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January 18, 2005

VIA HAND DELIVERY

Chairman Pat Miller
c/o Sharla Dillon, Docket Manager
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

Re: Petition of Tennessee American Water Company to Change and Increase Certain Rates and Charges So As to Permit It to Earn a Fair and Adequate Rate of Return on Its Property Used and Useful In Furnishing Water Service to Its Customers, Docket No. 04-00288.

Dear Chairman Miller:

Enclosed please find the original and five (5) copies of the Rebuttal Testimony and exhibits of the following witnesses:

1. Mr. Paul T. Diskin;
2. Mr. Michael A. Miller;
3. Mr. John Watson;
4. Dr. James H. Vander Weide; and
5. Mr. Paul Herbert.

Also we have enclosed an electronic version in PDF format, that includes this letter and the testimony and exhibits.

Should you have any questions with respect to this filing, please do not hesitate to contact me at the telephone number listed above.

With kindest regards, I remain

Very truly yours,

R. Dale Grimes

RDG/tn
Enclosures

JDF/tn
Enclosure

cc: Certificate of Service List
Jean Stone, Esq.
Mr. Paul Diskin
Mr. Michael Miller
T. G. Pappas, Esq.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served via the method(s) indicated, on this the 18th day of January, 2005, upon the following:

[ ] Hand [✓] Mail [ ] Facsimile [ ] Overnight [✓] Electronic	Michael A. McMahan, Esq. Phillip A. Noblett, Esq. Lawrence W Kelly, Esq. Nelson, McMahan & Noblett 801 Broad Street, Suite 400 Chattanooga, TN 37402
[✓] Hand [ ] Mail [ ] Facsimile [ ] Overnight [ ] Electronic	Timothy C. Phillips, Esq. Vance L. Broemel, Esq. Office of the Attorney General Consumer Advocate and Protection Division P.O. Box 20207 Nashville, TN 37202
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TENNESSEE REGULATORY AUTHORITY

STATE OF NORTH CAROLINA)
) ss.
COUNTY OF DURHAM)

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared James H. Vander Weide, being by me first duly sworn, deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his testimony would be set forth in the annexed transcript.

James H. Vander Weide

Sworn to and subscribed before me
this Jan 17 **day of 2005.**

Notary Public

My Commission Expires January 23, 2007

STATE OF TENNESSEE
BEFORE THE TENNESSEE REGULATORY AUTHORITY

IN THE MATTER OF:	)	
ADJUSTMENT OF THE RATES OF TENNESSEE-AMERICAN WATER COMPANY	)	CASE NO. 04-00288

REBUTTAL TESTIMONY
OF
DR. JAMES H. VANDER WEIDE
ON BEHALF OF

TENNESSEE-AMERICAN WATER COMPANY

TABLE OF CONTENTS

I. WITNESS IDENTIFICATION

Q 1 What is your name and business address?

A 1 My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. I am also President of Financial Strategy Associates, a firm that provides strategic and financial consulting services to business clients. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q 2 Are you the same James H. Vander Weide who submitted prepared direct testimony in this proceeding?

A 2 Yes, I am.

II. PURPOSE OF TESTIMONY

Q 3 What is the purpose of your testimony?

A 3 I have been asked by Tennessee-American Water Company ("TAWC or the Company") to review the direct testimonies of Dr. Steve N. Brown and Mr. Michael Gorman and to respond to their cost of capital recommendations in this proceeding. Dr. Brown's testimony is on behalf of the Consumer Advocate and Protection Division, Office of the Attorney General; and Mr. Gorman's testimony is on behalf of the Chattanooga Manufacturers Association.

Q 4 What topics in Dr. Brown's testimony will you address in your rebuttal testimony?

A 4 First, I will address Dr. Brown's inappropriate and incorrect accusation that my cost of capital opinion was "directed" by RWE management to achieve a "preconceived goal." Then I will address Dr. Brown's testimony regarding: (1) proxy companies; (2) risk; (3) discounted cash flow (DCF) approach; (4) risk premium approach; (5) capital structure; and (6) tests of reasonableness.

Q 5 What areas of Mr. Gorman's testimony will you address in your rebuttal testimony?

A 5 I will address Mr. Gorman's testimony regarding his discounted cash flow (DCF) approach and Capital Asset Pricing Model ("CAPM").

Q 6 Is there anything in either Dr. Brown's or Mr. Gorman's testimony that would cause you to change your opinion regarding TAWC's cost of equity and capital structure?

