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ANNUAL MONTORING REPORT

2/28/2009



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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

- 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 of 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 | Е |
| 73220 | 3RP-068-0 | Fogelson 4-1 Com. #14 | 29N | 11W | 4 | P |
| 89894 | 3RP-186-0 | Hammond #41A | 27N | 08W | 25 | 0 |
| 97213 | 3RP-190-0 | Hamner #9 | 29N | 09W | 20 | A |
| 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 | O. |
| 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: | SHE NAME | TOWNSHIP | RANGE | SECTION | UNHT |
|---------------------|-------------------|---------------------|----------|-------|---------|------|
| 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 |

^{*} 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.





EPTPC GROUNDWATER SITES 2008 ANNUAL GROUNDWATER REPORT

Lat 0-21 Line Drip Meter Code: LD151

SITE DETAILS

Legal Description:

Town:

30N

Range:

9W

Sec:

12 Unit: O

NMOCD Haz Ranking:

40

Land Type: Federal

Operator:

Enterprise

PREVIOUS ACTIVITIES

Site Assessment:

1/95

Excavation:

1/95

Soil Boring:

10/95

Monitor Well:

10/95

Geoprobe:

11/96

Additional MWs:

7/00

Downgradient MWs:

7/00

Replace MW:

NA

Quarterly Initiated:

11/96

ORC Nutrient

Injection:

NA

Re-Excavation:

NA

PSH Removal Initiated:

NA

Annual Initiated:

5/97

Quarterly Resumed: NA

PSH Removal in 2008?

No

SUMMARY OF 2008 ACTIVITIES

MW-1: Quarterly groundwater sampling (April, July, and October) and water level monitoring was performed during 2008.

MW-2: Quarterly water level monitoring (April, July, and October) was performed during 2008.

MW-3: Quarterly groundwater sampling (April, July, and October) and water level monitoring was performed during 2008.

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

SITE MAPS

Site maps (April, July, and October) are attached as Figures 1, 2, and 3.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically in Figures 4 through 6.
- Historic free-product recovery data are summarized in Table 2. Free-product has not been recovered from the Site since 2002.
- The 2008 laboratory reports are presented in Attachment 1 (included on CD).

EPTPC GROUNDWATER SITES 2008 ANNUAL GROUNDWATER REPORT

Lat 0-21 Line Drip Meter Code: LD151

• 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

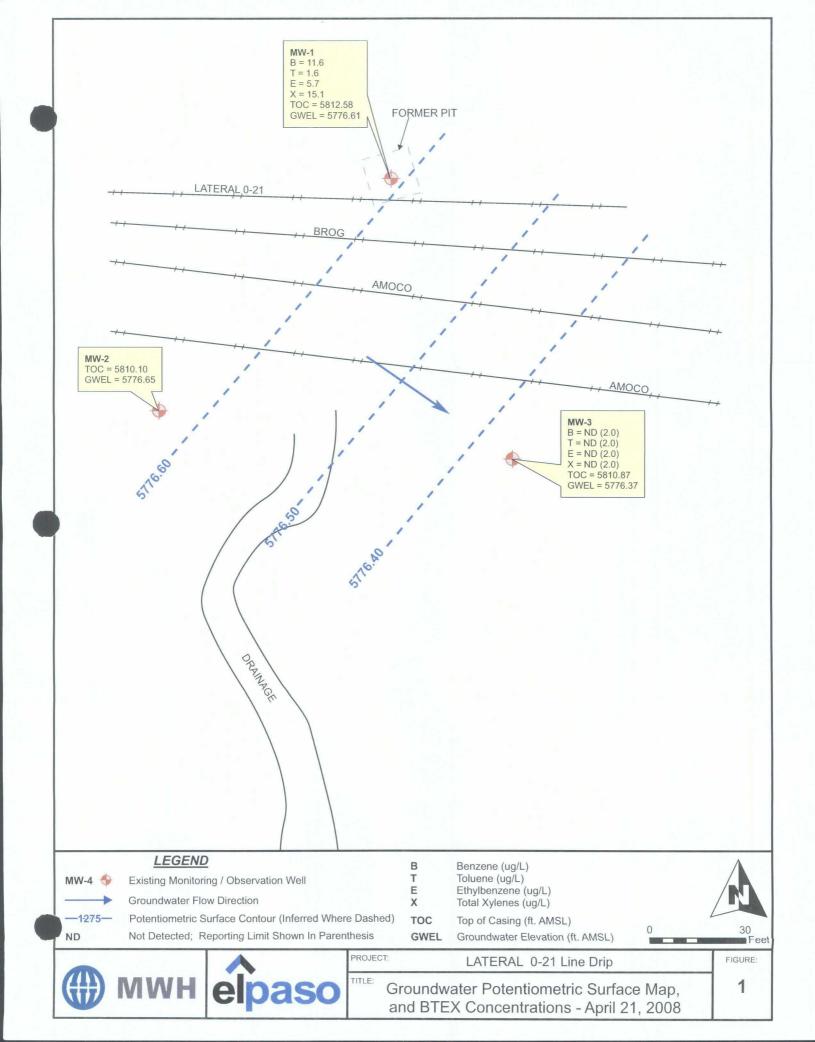
No isoconcentration maps were prepared for this Site; however, the attached Site maps present the water level and analytical data collected during 2008.

