



*Charlotte-Mecklenburg Utilities
Annual Report on Interbasin Transfer
Calendar Year 2004*

Charlotte Mecklenburg Utilities (Utilities) operates the water and wastewater system that serves the City of Charlotte, Cornelius, Davidson, Huntersville, Mint Hill, Matthews, Pineville, and much of the unincorporated areas of Mecklenburg County. This utility system, covering most of Mecklenburg County, is divided between two river basins as designated by NC General Statutes. The western portions of the system are within the Catawba River basin and the eastern portion is within the Rocky River basin. Water that is transferred from the Catawba River basin to the Rocky River basin that is not returned to the Catawba is defined as interbasin transfer (IBT).

Water is withdrawn from the Catawba River basin at two locations. An intake at Lake Norman sends water to the North Mecklenburg Water Treatment Plant. A second intake at Mountain Island Lake sends water to the Franklin Water Treatment Plant and the Vest Water Treatment Plant. Potable water from these three plants is delivered through an interconnected distribution system to customers throughout Mecklenburg County.

Utilities treats wastewater at five advanced wastewater treatment plants (WWTP's) which discharge into small streams in Mecklenburg County. Four of the streams are tributary to the Catawba River basin and one (Mallard Creek) is tributary to the Rocky River basin. Utilities also sends wastewater from several portions of Mecklenburg to the Rocky River Regional Wastewater Treatment Plant (RRRWWTP) operated by the Water and Sewer Authority of Cabarrus County (WSACC). The RRRWWTP discharges in the Rocky River.

Utilities transfers treated, potable water to the City of Concord through several metered connections to their water system. Water is transferred as an emergency back-up to Concord's routine supply which comes from Lake Howell and several smaller reservoirs. All of these reservoirs are within the Rocky River basin. Wastewater from Concord is treated at the RRRWWTP. Utilities' agreement with Concord is that water can be supplied to them subject to availability from the Charlotte-Mecklenburg system and subject to regulatory constraints including IBT and Federal Energy Regulatory Commission (FERC) limitations.

Charlotte Mecklenburg Utilities' petition to increase the amount of water transferred from the Catawba basin to the Rocky River basin was approved by the North Carolina Environmental Management Commission (EMC) on March 14, 2002. The petition allows Utilities to transfer up to 33 million gallons per day (mgd) from the Catawba River basin to the Rocky River basin.

The approved petition requires Utilities to report daily IBT amounts annually to the North Carolina Division of Water Resources until such time as the transfer amount exceeds

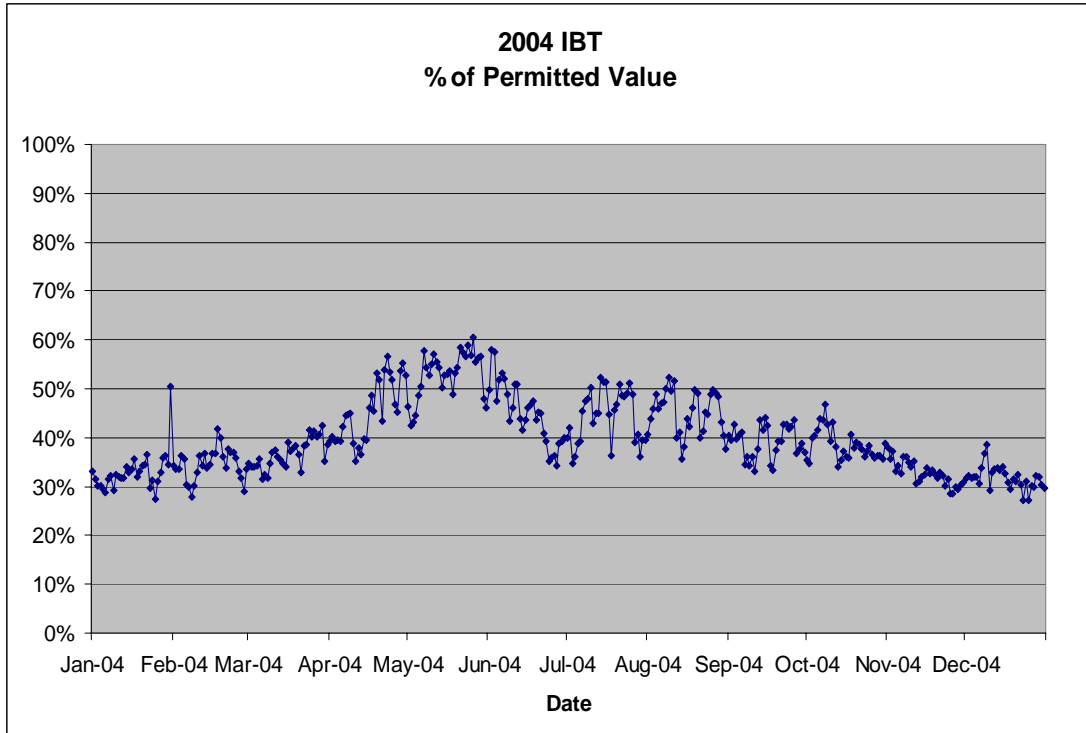


80% of the authorized amount, which would be 26.4 mgd. Once that amount is exceeded, Utilities is required to report monthly. To date, Charlotte-Mecklenburg Utilities has not exceeded 80% of the authorized IBT amount.

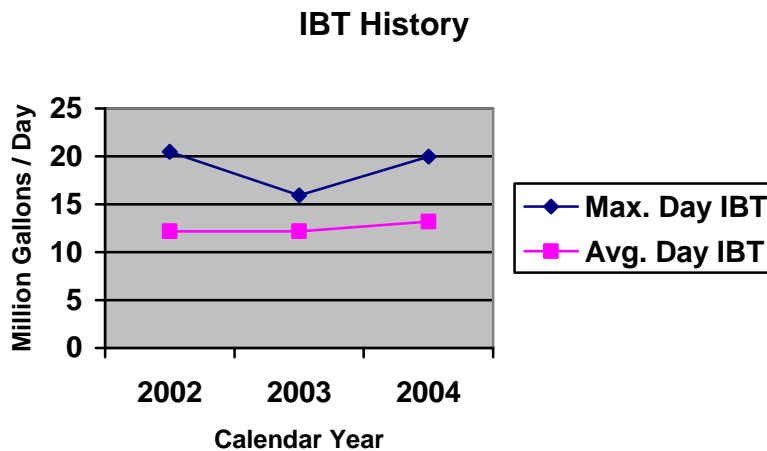
Table 1 below summarizes 2004 daily IBT amounts. The table considers the daily amounts of water delivered from the Catawba basin to customers within Mecklenburg County based on combined pumping records from the three water treatment plants. The values shown in Table 1 include the amount of water transferred to the City of Concord through metered connections. Transfers to Concord are included as average daily values over the billing period which is approximately monthly. The full amount transferred to Concord is IBT since none is returned from Concord to the Catawba basin. Daily wastewater treatment plant discharges are used to determine how much flow is returned to the Catawba basin and how much is discharged directly to the Rocky River basin from Utilities' Mallard Creek WWTP. Wastewater flows sent to RRRWWTP (and thereby discharging into the Rocky River basin) are included in Table 1 as average daily flows based on wastewater flow meter readings which are made approximately monthly. Consumptive use within the Rocky River basin is considered IBT according to North Carolina statutes. Consumptive use occurs due to septic tank systems, lawn irrigation, inclusion of water in packaged products, evaporation, and other uses. The amount of this consumptive use is estimated based on criteria described in Utilities' IBT petition.

