# 3R - 192

# ANNUAL MONITORING REPORT

2/28/2009



### **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:

### Volume Location Type

- 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	MMOCD 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	Р
89894	3RP-186-0	Hammond #41A	27N	08W	25	0
97213	3RP-190-0	Hamner #9	29N	09W	20	Α
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	Р
70194	3RP-201-0	Johnston Fed #4	31N	09W	33	Н
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	Н
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	. 12	О
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	С





### 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	Н
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	Н

<sup>\*</sup> Lindrith B#24 Site was submitted for closure in 2006, and is pending approval from NMOCD. There were no activites for this site in 2008.





### EPTPC GROUNDWATER SITES 2008 ANNUAL GROUNDWATER REPORT

### Horton #1E Meter Code: 93388

SITE DETAILS

Legal Description: Town: 31N Range: 9W Sec: 28 Unit: H

NMOCD Haz 40 Land Type: Fee Operator: BP / Amoco Production

Ranking: Company

**PREVIOUS ACTIVITIES** 

Site Assessment: 8/94 Excavation: 9/94 Soil Boring: 8/95

(50 cy)

Monitor Well: 8/95 Geoprobe: NA Additional MWs: 10/99

Downgradient MWs:

MWs: 10/99 Replace MW: NA Quarterly Initiated: 12/96

ORC Nutrient Re-

Injection: NA Excavation: NA PSH Removal Initiated: NA

Quarterly

Annual Initiated: 10/99 Resumed: NA PSH Removal in 2008?: No

**SUMMARY OF 2008 ACTIVITIES** 

**MW-1:** Quarterly groundwater sampling was performed in 2008.

**MW-2:** Quarterly water level monitoring was performed in 2008.

**MW-3:** Quarterly water level monitoring was performed in 2008.

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

SITE MAPS

Site maps (March, June, September, December) are attached as Figures 1 through 4.

### **SUMMARY TABLES AND GRAPHS**

- Historic analytical and water level data are summarized in Table 1 and presented graphically in Figures 5 though 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).

## EPTPC GROUNDWATER SITES 2008 ANNUAL GROUNDWATER REPORT

Horton #1E Meter Code: 93388

### **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

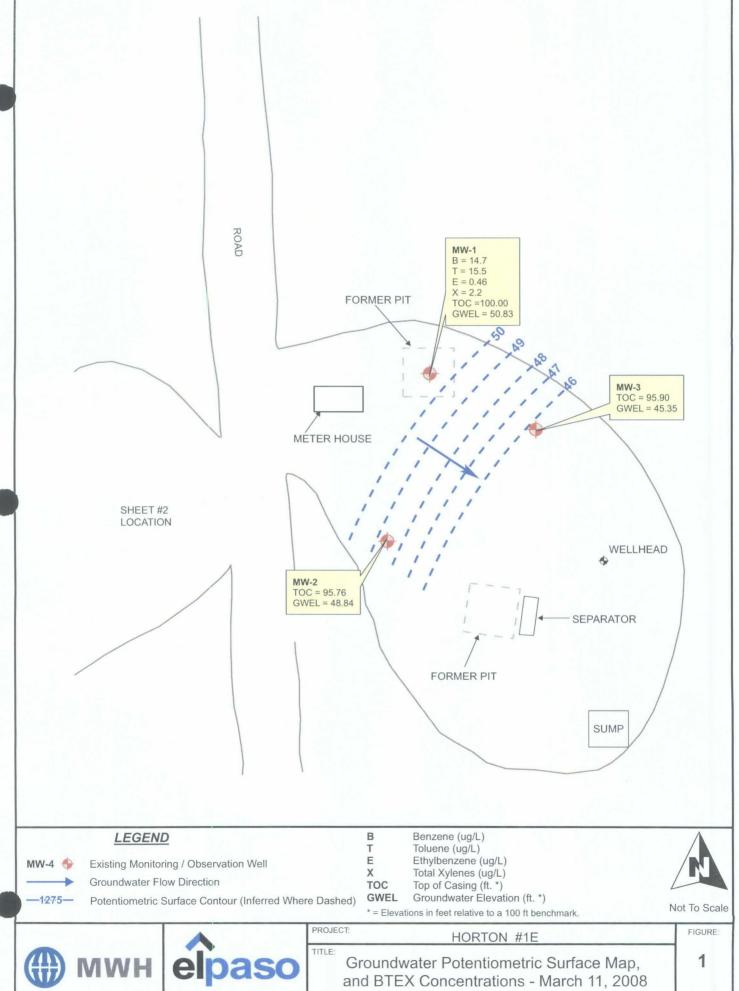
No isoconcentration maps were generated for this Site; however, the attached Site maps present the analytical data collected during 2008.

