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**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
FEDERAL SITES VOLUME I
EL PASO TENNESSEE PIPELINE COMPANY**

TABLE OF CONTENTS

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT	
89961	Fields A#7A	32N	11W	34	E	3R170
89232	Johnston Fed #6A	31N	09W	35	F	3R202
94715	James F. Bell #1E	30N	13W	10	P	3R196
89620	Sandoval GC A #1A	30N	09W	35	C	3R235
LD151	Lat 0-21 Line Drip	30N	09W	12	O	3R213
73220	Fogelson 4-1 Com. #14	29N	11W	4	P	3R068
97213	Hamner #9	29N	09W	20	A	3R190
LD174	LAT L 40	28N	04W	13	H	3R212
89894	Hammond #41A	27N	08W	25	O	3R186
94810	Miles Fed 1A	26N	07W	5	F	3R223
LD072	K27 LD072	25N	06W	4	E	3R204
87640	Canada Mesa #2	24N	06W	24	I	3R155
70194	Johnston Fed #4	31N	09W	33	H	3R201



MWH

**EPTPC GROUNDWATER SITES
2007 ANNUAL GROUNDWATER REPORT**

3R201

**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 2007?	Yes

SUMMARY OF 2007 ACTIVITIES

MW-1: Quarterly water level monitoring was performed during 2007.

MW-2: Annual groundwater sampling (June) and quarterly water level monitoring were performed during 2007.

MW-3: Quarterly free-product recovery and water level monitoring were performed during 2007.

MW-4: Annual groundwater sampling (June) and quarterly water level monitoring were performed during 2007.

TMW-5: Annual groundwater sampling (June) and quarterly water level monitoring were performed during 2007.

Site-Wide Activities: All wells were surveyed in January 2007. The survey work was undertaken in conjunction with the November 2006 installation of monitoring wells MW-4 and TMW-5.

SITE MAPS

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

**EPTPC GROUNDWATER SITES
2007 ANNUAL GROUNDWATER REPORT**

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

SUMMARY TABLES AND GRAPHS

- Historic groundwater analytical and water level data are summarized in Table 1 and presented graphically in Figures 2 through 6.
- Free-product recovery data are included in Table 2 and presented graphically in Figures 7 and 8.
- Laboratory reports are 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 performed at this Site during 2007.

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 2007.

CONCLUSIONS

- The groundwater flow direction at this Site trends toward the east-northeast.
- Monitoring wells MW-2 and MW-3 are located downgradient to cross-gradient of the former pit. The presence of hydrocarbon contamination in MW-5 may suggest an alternative source of contamination at the Site.
- Free-product was not observed in MW-1 during 2007. The most recent product recovery at this well was in 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 is absent.
- The benzene concentration in the annual groundwater sample collected at MW-2 decreased from 92.1 µg/L in June 2006 to 83.0 µg/L in June 2007. The benzene concentration appears to be steadily attenuating in this well.
- Free-product recovery efforts at MW-3 resulted in the removal of approximately 1.72 gallons of free-phase hydrocarbons during 2007, bringing the cumulative total