Combination of the data allows the calculation of the daily IBT amount. Table 1 presents these amounts both as a percentage of the authorized amount and as a daily transfer amount in mgd. The data is also presented in two charts which depict graphically the IBT amounts.

The data indicates that the maximum amount of IBT for year 2004 occurred on May 26, 2004, and was 19.99 mgd, or 60% of the authorized maximum day value of 33 mgd. The average IBT for 2004 was 13.18 mgd, which is about 40% of the authorized maximum day value.



The graph below indicates historic IBT trends for Charlotte-Mecklenburg Utilities.



Condition 1 of Utilities' IBT certificate requires Mecklenburg County to summarize progress in implementation of watershed management approaches of the Surface Water Improvement and Management Program (S.W.I.M. program). This summary follows:

Basic countywide water quality modeling capabilities have been developed and are being upgraded to include advanced modeling capabilities for planning/land



development. A fully functioning water quality model has been developed for McDowell Creek in the Town of Huntersville where rapidly degrading water quality conditions have been experienced due to growth within the watershed. Outputs from the McDowell model were used to develop a watershed based approach for identifying alternative management strategies targeted toward preventing further water quality degradation. As a result of this effort, a performance based land development ordinance was developed that relies on Low Impact Design (LID) strategies to protect water quality from future development activities, which was adopted by the Town of Huntersville on February 17, 2003. Water quality modeling and watershed based planning initiatives are also being used in the design of two (2) large mixed use developments along Lake Wylie to protect water quality from land development activities. Other S.W.I.M. initiatives and actions in 2004 include:

- *Secured grant funds, obtained properties and developed design drawings to retrofit water quality BMP's in the McDowell Creek watershed;*
- *Implemented fecal coliform TMDL measures in Little Sugar, Sugar, and McAlpine Creek basins;*
- *Development of a draft Low Impact Development (LID) ordinance for the Town of Mint Hill designed to protect water quality conditions in Goose Creek from non-point source pollutants associated with post-construction storm water runoff; and*
- *Obtained grant funds and began design of pilot LID structures in the Goose Creek basin to demonstrate compliance with the draft LID ordinance.*

Condition 2 of Utilities' IBT certificate requires a report on the stakeholder process to investigate water quantity control from single-family development and water quality control for all development until that process is completed. The condition suggests that the feasibility of single-family detention should be considered along with any needed ordinance revisions. This report follows:

A water quality ordinance adopted by the Town of Huntersville in 2003 provides water quality controls for single-family development as well as establishes requirements for single-family detention within the Town limits and within their zoning jurisdiction. This geographic area spans Mecklenburg County from west to east and includes significant areas of the Catawba River (Mountain Island Lake) watershed and the Rocky River basin. The Huntersville Ordinance was designed to address both water quality and detention. The basic objectives of the Huntersville Ordinance are:

- *Minimize increases in storm water runoff from development or redevelopment in order to reduce flooding, siltation and streambank erosion, and maintain the integrity of stream channels.*



- *Utilize Low Impact Design (LID) strategies to minimize increases in non-point source pollution caused by storm water runoff from development or redevelopment. The goal of LID is to develop site design techniques, strategies, and BMPs to store, infiltrate, evaporate, retain, and detain runoff on the site to more closely replicate pre-development runoff characteristics and to better mimic the natural and unique hydrology of the site thereby limiting the increase in pollutant loads caused by development.*
- *Minimize the total volume of surface water runoff that flows from any specific site during and following development in order to replicate pre-development hydrology to the maximum extent practicable.*
- *Reduce storm water runoff rates and volumes, soil erosion and non-point source pollution, to the extent practicable, through storm water management controls (BMPs) and to ensure that these management controls are properly maintained and pose no threat to public health or safety.*

The performance criteria contained in the Huntersville Ordinance are :

- *All storm water treatment systems used to meet these Performance Criteria shall be designed to achieve average annual 85% Total Suspended Solids (TSS) removal for the developed area of a site. Areas designated as open space that are not developed do not require storm water treatment. All sites must employ LID practices to control and treat runoff from the first inch of rainfall.*
- *LID practices or a combination of LID and conventional storm water management practices shall be used to control and treat the increase in storm water runoff volume associated with post-construction conditions as compared with pre-construction (existing) conditions for the 2-year frequency, 24-hour duration storm event in the Rural and Transitional Zoning Districts. For all other Zoning Districts, LID practices or a combination of LID and conventional storm water management practices shall be used to control and treat the increase in storm water runoff volume associated with post-construction conditions as compared with pre-construction (existing) conditions for the 1-year frequency, 24-hour duration storm event. This may be achieved by hydrologic abstraction, recycling and/or reuse, or other accepted management practice as described in Section 6 of the Huntersville Water Quality Design Manual.*
- *Where any storm water BMP employs the use of a temporary water quality storage pool as a part of its treatment system, the drawdown time shall be a minimum of 48 hours and a maximum of 120 hours.*
- *Peak storm water runoff rates shall be controlled for all development above 12% imperviousness. The peak storm water runoff release rates leaving the site during post-construction conditions shall be equal to or less than the pre-development*



peak storm water runoff release rates for the 2-year frequency, 24-hour duration storm event and 10-year frequency, 24-hour duration storm event. The emergency overflow and outlet works for any pond or wetland constructed as a storm water BMP shall be capable of safely passing a discharge with a minimum recurrence frequency of 50 years. For detention basins, the temporary storage capacity shall be restored within 72 hours. Requirements of the Dam Safety Act shall be met when applicable.