A 6 No, there is not.

III. REBUTTAL OF DR. BROWN'S DIRECT TESTIMONY

A. Dr. Brown's Accusation that My Analysis Was "Directed" by RWE Management

Q 7 Does Dr. Brown make any accusations in his testimony regarding how your cost of equity recommendation was determined in this proceeding?

A 7 Yes. On page 13 of his testimony, Dr. Brown charges that my cost of capital analysis was "directed" by RWE management. Specifically, he states:

My opinion is that Dr. Vander Weide's cost of capital analysis, as well as the capital structure and overall return requested in Mr. Miller's testimony, are efforts to achieve a predetermined and preconceived goal, rather than independent appraisals of the cost of capital.

Q 8 Does Dr. Brown attempt to provide any evidence to support his accusation that your cost of capital analysis was a "directed result" (Brown testimony at page 11)?

A 8 Yes. On pages 11 – 21 of his testimony, Dr. Brown claims that the Company's recommended 8% overall return in this proceeding is equal to the target 8% return on capital employed that RWE uses to evaluate the performance of its water company division. In his opinion, this equality could not occur by coincidence.

Q 9 Where does Dr. Brown obtain his information about the return on capital employed that RWE uses to evaluate the performance of its water operations?

A 9 Dr. Brown obtains his information from RWE's 2003 Annual Report.

Q 10 Had you read RWE's 2003 Annual Report prior to the preparation of your cost of equity studies?

A 10 No. In fact, I did not have a copy of the annual report until November 2004.

Q 11 Were you aware of the return on capital employed that RWE uses to evaluate its water operations at the time you prepared your cost of equity studies?

A 11 No.

Q 12 Have you read RWE's 2003 Annual Report since the time you prepared your direct testimony in this proceeding?

A 12 Yes. I read RWE's 2003 Annual Report after I saw Dr. Brown's references to the 2003 Annual Report in his testimony.

Q 13 On the basis of your reading of RWE's 2003 Annual Report, have you been able to determine whether the 8% return on capital employed that RWE uses evaluate the performance of its water segment is comparable to the 8% overall rate of return TAWC is requesting in this proceeding?

A 13 Yes. I have determined that the 8% return on capital employed that RWE uses to evaluate the performance of its water segment is *not* directly comparable to the 8% overall rate of return TAWC is requesting in this proceeding. First, RWE's 8% return on capital employed appears to based on interest rates and investors' return requirements in the German capital markets, while TAWC's request in this proceeding is based on interest rates and equity returns in U.S. capital markets. Second, RWE's return on capital employed is meant to be applied to the total capital (debt plus equity) invested in the water segment rather than to a specific company's rate base, which is not necessarily equal to total capital. Third, RWE's return on capital employed reflects current interest rates rather than the embedded cost of debt that is used to calculate the allowed rate of return.

Q 14 Did either TAWC management or RWE management give you any guidance on a desired cost of equity recommendation for this proceeding?

A 14 No. TAWC management made it clear at the outset that my cost of equity studies were to be conducted on an independent basis, and there was never any suggestion on their part of a desired cost of equity result. Furthermore, I was hired by TAWC management, not RWE management; and I have never had any conversations with any person from RWE management.

Q 15 Would you have taken the assignment from TAWC if they had directed a specific cost of equity result?

A 15 No. My integrity and reputation as an independent expert in finance and economics is more valuable to me than any compensation I could receive from TAWC in this proceeding. I would never work for a client that attempted to direct my cost of equity results.

B. Proxy Companies

Q 16 What is Dr. Brown's recommended rate of return on equity for TAWC?

A 16 Dr. Brown recommends a rate of return on equity for TAWC equal to 7.90%.

Q 17 How does Dr. Brown arrive at his 7.90% recommended rate of return on equity for TAWC?

A 17 Dr. Brown arrives at his recommended 7.90% rate of return on equity for TAWC by applying his versions of the DCF and risk premium cost of equity methodologies to a proxy group of 12 water companies.

Q 18 What companies are included in Dr. Brown's water company proxy group?

A 18 Dr. Brown's proxy group includes American States Water, Aqua America Inc., Artesian Resources Corp., BIW Ltd., California Water Service Group, Connecticut Water Services Inc., Consolidated Water Co. Ltd., Middlesex Water Company, Pennichuck Corp., SJW Corp., Southwest Water Company, and York Water Company.

Q 19 Are the companies in Dr. Brown's proxy group widely followed in the investment community?

