

3R - 205

**ANNUAL
MONITORING
REPORT**

2/28/2009

**MWH****BUILDING A BETTER WORLD**

RECEIVED

2009 MAR 2 AM 9 51

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:

Volume Location Type

- | | |
|---|--|
| 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.



MWH

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**K-31 Line Drip
Meter Code: LD087**

SITE DETAILS

Legal Description: **Town:** 25N **Range:** 6W **Sec:** 16 **Unit:** N
NMOCD Haz Ranking: 40 **Land Type:** State **Operator:** Enterprise

PREVIOUS ACTIVITIES

Site Assessment:	7/94	Excavation:	8/94 (90 cy)	Soil Boring:	9/95
Monitor Well:	3/97	Geoprobe:	7/97	Additional MWs:	7/00
Downgradient MWs:	7/00	Replace MW:	NA	Quarterly Initiated:	6/97
ORC Nutrient Injection:	11/02	Re-Excavation:	11/95 (1786 cy)	PSH Removal Initiated:	NA
Annual Initiated:	6/99	Quarterly Resumed:	NA	PSH Removal in 2008?	No

SUMMARY OF 2008 ACTIVITIES

MW-1: Semiannual water level monitoring (June and December) was performed in 2008.

MW-2: Semiannual groundwater sampling (June and December) was performed during June and December 2008.

MW-3: Semiannual water level monitoring (June and December) was performed in 2008.

MW-4: Semiannual groundwater sampling (June and December) was performed during 2008.

MW-5: Semiannual groundwater sampling (June and December) was performed during 2008.

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

SITE MAP

