

**3R - 179**

**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)

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

**EL PASO TENNESSEE PIPELINE COMPANY**

**TABLE OF CONTENTS**

<b>METER or LINE ID</b>	<b>NMOCD CASE NO.</b>	<b>SITE NAME</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>SECTION</b>	<b>UNIT</b>
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**

<b>METER or LINE ID</b>	<b>NMOCD CASE NO.</b>	<b>SITE NAME</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>SECTION</b>	<b>UNIT</b>
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**

**GCU Com A #142E  
Meter Code: 03906**

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**SITE DETAILS**

<b>Legal Description:</b>	<b>Town:</b> 29N	<b>Range:</b> 12W	<b>Sec:</b> 25	<b>Unit:</b> G
<b>NMOCD Haz Ranking:</b>	10	<b>Land Type:</b> Fee	<b>Operator:</b> BP / Amoco Production Company	

**PREVIOUS ACTIVITIES**

<b>Site Assessment:</b>	4/94	<b>Excavation:</b>	4/94 (20 cy)	<b>Soil Boring:</b>	10/95
<b>Monitor Well:</b>	2/97	<b>Geoprobe:</b>	12/96	<b>Additional MWs:</b>	1/06
<b>Downgradient MWs:</b>	12/01	<b>Replace MW:</b>	NA	<b>Quarterly Initiated:</b>	8/97
<b>ORC Nutrient Injection:</b>	NA	<b>Re-Excavation:</b>	10/96 (882 cy)	<b>PSH Removal Initiated:</b>	NA
<b>Annual Initiated:</b>	5/98	<b>Quarterly Resumed:</b>	NA	<b>PSH Removal in 2008?</b>	No

**SUMMARY OF 2008 ACTIVITIES**

**MW-1:** Annual groundwater sampling (June) was performed in 2008.

**MW-2:** Annual groundwater sampling (June) was performed in 2008.

**TMW-1:** Annual water level monitoring (June) was performed in 2008.

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

**SITE MAPS**

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 and 3.
- The 2008 laboratory reports are presented in Attachment 1 (included on CD).
- The 2008 field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES  
2008 ANNUAL GROUNDWATER REPORT**

**GCU Com A #142E  
Meter Code: 03906**

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**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**

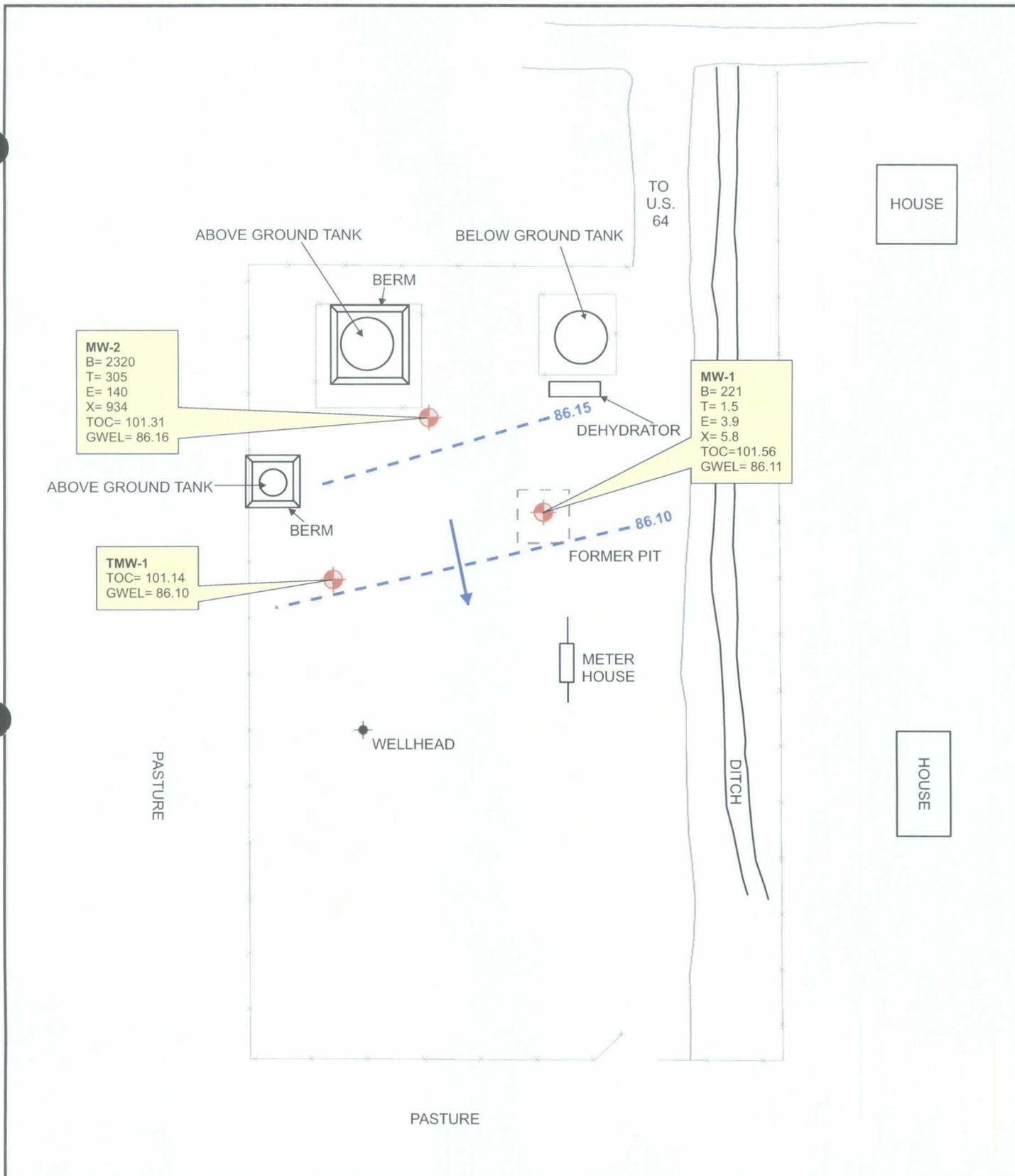
No isoconcentration maps were generated for this Site; however, the attached Site map presents the analytical data collected during 2008.