- *No one BMP shall receive runoff from an area greater than five (5) acres. However, the total drainage area from BMP's used in series (i.e., integrated) can exceed this five (5) acre maximum.*

In 2004, Mecklenburg County began work to develop ordinances to control and manage storm water runoff and water quality impacts resulting from post-construction storm water discharges in other areas of Mecklenburg County. This work has four objectives:

- 1. Compliance with Phase I and Phase II NPDES Storm Water Permit requirements;*
- 2. Address storm water pollution criteria specified by the NC Wildlife Resources Commission and the US Fish and Wildlife Service for the Rocky River / Yadkin River basin;*
- 3. Address the causes of impairment identified in the NC 2002 Integrated 305(b) and 303(d) Report for Surface Waters in Mecklenburg County; and,*
- 4. Address detention measures for the control of storm water volumes and peaks associated with new construction.*

The development of the ordinance provisions is involving approximately 18 stakeholders representing interests such as realtors, Chamber of Commerce, local government jurisdictions, home builders, environmental groups, and marine commissions. Staff and other technical support is provided to the stakeholders by Mecklenburg County, City of Charlotte, NC Wildlife Resources Commission, US Fish and Wildlife Service, NC DENR, and SC DHEC.

Mecklenburg County has contracted with leading consultants to develop water quality models and provide additional technical support to the process. The detailed modeling is being used to evaluate the effectiveness of various methodologies and techniques in meeting water quality and hydrology goals. The stakeholder phase of this work is expected to be completed in 2005. The next step is for the results of this phase to be incorporated into draft ordinances and presented to the political jurisdictions within Mecklenburg County for adoption.

Condition 3 of the IBT certificate imposes a moratorium on the installation of new IBT water lines (water lines crossing the ridgeline) into Goose Creek subbasin until the impacts of additional growth on the endangered species are fully evaluated. This moratorium remains in place.



Condition 4 of the IBT certificate provides that the Environmental Management Commission may reopen the certificate under certain circumstances. This did not occur in 2004.

Condition 5 of the IBT certificate requires Utilities to develop a compliance and monitoring plan for reporting maximum daily transfer amounts, compliance with certificate conditions, progress on mitigation measures, and drought management activities. At the direction of NCDWR staff, Utilities developed a reporting format and spreadsheets that were submitted in draft form for calendar year 2003. Not having been informed otherwise, Utilities assumes this format is satisfactory.

Weather conditions in 2004 did not require implementation of drought management activities. However, Utilities is working with Duke Power, NCDWR, and other water users in the Catawba River basin to develop drought management plans to be included in the Federal Energy Regulatory Commission (FERC) relicensing of Duke Power's hydroelectric facilities in 2008. This plan, referred to as the "Low Inflow Protocol" (LIP) will establish trigger mechanisms for multiple drought stages and prescribe actions that water users are to take at each stage. It is expected that development of the LIP will be completed in 2005 or early 2006 with implementation to follow.

In summary, Utilities is in full compliance with IBT authorizations and compliance conditions. Utilities continues to work cooperatively with Mecklenburg County and other jurisdictions in our service area to develop and implement programs to support growth and mitigate direct and secondary impacts.



Table 1

DATE	Finished Water Pumping from Catawba (mgd)	Consumptive Use (mgd)		Portion of Water Use Discharged as Wastewater (mgd)		Total Return to Catawba Basin (mgd)	Interbasin Transfer (mgd)	% of Withdrawal Returned	IBT as % of Certificate
		Catawba Basin (mgd)	Rocky River Basin (mgd)	Catawba River Basin (mgd)	Rocky River Basin (mgd)				
1/1/2004	78.39	14.83	2.41	52.65	8.49	67.49	10.90	86%	33%
1/2/2004	90.37	17.10	2.78	62.86	7.63	79.96	10.41	88%	32%
1/3/2004	85.69	16.21	2.64	59.56	7.27	75.77	9.91	88%	30%
1/4/2004	88.63	16.77	2.73	61.90	7.23	78.67	9.96	89%	30%
1/5/2004	86.11	16.29	2.65	60.13	7.04	76.42	9.70	89%	29%
1/6/2004	84.82	16.05	2.61	59.27	6.89	75.32	9.50	89%	29%
1/7/2004	87.92	16.63	2.71	60.91	7.67	77.55	10.37	88%	31%
1/8/2004	83.38	15.78	2.57	56.97	8.06	72.75	10.63	87%	32%
1/9/2004	77.28	14.62	2.38	53.02	7.26	67.64	9.64	88%	29%
1/10/2004	83.61	15.82	2.58	57.08	8.13	72.90	10.71	87%	32%
1/11/2004	84.43	15.97	2.60	57.92	7.94	73.89	10.54	88%	32%
1/12/2004	88.52	16.75	2.73	61.28	7.76	78.03	10.49	88%	32%
1/13/2004	86.65	16.39	2.67	59.79	7.80	76.18	10.47	88%	32%
1/14/2004	91.20	17.26	2.81	62.71	8.43	79.97	11.24	88%	34%
1/15/2004	88.06	16.66	2.71	60.53	8.16	77.19	10.87	88%	33%
1/16/2004	85.65	16.20	2.64	58.40	8.41	74.60	11.05	87%	33%
1/17/2004	83.42	15.78	2.57	55.91	9.15	71.69	11.72	86%	36%
1/18/2004	78.58	14.87	2.42	53.17	8.12	68.04	10.54	87%	32%
1/19/2004	89.42	16.92	2.75	61.54	8.20	78.46	10.96	88%	33%
1/20/2004	85.24	16.13	2.63	57.80	8.68	73.93	11.31	87%	34%
1/21/2004	85.49	16.17	2.63	57.95	8.73	74.13	11.37	87%	34%
1/22/2004	90.74	17.17	2.79	61.53	9.25	78.69	12.04	87%	36%
1/23/2004	85.49	16.18	2.63	59.55	7.14	75.72	9.77	89%	30%
1/24/2004	85.53	16.18	2.63	59.00	7.71	75.19	10.35	88%	31%
1/25/2004	79.92	15.12	2.46	55.73	6.60	70.85	9.06	89%	27%
1/26/2004	78.23	14.80	2.41	53.15	7.87	67.95	10.28	87%	31%
1/27/2004	86.55	16.37	2.67	59.34	8.16	75.72	10.83	87%	33%
1/28/2004	92.59	17.52	2.85	63.25	8.97	80.77	11.82	87%	36%
1/29/2004	90.54	17.13	2.79	61.40	9.22	78.53	12.01	87%	36%
1/30/2004	92.28	17.46	2.84	63.42	8.56	80.88	11.40	88%	35%
1/31/2004	91.66	47.93	7.80	27.10	8.83	75.03	16.63	82%	50%
2/1/2004	90.51	17.12	2.79	62.11	8.48	79.24	11.27	88%	34%
2/2/2004	87.48	16.55	2.69	59.86	8.38	76.41	11.07	87%	34%
2/3/2004	90.06	17.04	2.77	61.95	8.29	78.99	11.07	88%	34%
2/4/2004	93.96	17.78	2.89	64.22	9.07	81.99	11.97	87%	36%
2/5/2004	86.84	16.43	2.67	58.67	9.07	75.10	11.74	86%	36%
2/6/2004	83.55	15.81	2.57	57.76	7.41	73.56	9.98	88%	30%