**EPTPC GROUNDWATER SITES
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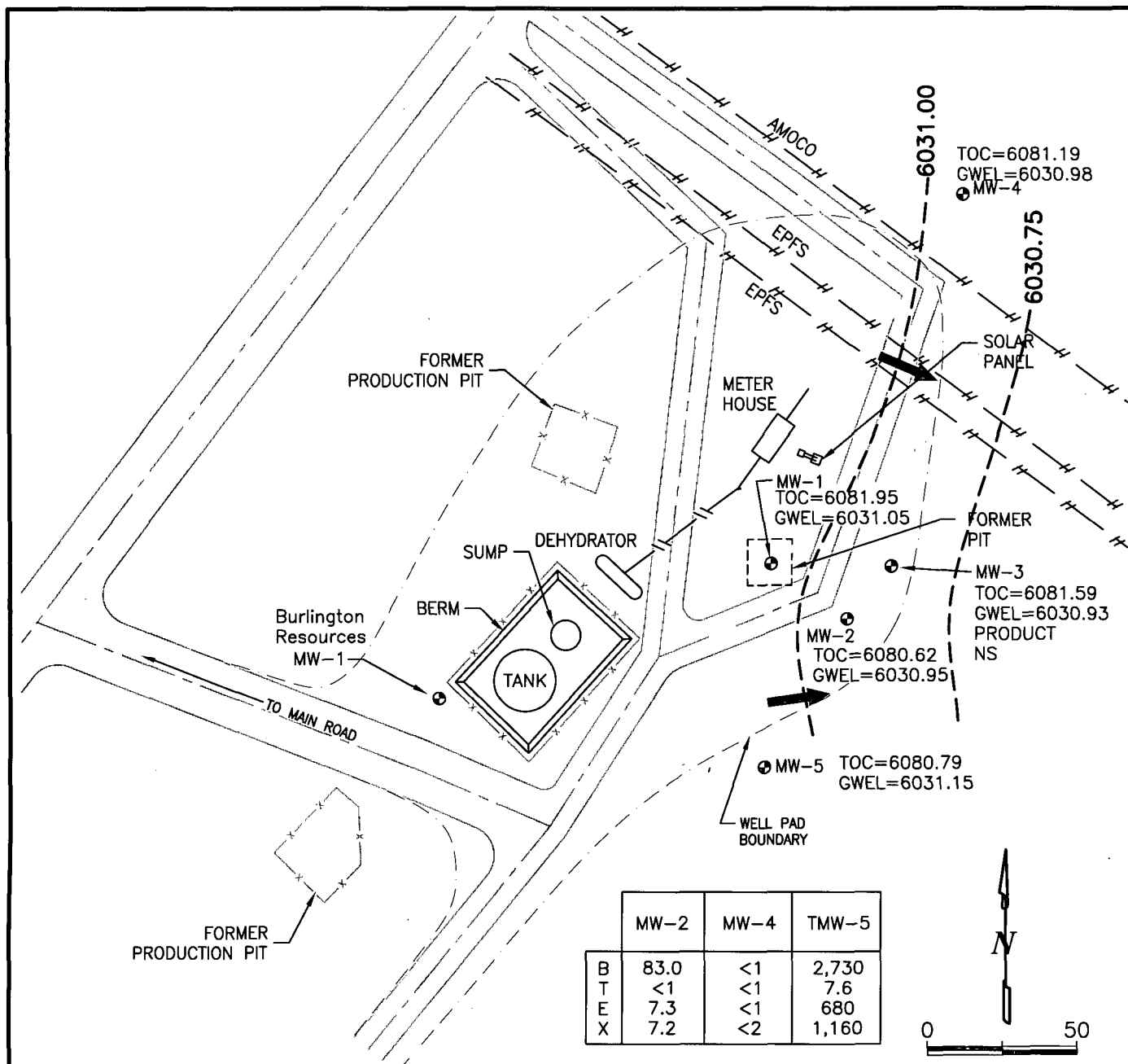
**Johnston Fed #4
Meter Code: 70194**

volume recovered to 10.18 gallons. The recovery was twice that of the preceding year, due to the installation of a larger capacity product recovery sock system in December 2006.

- New monitoring well MW-4 was sampled in June 2007 and appears to be clean. This well was anticipated to be downgradient of the pit; however, based on the June 2007 monitoring data, this well appears to be cross-gradient.
- New temporary monitoring well TMW-5 was sampled in June 2007 and appears to be significantly impacted, though it is cross-gradient from the former pit. It should be noted that when the well was installed, it was expected to be upgradient of the pit

RECOMMENDATIONS

- 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.
- 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.
- Monitoring wells MW-4 and TMW-5 will be sampled annually in conjunction with MW-2. EPTPC may continue to evaluate the source of the apparent upgradient impacts in the vicinity of TMW-5.



	MW-2	MW-4	TMW-5
B	83.0	<1	2,730
T	<1	<1	7.6
E	7.3	<1	680
X	7.2	<2	1,160

LEGEND

- MW-1 Monitoring Well Location and Number
- Centerline of Road
- x-x- Fence Line
- //-- Pipe Line
- ← Direction of Groundwater Flow (Estimated)
- - - 82.87 Potentiometric Surface (Inferred where Dashed)

- PRODUCT Free Product Present
- GWEL Groundwater Elevation (FT Above Mean Sea Level)
- TOC Top of Casing (Surveyed January 2007)
- NS Not Sampled
- ND Not Detected
- CR Water Level Corrected for Product.
- B Benzene (µg/L)
- T Toluene (µg/L)
- E Ethylbenzene (µg/L)
- X Total Xylenes (µg/L)