**RESULTS**

- The groundwater flow direction generally trends to the south-southeast.
- In the sample collected at MW-1, the benzene concentration (221 µg/L) was above its NMWQCC standard. The remaining BTEX constituents were either not detected or were present at low levels near the reporting limit. BTEX concentrations in this well have attenuated significantly from their 1997 highs (e.g., benzene at 4,010 µg/L).
- In the sample collected at MW-2, the benzene concentration (2,320 µg/L) and total xylenes concentration (934 µg/L) were above their respective NMWQCC standards. The concentrations of toluene (305 µg/L) and ethylbenzene (140 µg/L) were below their respective NMWQCC standards. As a long-term trend, the BTEX concentrations in this well appear to be gradually attenuating.

**RECOMMENDATIONS**

- EPTPC recommends that MW-1 continue to be sampled annually. Annual sampling will continue until BTEX concentrations approach NMWQCC standards, at which time quarterly sampling will be initiated.
- EPTPC recommends that MW-2, which is located adjacent to production equipment, continue to be sampled annually.
- EPTPC recommends that temporary monitor well TMW-1 be sampled annually in conjunction with the activities at MW-1 and MW-2. This piezometer was installed in January 2006 in order to provide better control regarding the groundwater gradient.



**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. \*)
  - GWEL** Groundwater Elevation (ft. \*)
- \* = Elevations in feet relative to a 100 ft benchmark.



Not To Scale



**MWH**



PROJECT: GALLEGOS #142E

TITLE: Groundwater Potentiometric Surface Map,  
and BTEX Concentrations - June 23, 2008

FIGURE:

**1**

FIGURE 2  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 GCU COM A #142E (METER #03906)  
 MW01