Site maps (June and December) are attached as Figures 1 and 2.

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**K-31 Line Drip
Meter Code: LD087**

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically in Figures 3 through 7.
- The 2008 laboratory reports are 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 maps present the analytical data collected during 2008.

RESULTS

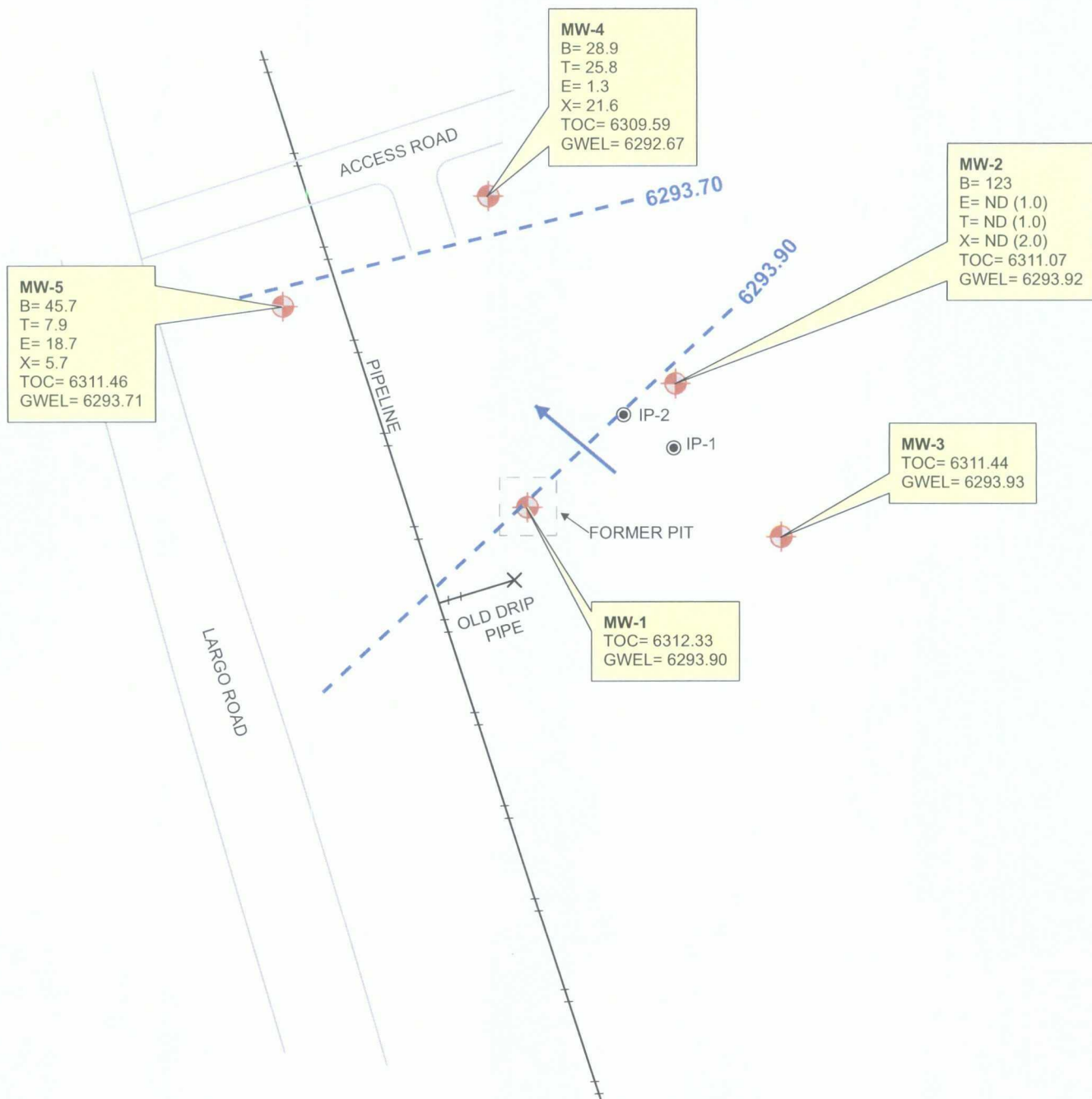
- The groundwater flow direction appears to be northerly.
- In November 2002, oxygen releasing compound (ORC) slurry was injected into the subsurface near MW-2. The pre-injection benzene concentrations in MW-2 were 230 and 104 µg/L in March and September 2002, respectively. In 2008, benzene concentrations were 123 µg/L in June and 1.8 µg/L in December 2008. These data indicate that long-term attenuation is continuing; however, wide fluctuations appear to be possible with varying water levels in this well.
- The samples collected from new downgradient monitor well MW-4 (installed in November 2006) had benzene concentrations of 28.9 µg/L and 20.4 µg/L, in June and December 2008, respectively. All other BTEX components were below their respective NMWQCC standards.
- The samples collected from new downgradient / cross-gradient monitor well MW-5 (installed in November 2006) had benzene concentrations of 45.7 µg/L and 63.5 µg/L, in June and December 2008, respectively. All other BTEX components were below their respective NMWQCC standards.