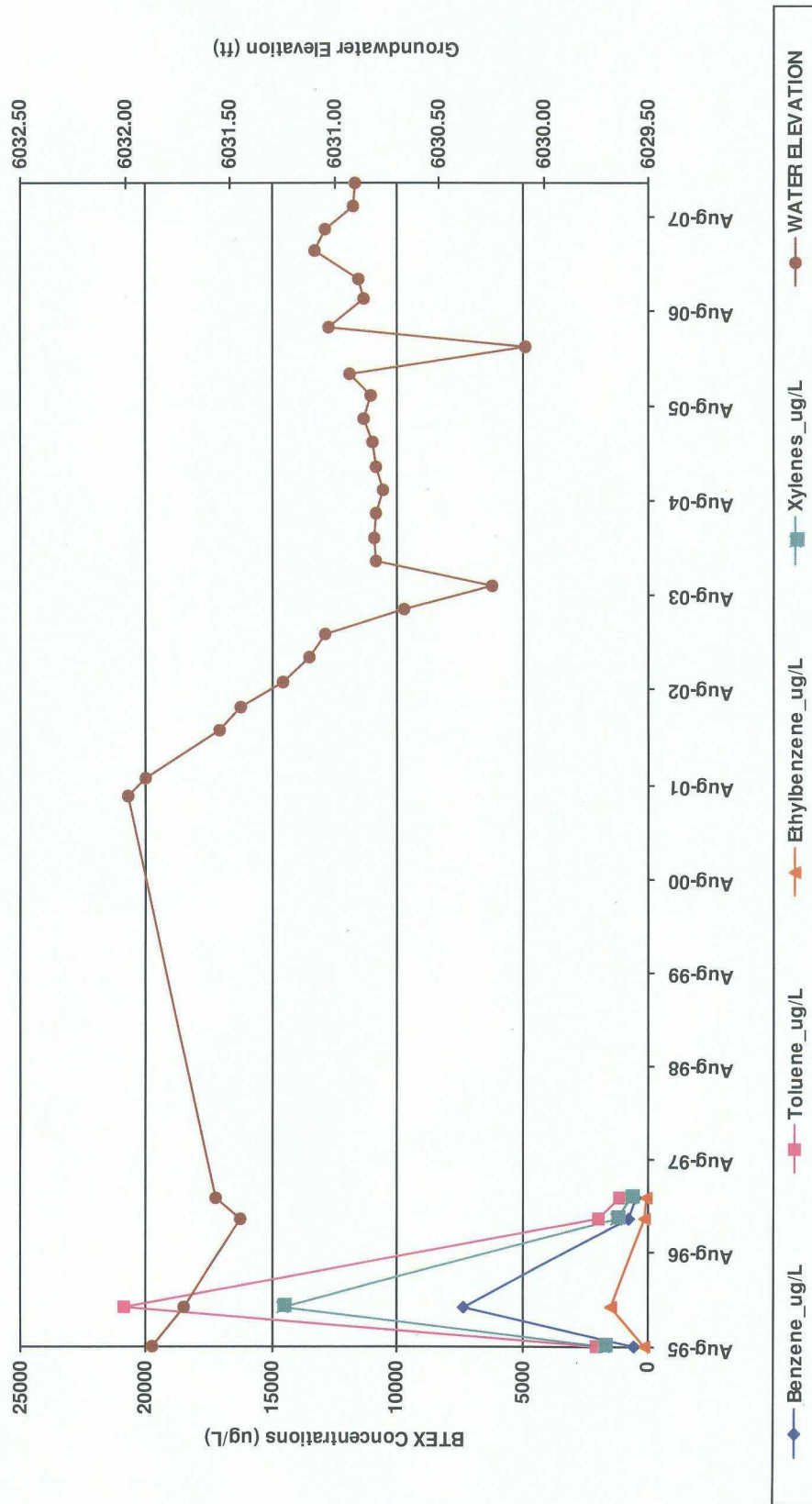
1	Issued for Report	01/08	D.Wade	N.Day	J.Smith
0	Issued for Report	06-07	J.Hurley	N.Day	J.Smith
REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
PROJECT No.: 1005521.0601					
AutoCAD FILE: johnstonfed4					
SCALE: As Shown			FIGURE No: 1		



