

3R - 235

**ANNUAL  
MONITORING  
REPORTS**

**DATE:**

3/2006

**RECEIVED**

**2005 ANNUAL GROUNDWATER REPORT**  
**FEDERAL SITES VOLUME I**

**EL PASO TENNESSEE PIPELINE COMPANY**    **MAR 17 2006**

Oil Conservation Division  
 Environmental Bureau

**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



**MWH**  
 MONTGOMERY WATSON HARZA

## LIST OF ACRONYMS

B	benzene
btoc	below top of casing
E	ethylbenzene
EPFS	El Paso Field Services
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitoring well
PSH	phase-separated hydrocarbons
NMWQCC	New Mexico Water Quality Control Commission
T	toluene
TOC	top of casing
NA	not applicable
NE	not established
NM	not measured
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
ppb	parts per billion
µg/L	micrograms per liter
X	total xylenes



EPTPC GROUNDWATER SITES  
2005 ANNUAL GROUNDWATER REPORT

3R235

Sandoval GC A #1A  
Meter Code: 89620

---

**SITE DETAILS**

Legal Description:      Town: 30N      Range: 9W      Sec: 35      Unit: C  
NMOCD Haz      10      Land      Federal      Operator: BP \ Amoco Production  
Ranking:      Type:      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      PSH Removal  
Injection:      10/01      Re-Excavation:      7/97 (504cy)      Initiated:      NA  
Annual Initiated:      4/99      Quarterly Resumed:      NA

\*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 2005 ACTIVITIES**

**MW-1:** Annual groundwater sampling and dissolved oxygen measurements were conducted in November 2005. Oxygen releasing compound (ORC) socks in MW-1 were replaced during November 2005.

**Site-Wide Activities:** No other activities were performed at this site during 2005.

**SITE MAP**

A site map (November) is attached in Figure 1.

**SUMMARY TABLES AND GRAPHS**

- Analytical data for 2005 are summarized in Table 1, and historic data are presented graphically in Figure 2.
- Analytical reports are presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES  
2005 ANNUAL GROUNDWATER REPORT**

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

---

---

**GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS**

No subsurface activities were performed at this site during 2005.

**DISPOSITION OF GENERATED WASTES**

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station.

**ISOCONCENTRATION MAPS**

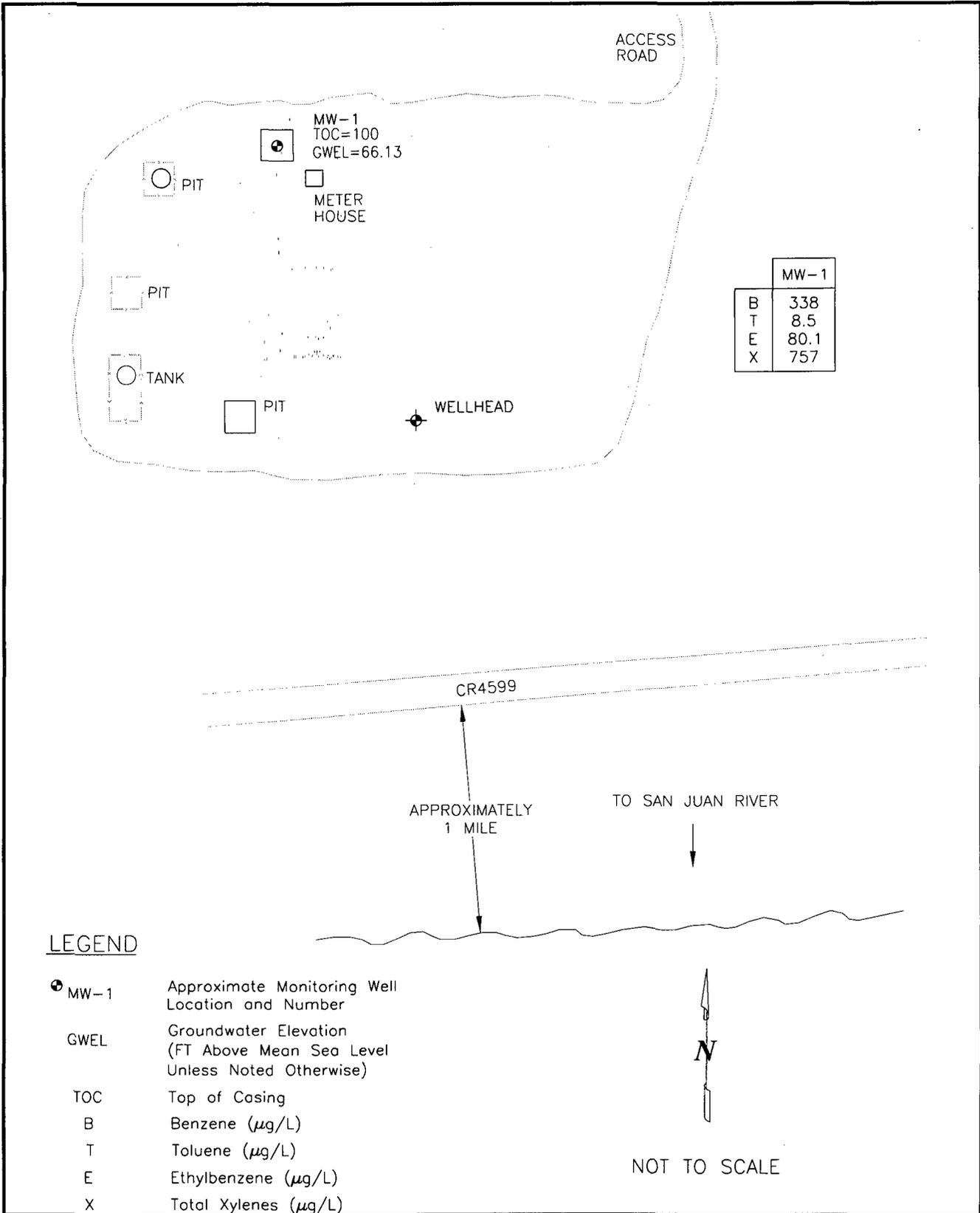
No isoconcentration maps were prepared for this site, however, the attached site map presents the analytical data collected during 2005.

**CONCLUSIONS**

- Regional groundwater flow is estimated to be toward the south.
- The dissolved oxygen concentration in MW-1 was 2.73 mg/L in November, indicating that the ORC is providing oxygen to enhance natural biodegradation and that the oxygen is being used up in the process.
- The benzene concentration in MW-1 has decreased in 2005 with a measured concentration of 338 µg/L, as compared with the measured concentration of 2,490 µg/L in 2004. Benzene concentrations continue to decrease from the historic high concentration of 10,400 µg/L in 1996.
- 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 (including dissolved oxygen measurements) at MW-1.
- EPTPC will continue to inspect the ORC socks installed in MW-1, and will replace them annually.



sandovalgas\_11-04.dwg

SANDOVAL GAS COM A #1A, METER 89620  
NOVEMBER 2005

GROUNDWATER SITES  
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1

**SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES**  
**SANDOVAL GC A #1A (METER #89620)**

TABLE 1

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet btoc)
Sandoval GC A #1A	11/8/2005	MW-1	338	8.5	80.1	757	33.87

**FIGURE 2**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER DEPTHS**  
**SANDOVAL GC A #1A**  
**MW-1**

