

3R - 235

**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:

<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)

1801 California Street
Suite 2900
Denver, Colorado 80202

TEL 303 291 2222
FAX 303 291 2221
www.mwhglobal.com

**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**

**Sandoval GC A #1A
Meter Code: 89620**

SITE DETAILS

Legal Description:	Town: 30N	Range: 9W	Sec: 35	Unit: C
NMOCD Haz Ranking:	10	Land Type:	Federal	Operator: BP / Amoco Production Company

PREVIOUS ACTIVITIES

Site Assessment:	5/94	Excavation:	9/94 (50 cy)	Soil Boring:	5/95
Monitor Well:	5/95	Geoprobe:	NA*	Additional MWs:	NA*
Downgradient MWs:	NA	Replace MW:	8/97	Quarterly Initiated:	4/96
ORC Nutrient Injection:	10/01	Re-Excavation:	7/97 (504cy)	PSH Removal Initiated:	NA
Annual Initiated:	4/99	Quarterly Resumed:	NA	PSH Removal in 2008?	No

*Downgradient monitoring wells were attempted in 1995, but met with drilling refusal. In 1997, geoprobe borings were attempted, but were again met with drilling refusal.

SUMMARY OF 2008 ACTIVITIES

MW-1: Annual groundwater sampling (November) and semiannual dissolved oxygen measurements (April and November) were performed during 2008. 3 fresh ORC socks were placed in the well following the annual sampling event.

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

SITE MAP

A Site map (November) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically on Figure 2.
- 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.

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Sandoval GC A #1A
Meter Code: 89620**

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station. The spent oxygen-releasing socks were managed as non-hazardous solid waste.

ISOCONCENTRATION MAPS

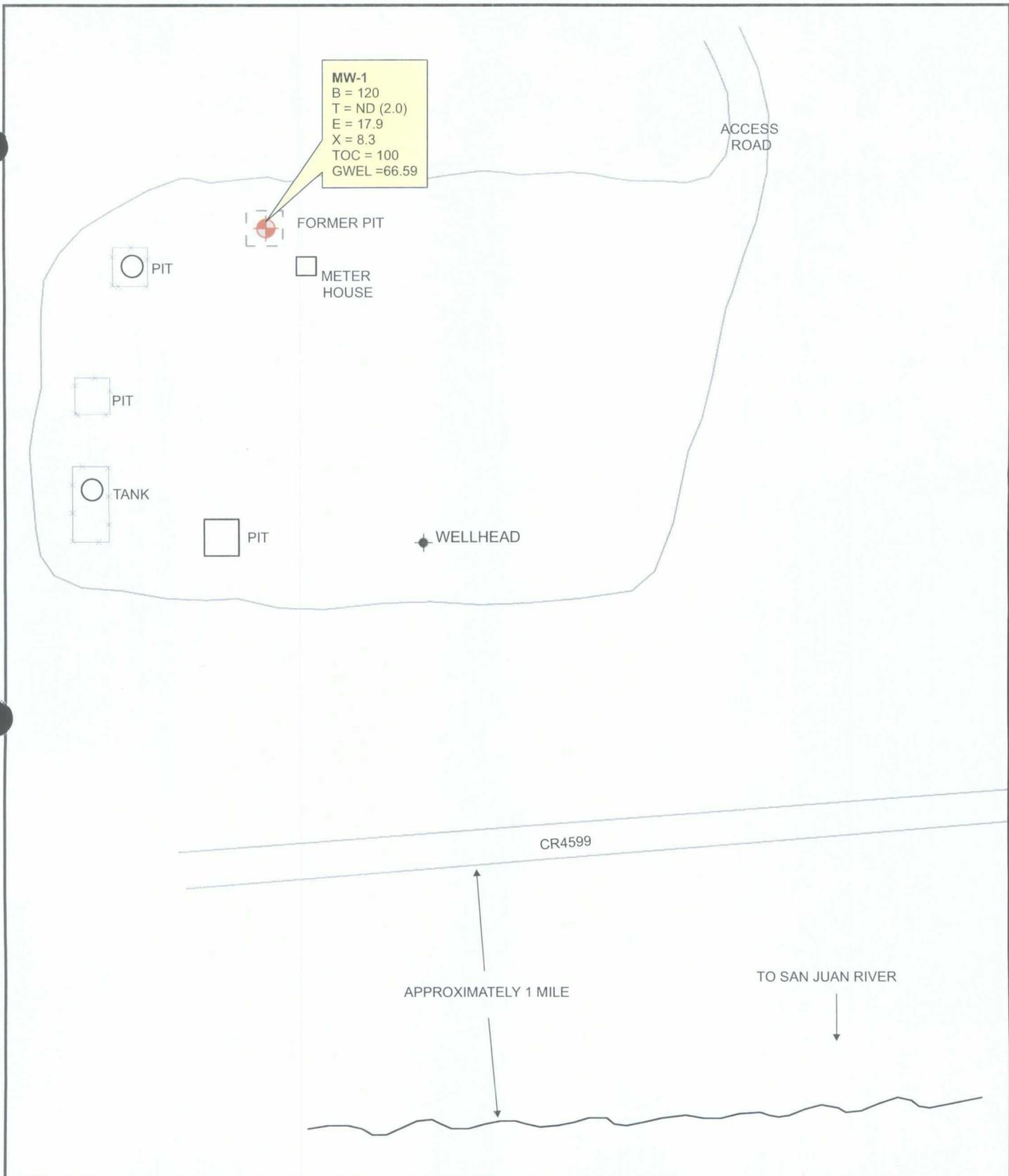
No isoconcentration maps were prepared for this Site; however, the attached Site map presents the analytical data collected during 2008.