2/7/2004	87.12	16.48	2.68	60.79	7.16	77.28	9.84	89%	30%
2/8/2004	83.20	15.74	2.56	58.27	6.62	74.01	9.18	89%	28%
2/9/2004	85.76	16.23	2.64	59.61	7.28	75.84	9.92	88%	30%
2/10/2004	89.28	16.89	2.75	61.53	8.11	78.43	10.86	88%	33%
2/11/2004	89.46	16.93	2.76	60.53	9.25	77.46	12.00	87%	36%
2/12/2004	84.29	15.95	2.60	57.06	8.69	73.01	11.28	87%	34%
2/13/2004	87.53	16.56	2.70	58.85	9.42	75.41	12.12	86%	37%
2/14/2004	78.90	14.93	2.43	52.82	8.72	67.75	11.15	86%	34%
2/15/2004	80.28	15.19	2.47	53.69	8.92	68.88	11.40	86%	35%
2/16/2004	88.51	16.75	2.73	59.63	9.40	76.38	12.13	86%	37%
2/17/2004	86.26	16.32	2.66	57.78	9.50	74.10	12.15	86%	37%
2/18/2004	89.95	17.02	2.77	59.15	11.02	76.17	13.79	85%	42%
2/19/2004	89.20	16.88	2.75	59.13	10.45	76.00	13.20	85%	40%
2/20/2004	87.61	16.58	2.70	59.13	9.21	75.71	11.91	86%	36%
2/21/2004	83.44	15.79	2.57	56.47	8.61	72.26	11.18	87%	34%
2/22/2004	84.74	16.03	2.61	56.27	9.82	72.30	12.43	85%	38%
2/23/2004	87.01	16.46	2.68	58.36	9.51	74.82	12.19	86%	37%
2/24/2004	87.97	16.64	2.71	59.15	9.47	75.80	12.18	86%	37%
2/25/2004	88.06	16.66	2.71	59.55	9.13	76.21	11.84	87%	36%
2/26/2004	77.08	14.58	2.37	51.57	8.55	66.16	10.92	86%	33%
2/27/2004	78.49	14.85	2.42	53.15	8.08	68.00	10.50	87%	32%
2/28/2004	80.02	15.14	2.46	55.30	7.12	70.44	9.58	88%	29%
2/29/2004	85.34	16.15	2.63	58.12	8.44	74.27	11.07	87%	34%
3/1/2004	86.17	16.30	2.65	58.38	8.83	74.69	11.48	87%	35%
3/2/2004	91.62	17.33	2.82	63.04	8.42	80.38	11.24	88%	34%
3/3/2004	92.75	17.55	2.86	64.00	8.35	81.54	11.21	88%	34%
3/4/2004	90.45	17.11	2.79	62.07	8.48	79.19	11.27	88%	34%
3/5/2004	90.35	17.09	2.78	61.47	9.01	78.56	11.79	87%	36%
3/6/2004	88.58	16.76	2.73	61.41	7.68	78.17	10.41	88%	32%
3/7/2004	91.07	17.23	2.80	63.10	7.93	80.33	10.74	88%	33%
3/8/2004	87.29	16.52	2.69	60.29	7.80	76.80	10.49	88%	32%
3/9/2004	88.02	16.65	2.71	59.90	8.76	76.55	11.47	87%	35%
3/10/2004	93.33	17.66	2.87	63.50	9.30	81.16	12.17	87%	37%
3/11/2004	90.54	17.13	2.79	61.05	9.57	78.18	12.36	86%	37%
3/12/2004	93.41	17.67	2.88	63.80	9.06	81.48	11.94	87%	36%
3/13/2004	91.26	17.27	2.81	62.31	8.87	79.58	11.68	87%	35%
3/14/2004	86.82	16.43	2.67	58.92	8.80	75.34	11.48	87%	35%
3/15/2004	89.36	16.91	2.75	61.20	8.50	78.11	11.25	87%	34%
3/16/2004	93.91	17.77	2.89	63.23	10.02	81.00	12.91	86%	39%
3/17/2004	89.08	16.85	2.74	59.98	9.50	76.83	12.25	86%	37%
3/18/2004	85.72	16.22	2.64	57.02	9.85	73.24	12.49	85%	38%
3/19/2004	92.84	17.57	2.86	62.65	9.77	80.21	12.63	86%	38%
3/20/2004	89.53	16.94	2.76	60.50	9.33	77.44	12.09	86%	37%
3/21/2004	85.96	16.26	2.65	58.87	8.17	75.13	10.82	87%	33%
3/22/2004	93.94	17.77	2.89	63.47	9.80	81.25	12.69	86%	38%
3/23/2004	93.12	17.62	2.87	62.75	9.89	80.36	12.76	86%	39%
3/24/2004	99.00	18.73	3.05	66.56	10.66	85.29	13.71	86%	42%