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**K-31 Line Drip
Meter Code: LD087**

RECOMMENDATIONS

- Because sampling at MW-1 has indicated BTEX concentrations below detection limits for four consecutive quarters, EPTPC recommends that this well not be sampled until closure samples are collected.
- EPTPC will continue to sample MW-2 on a semiannual basis until BTEX concentrations approach closure standards. Quarterly sampling will then be initiated.
- Because sampling at MW-3 has indicated BTEX concentrations below detection limits, EPTPC recommends that this well not be sampled until closure samples are collected.
- EPTPC recommends that new monitoring wells MW-4 and MW-5 be sampled in conjunction with MW-2.



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)



Not To Scale



MWH



PROJECT:

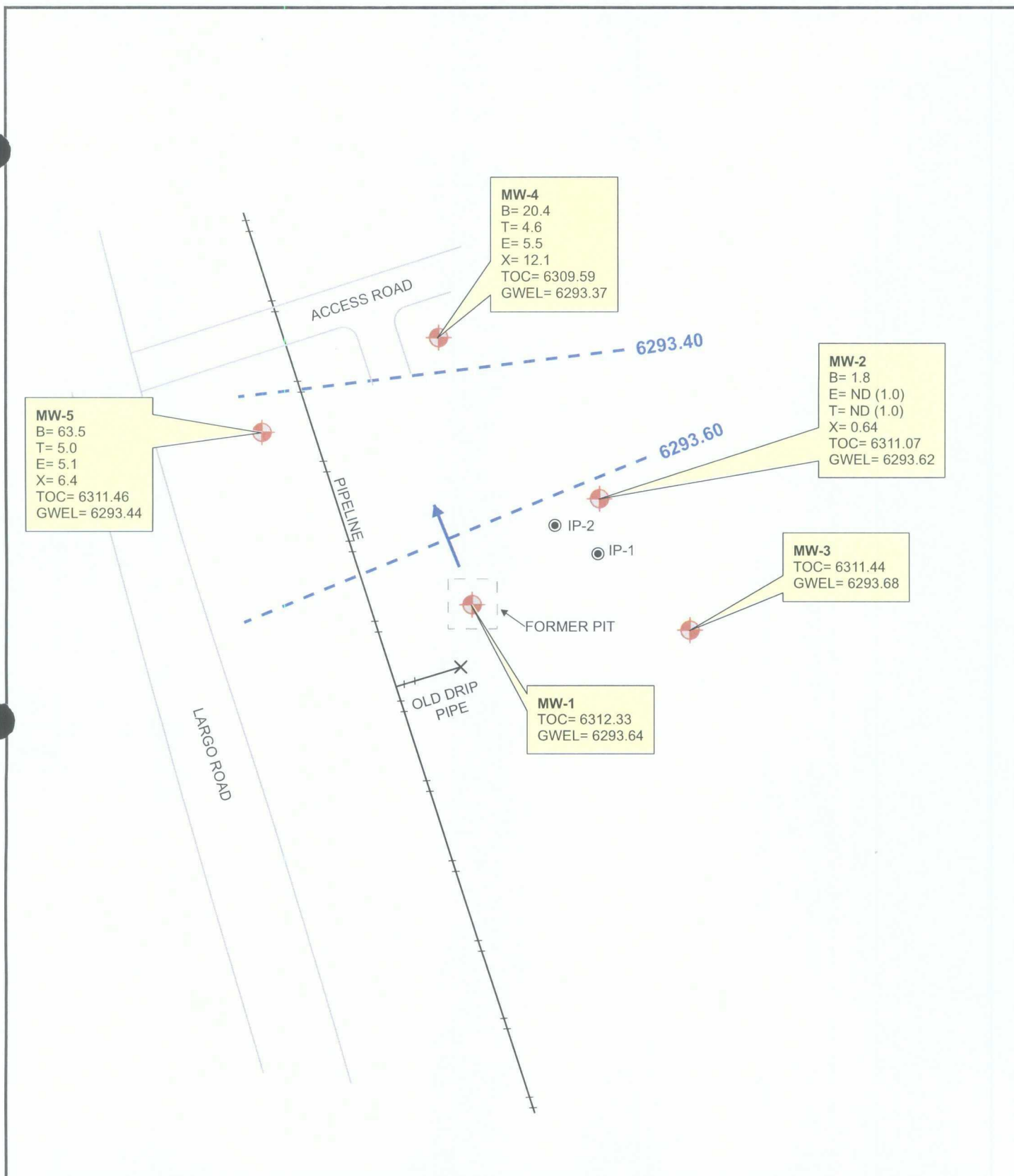
K-31 LINE DRIP

TITLE:

Groundwater Potentiometric Surface Map,
 and BTEX Concentrations - June 16, 2008

FIGURE:

1



LEGEND

MW-4 Existing Monitoring / Observation Well

PZ-01 Abandoned Monitoring Well

Groundwater Flow Direction

—6294— 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)



Not To Scale



MWH



PROJECT:

K-31 LINE DRIP

TITLE:

Groundwater Potentiometric Surface Map,
 and BTEX Concentrations - December 10, 2008

FIGURE:

2

FIGURE 3
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)
MW01

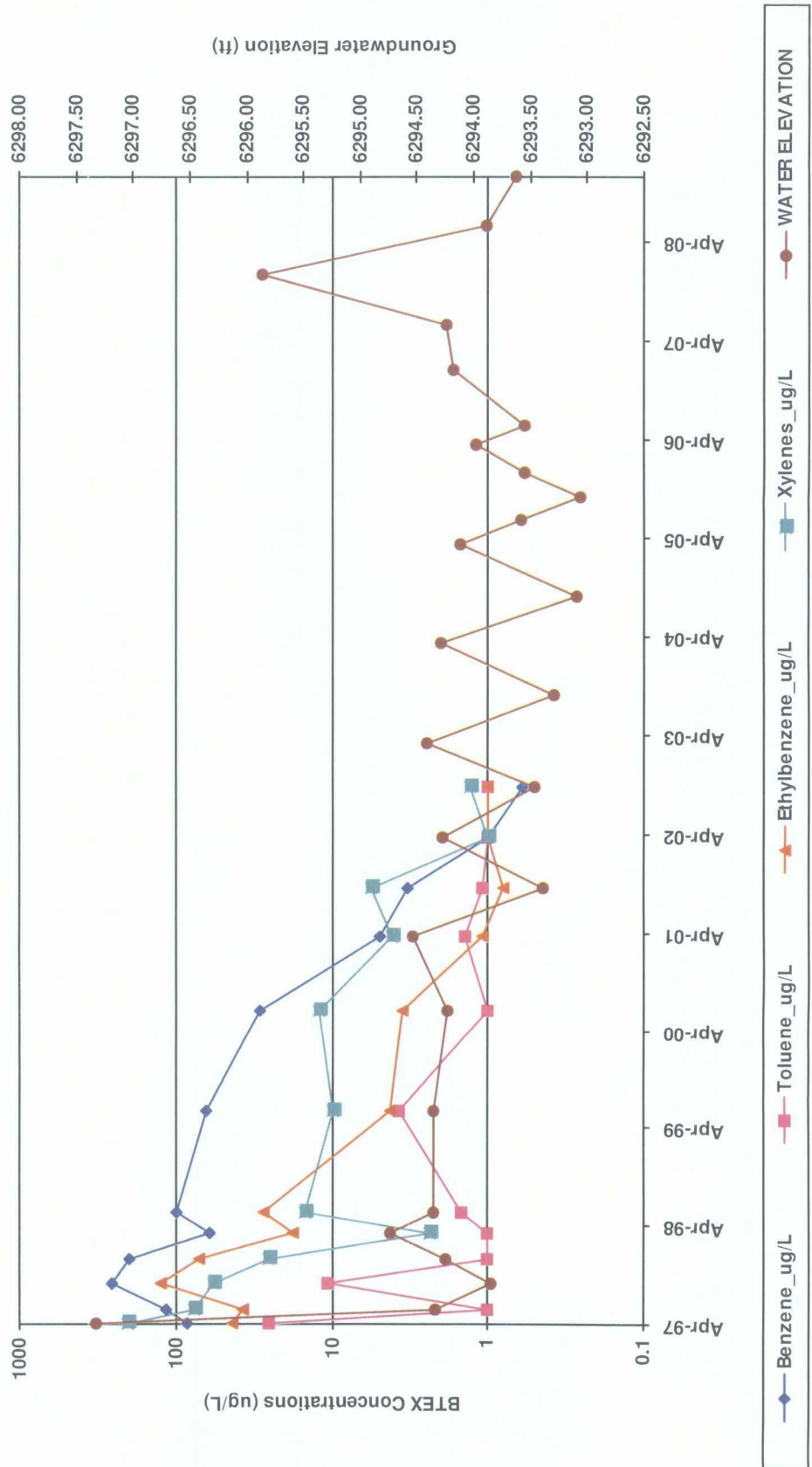


FIGURE 4
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)
MW02

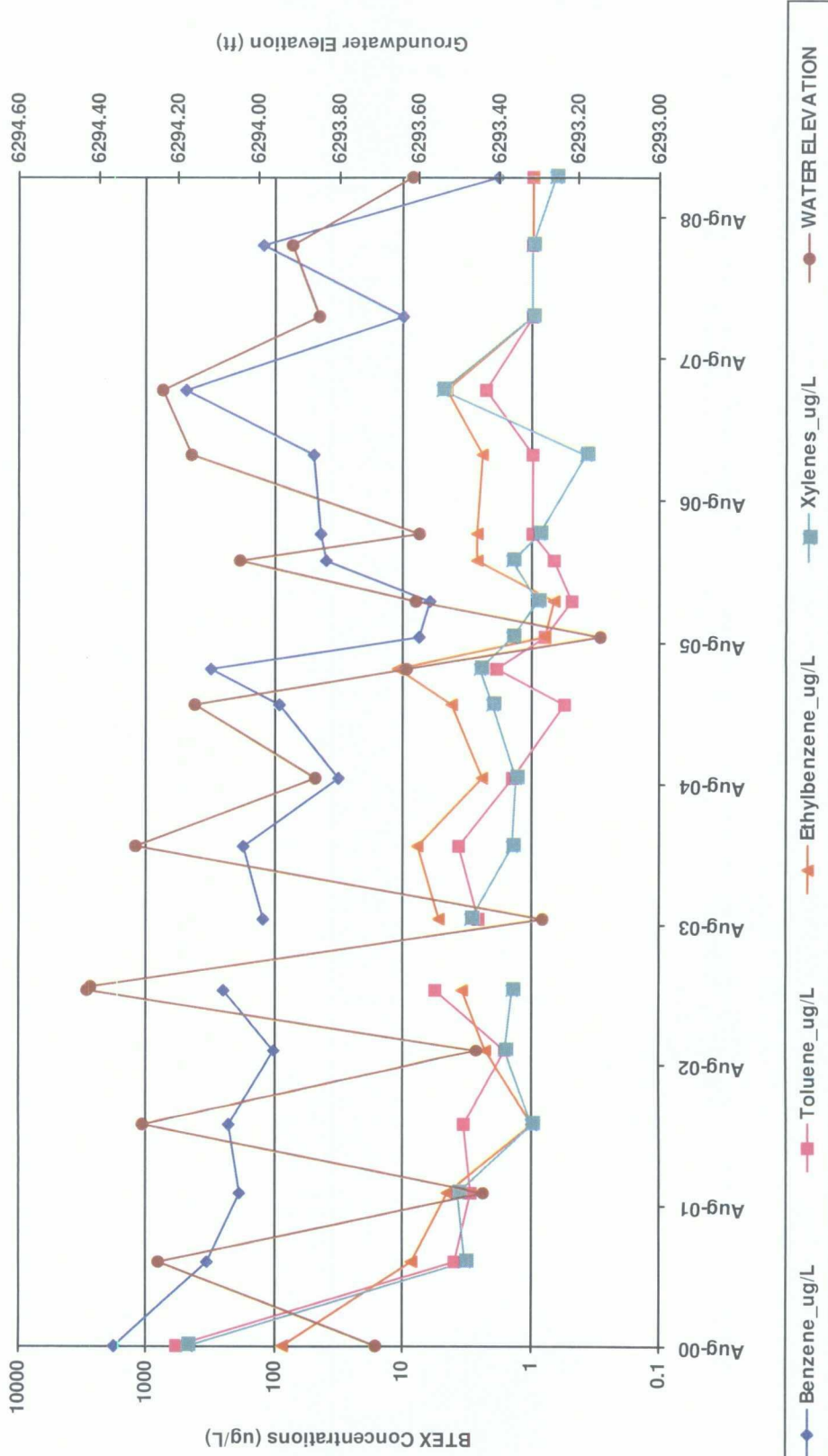


FIGURE 5
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)
MW03

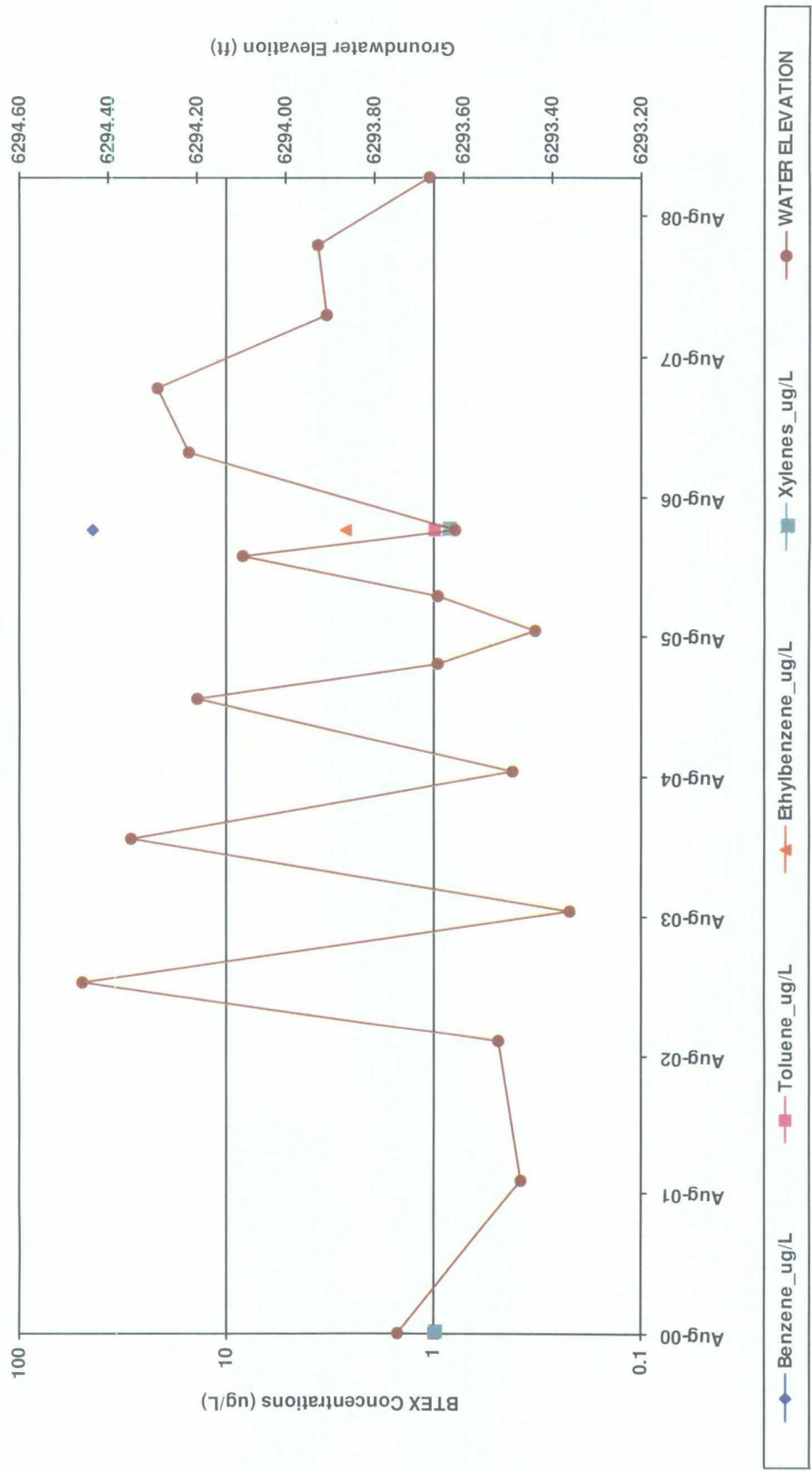


FIGURE 6
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)
MW04

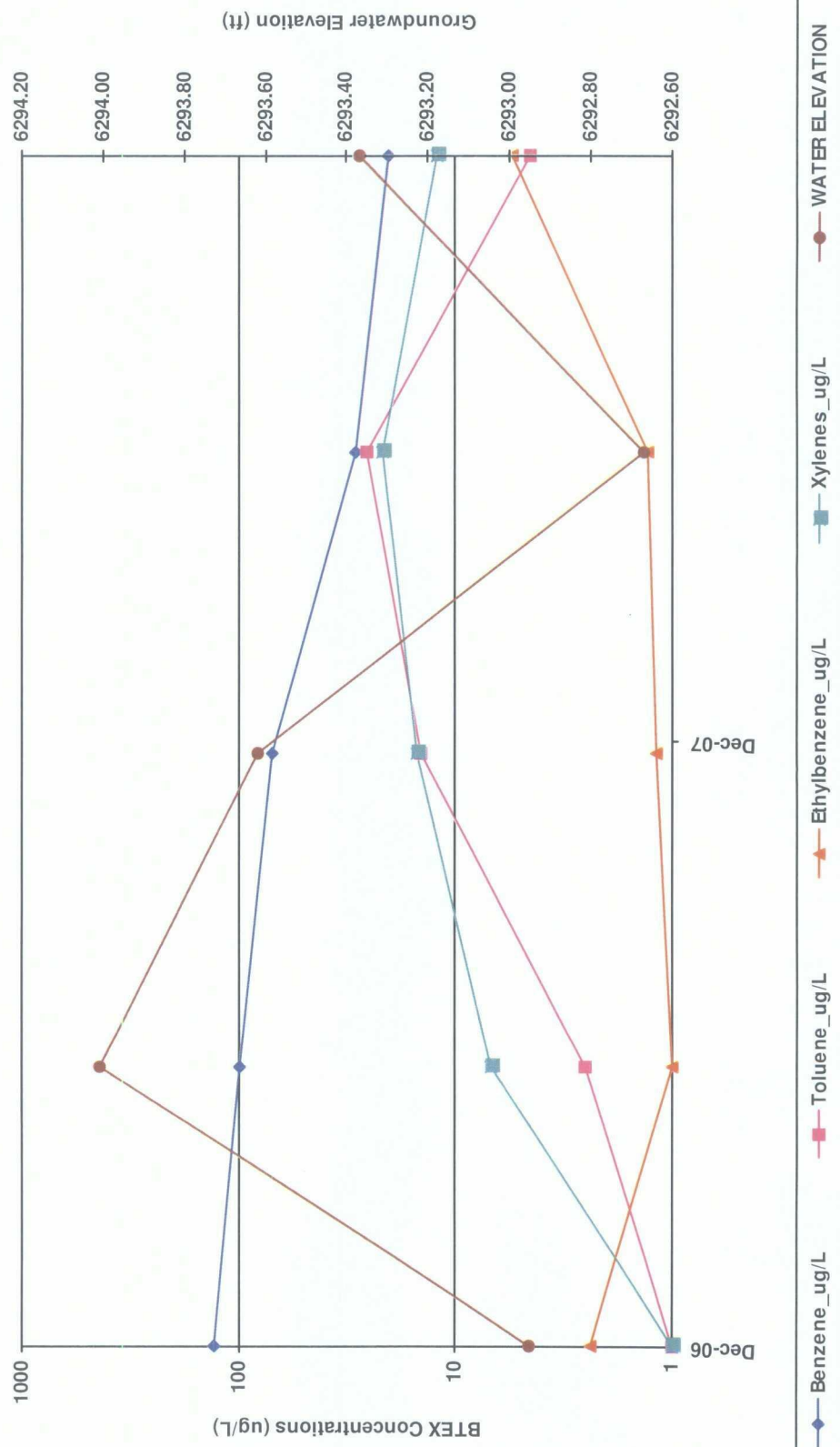