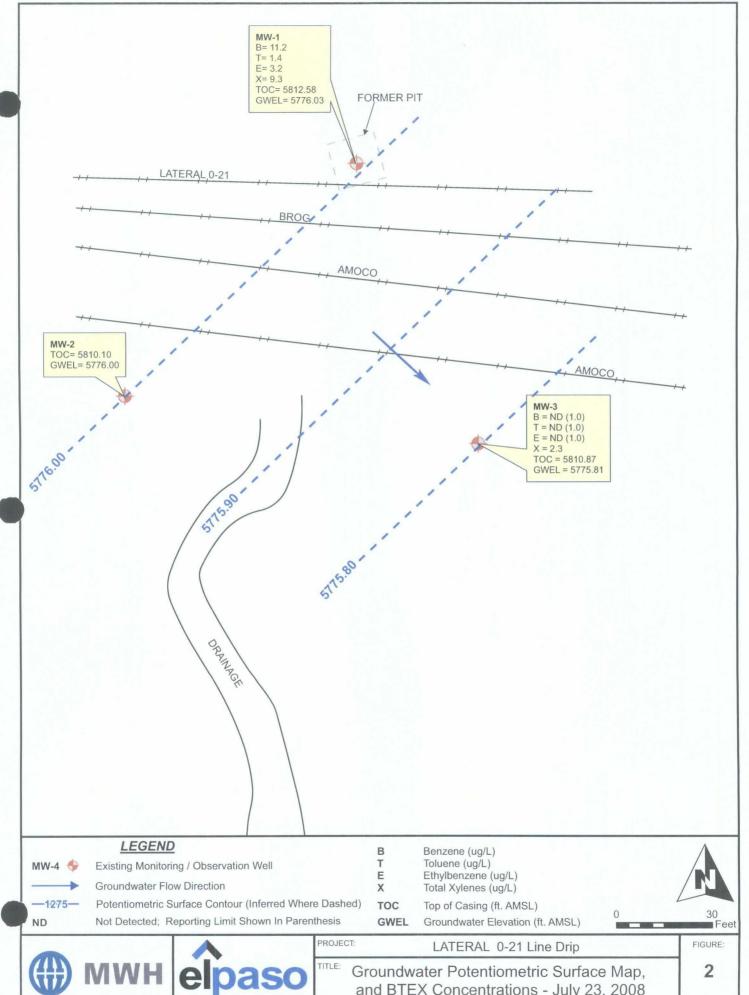
RESULTS

- Groundwater flow has historically been toward the southeast.
- The BTEX sample from MW-1 exceeded the standard for benzene in April and July 2008 (11.6 μg/L and 11.2 μg/L, respectively), but fell below the standard in October 2008 (7.6 μg/L). All other parameters were below standards during 2008. The benzene results represent a significant attenuation from the high benzene concentration of 5,380 μg/L in 1997.
- With the exception of a total xylenes concentration of 2.3 μ g/L in July 2008, BTEX constituents were not detected in the 2008 MW-3 groundwater samples. These results are consistent with the overall decline in concentrations since 2000, when, for example, the benzene concentration was 190 μ g/L.
- Site-wide decreases in BTEX concentrations provide evidence that natural attenuation is occurring at the Site.