EL PASO TENNESSEE PIPELINE COMPANY
JOHNSTON FEDERAL #4, METER 700194

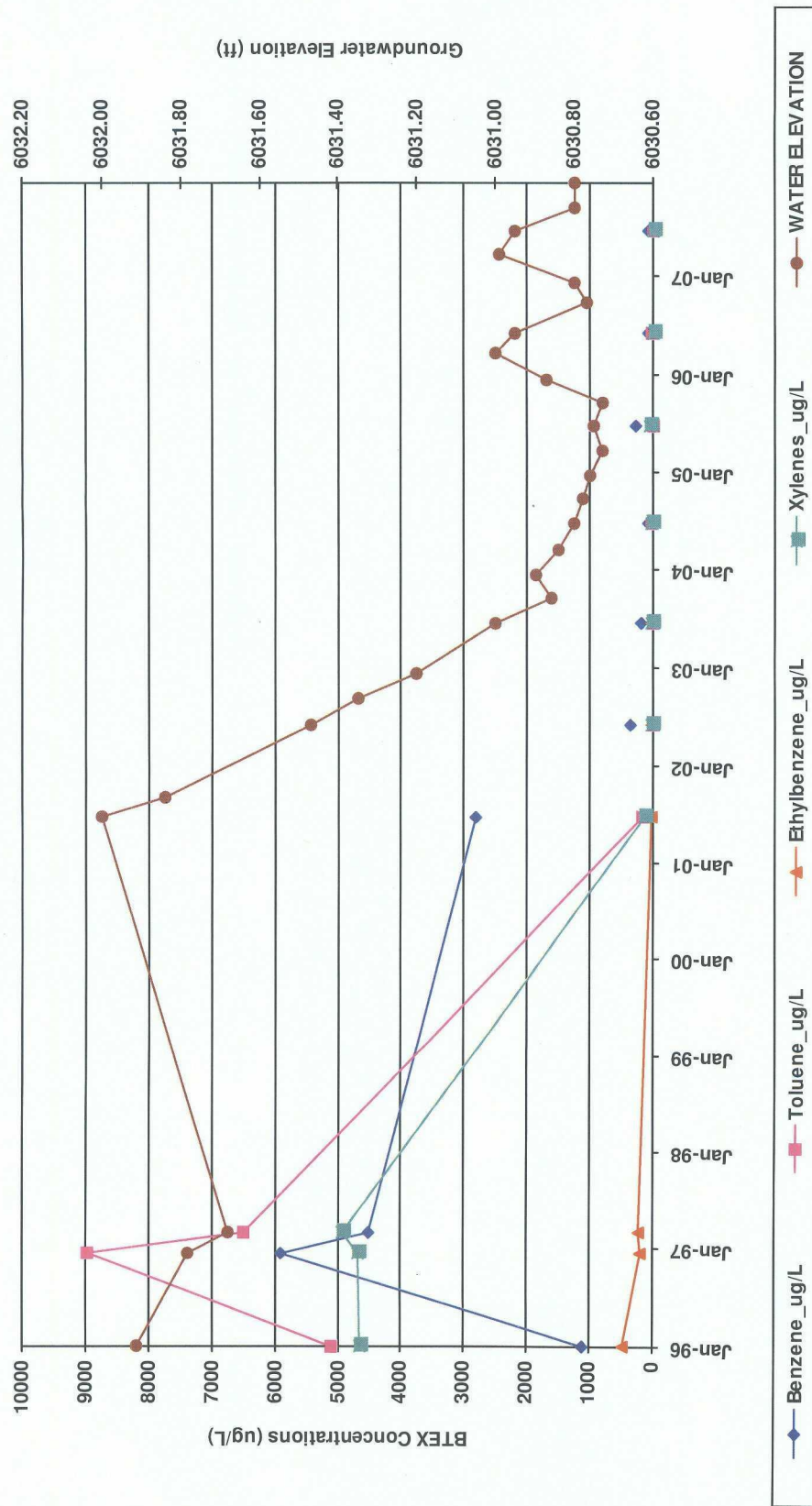
GROUNDWATER POTENTIOMETRIC SURFACE
CONTOURS AND BTEX CONCENTRATIONS
JUNE 2007

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



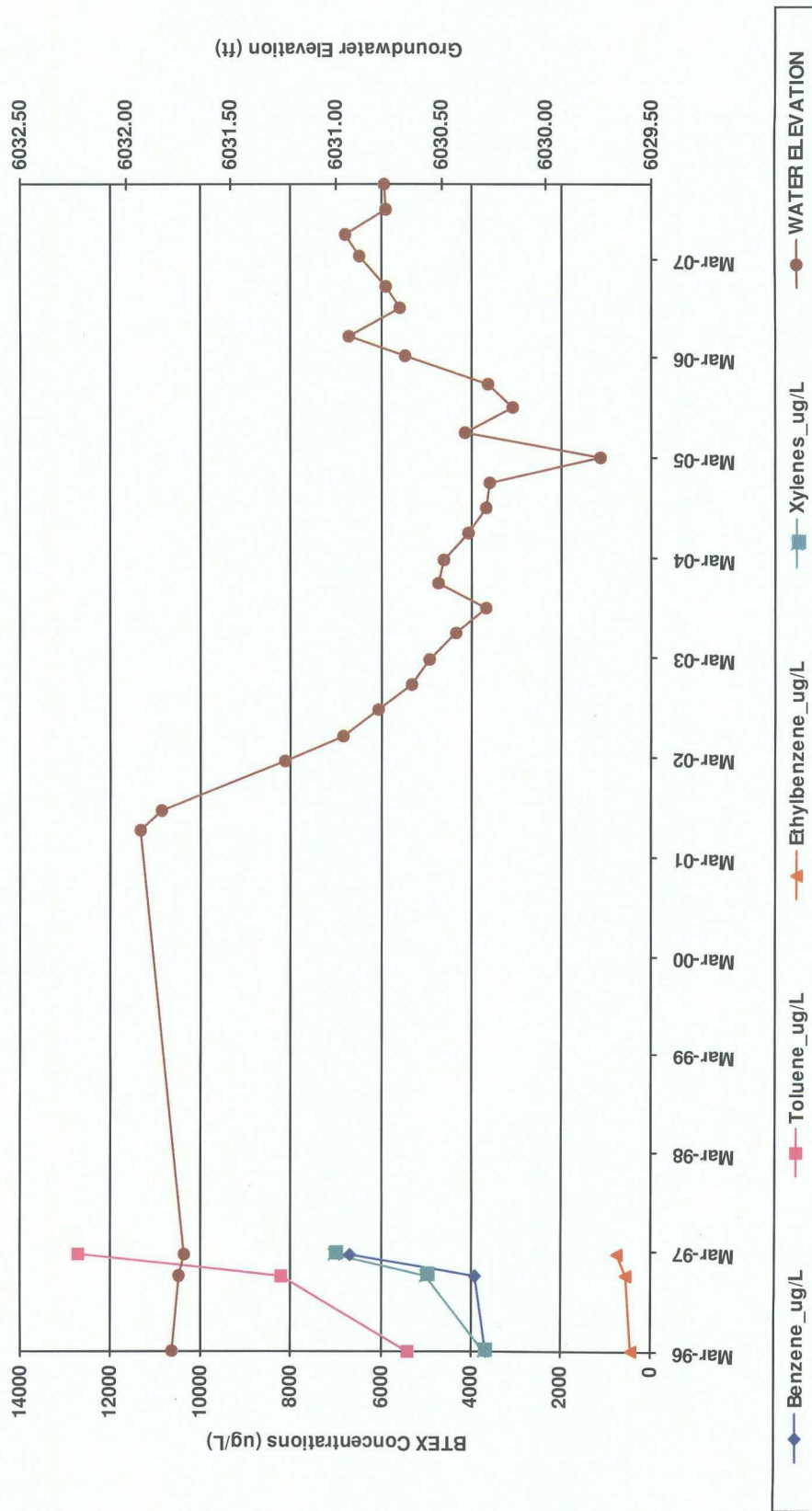
Note: Non Detects are represented by a value of 1.