RESULTS

- Regional groundwater flow is estimated to be toward the south, toward the San Juan River.
- The benzene concentration in MW-1 decreased in 2008 to 120 µg/L, from a previous year result of 441 µg/L in 2007. As a long-term trend, the benzene concentrations continue to decrease from the historic high concentration of 10,400 µg/L in 1996.
- The dissolved oxygen in MW-1 was at 75.4 percent of saturation in April 2008. The socks were removed on November 7, 2008, 11 days prior to the sampling event. During the sampling event, the dissolved oxygen in MW-1 was at 18.3 percent of saturation, indicating that sufficient oxygen was present year-round for natural aerobic biodegradation to proceed uninhibited.
- Previous attempts to install downgradient monitoring wells in December 1995 resulted in drilling refusal. Therefore, additional wells are not considered to be feasible at this Site.

RECOMMENDATIONS

- EPTPC will continue annual groundwater sampling and semiannual dissolved oxygen measurements at MW-1.
- EPTPC will continue to inspect the ORC socks installed in MW-1 and will replace them annually.



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)



Not To Scale



MWH



PROJECT: SANDOVAL GC A#1A

FIGURE:

TITLE: Groundwater Potentiometric Surface Map,
and BTEX Concentrations - November 18, 2008

1

FIGURE 2
 SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
 SANDOVAL GC A #1A (METER #89620)
 MW01