3/25/2004	97.11	18.37	2.99	65.47	10.28	83.84	13.27	86%	40%
3/26/2004	102.98	19.48	3.17	69.87	10.45	89.36	13.62	87%	41%
3/27/2004	98.69	18.67	3.04	66.74	10.23	85.41	13.27	87%	40%
3/28/2004	102.92	19.47	3.17	70.02	10.26	89.49	13.43	87%	41%
3/29/2004	105.61	19.98	3.25	71.60	10.77	91.58	14.03	87%	43%
3/30/2004	88.57	16.76	2.73	60.21	8.87	76.97	11.60	87%	35%
3/31/2004	88.96	16.83	2.74	59.37	10.02	76.20	12.76	86%	39%
4/1/2004	94.54	17.89	2.91	63.71	10.03	81.59	12.95	86%	39%
4/2/2004	94.95	17.96	2.92	63.68	10.37	81.65	13.30	86%	40%
4/3/2004	91.86	17.38	2.83	61.50	10.15	78.88	12.98	86%	39%
4/4/2004	92.75	17.55	2.86	62.13	10.22	79.68	13.07	86%	40%
4/5/2004	96.48	18.25	2.97	65.26	9.99	83.52	12.96	87%	39%
4/6/2004	101.16	19.14	3.12	68.06	10.85	87.20	13.96	86%	42%
4/7/2004	104.33	19.74	3.21	69.89	11.49	89.63	14.70	86%	45%
4/8/2004	104.84	20.92	3.41	69.12	11.39	90.04	14.79	86%	45%
4/9/2004	109.44	22.93	3.73	71.67	11.11	94.60	14.84	86%	45%
4/10/2004	95.63	18.09	2.95	64.72	9.87	82.82	12.81	87%	39%
4/11/2004	89.99	17.03	2.77	61.34	8.85	78.36	11.62	87%	35%
4/12/2004	89.41	16.92	2.75	59.98	9.76	76.90	12.52	86%	38%
4/13/2004	90.23	17.07	2.78	61.10	9.28	78.17	12.06	87%	37%
4/14/2004	92.73	17.54	2.86	62.10	10.23	79.64	13.08	86%	40%
4/15/2004	93.29	17.65	2.87	62.57	10.19	80.22	13.06	86%	40%
4/16/2004	105.51	21.71	3.53	68.58	11.68	90.29	15.22	86%	46%
4/17/2004	111.14	24.25	3.95	70.87	12.07	95.12	16.02	86%	49%
4/18/2004	109.22	24.50	3.99	69.76	10.97	94.26	14.96	86%	45%
4/19/2004	125.89	35.39	5.76	72.93	11.82	108.31	17.58	86%	53%
4/20/2004	118.30	31.44	5.12	69.73	12.02	101.16	17.13	86%	52%
4/21/2004	123.86	36.50	5.94	73.04	8.38	109.54	14.32	88%	43%
4/22/2004	124.50	36.05	5.87	70.64	11.94	106.69	17.80	86%	54%
4/23/2004	129.31	41.31	6.72	69.32	11.96	110.63	18.68	86%	57%
4/24/2004	125.41	36.38	5.92	71.38	11.73	107.76	17.65	86%	53%
4/25/2004	122.98	35.96	5.85	69.89	11.28	105.84	17.13	86%	52%
4/26/2004	110.46	24.57	4.00	70.41	11.48	94.98	15.48	86%	47%
4/27/2004	106.55	20.67	3.36	70.97	11.55	91.63	14.91	86%	45%
4/28/2004	118.03	32.09	5.22	68.20	12.52	100.29	17.74	85%	54%
4/29/2004	120.39	33.87	5.51	68.29	12.71	102.16	18.23	85%	55%
4/30/2004	122.08	28.84	4.69	75.84	12.71	104.68	17.40	86%	53%
5/1/2004	100.98	19.10	3.11	66.54	12.22	85.64	15.33	85%	46%
5/2/2004	97.03	18.36	2.99	64.67	11.01	83.03	14.00	86%	42%
5/3/2004	101.83	19.27	3.14	68.34	11.09	87.60	14.22	86%	43%
5/4/2004	105.22	19.91	3.24	70.59	11.48	90.50	14.72	86%	45%
5/5/2004	113.54	27.49	4.48	70.01	11.56	97.51	16.03	86%	49%
5/6/2004	119.77	31.85	5.18	71.24	11.50	103.09	16.68	86%	51%
5/7/2004	134.23	47.54	7.74	67.61	11.34	115.15	19.08	86%	58%
5/8/2004	128.75	40.23	6.55	70.60	11.37	110.83	17.92	86%	54%
5/9/2004	125.67	38.21	6.22	70.02	11.22	108.23	17.44	86%	53%
5/10/2004	131.11	41.39	6.74	71.56	11.42	112.95	18.16	86%	55%



5/11/2004	133.24	45.57	7.42	68.81	11.45	114.38	18.86	86%	57%
5/12/2004	128.03	39.83	6.48	69.85	11.86	109.68	18.35	86%	56%
5/13/2004	122.58	38.32	6.24	66.34	11.68	104.66	17.91	85%	54%
5/14/2004	128.19	40.96	6.67	70.67	9.89	111.63	16.56	87%	50%
5/15/2004	133.03	44.82	7.30	70.81	10.10	115.63	17.40	87%	53%
5/16/2004	134.20	46.20	7.52	70.51	9.97	116.71	17.49	87%	53%
5/17/2004	138.31	49.73	8.10	70.87	9.61	120.60	17.71	87%	54%
5/18/2004	129.07	41.32	6.73	71.59	9.43	112.91	16.16	87%	49%
5/19/2004	135.73	48.78	7.94	69.41	9.60	118.19	17.54	87%	53%
5/20/2004	139.53	50.16	8.17	71.46	9.75	121.62	17.91	87%	54%
5/21/2004	148.39	58.92	9.59	70.16	9.72	129.08	19.31	87%	59%
5/22/2004	147.96	57.40	9.34	71.55	9.66	128.95	19.01	87%	58%
5/23/2004	144.24	54.45	8.86	71.12	9.81	125.57	18.67	87%	57%
5/24/2004	150.01	58.86	9.58	71.70	9.87	130.56	19.46	87%	59%
5/25/2004	149.35	55.79	9.08	74.78	9.70	130.57	18.78	87%	57%
5/26/2004	152.69	63.12	10.27	69.58	9.72	132.70	20.00	87%	61%
5/27/2004	149.71	62.68	10.20	68.72	8.10	131.41	18.30	88%	55%
5/28/2004	145.90	57.38	9.34	69.92	9.25	127.31	18.59	87%	56%
5/29/2004	151.83	66.19	10.78	66.91	7.95	133.10	18.73	88%	57%
5/30/2004	133.21	48.46	7.89	68.94	7.92	117.40	15.81	88%	48%
5/31/2004	129.53	41.86	6.81	72.40	8.46	114.26	15.27	88%	46%
6/1/2004	133.59	47.95	7.81	69.21	8.63	117.15	16.43	88%	50%
6/2/2004	150.79	64.63	10.52	67.04	8.59	131.67	19.11	87%	58%
6/3/2004	151.13	64.79	10.55	67.37	8.43	132.16	18.98	87%	58%
6/4/2004	129.36	43.80	7.13	69.87	8.55	113.67	15.68	88%	48%
6/5/2004	139.63	53.42	8.70	69.06	8.46	122.48	17.15	88%	52%
6/6/2004	140.53	55.85	9.09	67.14	8.45	122.99	17.54	88%	53%
6/7/2004	139.35	52.40	8.53	69.74	8.68	122.14	17.21	88%	52%
6/8/2004	133.07	45.58	7.42	71.38	8.69	116.96	16.11	88%	49%
6/9/2004	123.30	33.51	5.46	75.50	8.84	109.01	14.29	88%	43%
6/10/2004	124.43	39.12	6.37	70.07	8.87	109.19	15.24	88%	46%
6/11/2004	139.70	49.69	8.09	73.21	8.71	122.90	16.80	88%	51%
6/12/2004	137.28	50.94	8.29	69.50	8.55	120.43	16.84	88%	51%
6/13/2004	116.37	36.03	5.87	65.88	8.59	101.91	14.45	88%	44%
6/14/2004	115.64	25.20	4.10	76.76	9.59	101.95	13.69	88%	41%
6/15/2004	110.43	21.07	3.43	74.98	10.95	96.05	14.38	87%	44%
6/16/2004	117.17	33.71	5.49	68.24	9.74	101.95	15.22	87%	46%
6/17/2004	113.48	31.10	5.06	66.92	10.40	98.02	15.46	86%	47%
6/18/2004	128.53	38.95	6.34	73.89	9.34	112.84	15.68	88%	48%
6/19/2004	124.08	34.48	5.61	75.18	8.81	109.66	14.42	88%	44%
6/20/2004	124.56	38.05	6.19	71.60	8.72	109.64	14.92	88%	45%
6/21/2004	120.59	27.06	4.40	78.69	10.44	105.75	14.84	88%	45%
6/22/2004	111.67	22.87	3.72	75.33	9.75	98.19	13.47	88%	41%
6/23/2004	110.41	20.89	3.40	76.54	9.57	97.43	12.98	88%	39%
6/24/2004	104.41	19.76	3.22	73.03	8.41	92.79	11.63	89%	35%
6/25/2004	102.81	19.45	3.17	71.50	8.70	90.95	11.86	88%	36%
6/26/2004	98.99	18.73	3.05	68.29	8.92	87.02	11.97	88%	36%



