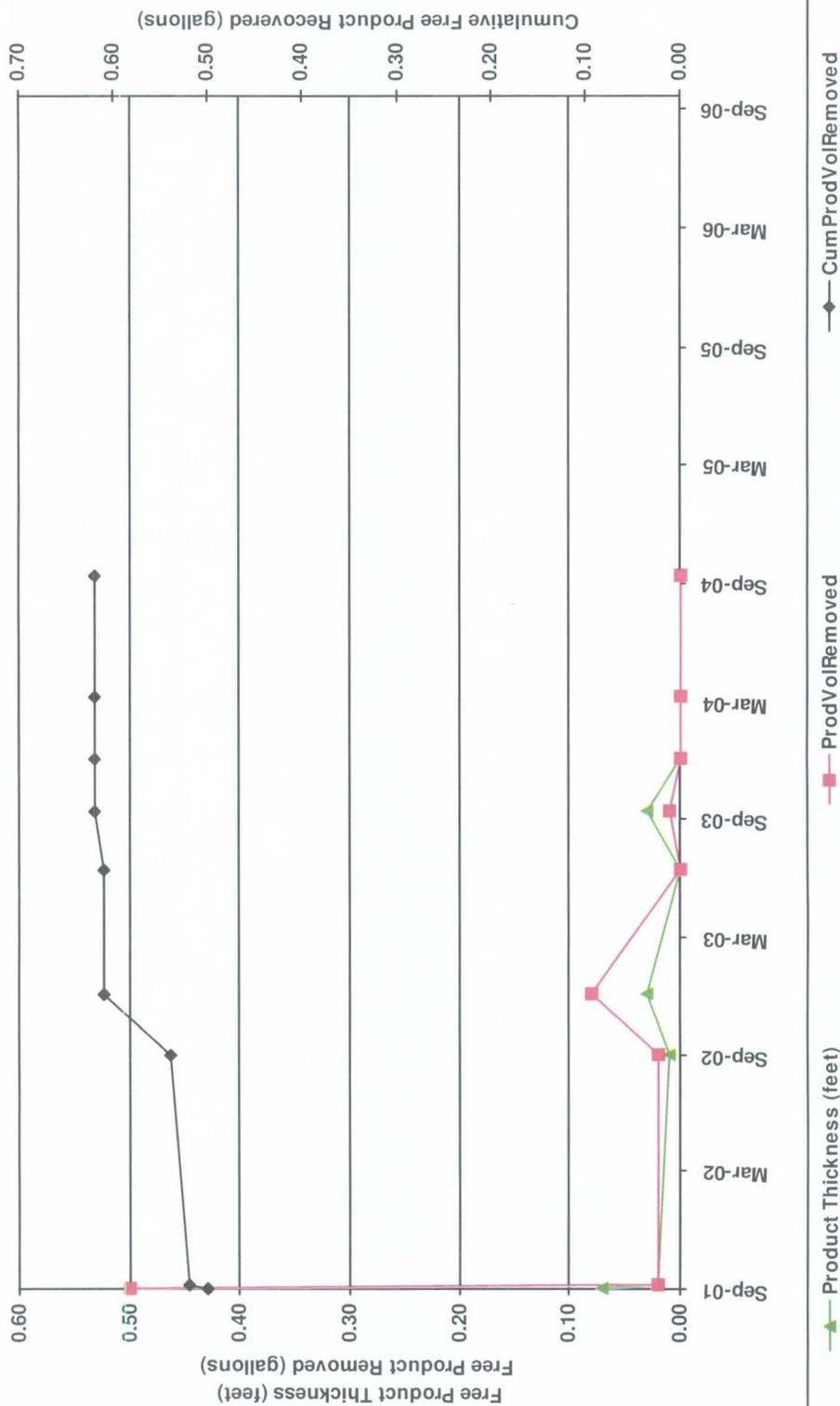


TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
KNIGHT #1 (METER #72556)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	10/16/1995	5080	1180	1050	9970	26.03
	12/12/1995	4330	679	1010	8560	25.91
	4/9/1996	5490	208	1100	7370	26.71
	7/17/1996	6450	279	990	9060	25.39
	10/15/1996	9870	840	1120	10900	27.35
	1/13/1997	7760	332	914	10900	26.53
	4/22/1997	2700	1	492	6690	26.23
	7/14/1997	3900	36.7	530	6700	25.25
	10/22/1997	4270	48.7	728	8580	26.22
	1/9/1998	4750	24.2	819	9480	25.82
	4/24/1998	5610	44.7	898	9530	26.01
	4/16/1999	7340	42.8	853	10600	26.52
	4/19/2000	9400	510	4300	66000	27.14
	9/19/2005	4430	23.7	487	7370	27.47
	3/27/2006	4410	26.6	337	7860	26.49
	9/26/2006	5880	36.5	633	11000	25.91
	3/28/2007	3740	1	441	9210	25.87
	9/17/2007	4640	93.3	444	8180	26.94
	9/9/2008	3230	1	324	6780	26.68
MW02	12/12/1995	175	1	74.3	671	25.37
	4/9/1996	39.2	1	13.4	77.9	25.58
	7/17/1996	9.55	1	2.39	3.65	25.09
	10/15/1996	49.7	1	1	38.4	26.36
	1/13/1997	20.3	1	1	37.3	26.05
	4/22/1997	19.4	1	1	29.8	25.82
	10/22/1997	155	1	12.6	204	25.86
	1/9/1998	58	1	3.85	207	25.50
	4/24/1998	19.4	1	1	40.7	25.60
	2/9/1999	19	1	1	48	26.05
	4/16/1999	16.7	1	1	41	26.16
	4/19/2000	23	0.5	1	26	25.92
	9/11/2001	110	1	17	200	27.60
	9/4/2002	269	7.4	48.9	482.4	27.88
	9/17/2003	177	1	41	343	28.42
9/15/2004	291	1	48.9	431	28.25	