RECOMMENDATIONS

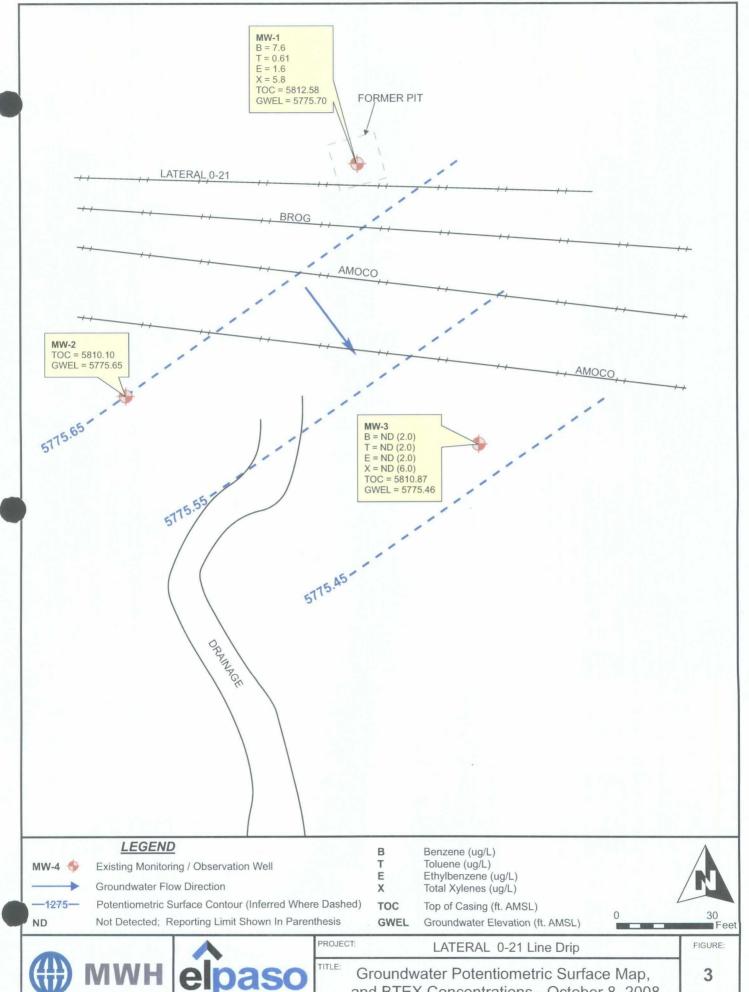
- Higher MW-1 benzene concentrations have typically been observed in the Spring; however, in 2008 the Spring/Summer results were very near the benzene standard. EPTPC recommends quarterly sampling of MW-1 until BTEX concentrations are below NMWQCC standards for four consecutive quarters, at which time this Site will be submitted for closure.
- Because BTEX concentrations at MW-2 have remained below closure criteria, EPTPC recommends that this well not be sampled again until closure.
- Because BTEX concentrations at MW-3 have remained below closure criteria, EPTPC recommends that this well not be sampled again until closure.















and BTEX Concentrations - October 8, 2008

WATER ELEVATION 5779.00 5778.50 5774.50 5778.00 5776.00 5775.50 5775.00 5779.50 5777.00 80-voN 70-VOM 90-voM SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES **GO-VON** LAT 0-21 LINE DRIP (METER #LD151) 40-VOM Nov-03 --- Ethylbenzene_ug/L MW01 Nov-02 TO-VOM 00-voM **66-VOM** --- Toluene_ug/L 86-VON **76-VOM** 96-VON -- Benzene_ug/L **26-VOM** 10000 1000 100 10 0.1 BTEX Concentrations (ug/L)

FIGURE 4

Groundwater Elevation (ft)

Groundwater Elevation (ft) --- WATER ELEVATION 5778.00 5777.00 5776.00 5774.00 5775.00 5773.00 5772.00 5771.00 5769.00 5770.00 5768.00 80-guA 70-guA ----Xylenes_ug/L 90-6n∀ LAT 0-21 LINE DRIP (METER #LD151) 20-guA Ethylbenzene_ug/L MW02 40-guA Aug-03 ____Toluene_ug/L Aug-02 10-guA → Benzene_ug/L 10 1 00-guA BTEX Concentrations (ug/L)