6/27/2004	100.32	18.98	3.09	70.00	8.25	88.98	11.34	89%	34%
6/28/2004	109.15	20.94	3.41	75.40	9.40	96.34	12.81	88%	39%
6/29/2004	108.34	22.29	3.63	73.09	9.33	95.38	12.96	88%	39%
6/30/2004	110.19	24.33	3.96	72.66	9.23	96.99	13.20	88%	40%
7/1/2004	105.96	20.62	3.36	72.17	9.82	92.79	13.17	88%	40%
7/2/2004	112.00	26.29	4.28	71.82	9.62	98.10	13.90	88%	42%
7/3/2004	102.01	19.30	3.14	71.25	8.32	90.55	11.46	89%	35%
7/4/2004	102.07	22.44	3.65	67.70	8.27	90.15	11.92	88%	36%
7/5/2004	109.19	30.21	4.92	66.17	7.89	96.38	12.81	88%	39%
7/6/2004	111.43	26.32	4.28	72.16	8.67	98.47	12.96	88%	39%
7/7/2004	122.81	38.09	6.20	69.68	8.84	107.77	15.04	88%	46%
7/8/2004	128.44	43.11	7.02	69.66	8.65	112.77	15.67	88%	47%
7/9/2004	134.11	44.29	7.21	73.97	8.64	118.26	15.85	88%	48%
7/10/2004	135.68	48.92	7.96	70.21	8.59	119.13	16.55	88%	50%
7/11/2004	117.22	33.56	5.46	69.47	8.72	103.03	14.19	88%	43%
7/12/2004	121.41	35.02	5.70	71.51	9.18	106.53	14.88	88%	45%
7/13/2004	120.40	38.58	6.28	66.94	8.61	105.52	14.89	88%	45%
7/14/2004	135.48	51.82	8.44	66.39	8.83	118.21	17.27	87%	52%
7/15/2004	131.89	50.38	8.20	64.52	8.79	114.89	16.99	87%	51%
7/16/2004	136.87	50.61	8.24	69.29	8.74	119.90	16.97	88%	51%
7/17/2004	125.95	38.18	6.22	72.96	8.59	111.14	14.80	88%	45%
7/18/2004	108.69	20.56	3.35	76.16	8.62	96.72	11.97	89%	36%
7/19/2004	121.45	35.64	5.80	70.76	9.25	106.39	15.05	88%	46%
7/20/2004	125.17	39.71	6.46	69.98	9.01	109.70	15.48	88%	47%
7/21/2004	134.43	48.74	7.93	68.86	8.89	117.60	16.82	87%	51%
7/22/2004	130.96	43.45	7.07	71.42	9.01	114.88	16.08	88%	49%
7/23/2004	132.48	43.53	7.09	72.94	8.92	116.47	16.00	88%	48%
7/24/2004	129.36	45.71	7.44	67.46	8.74	113.17	16.18	87%	49%
7/25/2004	131.52	49.24	8.02	65.41	8.85	114.65	16.87	87%	51%
7/26/2004	128.00	42.72	6.95	69.15	9.18	111.87	16.13	87%	49%
7/27/2004	110.04	20.82	3.39	76.36	9.48	97.17	12.86	88%	39%
7/28/2004	115.97	23.95	3.90	78.60	9.52	102.55	13.42	88%	41%
7/29/2004	105.29	19.92	3.24	73.44	8.68	93.36	11.93	89%	36%
7/30/2004	109.32	20.68	3.37	75.63	9.65	96.31	13.01	88%	39%
7/31/2004	109.68	23.19	3.77	73.41	9.31	96.59	13.08	88%	40%
8/1/2004	109.40	26.50	4.31	69.46	9.13	95.96	13.45	88%	41%
8/2/2004	115.17	29.55	4.81	71.16	9.65	100.71	14.46	87%	44%
8/3/2004	120.86	35.57	5.79	70.11	9.39	105.68	15.18	87%	46%
8/4/2004	129.09	43.16	7.03	69.75	9.15	112.91	16.18	87%	49%
8/5/2004	125.72	39.49	6.43	71.10	8.70	110.59	15.13	88%	46%
8/6/2004	121.80	40.12	6.53	66.15	8.99	106.28	15.53	87%	47%
8/7/2004	121.11	42.13	6.86	63.34	8.79	105.47	15.65	87%	47%
8/8/2004	125.35	47.34	7.71	61.47	8.83	108.81	16.54	87%	50%
8/9/2004	133.11	49.95	8.13	65.85	9.18	115.80	17.31	87%	52%
8/10/2004	126.18	43.93	7.15	65.92	9.18	109.85	16.33	87%	49%
8/11/2004	132.85	48.57	7.91	67.27	9.11	115.84	17.01	87%	52%
8/12/2004	112.46	21.28	3.46	78.01	9.71	99.29	13.17	88%	40%