A 19 No. The investment community generally focuses on companies that are reasonably large in terms of revenues and market capitalization. Most of the companies in Dr. Brown's proxy group of water companies are so small that they are not widely followed in the investment community.

Q 20 Is there a way to characterize the size of publicly-traded companies such as Dr. Brown's water companies?

A 20 Yes. Ibbotson Associates, a well-known respected provider of financial information related to capital market returns, measures company size in terms of a company's market capitalization (market price times number of shares outstanding), and characterizes firms as being either large

cap, mid-cap, low-cap, or micro-cap. The large cap group consists of all companies with market capitalization greater than $4,794 million; the mid-cap group consists of companies with market capitalization ranging from approximately $1,167 million to $4,794 million; low-cap consists of companies with market capitalization ranging from approximately $330 million to $1,167 million; and micro-cap consists of all companies with market capitalization less than $330 million (see Ibbotson Associates' *2004 Yearbook, Valuation Edition*, "Key Variables in Estimating the Cost of Capital"). As shown in Table 1 below, most of Dr. Brown's 12 water companies fall in the micro-cap, or smallest, category.

Table 1
REVENUES AND MARKET CAPITALIZATION OF DR. BROWN'S PROXY WATER COMPANIES

Company	Revenues	Market Capitalization	Classification
BIW Limited	9,402,960	32,156,315	Micro-Cap
Pennichuck Water	21,337,000	62,135,438	Micro-Cap
Artesian Resources	39,449,000	92,389,743	Micro-Cap
York Water Company	21,727,311	127,096,987	Micro-Cap
Consolidated Wtr. Co. Ltd.	19,054,205	157,977,380	Micro-Cap
Middlesex Water Company	69,048,634	205,556,397	Micro-Cap
Connecticut Water Service	48,494,000	210,906,854	Micro-Cap
Southwest Water Co.	184,423,000	245,459,155	Micro-Cap
SJW Corp.	163,608,000	314,350,525	Micro-Cap
American States Water	225,407,000	413,565,364	Low-Cap
California Water Service	315,815,000	633,103,067	Low-Cap
Aqua America Inc.	427,809,000	2,220,384,335	Mid-Cap

Q 21 Do you have any other evidence that the companies in Dr. Brown's proxy group are not widely followed in the investment community?

A 21 Yes. Since many investors use data from both The Value Line Investment Survey and I/B/E/S Thompson Financial to obtain information on a company's future growth prospects, these companies have a strong

economic incentive to provide financial information on all companies followed by a reasonable number of investors. However, as shown in Table 2 below, Value Line presents historical growth information for just half the companies in Dr. Brown's proxy group and growth forecasts for only three of the 12 companies in Dr. Brown's proxy group, while I/B/E/S Thomson Financial has long-term growth forecasts for only 7 of the 12 companies in Dr. Brown's proxy group. Since Value Line prepares growth forecasts for approximately 1,600 publicly-traded companies, the fact that Value Line only presents historical growth data for half of Dr. Brown's companies and does not prepare growth forecasts for nine of Dr. Brown's proxy companies is strong evidence that his proxy companies are not widely followed in the investment community.

Table 2
AVAILABILITY OF THE GROWTH FORECASTS
REQUIRED TO EMPLOY DCF MODEL FOR DR. BROWN'S PROXY COMPANIES

Company	Value Line	I/B/E/S
American States Water	Yes	Yes
Aqua America Inc.	Yes	Yes
Artesian Resources	No	Yes
BIW Limited	No	No
California Water Service	Yes	Yes
Connecticut Water Service	No	No
Consolidated Water Co. Ltd.	No	Yes
Middlesex Water Company	No	No
Pennichuck Water	No	No
SJW Corp.	No	No
Southwest Water Company	No	Yes
York Water Company	No	Yes

Q 22 Dr. Brown claims on page 32 of his testimony that the information required to implement the DCF model is available from his

companies' 10K reports. What information is required to implement the DCF model?

A 22 The DCF model requires information on: (1) a company's current dividend yield; and (2) investors' forecasts of future growth rates in dividends, earnings, and stock prices.

Q 23 Do the companies' 10K reports contain any information regarding investors' growth forecasts for Dr. Brown's proxy companies?

A 23 No. The companies' 10K reports do not report growth forecasts. The 10K merely reports the historical record of a company's financial performance, including its earnings and dividends.

