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**ANNUAL
MONITORING
REPORT**

2/28/2009

**MWH**

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



**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**

**Johnston Fed #4
Meter Code: 70194**

SITE DETAILS

Legal Description: **Town:** 31N **Range:** 09W **Sec:** 33 **Unit:** H
NMOCD Haz Ranking: 40 **Land Type:** Fee **Operator:** Burlington Resources

PREVIOUS ACTIVITIES

Site Assessment:	8/94	Excavation:	9/94 (60 cy)	Soil Boring:	8/95
Monitor Well:	8/95	Geoprobe:	9/97	Additional MWs:	12/95
Downgradient MWs:	12/95	Replace MW:	NA	Quarterly Initiated:	NA
ORC Nutrient Injection:	NA	Re-Excavation:	NA	PSH Removal Initiated:	9/97
Annual Initiated:	6/01	Quarterly Resumed:	NA	PSH Removal in 2008?	Yes

SUMMARY OF 2008 ACTIVITIES

MW-1: Quarterly water level monitoring was performed during 2008.

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

MW-3: Quarterly free-product recovery and water level monitoring were performed during 2008.

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

TMW-5: Annual groundwater sampling (June) and quarterly water level monitoring were performed during 2008.

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

SITE MAP

A Site map (June) 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. Where applicable, static water level elevations were corrected for measurable thicknesses of free-product (specific gravity of 0.8).

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Johnston Fed #4
Meter Code: 70194**

- Historic free-product recovery data are summarized in 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. Spent product recovery socks were disposed of as non-hazardous solid waste.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this Site; however, the attached Site map presents the water level and analytical data collected during June 2008.

RESULTS

- The groundwater flow direction at this Site trended toward the east in 2008.
- Monitoring wells MW-2 and MW-3 are located downgradient to cross-gradient of the former pit. The presence of hydrocarbon contamination in TMW-5 may suggest an alternative source of contamination at the Site.
- Free-product was not observed in MW-1 during 2008. The most recent product recovery at this well was during Summer 2006. Water levels have been steadily increasing over the last few years, and product may be observed in the future during a low water period. However, this well can be added to the sampling list while free-product remains absent.
- The benzene concentration in the annual groundwater sample collected at MW-2 increased from 83.0 µg/L in June 2007 to 201 µg/L in June 2008. As a long-term trend, the benzene concentration appears to be steadily attenuating from its high of 5,900 µg/L in 1996.
- Free-product recovery efforts at MW-3 resulted in the removal of approximately 0.6 gallons of free-phase hydrocarbons during 2008, bringing the cumulative total volume recovered to 10.78 gallons.
- New monitoring well MW-4 was sampled in June 2008 and appears to be clean. This well, installed in late 2006, was anticipated to be downgradient of the pit;