### **RESULTS**

- The groundwater flow direction at this Site trends toward the southeast.
- Benzene concentrations in MW-1 continued to stabilize around the NMWQCC benzene standard of 10  $\mu$ g/L, with results ranging between 3.7 to 16.2  $\mu$ g/L. The remaining BTEX constituents were stable at low levels generally near the laboratory reporting limits.

### **RECOMMENDATIONS**

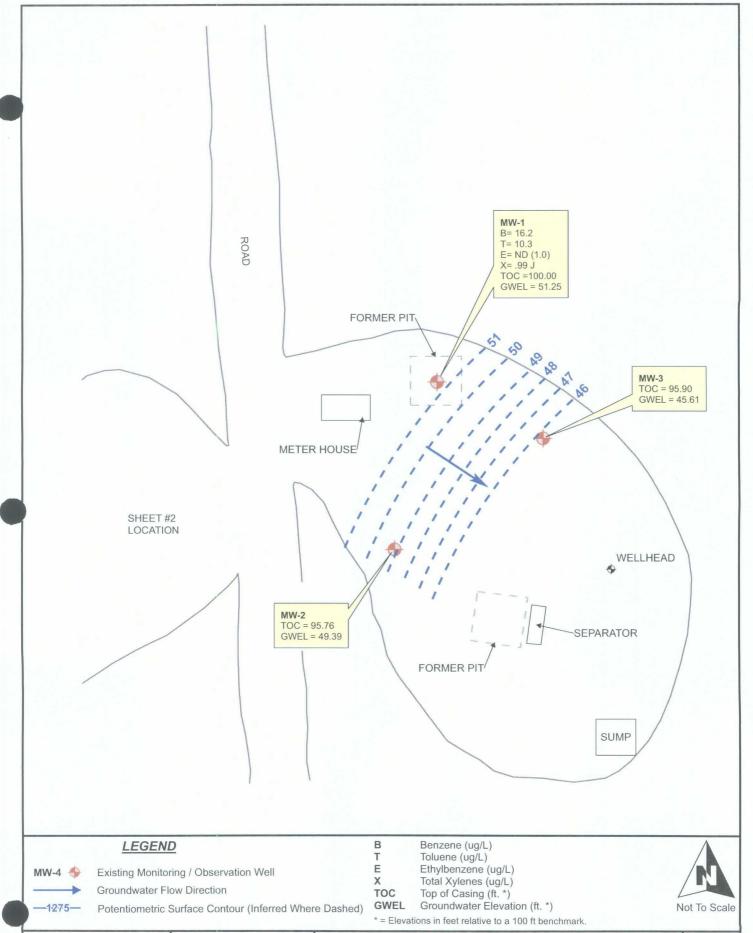
- EPTPC will continue quarterly groundwater sampling (March, June, September and December) at MW-1.
- Wells MW-2 and MW-3 have been below detection limits since 1999. These wells will be sampled at closure. EPTPC recommends that water level measurements be collected from MW-2 and MW-3, in conjunction with the quarterly sampling of MW-1.