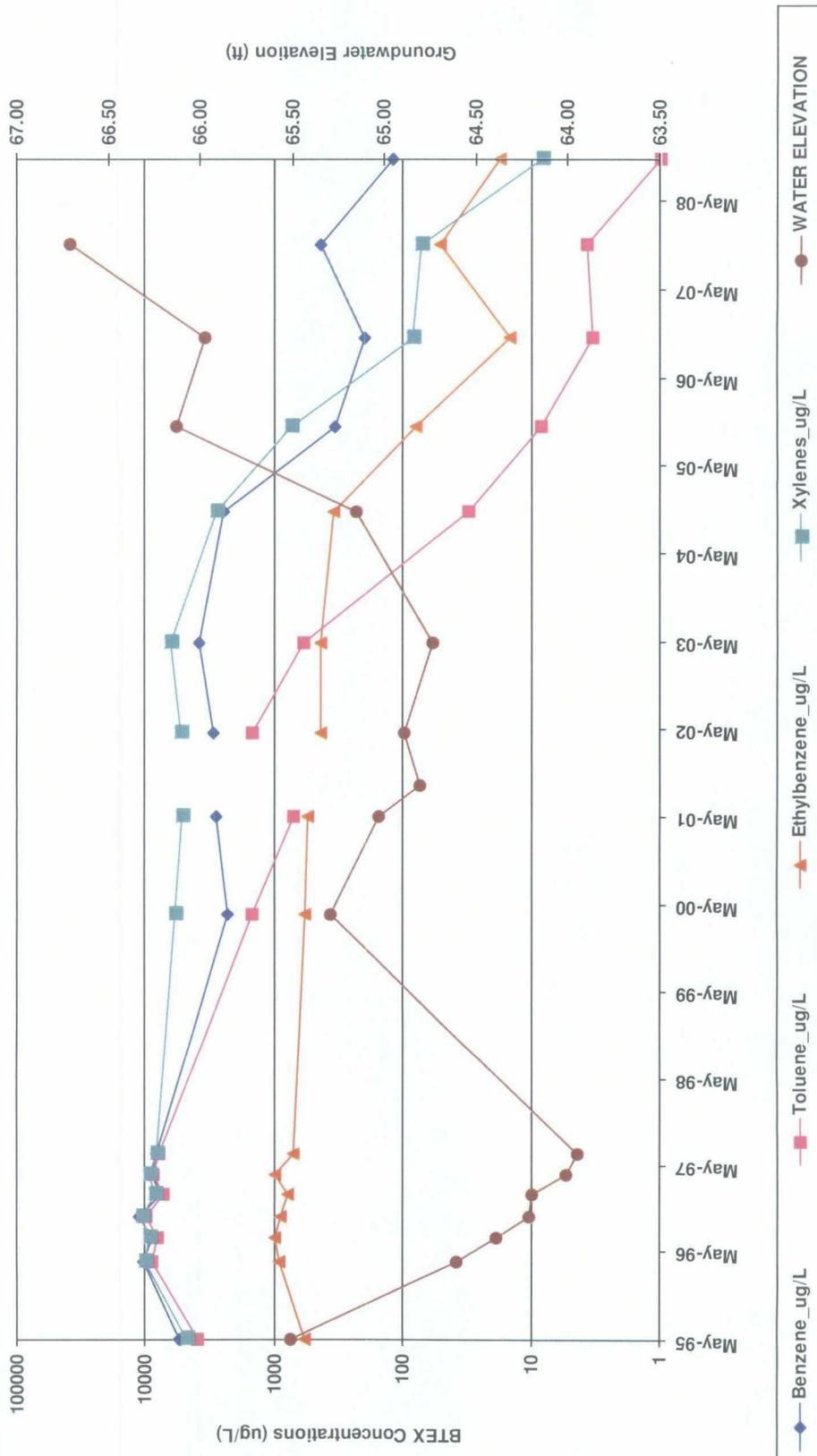


TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
SANDOVAL GC A #1A (METER #89620)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	5/30/1995	5500	3980	579	4780	34.49
	4/12/1996	10400	8960	925	10100	35.39
	7/26/1996	8980	7980	1000	9430	35.61
	10/18/1996	11050	9960	900	10700	35.79
	1/21/1997	7700	7210	787	8430	35.80
	4/16/1997	8900	8680	996	9250	35.99
	7/11/1997	8240	7850	709	8230	36.05
	4/13/2000	2300	1500	590	5900	34.70
	5/30/2001	2800	710	560	5200	34.97
	5/16/2002	3000	1500	440	5300	35.11
	5/21/2003	3850	601	443	6360	35.26
	11/16/2004	2490	30.9	346	2860	34.84
	11/8/2005	338	8.5	80.1	757	33.87
	11/8/2006	198	3.4	14.9	83.6	34.02
	11/29/2007	441	3.8	52.2	72.2	33.29
11/18/2008	120	1	17.9	8.3	33.41	
R01	9/4/1997	4420	2370	850	9660	35.18
	10/22/1997	3460	39.6	714	7690	35.14
	1/6/1998	3850	194	795	8570	35.10
	4/23/1998	4330	406	783	7220	35.15
	4/19/1999	4300	1260	629	7440	35.10

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