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

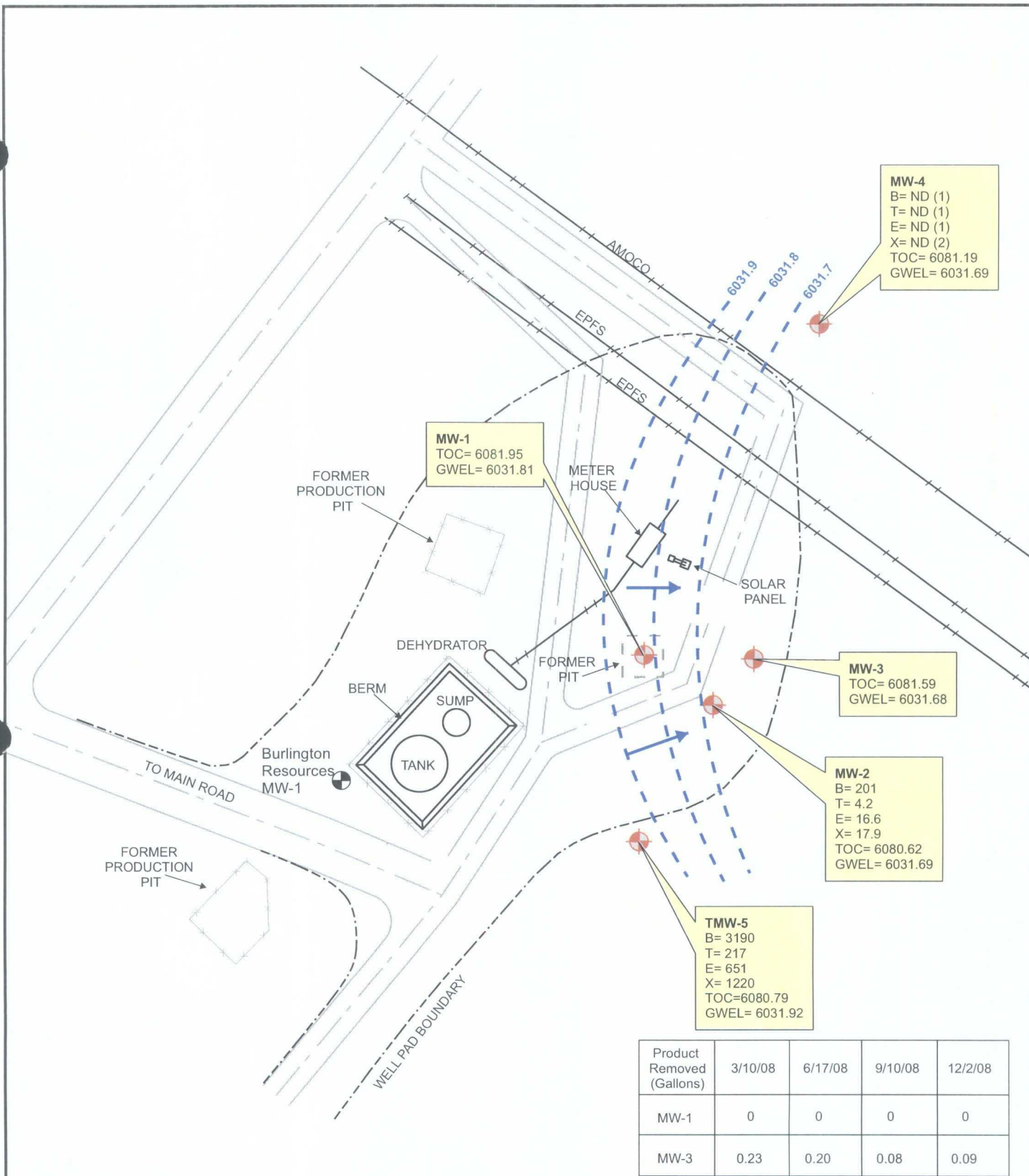
**Johnston Fed #4
Meter Code: 70194**

however, based on the 2007 and 2008 monitoring data, this well appears to be more cross-gradient.

- Temporary monitoring well TMW-5 was sampled in June 2008 and appears to be significantly impacted, though it is upgradient from the former pit. The June 2008 benzene concentration of 3,190 µg/L and total xylenes concentration of 1,220 µg/L both exceeded their respective NMWQCC standards.

RECOMMENDATIONS

- EPTPC will add MW-1 to the annual sampling list, as long as free-product does not re-appear. This well will be gauged quarterly.
- EPTPC will continue annual sampling and quarterly water level monitoring at MW-2 until analytical results indicate that Site BTEX concentrations are approaching closure criteria. This well will then be scheduled for quarterly sampling until closure criteria have been met.
- EPTPC will continue quarterly free-product recovery efforts at MW-3; however, the frequency of monitoring may be adjusted based on the amount of product recovered during the monitoring visits.
- Monitoring wells MW-4 and TMW-5 will be sampled annually in conjunction with MW-1 and MW-2. EPTPC may continue to evaluate the source of the potential upgradient impacts in the vicinity of TMW-5.



LEGEND

MW-4 Existing Monitoring / Observation Well

PZ-01 Abandoned Monitoring Well

Groundwater Flow Direction

1275 Potentiometric Surface Contour (Inferred Where Dashed)

B Benzene (ug/L)

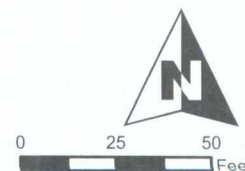
T Toluene (ug/L)

E Ethylbenzene (ug/L)

X Total Xylenes (ug/L)

TOC Top of Casing (ft. AMSL)

GWEL Groundwater Elevation (ft. AMSL)



MWH



PROJECT:

JOHNSTON FED #4

TITLE:

Groundwater Potentiometric Surface Map,
and BTEX Concentrations - June 17, 2008

FIGURE:

1

FIGURE 2
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)
MW01

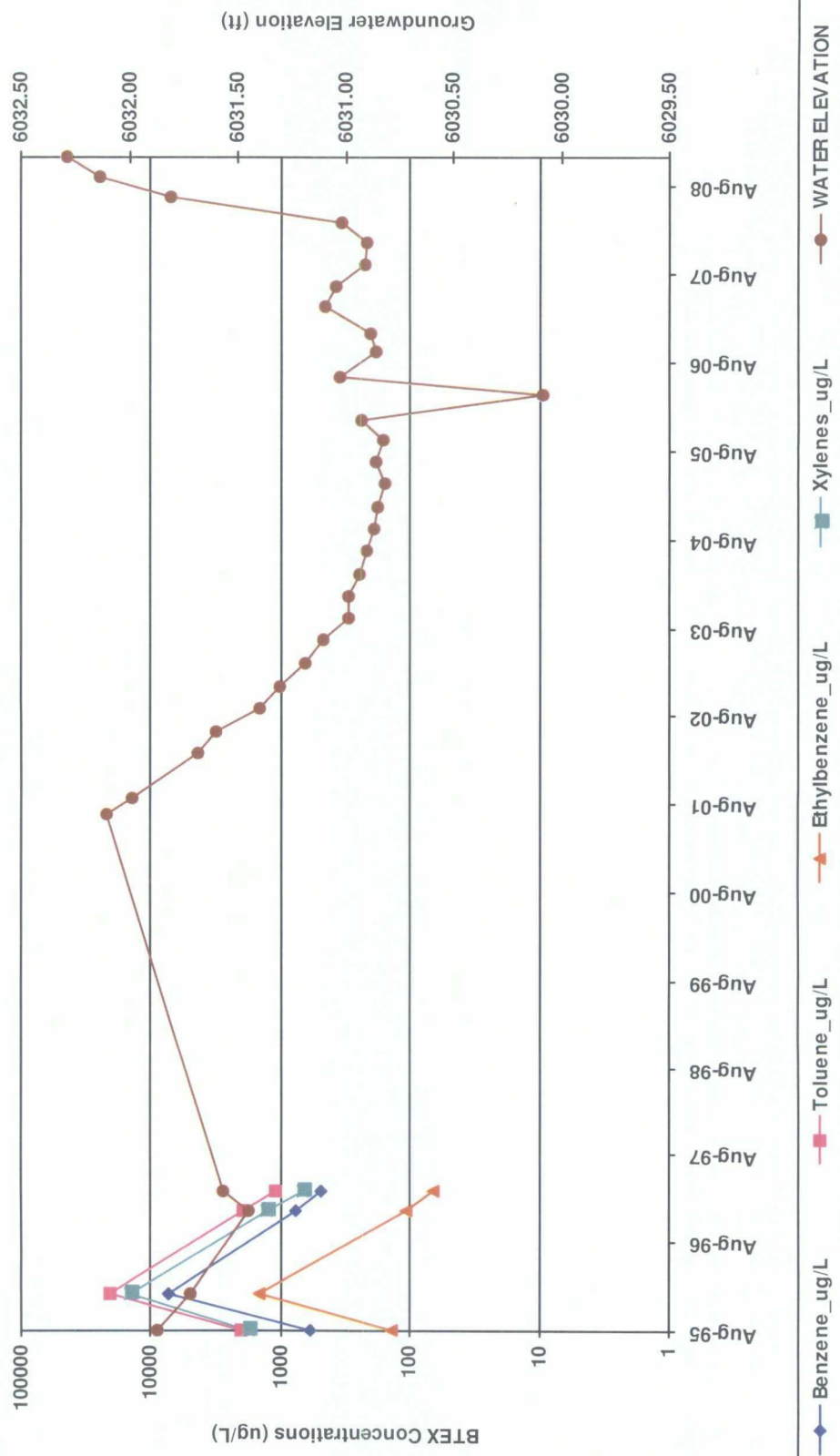


FIGURE 3
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)
MW02

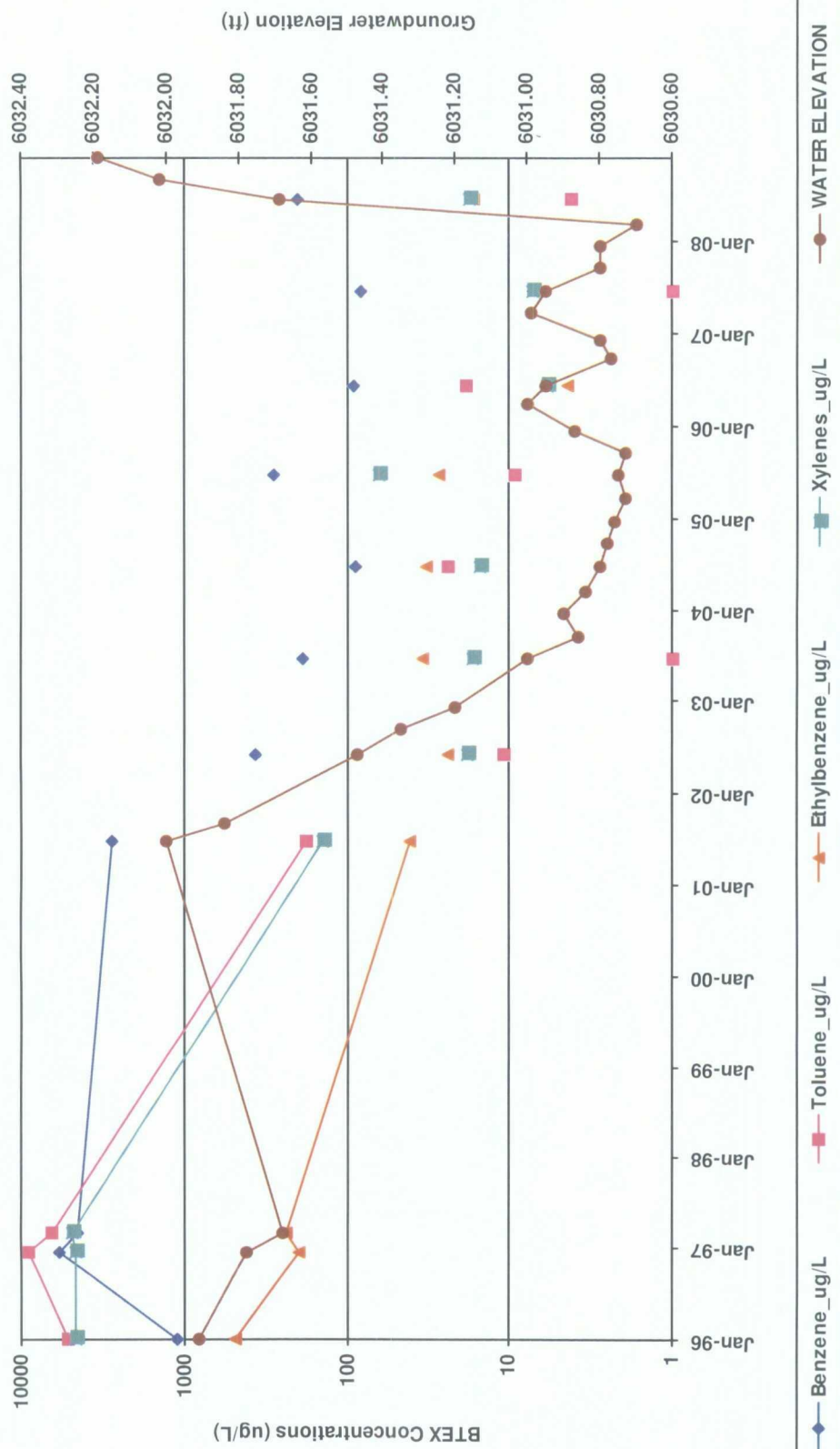


FIGURE 4
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)
MW03

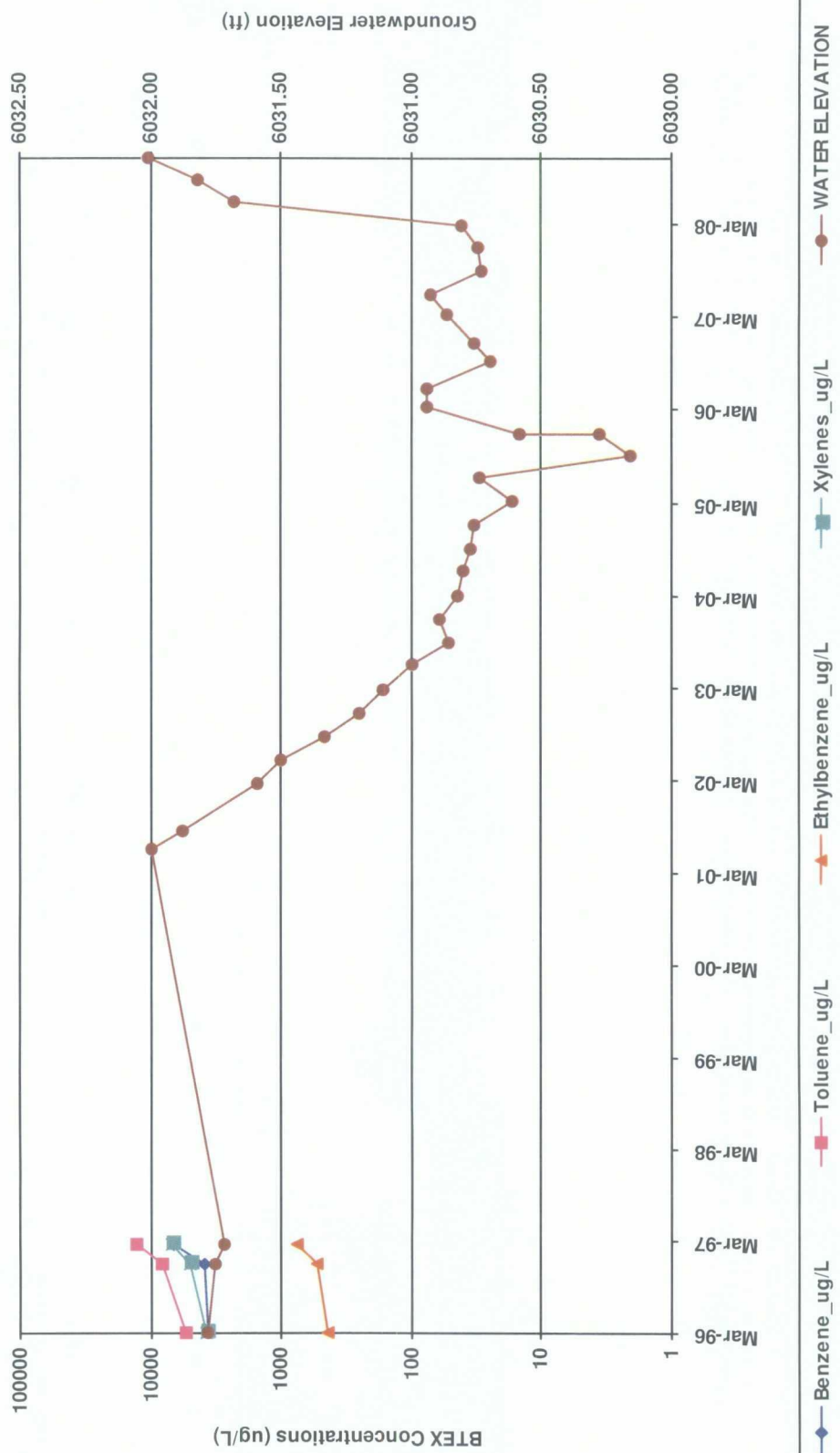


FIGURE 5
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)
MW04

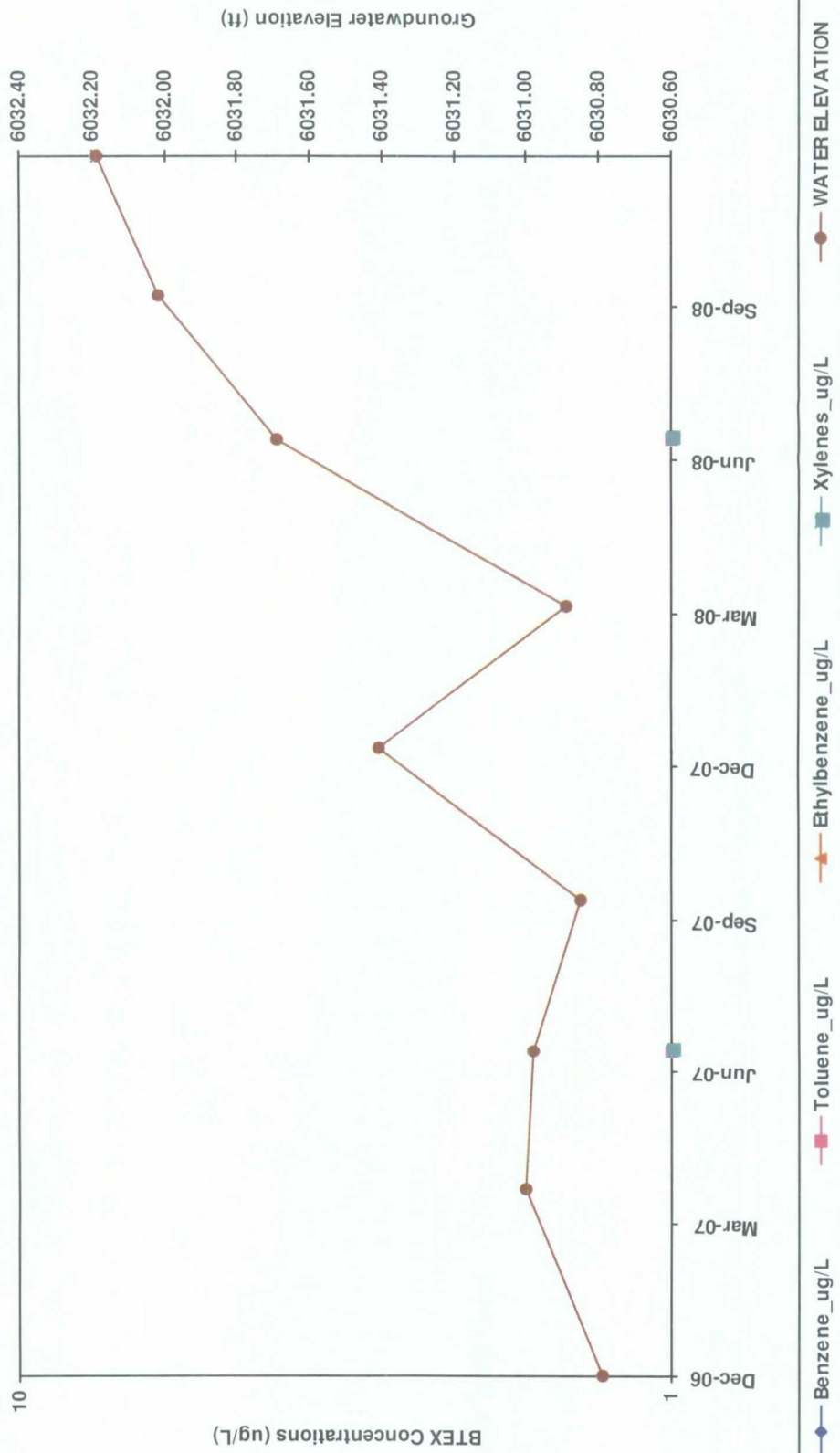


FIGURE 6
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)
TMW05

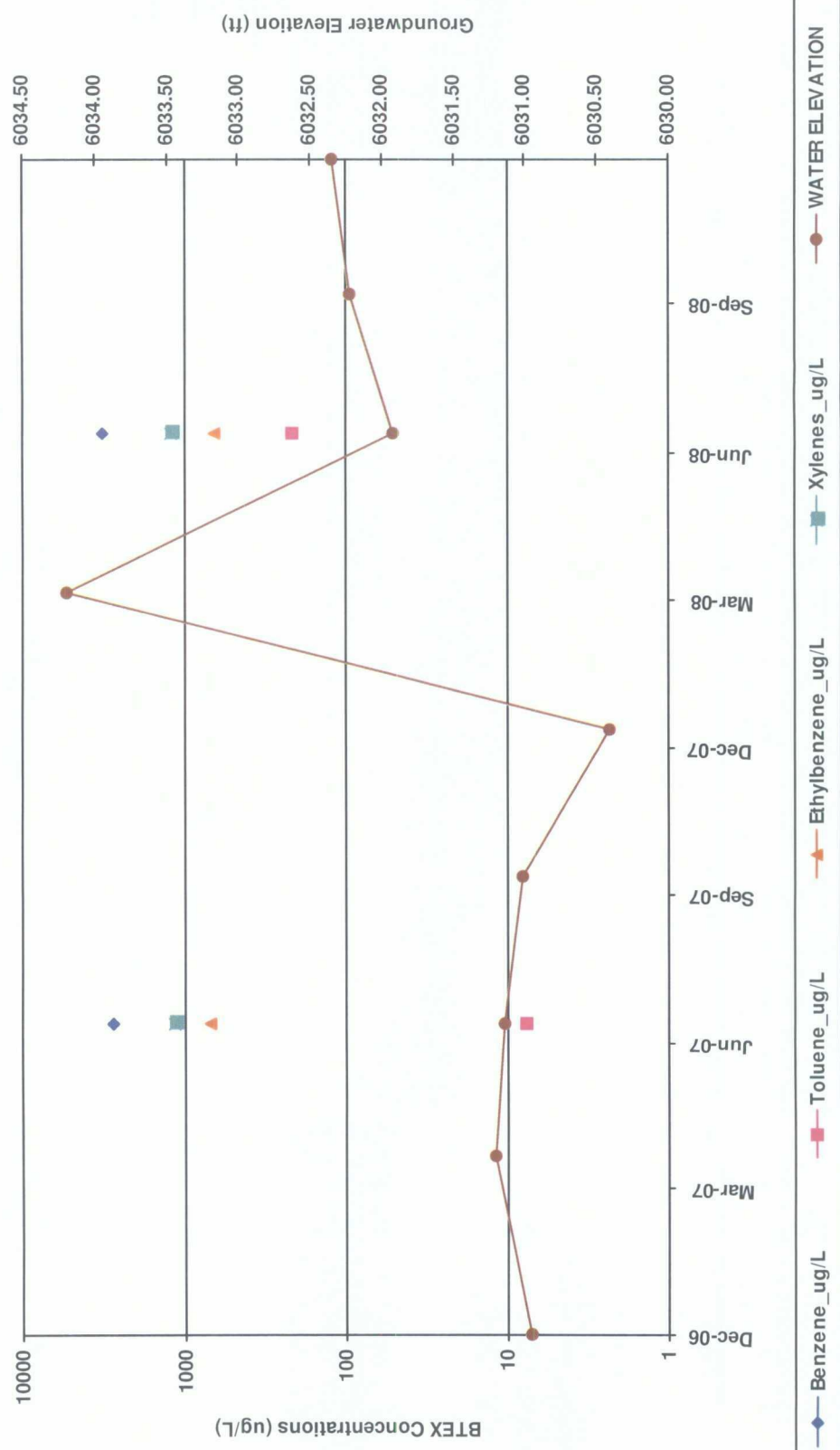


FIGURE 7
SUMMARY OF FREE-PRODUCT REMOVAL
JOHNSTON FED #4 (METER #70194)
MW01