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES

FIGURE 5

5775.50 5777.00 5776.00 5775.00 5778.00 5777.50 5776.50 5774.50 80-guA 70-guA SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES 90-BnA LAT 0-21 LINE DRIP (METER #LD151) 60-guA FIGURE 6 MW03 40-guA &ug-03 S0-guA f0-guA 00-puA 10000 1000 100 10 0.1 BTEX Concentrations (ug/L)

Groundwater Elevation (ft)

── WATER ELEVATION

————Xylenes_ug/L

Ethylbenzene_ug/L

Toluene_ug/L

--- Benzene_ug/L

TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
LAT 0-21 LINE DRIP (METER #LD151)

| Monitoring Well | Sample Date | Benzene (ug/L) | Toluene (ug/L) | Ethylbenzene (ug/L) | Total Xylenes (ug/L) | Depth to Water (ft BTOC) |
|--------------------|----------------|-------------------|-------------------|------------------------|-------------------------|-----------------------------|
| MW01 | 11/6/1995 | 935 | 2700 | 168 | 1890 | 34.45 |
| | 11/12/1996 | . 741 | 1620 | 99 | 1100 | 34.75 |
| • | 2/11/1997 | 202 | 313 | 15.6 | 230 | 33.82 |
| * - | 5/8/1997 | 1050 | 1220 | 50.8 | 764 | 33.54 |
| - • | 8/5/1997 | 99.5 | 179 | 8.42 | 160 | 34.20 |
| | 11/4/1997 | 1370 | 3040 | 174 | 2530 | 35.42 |
| | 2/3/1998 | 3000 | 3600 | 138 | 2180 | 35.08 |
| | 5/7/1998 | 5380 | 7500 | 247 | 3500 | 34.83 |
| | 5/18/1999 | 4860 | 6810 | 183 | 3450 | 34.64 |
| | 5/26/2000. | 620 | 900 | 49 | 580 | 34.76 |
| | 6/18/2001 | 1400 | 2000 | 37 | 2500 | 35.60 |
| - | 6/4/2002 | 270 | 170 | 12 12 | 1900 | 35.98 |
| | 6/18/2003 | 137 | 1 | 1 | 1730 | 36.26 |
| v ^e | 6/23/2004 | 59.9 | 11.8 | 23.8 | 44.1 | 36.38 |
| | 4/18/2005 | 66.6 | 9.3 | 21.5 | 56.5 | 35.93 |
| • | 10/22/2005 | 8.9 | 1.4 | 5.6 | 9.1 | 36.99 |
| - | 1/19/2006 | 37.6 | 3.6 | 17.4 | 42 | 36.18 |
| | 4/24/2006 | 81.4 | 24.5 | 21.8 | 152 | 35.71 |
| . . | 10/24/2006 | 9.4 | 1.7 | 2.3 | 8.2 | 36.81 |
| * | 1/19/2007 | 28.7 | 5.5 | 7.3 | 19.8 | 36.14 |
| | 4/24/2007 | 104 | 82.1 | 41 | 244 | 35.73 |
| | 10/25/2007 | 3.8 | . 4 | 4.4 | 8.8 | 37.39 |
| | 4/21/2008 | 11.6 | 1.6 | 5.7 | 15.1 | 35.97 |
| | 7/23/2008 | - 11.2 | 1.4 | 3.2 | 9:3 | 36.55 |
| ٠ | 10/8/2008 | 7.6 | 0.61 | 1.6 | 5.8 | 36.88 |
| MW02 | 8/30/2000 | 1.3 | 1 | 1 : | 9.5 | 33.62 |
| | 6/18/2001 | 1 | 1 | 1 | 2 | 33.16 |
| | 6/4/2002 | 1. | 1 | 1 | 1 | 33.42 |
| ' | 6/18/2003 | 1 | 1 | , | 1 | 33.80 |
| | 6/23/2004 | 1 | i i | 1 . , | . • 1 | 33:92 |
| MW03 | 8/30/2000 | 190 | 20 | 37 | 460 | 34.56 |
| | 6/18/2001 | 34 | 4.7 | 68 | 130 | , 34.14 |
| | 6/4/2002 | 5.7 | 0.52 | 19 | 30 | 34.42 |
| • | 6/18/2003 | 1 | 1. | 540 | 6490 | 34.80 |
| • | 6/23/2004 | 3.3 | 28.9 | 34 | 48.4 | 34.95 |