8/13/2004	106.78	20.20	3.29	72.97	10.32	93.17	13.61	87%	41%
8/14/2004	98.77	18.69	3.04	68.32	8.72	87.01	11.76	88%	36%
8/15/2004	100.65	19.04	3.10	69.03	9.47	88.07	12.57	88%	38%
8/16/2004	111.86	25.95	4.22	71.43	10.25	97.38	14.48	87%	44%
8/17/2004	109.88	24.29	3.95	71.64	10.00	95.93	13.95	87%	42%
8/18/2004	114.64	34.83	5.67	64.54	9.60	99.38	15.27	87%	46%
8/19/2004	118.00	34.53	5.62	67.03	10.81	101.56	16.44	86%	50%
8/20/2004	128.54	38.80	6.32	73.54	9.89	112.34	16.20	87%	49%
8/21/2004	110.61	20.93	3.41	76.52	9.76	97.45	13.17	88%	40%
8/22/2004	110.37	23.41	3.81	73.28	9.87	96.69	13.68	88%	41%
8/23/2004	114.76	31.01	5.05	68.80	9.90	99.81	14.95	87%	45%
8/24/2004	114.57	30.30	4.93	69.52	9.82	99.82	14.75	87%	45%
8/25/2004	122.80	39.38	6.41	67.27	9.75	106.64	16.16	87%	49%
8/26/2004	122.76	40.66	6.62	65.62	9.86	106.28	16.48	87%	50%
8/27/2004	123.02	41.22	6.71	65.61	9.48	106.83	16.19	87%	49%
8/28/2004	126.27	42.74	6.96	67.50	9.07	110.24	16.03	87%	49%
8/29/2004	113.63	29.16	4.75	70.18	9.54	99.34	14.29	87%	43%
8/30/2004	110.48	22.11	3.60	75.00	9.76	97.11	13.36	88%	40%
8/31/2004	107.04	20.25	3.30	74.31	9.18	94.57	12.48	88%	38%
9/1/2004	109.63	24.62	4.01	71.65	9.36	96.27	13.37	88%	41%
9/2/2004	105.80	23.38	3.81	69.34	9.28	92.72	13.08	88%	40%
9/3/2004	113.19	29.90	4.87	69.18	9.24	99.08	14.11	88%	43%
9/4/2004	105.42	27.11	4.41	65.16	8.74	92.26	13.15	88%	40%
9/5/2004	105.54	26.59	4.33	65.53	9.09	92.12	13.42	87%	41%
9/6/2004	107.80	25.85	4.21	68.34	9.40	94.19	13.61	87%	41%
9/7/2004	101.76	19.25	3.13	71.07	8.30	90.33	11.43	89%	35%
9/8/2004	101.02	19.11	3.11	69.96	8.84	89.07	11.95	88%	36%
9/9/2004	101.49	19.20	3.13	70.95	8.21	90.15	11.34	89%	34%
9/10/2004	101.83	19.27	3.14	70.63	8.80	89.89	11.94	88%	36%
9/11/2004	101.12	19.13	3.11	71.03	7.85	90.16	10.96	89%	33%
9/12/2004	108.71	20.57	3.35	75.69	9.10	96.26	12.45	89%	38%
9/13/2004	110.78	20.96	3.41	75.43	10.97	96.39	14.38	87%	44%
9/14/2004	102.30	19.36	3.15	69.19	10.61	88.54	13.76	87%	42%
9/15/2004	106.84	22.45	3.65	69.80	10.94	92.25	14.59	86%	44%
9/16/2004	101.04	19.12	3.11	67.91	10.90	87.02	14.01	86%	42%
9/17/2004	96.53	18.26	2.97	66.97	8.32	85.24	11.29	88%	34%
9/18/2004	97.08	18.37	2.99	67.65	8.07	86.02	11.06	89%	34%
9/19/2004	103.91	19.66	3.20	71.88	9.17	91.54	12.37	88%	37%
9/20/2004	106.98	21.39	3.48	72.60	9.49	94.00	12.98	88%	39%
9/21/2004	108.17	21.90	3.57	73.31	9.39	95.21	12.96	88%	39%
9/22/2004	115.66	28.48	4.64	73.09	9.45	101.57	14.09	88%	43%
9/23/2004	115.40	28.88	4.70	72.42	9.39	101.30	14.10	88%	43%
9/24/2004	117.12	27.78	4.52	75.56	9.26	103.34	13.78	88%	42%
9/25/2004	114.56	29.61	4.82	71.00	9.12	100.61	13.94	88%	42%
9/26/2004	118.31	31.67	5.16	72.19	9.29	103.86	14.45	88%	44%
9/27/2004	107.04	20.25	3.30	74.61	8.88	94.86	12.18	89%	37%
9/28/2004	98.73	18.68	3.04	67.64	9.37	86.32	12.41	87%	38%



9/29/2004	103.49	19.58	3.19	71.06	9.66	90.64	12.84	88%	39%
9/30/2004	106.61	20.17	3.28	74.22	8.94	94.39	12.22	89%	37%
10/1/2004	104.87	19.84	3.23	73.37	8.44	93.21	11.67	89%	35%
10/2/2004	102.37	19.37	3.15	71.52	8.32	90.89	11.48	89%	35%
10/3/2004	106.62	20.17	3.28	73.24	9.92	93.42	13.20	88%	40%
10/4/2004	109.07	20.64	3.36	75.10	9.98	95.73	13.34	88%	40%
10/5/2004	111.43	22.23	3.62	75.44	10.14	97.67	13.76	88%	42%
10/6/2004	108.52	20.53	3.34	73.50	11.14	94.03	14.49	87%	44%
10/7/2004	110.42	21.46	3.49	74.57	10.90	96.03	14.39	87%	44%
10/8/2004	114.36	25.54	4.16	73.33	11.33	98.87	15.49	86%	47%
10/9/2004	111.91	26.27	4.28	71.53	9.84	97.79	14.11	87%	43%
10/10/2004	111.11	23.44	3.82	74.73	9.13	98.17	12.94	88%	39%
10/11/2004	120.43	32.08	5.22	74.09	9.04	106.17	14.26	88%	43%
10/12/2004	109.58	20.85	3.39	76.13	9.20	96.99	12.59	89%	38%
10/13/2004	104.88	19.84	3.23	73.81	7.99	93.66	11.22	89%	34%
10/14/2004	103.92	19.66	3.20	72.60	8.46	92.26	11.66	89%	35%
10/15/2004	105.12	19.89	3.24	72.97	9.03	92.85	12.27	88%	37%
10/16/2004	104.10	19.70	3.21	72.48	8.71	92.18	11.92	89%	36%
10/17/2004	104.02	19.70	3.21	72.49	8.62	92.19	11.83	89%	36%
10/18/2004	114.29	26.76	4.36	74.11	9.06	100.87	13.42	88%	41%
10/19/2004	106.14	20.08	3.27	73.55	9.24	93.63	12.51	88%	38%
10/20/2004	107.73	22.25	3.62	72.58	9.27	94.83	12.90	88%	39%
10/21/2004	105.64	21.07	3.43	71.84	9.30	92.91	12.73	88%	39%
10/22/2004	105.47	19.96	3.25	73.07	9.20	93.03	12.45	88%	38%
10/23/2004	103.23	19.53	3.18	71.75	8.76	91.28	11.94	88%	36%
10/24/2004	101.65	19.23	3.13	70.10	9.19	89.33	12.32	88%	37%
10/25/2004	106.66	20.18	3.29	73.78	9.42	93.96	12.70	88%	38%
10/26/2004	100.71	19.05	3.10	69.58	8.97	88.64	12.07	88%	37%
10/27/2004	100.52	19.02	3.10	69.63	8.78	88.64	11.88	88%	36%
10/28/2004	97.73	18.49	3.01	67.24	8.99	85.73	12.00	88%	36%
10/29/2004	100.50	19.01	3.10	69.51	8.88	88.53	11.97	88%	36%
10/30/2004	100.09	18.94	3.08	69.41	8.65	88.35	11.74	88%	36%
10/31/2004	106.04	20.06	3.27	73.17	9.55	93.23	12.81	88%	39%
11/1/2004	104.82	19.83	3.23	72.46	9.30	92.29	12.53	88%	38%
11/2/2004	97.96	18.53	3.02	67.69	8.72	86.22	11.74	88%	36%
11/3/2004	102.56	19.40	3.16	70.87	9.12	90.28	12.28	88%	37%
11/4/2004	92.50	17.50	2.85	64.10	8.05	81.60	10.90	88%	33%
11/5/2004	97.24	18.40	3.00	67.55	8.30	85.95	11.29	88%	34%
11/6/2004	90.31	17.09	2.78	62.40	8.04	79.48	10.83	88%	33%
11/7/2004	99.34	18.80	3.06	68.65	8.84	87.45	11.90	88%	36%
11/8/2004	100.66	19.04	3.10	69.67	8.84	88.72	11.94	88%	36%
11/9/2004	97.01	18.35	2.99	67.11	8.56	85.47	11.55	88%	35%
11/10/2004	94.84	17.94	2.92	65.63	8.35	83.57	11.27	88%	34%
11/11/2004	99.39	18.80	3.06	68.99	8.53	87.79	11.59	88%	35%
11/12/2004	89.35	16.90	2.75	62.35	7.35	79.25	10.10	89%	31%
11/13/2004	87.56	16.57	2.70	60.75	7.55	77.31	10.25	88%	31%
11/14/2004	90.45	17.11	2.79	62.74	7.81	79.85	10.60	88%	32%