and BTEX Concentrations - March 11, 2008





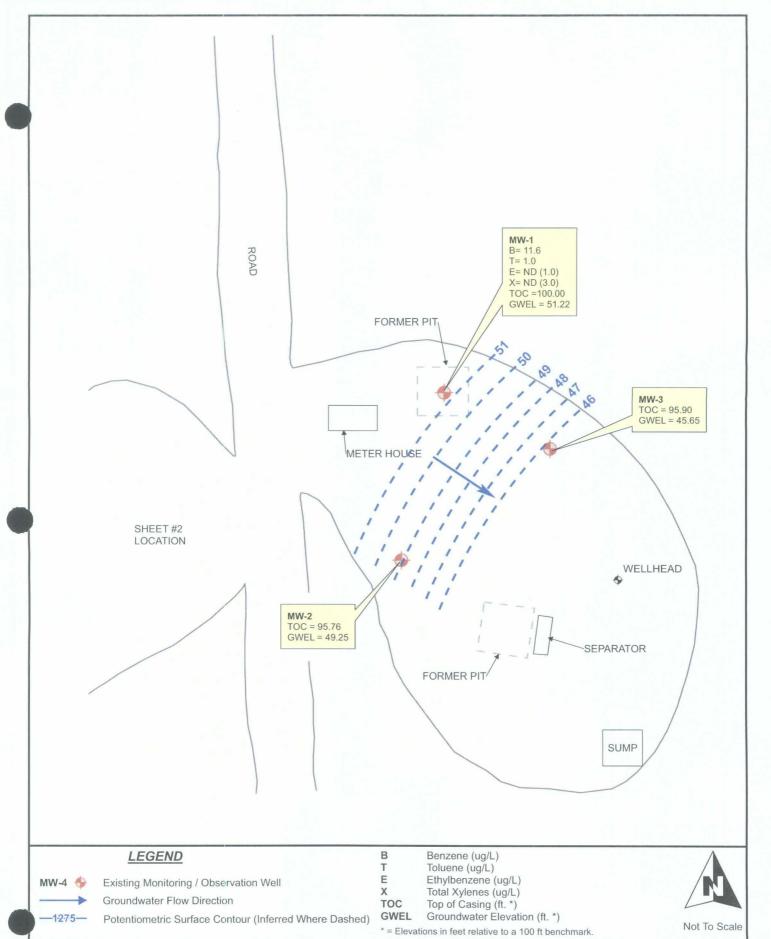


TITLE:

ON #1E FIGURE:

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

2



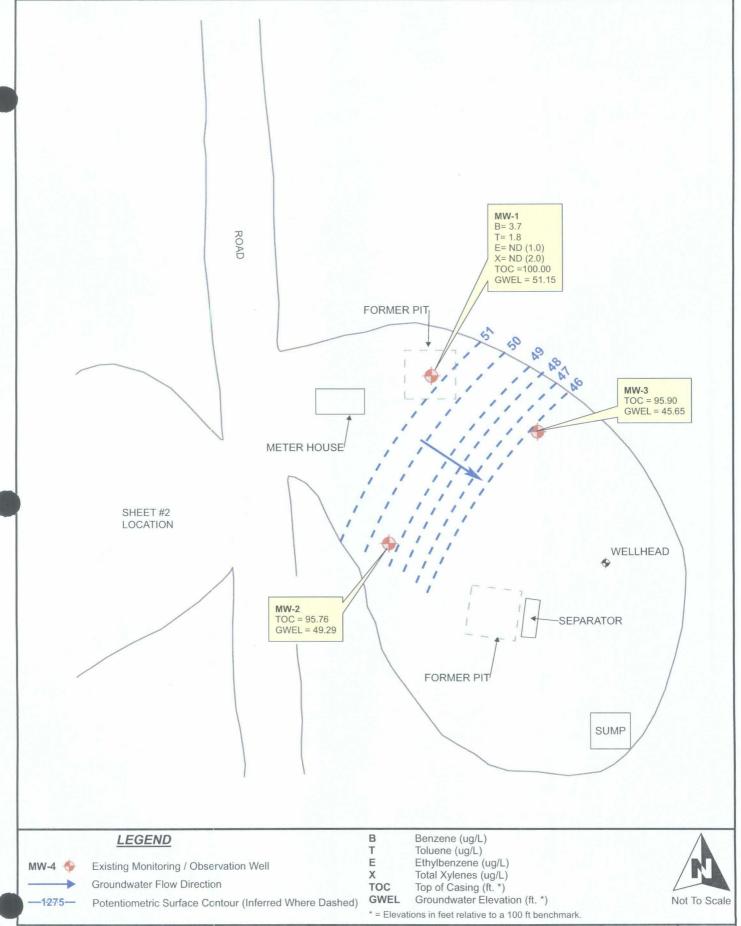




Groundwater Potentiometric Surface Map, and BTEX Concentrations - September 10, 2008

FIGURE:

3







TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - December 2, 2008 FIGURE:

4

Groundwater Elevation (ft) --- WATER ELEVATION 51.40 50.40 51.20 51.00 50.80 50.60 50.20 50.00 49.80 80-puA 70-guA 90-6n∀ 60-guA ₽0-bn∀ **HORTON #1E (METER #93388)** Aug-03 --- Ethylbenzene\_ug/L MW01 So-guA 10-guA 00-buA --- Toluene\_ug/L 66-6n∀ 86-puA 76-guA 96-6n∀ → Benzene\_ug/L 66-guA 1000 100 0.1 10 BTEX Concentrations (ug/L)