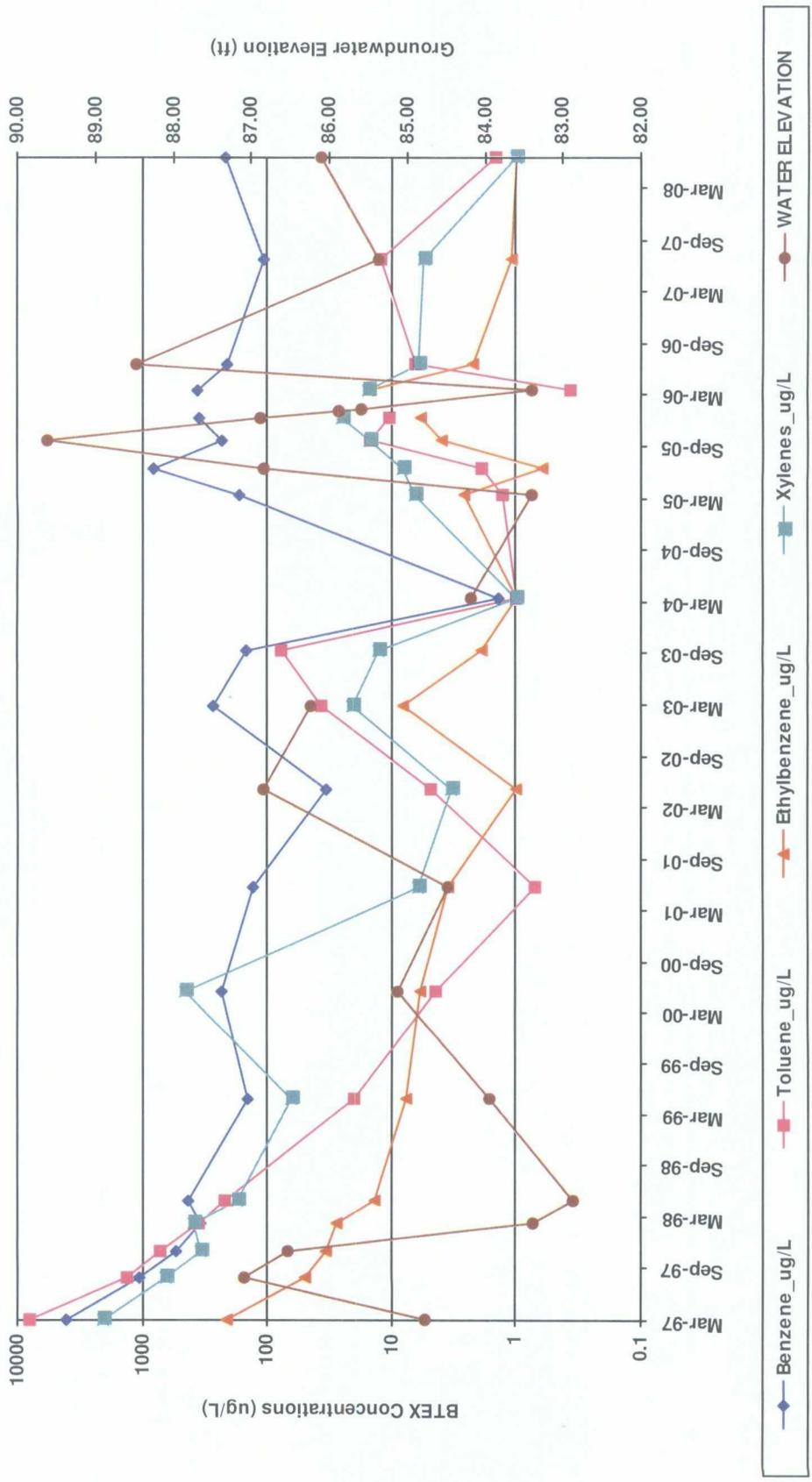


FIGURE 3  
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
 GCU COM A #142E (METER #03906)  
 MW02