Q 24 Dr. Brown's Schedule 20 shows dividends and dividend growth rates for his proxy water companies. Are the growth rates shown on Dr. Brown's Schedule 20 contained in the companies' 10K forms?

A 24 No. Dr. Brown calculated these growth rates himself. They are not contained in the companies' 10K reports.

Q 25 Is the typical investor likely to use data found in the SEC database to forecast the growth component of the DCF model?

A 25 No. As noted above, the SEC database contains only historical information on each company's financial performance. The typical investor would not use data directly from the SEC database to forecast the growth component of the DCF model because: (1) the SEC database does not contain growth forecasts; and (2) the typical investor

does not know how to calculate historical growth rates from the historical data contained in the SEC database.

Q 26 You mention that the typical investor does not know how to calculate historical growth rates from the historical data contained in the SEC database. Has Dr. Brown been able to calculate correct historical growth rates from the historical data in the SEC database?

A 26 No. Many of Dr. Brown's calculated historical dividend growth rates shown in Schedule 20 are incorrect. For example, Dr. Brown reports the last five year's annual dividends for Middlesex Water Company as 0.59, 0.61, 0.62, 0.63, and 0.65. Dr. Brown displays realized growth rates of 2.28%, 1.9%, 2.07%, and 2.37%. However, using the data shown on Dr. Brown's schedule, the correct realized growth rates for these years are 2.45%, 2.14%, 2.39%, and 3.17%. Thus, in addition to providing no evidence that investors use historical dividend growth to estimate future dividend growth, Dr. Brown has misstated the historical dividend growth for many of his proxy companies.

Q 27 Does Dr. Brown use his incorrect historical dividend growth rates in his cost of equity calculations?

A 27 Yes, he does. However, since I am unable to match either Dr. Brown's historical dividend growth rates or his dividend yields to the data reported in Schedule 20, I am unable to determine the effect that his incorrect historical dividend growth rates had on his cost of equity results.

Q 28 Does Dr. Brown estimate the cost of equity for any risk proxy companies in comparable industries?

A 28 No, he does not.

Q 29 Do you agree with Dr. Brown's sole reliance on water companies to estimate TAWC's cost of equity?

A 29 No. Dr. Brown relies on the DCF model to estimate the cost of equity in this proceeding. The DCF model requires information on *investors'* expected growth rates for each of the proxy companies. Because Dr. Brown's water companies are generally small, thinly traded, and not widely followed in the investment community, the requisite information on *investors' expected growth rates* for these companies is simply not available. Although Dr. Brown claims that historical information for his proxy companies is available, he provides no evidence that investors use historical information as he has to estimate the growth component of the DCF model. Thus, I recommend that the Commission consider the results of applying cost of equity models such as the DCF and risk premium to an additional set of proxy companies that are: (1) similar in risk to the water companies; and (2) more widely followed in the investment community.

Q 30 Have other states recognized the problems of relying entirely on a proxy group consisting only of water companies that are not widely followed in the investment community?

A 30 Yes. Recognizing the problems with using a sample of small water companies that are thinly traded and not widely followed in the investment community, the Florida Public Service Commission relies entirely on Value Line natural gas companies to estimate the cost of equity for Florida water utilities. Based on cost of equity studies for a proxy group of Value Line natural gas companies, in July 2004, the Florida Commission established a cost of equity of 11.40% for water utilities with 40% equity in their capital structure.[1]

Q 31 On page 34 of his testimony, Dr. Brown asserts that your position on comparable companies in this case is inconsistent with your position on comparable companies in recent testimony before the Washington Utilities and Transportation Commission ("Washington Commission"). Is your testimony before the Washington Commission inconsistent with your testimony in this proceeding?

A 31 No. In this proceeding, I have estimated the cost of equity for water companies that have sufficient data to estimate investors' growth expectations in the DCF model. I have also estimated the cost of equity for natural gas companies that are comparable in risk to the water companies because the set of water companies with sufficient data to estimate investor growth expectations is small. That is exactly the

[1] http://www.psc.state.fl.us/psc/dockets/index.cfm?event=documentFilings&docket=040006&requestTimeout=240

approach I followed in my testimony before the Washington Commission.

Q 32 Has Dr. Brown correctly characterized your testimony before the Washington Commission?