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



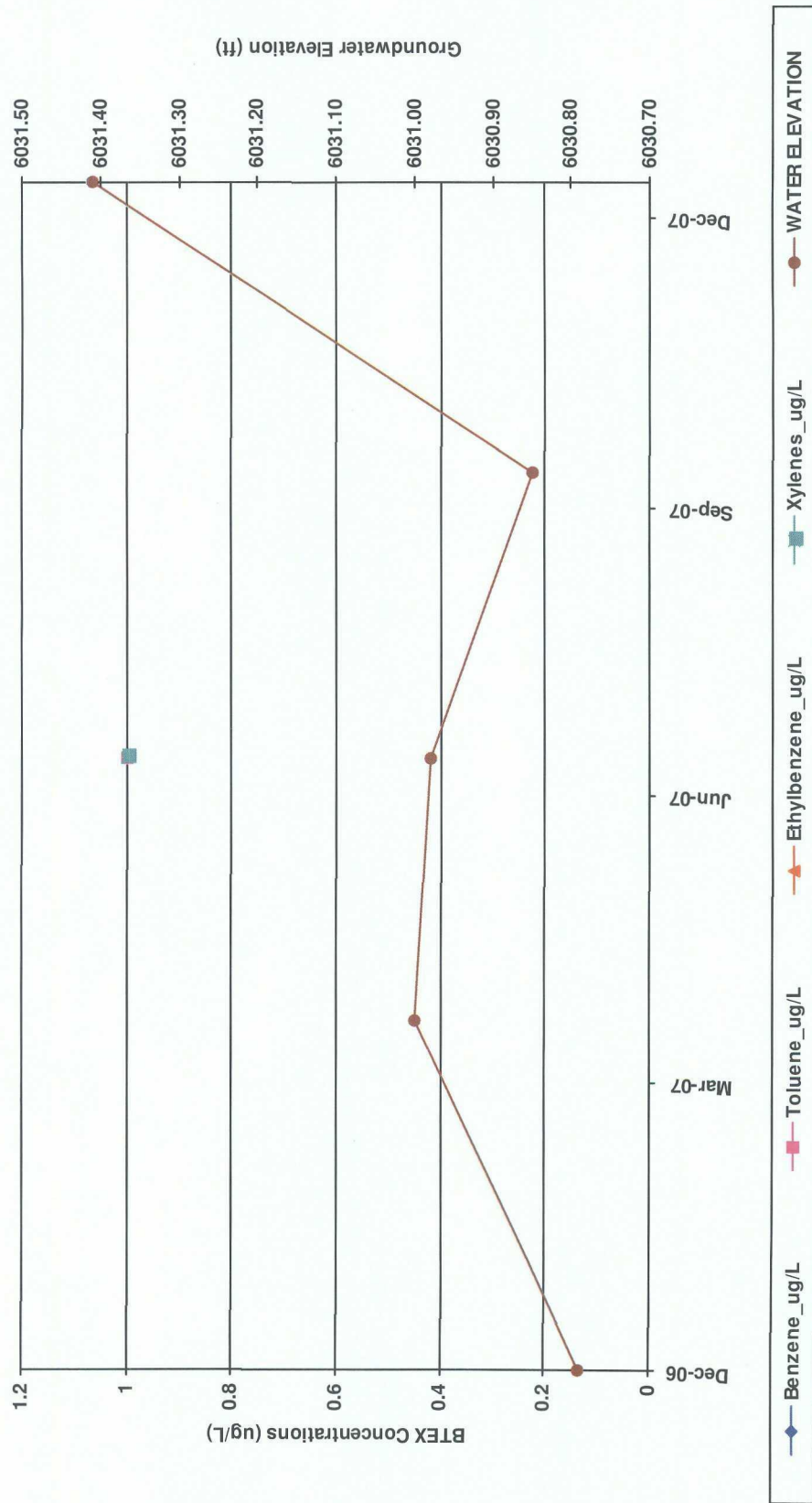
Note: Non Detects are represented by a value of 1.