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

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
KNIGHT #1 (METER #72556)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW02	9/19/2005	126	1	9.5	231	26.80
	9/26/2006	95.8	1	5.5	189	25.66
	9/17/2007	317	1	12.5	354	26.63
	9/9/2008	34.3	1	1.1	71.9	26.30
MW03	12/12/1995	979	1	398	2540	25.67
	4/9/1996	328	1	132	369	25.78
	7/17/1996	299	1	76.7	251	25.15
	1/13/1997	395	1	126	955	26.41
	7/14/1997	499	1	104	583	25.21
	10/22/1997	817	7.22	141	869	26.01
	1/9/1998	702	1	185	1080	25.69
	4/24/1998	377	11.8	126	525	25.76
	4/16/1999	191	4.11	18.1	169	26.30
	4/19/2000	40	0.6	1.1	28	26.75
	9/19/2005	73.8	1	5.2	158	27.16
	9/26/2006	3370	1	498	3960	25.83
	9/17/2007	288	1	65.4	599	26.85
	9/9/2008	805	3.3	160	1630	25.62
MW04	12/12/1995	90.1	1	16.8	144	26.27
	4/9/1996	63.1	1	1	42.5	26.40
	7/17/1996	35	1	1	17.8	25.77
	10/15/1996	53.5	1	1	28.4	27.26
	1/13/1997	56.2	1	1	48.4	26.96
	4/22/1997	32.8	1	1	15.2	26.69
	7/14/1997	10.4	1	1	5.79	25.78
	10/22/1997	215	1	5.5	184	26.72
	1/9/1998	114	1	2.66	85.7	26.34
	4/24/1998	55.4	1	1	19.3	26.44
	4/16/1999	129	1	2.03	87.3	26.97
	4/19/2000	110	6.5	17	140	26.09
	9/11/2001	140	1	9.6	110	28.48
	9/4/2002	261	3.1	20.1	246.5	28.75
	9/17/2003	192	1	26.3	194	29.36
	9/15/2004	182	1	9.8	161	29.20
9/19/2005	199	1	53.8	416	27.74	

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

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
KNIGHT #1 (METER #72556)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW04	9/26/2006	180	12.5	55.9	417	26.45
	9/17/2007	272	4.7	21.3	236	27.44
	9/9/2008	265	0.94	26.5	274	26.15
MW05	11/15/2000	1	1	1	1	25.62
	9/11/2001	1	1	1	0.6	25.94
	9/4/2002	1	0.3	0.9	1.4	26.20

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

TABLE 2

**SUMMARY OF FREE-PRODUCT REMOVAL
KNIGHT #1 (METER #72556)**

Monitoring Well	Removal Date	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Volume of Product Removed (gallons)
MW01	4/19/2000	27.07	27.14	0.07		
	9/5/2001	27.93	28.32	0.39	0.15	0.15
	9/11/2001	28.05	28.10	0.05	0.04	0.19
	9/4/2002	28.31	28.39	0.08	0.04	0.23
	12/10/2002	28.31	28.47	0.16	0.00	0.23
	3/20/2003	28.05	28.14	0.09	0.06	0.29
	6/19/2003	28.00	28.02	0.02	0.03	0.32
	9/17/2003	28.95	28.97	0.01	0.01	0.33
	12/9/2003	28.30	28.32	0.02	0.01	0.33
	3/15/2004	27.89	27.99	0.10	0.01	0.34
	9/15/2004	28.77	28.78	0.01	0.01	0.35
	3/16/2005	27.67	27.67	0.00	0.01	0.36
	3/27/2006		26.49	0.00	0.00	0.36
9/26/2006		25.91	0.00	0.00	0.36	
MW03	9/5/2001	27.84	27.91	0.07	0.50	0.50
	9/11/2001	27.89	27.91	0.02	0.02	0.52
	9/4/2002	28.16	28.17	0.01	0.02	0.54
	12/10/2002	28.17	28.20	0.03	0.08	0.61
	6/19/2003		27.81	0.00	0.00	0.61
	9/17/2003	28.76	28.79	0.03	0.01	0.62
	12/9/2003		28.11	0.00	0.00	0.62
	3/15/2004		27.78	0.00	0.00	0.62
	9/15/2004	28.60	28.60	0.00	0.00	0.62