A 32 No. Dr. Brown mistakenly claims that in my testimony before the Washington Commission, I only estimated the cost of equity for companies in the same line of business as the proxy company. However, in my direct and rebuttal testimonies in Washington, I recommended proxy groups of companies in the same line of business only when those companies had sufficient data to properly apply cost of equity models. With regard to the specific line of business under consideration, the directory publishing business cited by Dr. Brown in his Schedule 7, there were companies in the publishing industry with sufficient available data for the opposition to estimate the cost of equity. However, the opposition witness had recommended a proxy group of two Internet service providers, Earthlink and United Online, as suitable proxy companies for the Regional Bell Holding Companies' directory publishing businesses. My testimony before the Washington Commission criticized the opposition approach because: (1) the Internet service business is not comparable in risk to the RBHCs' directory publishing businesses; and (2) there existed many comparable risk publishing companies with sufficient data to properly apply the DCF model. Thus, my position in

this proceeding is exactly the same as my position in the Washington proceeding.

C. Risk

Q 33 What is Dr. Brown's view of the risk of investing in water companies such as TAWC?

A 33 Dr. Brown argues that water companies are very low risk investments with correspondingly low rate of return requirements.

Q 34 Does Dr. Brown attempt to support his risk argument with any empirical evidence?

A 34 Yes. Dr. Brown attempts to provide three types of empirical evidence that he asserts support his view that water companies are very low risk investments. First, he provides evidence that the market-to-book ratios of his proxy group of 12 water companies are higher than the market-to-book ratios of my comparable local natural gas distribution companies, indicating, in his opinion, that the water companies have lower risk than the LDCs. Second, he presents evidence that the stock holders in water companies hold their investments for a longer period of time, on average, than the stock holders in LDCs. Third, he argues that "the water companies have a beta of just 0.09, where beta is a well-known measure of risk." [Brown at page 7.]

Q 35 Do high market-to-book ratios indicate that companies have low risk, as Dr. Brown suggests on page 7 of his testimony?

A 35 No. For example, the S&P 500 has an average market-to-book ratio of 4.42, nearly twice as high as the 2.22 average market-to-book ratio Dr. Brown reports for the water companies (see Dr. Brown's Schedule 10), even though the S&P 500 companies are universally considered to have greater risk than the water companies.

Q 36 On page 35 of his testimony, Dr. Brown claims that you testified before the Washington Commission that "a market-to-book ratio is an alternative measure of risk and a better measure of risk than a beta." Has Dr. Brown correctly characterized your testimony before the Washington Commission?

A 36 No. In my testimony before the Washington Commission, I referred to journal articles that tested whether beta alone provided an adequate explanation of security returns. These articles indicate that additional variables, such as a company's size, liquidity, dividend yield, and market-to-book ratio, were required to provide a better explanation of security returns than beta alone. These articles provide no evidence that the market-to-book ratio *by itself* is a measure of risk, and I certainly did not testify that it was.

Q 37 Dr. Brown also claims that the water companies are less risky than the LDCs because water company investors tend to hold on to their investments for a greater length of time than LDC investors. Does this evidence indicate that water companies are less risky than LDCs?

A 37 No. To the contrary, Dr. Brown's evidence indicates that, measured solely on the basis of length of holding period, water companies are more risky than LDCs.

Q 38 Why does Dr. Brown's evidence on the greater length of the average investment in water companies compared to the holding period for an investment in LDCs, considered by itself, indicate that water companies are more risky than LDCs?

A 38 When investors hold a stock for a longer period of time, the level of trading in the stock is significantly reduced. Less trading produces less liquidity for investors who want to sell the stock. Investments that are less liquid are considered by investors to be more risky.

Q 39 You noted above that Dr. Brown's water companies are considerably smaller than the LDCs in terms of market capitalization. What does the finance literature have to say about the effect of size on a company's risk?

A 39 The finance literature supports the conclusion that smaller size generally leads to increased risk. For example, Ibbotson Associates estimates that companies such Dr. Brown's water companies in the micro-cap category have a required rate of return that is 4.01% (401 basis points) greater than the required rate of return for large cap companies.

Q 40 In comparing the relative risk of his water companies to the LDCs, did Dr. Brown even mention the smaller size of the water companies compared to the LDCs?

A 40 No. Dr. Brown completely ignored the evidence that: (1) his water companies are significantly smaller than the LDCs (approximately 1/10th as large in terms of market capitalization); and (2) the finance literature suggests that smaller companies are generally more risky than larger companies.

Q 41 What is a company's "beta" supposed to measure?

A 41 A company's "beta" is supposed to measure the company's relative risk compared to a portfolio of all securities. Thus, a beta of 1.0 indicates that a company has the same risk as the portfolio of all securities, while a beta of zero indicates that a company has essentially the same risk as an investment in a risk-free security such as a U.S. Treasury bond.