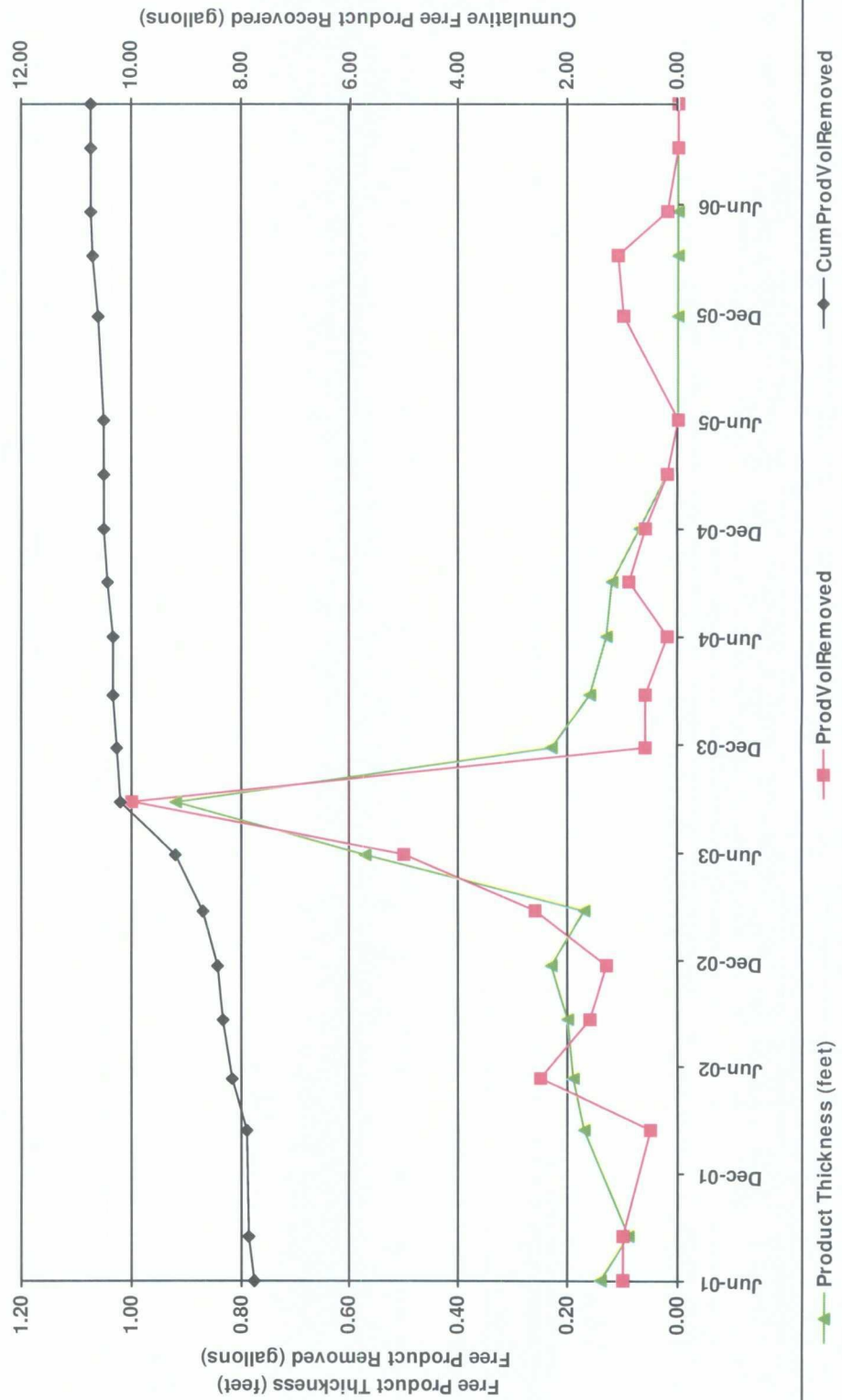


FIGURE 8
SUMMARY OF FREE-PRODUCT REMOVAL
JOHNSTON FED #4 (METER #70194)
MW03

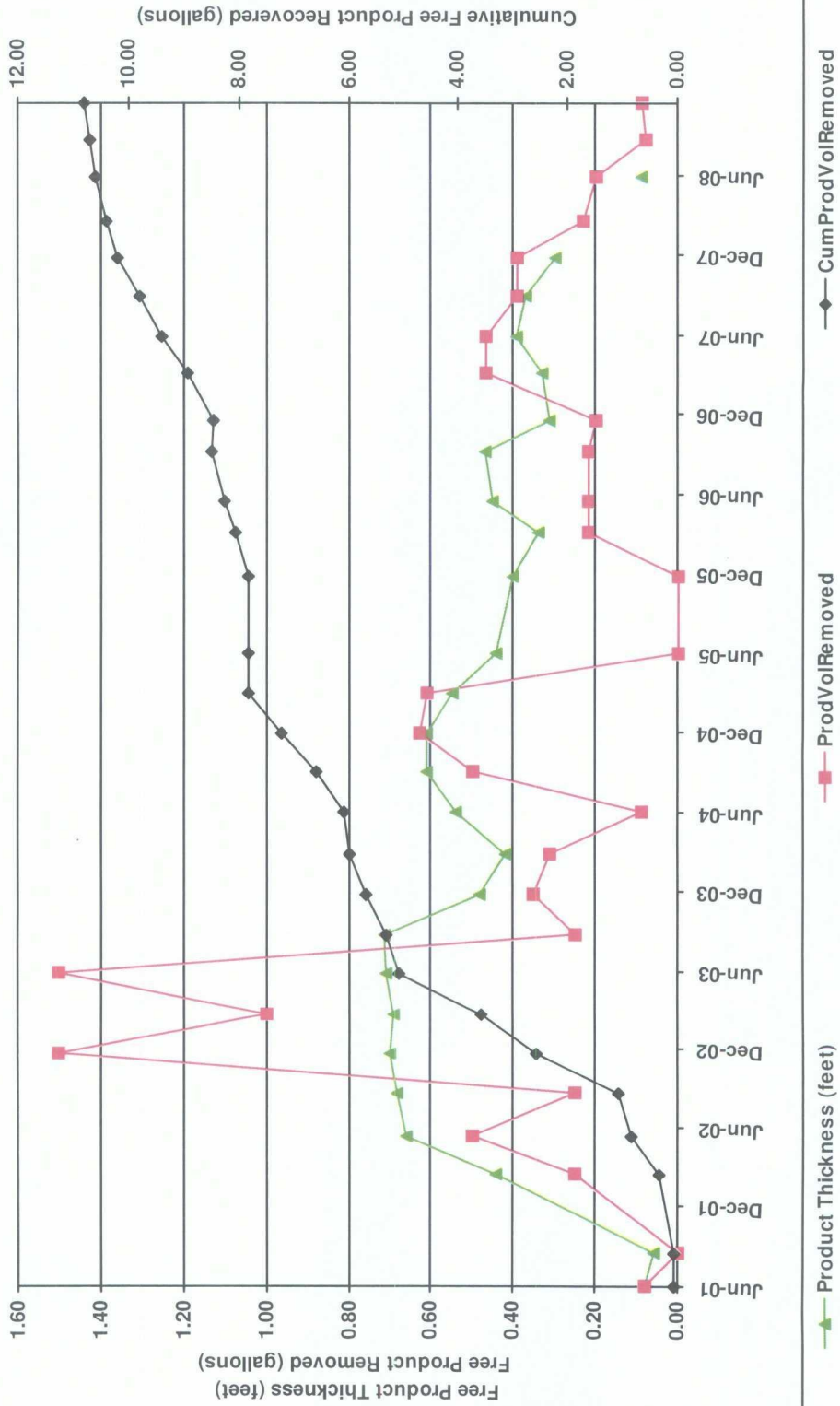


TABLE 1

**SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
JOHNSTON FED #4 (METER #70194)**

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	8/8/1995	590	2040	137	1764	50.08
	1/4/1996	7380	20900	1480	14600	50.23
	12/17/1996	762	1930	107	1270	50.50
	3/6/1997	483	1110	66.1	678	50.38
MW02	1/4/1996	1104	5107	479	4640	48.71
	12/17/1996	5900	8970	197	4670	48.84
	3/6/1997	4500	6480	236	4920	48.94
	6/22/2001	2800	180	41	140	48.62
	6/3/2002	370	11	24	18	49.15
	6/18/2003	186	1	34.9	16.8	49.62