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



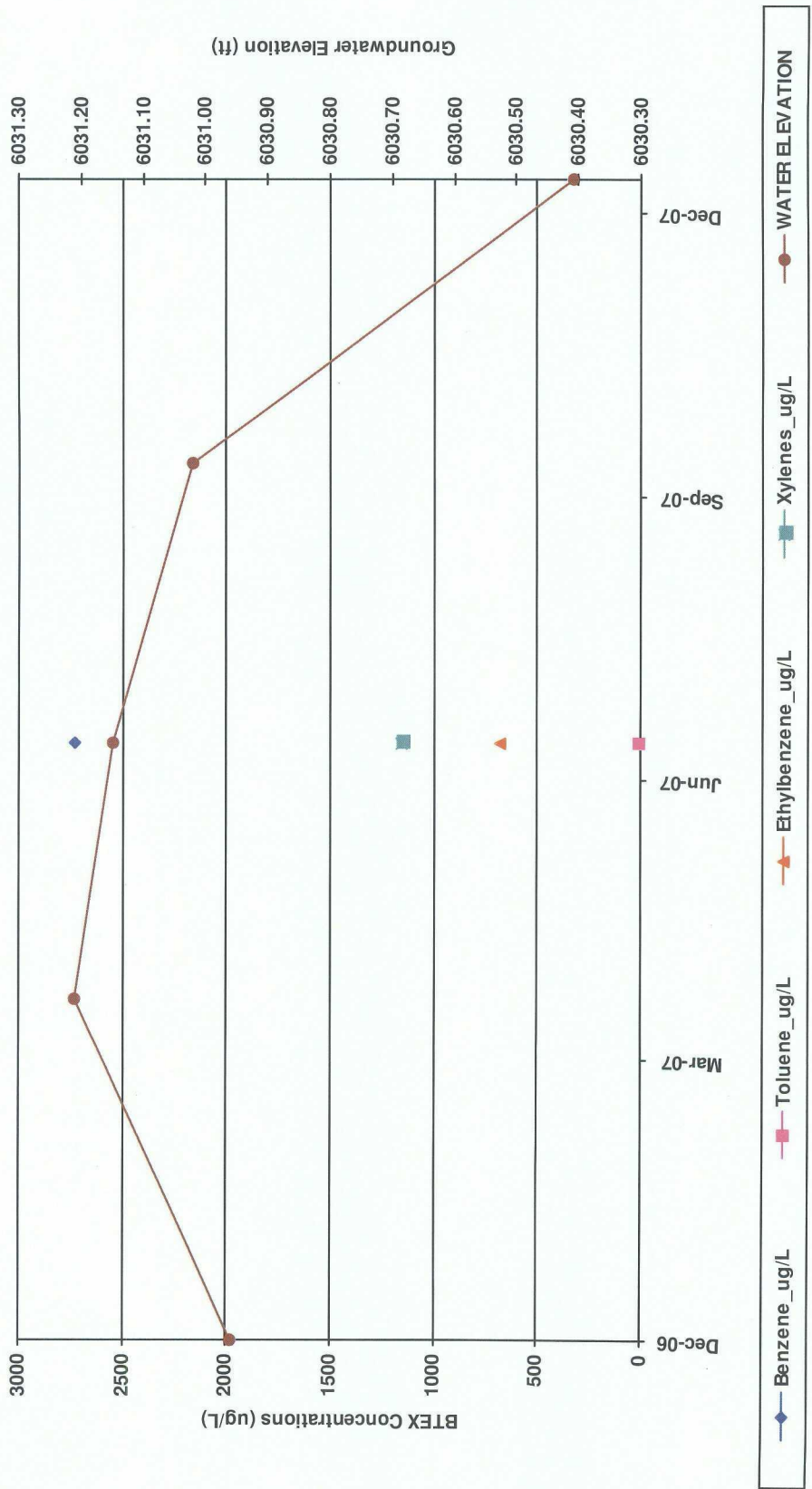
Note: Non Detects are represented by a value of 1.