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

TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
LAT 0-21 LINE DRIP (METER #LD151)

| Monitoring Well | Sample Date | Benzene (ug/L) | Toluene (ug/L) | Ethylbenzene (ug/L) | Total Xylenes (ug/L) | Depth to Water (ft BTOC) |
|--------------------|----------------|-------------------|-------------------|---|----------------------|-----------------------------|
| MW03 | 4/18/2005 | 1 | 1 | 5.3 | 2 | 34.48 |
| | 10/22/2005 | 1: | 1 | 1 | 1.1 | 35.52 |
| | 1/19/2006 | 1 | 1 | 1 | 1 | 34.71 |
| | 4/24/2006 | $\mathbf{r} = 1$ | 1 | 1 1 | 1 | 34.23 |
| | 10/24/2006 | 1 | 1 | 1 | 1.2 | 35.33 |
| • | 1/19/2007 | 3 - A A | 1 | 1 W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1 | 34.66 |
| | 4/24/2007 | 1 | 1 | 1 | 1 | 33.25 |
| | 10/25/2007 | 1 | 1 | i i | .1 | 35.88 |
| | 4/21/2008 | 1 | 1 | 1 | 1 | 34.50 |
| | 7/23/2008 | 1^{-1} | 1 | 111 | 2.3 | 35.06 |
| • | 10/8/2008 | 1 | 1 | 1 | 1 | 35.41 |

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

TABLE 2

SUMMARY OF FREE-PRODUCT REMOVAL
LAT 0-21 LINE DRIP (METER #LD151)

| Monitoring Well | Removal Date | Depth to Product (feet btoc) | Depth to Water (feet btoc) | Product Thickness (feet) | Volume Removed (gallons) | Cumulative Volume of Product Removed (gallons) |
|--------------------|-----------------|------------------------------------|----------------------------------|--------------------------------|--------------------------------|--|
| MW01 | 6/4/2002 | | 35.98 | 0.00 | 0.25 | 0.25 |
| | 9/10/2002 | 36.85 | 37.145 | 0.30 | 0.00 | 0.25 |
| | 12/30/2002 | 36.08 | 36.39 | 0.31 | 0.00 | 0.25 |
| - | 3/27/2003 | | 35.96 | 0.00 | 0.00 | 0.25 |
| | 6/18/2003 | | 36.26 | 0.00 | 0.00 | 0.25 |
| | 9/16/2003 | | 37.06 | 0.00 | 0.00 | 0.25 |
| • | 12/17/2003 | * | 36.72 | 0.00 | 0.00 | 0.25 |
| | 3/16/2004 | | 36.22 | 0.00 | 0.00 | 0.25 |
| • | 6/22/2004 | | 36.38 | 0.00 | 0.00 | 0.25 |
| | 9/21/2004 | • | 37.43 | 0.00 | 0.00 | 0.25 |
| | 12/21/2004 | | 36.98 | 0.00 | 0.00 | 0.25 |
| | 4/18/2005 | a t | 35.93 | 0.00 | 0.00 | 0.25 |
| MW03 | 9/10/2002 | 35.285 | 35.92 | 0.63 | 0.00 | 0.00 |
| | 12/30/2002 | 34.42 | 34.97 | 0.55 | 0.00 | 0.00 |
| | 9/16/2003 | 35.62 | 35.64 | 0.02 | 0.01 | 0.01 |
| | 12/17/2003 | | 35.24 | 0.00 | 0.00 | 0.01 |
| • | 3/16/2004 | | 34.75 | 0.00 | 0.00 | 0.01 |
| | 6/22/2004 | • | 34.95 | 0.00 | 0.00 | 0.01 |
| | 9/21/2004 | | 35.95 | 0.00 | 0.00 | 0.01 |
| •• | 12/21/2004 | | 35.51 | 0.00 | 0.00 | 0.01 |
| • | 4/18/2005 | | 34.48 | 0.00 | 0.00 | 0.01 |