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES

FIGURE 5

Groundwater Elevation (ft) WATER ELEVATION 50.00 48.60 49.80 49.60 49.40 49.20 49.00 48.80 80-1<sub>2</sub>O 70-10O ---- Xylenes\_ug/L 0ct-06 Oct-05 --- Ethylbenzene\_ug/L P0-120 MW02 Oct-03 Oct-02 --- Toluene\_ug/L Oct-01 00-toO --- Benzene\_ug/L 66-15O 0.1 10 BTEX Concentrations (ug/L)

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES

FIGURE 6

**HORTON #1E (METER #93388)** 

Groundwater Elevation (ft) WATER ELEVATION 45.90 45.80 45.70 45.40 45.30 45.20 45.60 45.50 80-toO 70-10O ————Xylenes\_ug/L 90-toO Oct-05 **HORTON #1E (METER #93388)** --- Ethylbenzene\_ug/L 40-12O **MW03** Oct-03 Oct-05 Toluene\_ug/L Oct-01 00-toO → Benzene\_ug/L 66-10O 10 BTEX Concentrations (ug/L)

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES

FIGURE 7

TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
HORTON #1E (METER #93388)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	8/7/1995	308	483	16.9	190	48.99
	12/17/1996	86.8	55.5	1	6.66	48.96
4	3/10/1997	93.3	55.3	1.02	6.34	48.93
	6/2/1997	96.1	58.8	1.07	6.82	48.94
	9/8/1997	132	80.7	1.59	9.46	48.88
	12/10/1997	74.9	47.1	1	5.94	48.76
	3/23/1998	63.6	35.9	1.	6.93	48.78
	6/4/1998	68.1	30.6	1	6.6	48.76
	9/14/1998	67.7	19.4	1	3.26	48.85
•	12/17/1998	100	29	1.1	5.8	48.87
	3/23/1999	70.1	30.6	1	3	48.88
	6/11/1999	71	19	0.8	2.6	48.92
	9/2/1999	120	30	1.8	5.8	48.91
	12/9/1999	50	9.1	1	1.8	48.89
	4/12/2000	67	16	3.6	7.2	48.77
	6/9/2000	110	37	1.1	7.4	48.75
	9/8/2000	140	18	0.8	7.6	48.81
	12/11/2000	93	7.2	0.6	5.3	48.75
	3/13/2001	130	3.8	0.7	6.6	48.81
	9/7/2001	80	43	1.3	11	48.83
•	3/20/2002	60	30	0.6	4.9	49.07
	9/10/2002	167	49.9	2.4	12.7	49.96
	3/14/2003	100	25.5	<ul><li>0.5○</li></ul>	6.1	49.00
	9/16/2003	95.5	95.8	1.3	12.5	49.18
	3/23/2004	27.8	.6.1	; <b>1</b>	.1.2	49.01
	9/22/2004	12.8	4.5	1	i	49.12
	3/23/2005	22.8	3.7	1 .	1.4	49.12
	6/23/2005	30.6	4.4	1	1.8	49.18
	9/20/2005	12.8	0.47	1	. 2	49.24
	12/14/2005	8.8	2.4	1	0.74	49.14
•	3/27/2006	12.5	2.7	1,	0.82	49.17
	6/7/2006	5.6	1.3	1	1	49.21
	9/25/2006	6.5	1	. 41	1	49.28
	12/27/2006	4.3	2.9	1	0.39	49.19
	3/28/2007	11.9	11.3	1	1.5	49.20

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

TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES HORTON #1E (METER #93388)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	6/18/2007	12.6	12.5	1 ;	2	49.23
	9/17/2007	2.5	1	1	1	49.27
	12/17/2007	14.2	7.6	1	1.1	49.27
	3/11/2008	14.7	15.5	0.46	2.2	49.17
	6/17/2008	16.2	10.3	i i	0.99	48.75
··· ·	9/10/2008	11.6	1	1	1	48.78
	12/2/2008	3.7	1.8	i	1 ,	48.85
MW02	10/20/1999	1	1	1	1	
-	10/9/2000	1 .	0.7	1	1.1	46.41
	3/13/2001	1	1	1	1	46.47
	3/20/2002	1.	. 1	1	. 1	46.75
	3/31/2007	1	1	1	1	46.89
MW03	10/20/1999	1	1	1	0.8	
	10/10/2000	1	1	1	2	50.12
	3/13/2001	1	1	1	1	50.18
	3/20/2002	1	1	1	1	50.40
	3/31/2007	1	1	1.	. 1.	50.52