Q 42 Do you agree with Dr. Brown's assertion on page 7 of his testimony that the average water company has a beta of just 0.09?

A 42 No. A beta of just 0.09 would indicate that an investment in the average water company's equity has essentially the same risk as an investment in a risk-free U.S. Treasury bond. This statement certainly could not be true because water company bonds have significantly higher interest rates and risk than U.S. Treasury bonds, and an investment in a water company's equity is more risky than an investment in a water company's bonds.

Q 43 Do you have any evidence that Dr. Brown has misestimated the water companies' betas?

A 43 Yes. The Value Line betas for the water companies in The Value Line Investment Survey's water utility industry group, American States Water, Aqua America, and California Water Services, are 0.70, 0.75, and 0.70, respectively. These betas are approximately equal to the betas for the LDCs.

Q 44 Did you provide any evidence in your direct testimony that, contrary to Dr. Brown's conclusion, LDCs are comparable in risk to water companies?

A 44 Yes. I provided evidence that Value Line's average "safety rank" for the water companies is approximately the same as the average Value Line "safety rank" for my proxy group of LDCs.

Q 45 Did you assert, as Dr. Brown claims on page 31 of his testimony, that an investment in water companies is more risky than an investment in LDCs?

A 45 No. As noted above, I provided evidence that water companies are similar in risk to the LDCs. If the water companies and LDCs were not similar in risk, I would not have added the LDCs as a second risk proxy group for estimating the cost of equity for the water companies.

Q 46 On page 23 of his testimony, Dr. Brown claims that you state on page 4 of your direct testimony, at lines 20 -23:

> **My recommended cost of equity is conservative because TAWC has . . greater risk than my proxy companies.**

Has Dr. Brown accurately quoted your testimony on page 4?

A 46 No. On page 4 of my testimony, I state:

> My recommended cost of equity range is conservative because TAWC has significantly higher financial leverage, and, hence, greater financial risk, than my proxy companies.

Q 47 What is the difference between a company's "*financial risk*" and a company's total risk?

A 47 Financial analysts frequently consider a company's total risk to be the sum of its operating or business risk and its financial risk. Operating risk includes the risk associated with fluctuating revenues and a high level of fixed costs in the firm's operating cost structure. Financial risk includes the additional risk associated with the use of fixed-cost debt to finance operations. Thus, financial risk is only one part of a company's total risk. In contrast, Dr. Brown's misquote of my testimony implies that financial risk is the same thing as total risk.

Q 48 Did you provide evidence in your direct testimony that TAWC does have higher financial leverage and hence greater financial risk than your proxy companies?

A 48 Yes. I provided such evidence on pp. 40 – 41 and Schedule F of my direct testimony.

Q 49 Did you describe the Value Line safety rank in response to a data request from the Attorney General?

A 49 Yes. I provided a complete description of the Value Line Safety Rank in response to data request No. 40. Since Dr. Brown provided only a

misleading quote from this response, I have attached my complete response to data request No. 40 as Rebuttal Schedule 1.

Q 50 Is the Value Line Safety Rank a widely regarded measure of risk?

A 50 Yes. The Value Line safety rank is a highly regarded measure of the risk of investing in common stocks. Not only is Value Line itself widely respected in the financial community for providing accurate and reliable information, but also the Value Line safety rank has been shown to predict the performance of stocks in down markets. In particular, companies with safety ranks of 1 or 2 perform considerably better in down markets than stocks with safety ranks of 3, 4, or 5. The data supporting this conclusion are summarized in Rebuttal Schedule 2.

Q 51 Does Dr. Brown agree that the Value Line safety rank is a reasonable measure of stock investment risk?

A 51 No. Dr. Brown claims on page 10 and pages 31 – 32 of his testimony that evidence about the Value Line safety rank should be dismissed because the Value Line safety rank is not clearly defined; and, in his opinion, my response to the Attorney General's data request No. 40 was "elusive."

Q 52 Is the Value Line safety rank clearly defined?

A 52 Yes. As I noted in my response to the Attorney General's data request No. 40, Value Line defines safety rank as:

> Safety Rank. A measurement of potential risk associated with individual common stocks. Safety Rank is computed by averaging two other Value Line indexes--the Price Stability Index and the Financial Strength Rating. Safety Ranks

> range from 1 (Highest) to 5 (Lowest). Conservative investors should try to limit purchases to equities ranked 1 (Highest) or 2 (Above Average) for Safety.