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



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

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



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

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

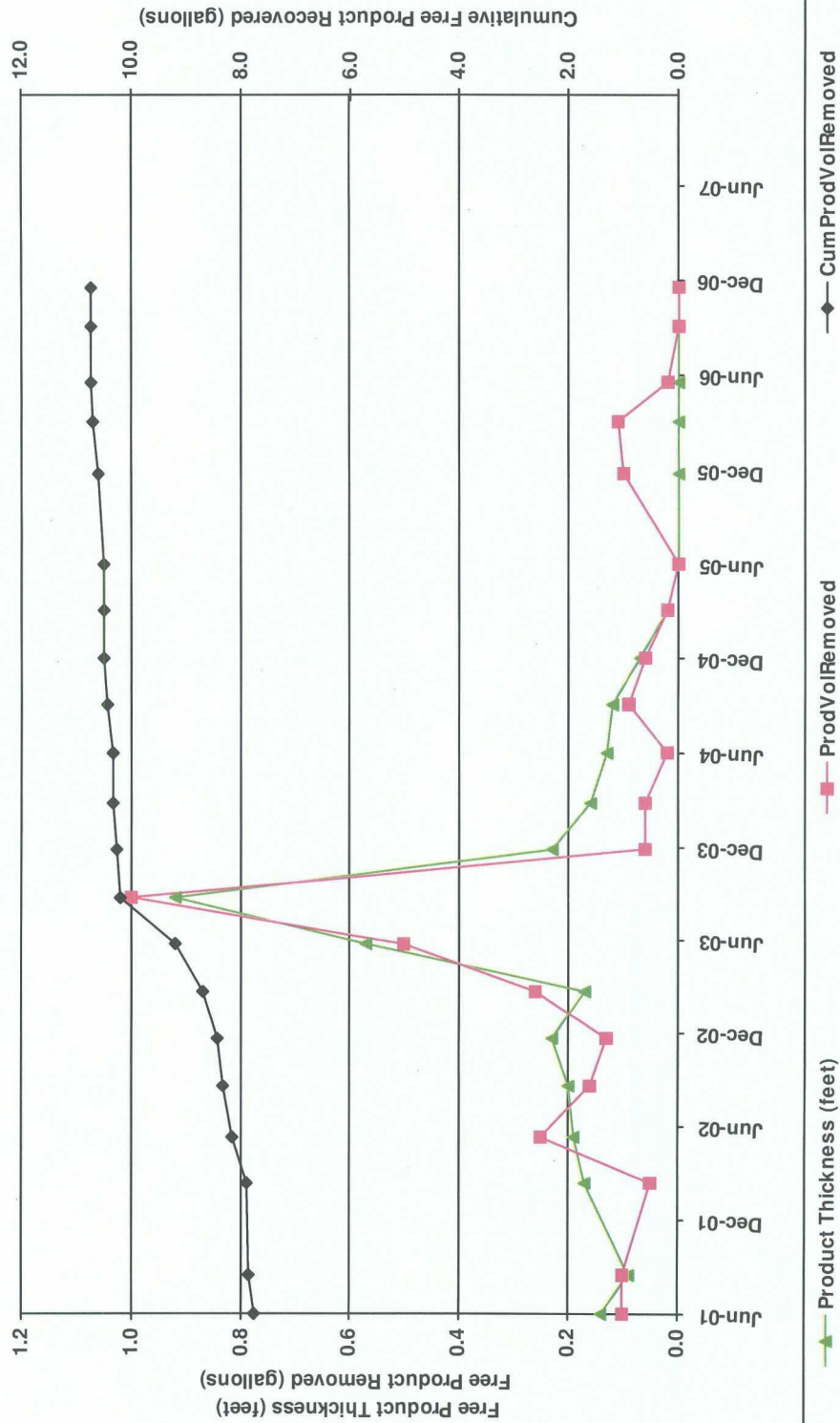


FIGURE 8
SUMMARY OF FREE-PRODUCT REMOVAL
JOHNSTON FED #4 (METER #70194)
MW03

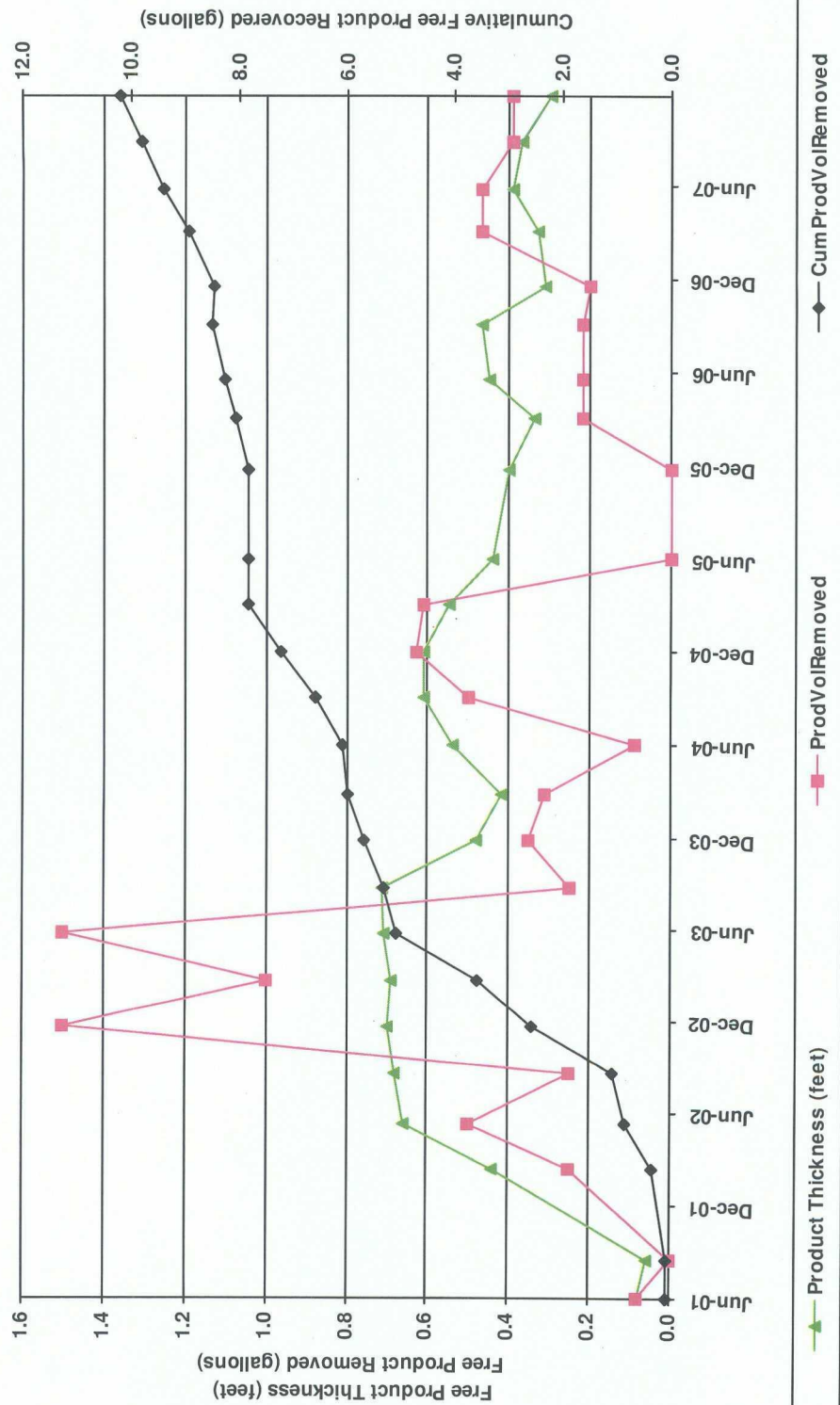


TABLE 1

**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
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
TMW05	6/19/2007	2730	7.6	680	1160	49.64

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	0.1	7.75
	9/4/2001	49.94	50.05	0.11	0.1	7.85
	3/4/2002	50.23	50.4	0.17	0.05	7.90
	6/3/2002	50.31	50.5	0.19	0.25	8.15
	9/10/2002	50.51	50.7	0.19	0.16	8.31
	12/12/2002	50.6	50.83	0.23	0.13	8.43
	3/14/2003	50.73	50.9	0.17	0.26	8.69
	6/18/2003	50.74	51.28	0.54	0.5	9.19