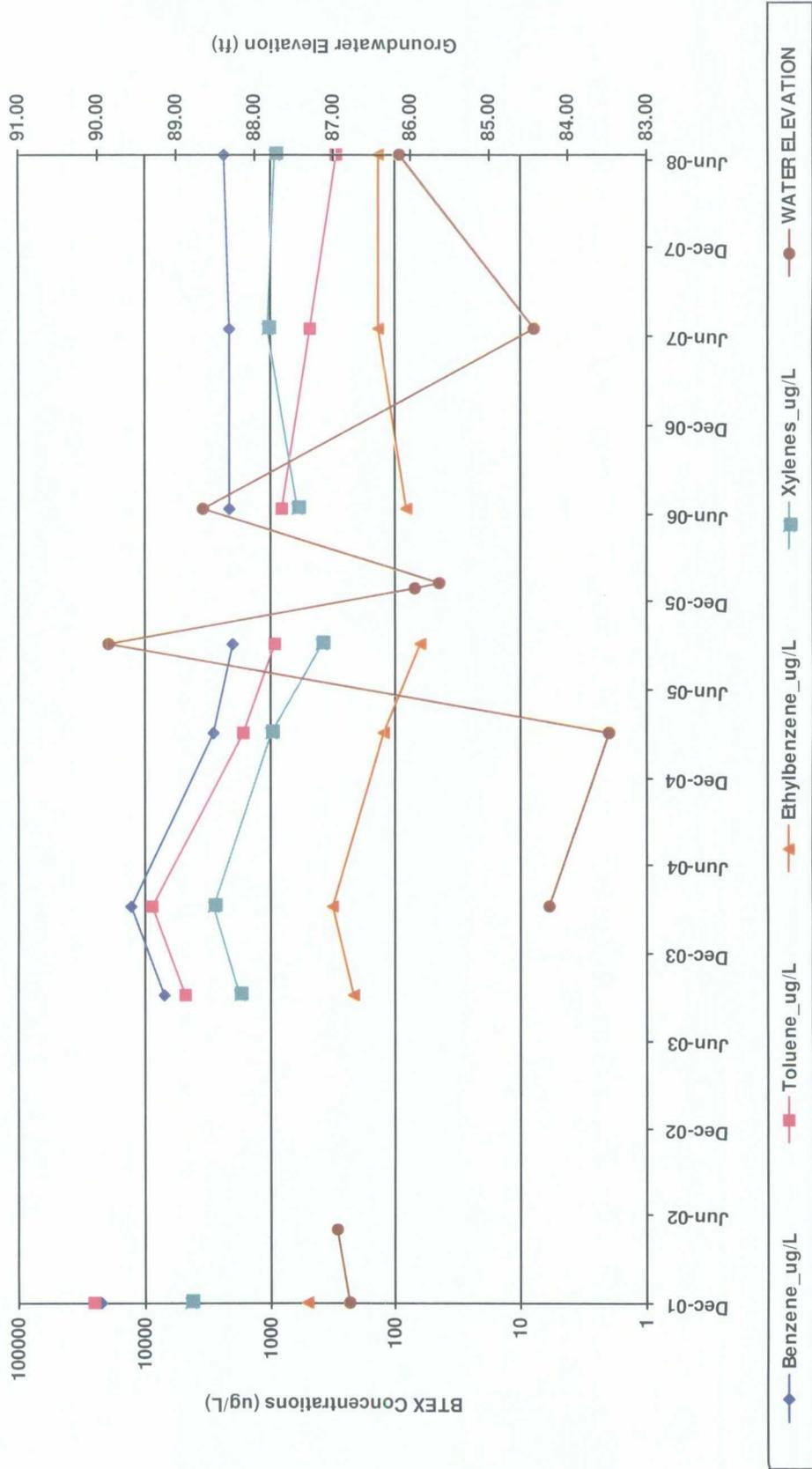


TABLE 1

**SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES  
GCU COM A #142E (METER #03906)**

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	3/10/1997	4010	7960	213	2050	16.78
	8/6/1997	1040	1310	49.4	647	14.46
	11/5/1997	543	719	33.9	342	15.02
	2/13/1998	343	354	27.6	394	18.18
	5/6/1998	429	216	13.6	176	18.69
	5/4/1999	143	20.4	7.78	63.3	17.61
	5/25/2000	230	4.4	6	450	16.44
	6/1/2001	130	0.7	3.5	6.1	17.08
	5/14/2002	34	4.9	1	3.3	14.70
	3/7/2003	270	36.8	8.3	21.1	15.31
	9/17/2003	150	77	1.9	12.8	
	3/22/2004	1.4	1	1	1	17.38
	3/17/2005	169	1.3	2.7	6.6	18.15
	6/23/2005	810	1.9	0.62	8.1	14.72
	9/26/2005	232	14.9	4	15.1	11.95
	12/14/2005	354	10.6	5.9	25.6	14.67
	3/28/2006	362	0.37	15	15.7	18.16
	6/23/2006	210	6.5	2.3	6.1	13.08
6/28/2007	109	12.6	1.1	5.5	16.18	
6/23/2008	221	1.5	1	1	15.45	
MW02	12/13/2001	22000	25000	500	4300	14.52
	9/17/2003	6890	4760	219	1770	
	3/22/2004	13000	8880	321	2850	17.06
	3/17/2005	2800	1640	125	978	17.83
	9/14/2005	1980	915	63.8	391	11.45
	6/23/2006	2140	811	83.5	610	12.64
	6/28/2007	2100	492	140	1050	16.86
	6/23/2008	2320	305	140	934	15.15

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