FIGURE 7
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)
MW05

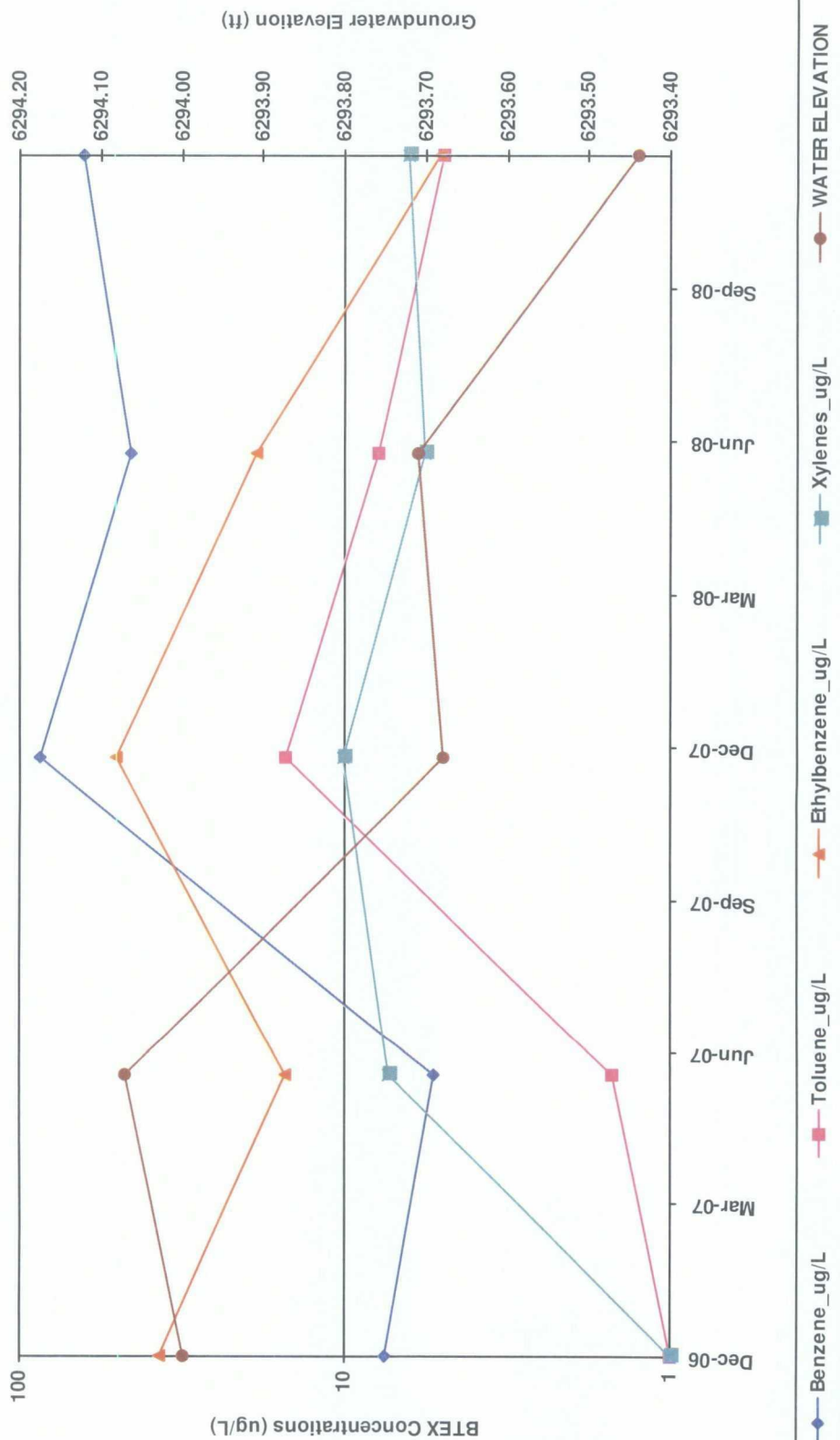


TABLE 1

**SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)**

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	4/16/1997	84.9	25.7	43.6	206	15.00
	6/6/1997	115	1	37.8	76.1	17.99
	9/11/1997	259	10.8	124	58.4	18.48
	12/9/1997	201	1	71.5	25.8	18.09
	3/19/1998	61.2	1	17.8	2.35	17.59
	6/2/1998	98.3	1.48	27.2	14.7	17.98