	6/22/2004	88.9	24	32.9	15.2	49.82
	6/23/2005	283	9.4	27.7	64.5	49.87
	6/7/2006	92.1	18.4	4.4	5.9	49.67
	6/19/2007	83	1	7.3	7.2	49.67
	6/17/2008	201	4.2	16.6	17.9	48.93
MW03	3/19/1996	3660	5410	436	3730	49.81
	12/17/1996	3910	8210	530	5020	49.84
	3/6/1997	6670	12700	759	7020	49.87
MW04	6/19/2007	1	1	1	1	50.21
	6/17/2008	1	1	1	1	49.50
TMW05	6/19/2007	2730	7.6	680	1160	49.64
	6/17/2008	3190	217	651	1220	48.87

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

TABLE 2

**SUMMARY OF FREE-PRODUCT REMOVAL
JOHNSTON FED #4 (METER #70194)**

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	6/22/2001	49.82	49.96	0.14	0.10	7.75
	9/4/2001	49.94	50.05	0.11	0.10	7.85
	3/4/2002	50.23	50.40	0.17	0.05	7.90
	6/3/2002	50.31	50.50	0.19	0.25	8.15
	9/10/2002	50.51	50.70	0.19	0.16	8.31
	12/12/2002	50.60	50.83	0.23	0.13	8.43
	3/14/2003	50.73	50.90	0.17	0.26	8.69
	6/18/2003	50.74	51.28	0.54	0.50	9.19
	9/16/2003	50.78	51.70	0.92	1.00	10.19
	12/17/2003	50.92	51.15	0.23	0.06	10.25
	3/16/2004	50.98	51.14	0.16	0.06	10.32
	6/22/2004	51.02	51.15	0.13	0.02	10.33
	9/22/2004	51.06	51.18	0.12	0.09	10.43
	12/21/2004	51.08	51.15	0.07	0.06	10.49
	3/23/2005	51.13	51.13	0.00	0.02	10.50
	6/23/2005		51.09	0.00	0.00	10.50
	12/15/2005		51.02	0.00	0.10	10.60
	3/27/2006		51.86	0.00	0.11	10.71
	6/7/2006		50.92	0.00	0.02	10.73