As Value Line also states in its Guide to Using the Investment Survey,

> Safety Rank measures the total risk of a stock. It is derived from the stock's Index of Price Stability relative to the 1,700 other stocks and from the Financial Strength Rating of the company. Safety ranks are also given on a scale from 1 (safest) to 5 (riskiest) as follows:
>
> Rank 1 (Highest): This stock is probably one of the safest, most stable, and least risky stock market investments.
>
> Rank 2 (Above Average): This stock is safer and less risky than most.
>
> Rank 3 (Average): This stock is of average risk and safety.
>
> Rank 4 (Below Average): This stock is riskier and less safe than most.
>
> Rank 5 (Lowest): This stock is probably one of the riskiest and least safe.

Contrary to Dr. Brown's assertion that the Value Line definition of safety rank is "vague," the Value Line statement about safety rank is quite clear.

Q 53 Does the Value Line safety rank involve some judgment on the part of Value Line?

A 53 Yes. As Value Line indicates, its safety rank is an average of its price stability index and financial strength rating. While price stability can be measured with precision, assessing a company's financial strength necessarily involves some judgment. However, Value Line has considerable skill and experience in assessing a company's financial strength. Indeed, Value Line's skill at assessing companies' financial

strength is borne out by the evidence that safety rank correctly predicts which stocks provide the greatest safety in down markets. To say that investors should dismiss Value Line's safety rank because it involves some judgment is clearly nonsense. Investors, for example, give considerable weight to the bond ratings supplied by Standard & Poor's and Moody's, even though these ratings also involve judgment. Furthermore, investors certainly would not pay for Value Line data if they thought the information provided were worthless.

Q 54 On page 32 of his testimony, Dr. Brown claims that your response to the Attorney General's data request No. 40 was "elusive." Do you agree?

A 54 No. Again, Dr. Brown has mischaracterized my testimony, choosing to cite one sentence from my two-page long response to the Attorney General's data request. In my response, I provided the exact definition of Value Line's safety rank, as described by Value Line itself.

D. DCF Approach

Q 55 What is the DCF approach to estimating the cost of equity?

A 55 The DCF approach is based on the assumption that investors value their investment in a company's stock on the basis of the future cash flows, or dividends, they expect to receive from owning the stock. Assuming that dividends are received only at the end of each year and grow at a constant annual rate, g, the DCF approach implies that the cost of equity can be estimated from the equation $k = D_1/P_s + g$, where k is the cost of equity, D_1 is the expected next period annual dividend, P_s is the current price of the stock, and g is the constant annual growth rate in earnings, dividends, and book value per share. The term D_1/P_s is called the dividend yield component of the annual DCF model, and the term g is called the growth component of the annual DCF model. When dividends are paid quarterly, the annual DCF model must be modified to correctly account for the quarterly payment of dividends.

Q 56 Assuming for the moment that dividends are paid annually, how should the dividend yield component of the annual DCF model be estimated?

A 56 The annual DCF model is based on the assumption that dividends are received just once at the end of each year. Thus, the first dividend in the annual DCF model is the expected annual dividend to be paid one year from the time the investment is made, and the dividend yield component should be estimated as the expected dividend to be paid one year from the date of investment divided by the current stock price.

Q 57 How does Dr. Brown estimate the dividend yield component of the annual DCF model?

A 57 Dr. Brown estimates the dividend yield component of his annual DCF model by simply dividing the dividend paid in 2003 by the average stock price for the three-month period January through March 2004.

Q 58 Does Dr. Brown estimate the dividend yield component of his annual DCF model correctly?

A 58 No. Instead of annualizing the latest quarterly dividend at the time of his studies (the first quarter 2004) and multiplying the annualized dividend by (one plus the growth rate), Dr. Brown simply used the annual dividend paid in 2003. Thus, Dr. Brown's procedure produces an underestimate of the dividend yield component for the annual DCF model.

Q 59 Recognizing your disagreement with Dr. Brown's procedure for estimating the dividend yield component of the DCF model, can you at least duplicate the numbers he displays in his Schedule 20?