11/15/2004	91.39	17.29	2.81	63.40	7.88	80.70	10.69	88%	32%
11/16/2004	93.18	17.63	2.87	64.40	8.28	82.03	11.15	88%	34%
11/17/2004	93.07	17.61	2.87	64.67	7.92	82.28	10.79	88%	33%
11/18/2004	93.63	17.71	2.88	64.93	8.10	82.64	10.99	88%	33%
11/19/2004	92.83	17.56	2.86	64.48	7.93	82.05	10.79	88%	33%
11/20/2004	88.29	16.70	2.72	61.13	7.74	77.83	10.45	88%	32%
11/21/2004	91.30	17.27	2.81	63.15	8.07	80.42	10.88	88%	33%
11/22/2004	92.01	17.41	2.83	64.01	7.76	81.41	10.60	88%	32%
11/23/2004	87.74	16.60	2.70	61.19	7.24	77.79	9.94	89%	30%
11/24/2004	90.97	17.21	2.80	63.37	7.59	80.58	10.39	89%	31%
11/25/2004	81.62	15.44	2.51	56.75	6.91	72.19	9.43	88%	29%
11/26/2004	78.93	14.93	2.43	54.61	6.96	69.54	9.39	88%	28%
11/27/2004	84.40	15.97	2.60	58.58	7.25	74.55	9.85	88%	30%
11/28/2004	87.83	16.62	2.71	61.49	7.01	78.11	9.71	89%	29%
11/29/2004	87.49	16.55	2.69	60.90	7.34	77.45	10.03	89%	30%
11/30/2004	88.95	16.83	2.74	61.93	7.45	78.76	10.19	89%	31%
12/1/2004	88.89	16.82	2.74	61.58	7.75	78.40	10.49	88%	32%
12/2/2004	89.19	16.88	2.75	61.68	7.89	78.56	10.63	88%	32%
12/3/2004	87.42	16.54	2.69	60.43	7.76	76.97	10.45	88%	32%
12/4/2004	87.81	16.61	2.70	60.67	7.82	77.29	10.52	88%	32%
12/5/2004	87.64	16.58	2.70	60.47	7.89	77.05	10.59	88%	32%
12/6/2004	88.76	16.79	2.73	61.87	7.36	78.66	10.10	89%	31%
12/7/2004	94.59	17.90	2.91	65.53	8.25	83.42	11.17	88%	34%
12/8/2004	98.76	18.69	3.04	67.93	9.10	86.61	12.14	88%	37%
12/9/2004	98.88	18.71	3.05	67.45	9.68	86.16	12.72	87%	39%
12/10/2004	91.68	17.35	2.82	64.71	6.80	82.06	9.62	90%	29%
12/11/2004	90.21	17.07	2.78	62.32	8.05	79.38	10.82	88%	33%
12/12/2004	93.82	17.75	2.89	64.99	8.18	82.74	11.07	88%	34%
12/13/2004	95.84	18.13	2.95	66.55	8.21	84.68	11.16	88%	34%
12/14/2004	96.61	18.28	2.98	67.32	8.04	85.59	11.02	89%	33%
12/15/2004	99.50	18.83	3.06	69.41	8.20	88.23	11.26	89%	34%
12/16/2004	92.89	17.57	2.86	64.55	7.90	82.12	10.76	88%	33%
12/17/2004	89.62	16.96	2.76	62.45	7.45	79.41	10.21	89%	31%
12/18/2004	83.89	15.87	2.58	58.33	7.11	74.20	9.69	88%	29%
12/19/2004	87.74	16.60	2.70	60.74	7.70	77.34	10.40	88%	32%
12/20/2004	88.47	16.74	2.72	61.47	7.54	78.21	10.27	88%	31%
12/21/2004	93.31	17.65	2.87	64.94	7.84	82.59	10.72	89%	32%
12/22/2004	88.14	16.68	2.71	61.41	7.34	78.08	10.06	89%	30%
12/23/2004	82.51	15.61	2.54	57.92	6.44	73.53	8.98	89%	27%
12/24/2004	87.01	16.46	2.68	60.32	7.55	76.78	10.23	88%	31%
12/25/2004	74.99	14.19	2.31	51.85	6.64	66.04	8.95	88%	27%
12/26/2004	84.36	15.96	2.60	58.48	7.32	74.44	9.92	88%	30%
12/27/2004	87.91	16.63	2.71	61.41	7.17	78.04	9.87	89%	30%
12/28/2004	89.68	16.97	2.76	62.08	7.87	79.05	10.63	88%	32%
12/29/2004	91.00	17.22	2.80	63.23	7.75	80.44	10.56	88%	32%
12/30/2004	90.77	17.17	2.80	63.59	7.21	80.76	10.00	89%	30%
12/31/2004	88.80	16.80	2.74	62.21	7.05	79.01	9.79	89%	30%



Minimum	74.99	14.19	2.31	27.10	6.44	66.04	8.95	82%	27%
Maximum	152.69	66.19	10.78	78.69	12.71	133.10	20.00	90%	61%
Average	104.97	25.26	4.11	66.53	9.07	91.79	13.19	87%	40%