	9/16/2003	50.78	51.7	0.92	1	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	0	10.50
	12/15/2005		51.02	0	0.1	10.60
	3/27/2006		51.86	0	0.11	10.71
	6/7/2006		50.92	0	0.02	10.73
	9/25/2006		51.09	0	0	10.73
	12/7/2006		51.06	0	0	10.73
MW03	6/22/2001	49.58	49.66	0.08	0.08	0.08
	9/4/2001	49.7	49.76	0.06	0	0.08
	3/4/2002	49.91	50.35	0.44	0.25	0.33
	6/3/2002	49.96	50.62	0.66	0.5	0.83
	9/10/2002	50.12	50.792	0.67	0.25	1.08
	12/12/2002	50.25	50.95	0.70	1.5	2.58
	3/14/2003	50.34	51.03	0.69	1	3.58
	6/18/2003	50.45	51.16	0.71	1.5	5.08
	9/16/2003	50.585	51.3	0.72	0.25	5.33
	12/17/2003	50.6	51.08	0.48	0.35	5.68
	3/16/2004	50.68	51.1	0.42	0.31	5.99
	6/22/2004	50.68	51.22	0.54	0.09	6.09
	9/22/2004	50.69	51.3	0.61	0.5	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	51.2	0.44	0	7.82
	12/15/2005	50.92	51.32	0.40	0	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	50.8	51.27	0.47	0.22	8.48
	12/7/2006	50.77	51.07	0.30	0.2	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