	6/14/1999	65	3.7	4.2	10	17.98
	6/27/2000	29	1	3.5	12	18.10
	4/3/2001	5	1.4	1.1	4.1	17.79
	10/1/2001	3.3	1.1	0.8	5.6	18.94
	4/1/2002	1	1	1	1	18.05
	10/8/2002	0.6	1	1	1.3	18.86
MW02	8/31/2000	1800	590	86	490	17.36
	4/3/2001	340	4	8.7	3.3	16.82
	10/1/2001	190	3	4.5	3.7	17.63
	4/1/2002	230	3.4	1	1	16.78
	10/8/2002	104	1.6	2.3	1.6	17.61
	3/13/2003	254	5.6	3.5	1.4	16.64
	9/15/2003	125	2.6	5.2	3	17.78
	3/22/2004	176	3.7	7.7	1.4	16.76
	9/14/2004	32.2	1.4	2.4	1.3	17.21
	3/22/2005	93.7	0.56	4.2	2	16.91
	6/24/2005	322	1.9	11	2.5	17.44
	9/14/2005	7.6	0.79	0.78	1.4	17.92
	12/14/2005	6.3	0.48	0.68	0.89	17.46
	3/28/2006	40.8	0.68	2.7	1.4	17.02
	6/7/2006	44.3	1	2.7	0.86	17.47
	12/26/2006	50.8	1	2.4	0.37	16.90
	6/12/2007	502	2.3	4.7	5	16.83
	12/18/2007	10.2	1	1	1	17.22
	6/16/2008	123	1	1	1	17.15
	12/10/2008	1.8	1	1	0.64	17.45
MW03	8/31/2000	1	1	1	1	17.69
MW04	12/26/2006	131	1	2.4	1	16.64

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

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW04	6/12/2007	99.8	2.5	1	6.9	15.58
	12/18/2007	70.1	14.5	1.2	15	15.97
	6/16/2008	28.9	25.8	1.3	21.6	16.92
	12/10/2008	20.4	4.6	5.5	12.1	16.22
MW05	12/26/2006	7.5	1	37.3	1	17.46
	6/12/2007	5.3	1.5	15.2	7.3	17.39
	12/18/2007	87	15.3	50.4	10.1	17.78
	6/16/2008	45.7	7.9	18.7	5.7	17.75
	12/10/2008	63.5	5	5.1	6.4	18.02

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