	9/25/2006		51.09	0.00	0.00	10.73
	12/7/2006		51.06	0.00	0.00	10.73
MW03	6/22/2001	49.58	49.66	0.08	0.08	0.08
	9/4/2001	49.70	49.76	0.06	0.00	0.08
	3/4/2002	49.91	50.35	0.44	0.25	0.33
	6/3/2002	49.96	50.62	0.66	0.50	0.83
	9/10/2002	50.12	50.79	0.67	0.25	1.08
	12/12/2002	50.25	50.95	0.70	1.50	2.58
	3/14/2003	50.34	51.03	0.69	1.00	3.58
	6/18/2003	50.45	51.16	0.71	1.50	5.08
	9/16/2003	50.58	51.30	0.72	0.25	5.33
	12/17/2003	50.60	51.08	0.48	0.35	5.68
	3/16/2004	50.68	51.10	0.42	0.31	5.99
	6/22/2004	50.68	51.22	0.54	0.09	6.09
	9/22/2004	50.69	51.30	0.61	0.50	6.59
	12/21/2004	50.71	51.32	0.61	0.63	7.21
	3/23/2005	50.76	51.85	1.09	0.61	7.82
	6/23/2005	50.76	51.20	0.44	0.00	7.82
	12/15/2005	50.92	51.32	0.40	0.00	7.82
	3/27/2006	50.58	50.92	0.34	0.22	8.04

TABLE 2

**SUMMARY OF FREE-PRODUCT REMOVAL
JOHNSTON FED #4 (METER #70194)**

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)
MW03	6/7/2006	50.56	51.01	0.45	0.22	8.26
	9/25/2006	50.80	51.27	0.47	0.22	8.48
	12/7/2006	50.77	51.07	0.30	0.20	8.46
	3/28/2007	50.66	50.99	0.33	0.47	8.93
	6/18/2007	50.58	50.97	0.39	0.47	9.40
	9/17/2007	50.78	51.15	0.37	0.39	9.79
	12/17/2007	50.78	51.08	0.30	0.39	10.18
	3/10/2008	50.75	50.90	0.15	0.23	10.41
	6/17/2008	49.89	49.98	0.09	0.20	10.61
	9/10/2008		49.77	0.00	0.08	10.69
	12/2/2008		49.58	0.00	0.09	10.78