A 59 No. Dr. Brown's formula indicates that he calculated the dividend yield for each company (shown in Column 11) by dividing the dividend during 2003 (shown in Column 5) by the average stock price (shown in Column 10). However, the numbers shown in Column 11 cannot be obtained using Dr. Brown's formula. For example, Dr. Brown's Schedule 20 shows a dividend in Column 5 for Pennichuck equal to $0.84 and a price equal to $28.45. The dividend yield obtained by dividing $0.84 by $28.45 is 2.95%, whereas Dr. Brown reports a dividend yield of 2.48%.

Q 60 How does Dr. Brown estimate the expected future growth component of the DCF cost of equity for his proxy companies?

A 60 Dr. Brown uses his calculation of the historical dividend growth rate from 1999 to 2003 for each company as his estimate of investors' expected future growth for each company.

Q 61 Do you agree with Dr. Brown's use of historical dividend growth rates to estimate investors' expectation of future growth for each company?

A 61 No. Dr. Brown provides no evidence that investors use historical dividend growth rates to forecast future growth when they buy and sell stocks. If investors did use historical dividend growth rates to forecast future growth, then historical dividend growth rates should be highly correlated with a company's stock price. However, my studies demonstrate that the correlation between stock prices and historical dividend growth rates is insignificant. Rather than being highly correlated with historical dividend growth rates, stock prices are highly correlated with the growth forecasts prepared by professional financial analysts. My studies, which are summarized in my direct testimony, provide strong support for the conclusion that investors use analysts' growth forecasts rather than historical dividend growth rates when making stock buy and sell decisions.

Q 62 Dr. Brown reports his calculations of historical dividend growth rates in his Schedule 20. Have you determined whether Dr. Brown has at least calculated historical dividend growth correctly?

A 62 Yes. As I described above, I have determined that the historical dividend growth rates Dr. Brown reports on his Schedule 20 are generally incorrect.

Q 63 How do you recommend that the future growth component of the DCF model be estimated?

A 63 As described in my direct testimony, I recommend that the expected future growth component of the DCF model be estimated using the average of analysts' growth estimates as reported by I/B/E/S.

Q 64 Why do you recommend that the average analysts' growth forecast be used to estimate the expected future growth component of the DCF model?

A 64 I recommend the use of analysts' growth forecasts because the DCF model requires the future growth expectations of investors, not those of Dr. Brown or myself; and my studies strongly support the conclusion that investors use analysts' growth rates in making stock buy and sell decisions.

Q 65 Do you agree with Dr. Brown's assertion on pages 26 - 28 of his testimony that the accuracy of analysts' growth forecasts is highly questionable?

A 65 No. Furthermore, I am uncertain what Dr. Brown is signifying when he refers to the "accuracy" of analysts' growth forecasts. If Dr. Brown is referring to the accuracy of analysts' growth forecasts as estimates of investors' growth expectations, then his statement that the accuracy of analysts' growth forecasts is highly questionable is certainly wrong. As described above, my studies indicate that analysts' growth forecasts are accurate measures of investors' growth expectations. However, if Dr. Brown is referring to the "accuracy" of

analysts' growth forecasts compared to what subsequently occurs, then he is simply asking the wrong question. The DCF model requires the growth forecasts of investors *at the time they purchase* a stock, not the achieved growth rates after the decision to invest has been made. After all, the achieved growth rates can not be known to investors at the time they make their investments.

Q 66 Does Dr. Brown correctly modify the annual DCF model to account for the quarterly payment of dividends?

A 66 No. Despite the fact that all his proxy group of water companies pay dividends quarterly, Dr. Brown uses a DCF model which incorrectly assumes that dividends are paid annually.

Q 67 Do you have any evidence that Dr. Brown's DCF results produce unreasonable estimates of the water companies' cost of equity?

A 67 Yes. As shown on his Schedule 20, Dr. Brown's DCF results for his proxy water companies range from 4.32% to 23.30%. Such a wide range of results indicates a major problem with the cost of equity model used to estimate the cost of equity for individual companies. Furthermore, at least two of Dr. Brown's DCF results are below the current yield to maturity on long-term U.S. Treasury bonds, and several other results are approximately equal to the yield to maturity on A-rated utility bonds. These results are patently unreasonable, because no investor would invest in a water company's equity if they expected to earn a return that is less than the return they could earn on a risk-free investment in U.S. Treasury bonds.

Q 68 What DCF results would Dr. Brown have obtained if he had implemented the DCF model correctly?

A 68 As described in my direct testimony, the average DCF result for a proxy group of water companies, using stock price, growth, and dividend information through May 2004, is 10.9%. (See Vander Weide direct testimony, Schedule A.)

E. Risk Premium Approach

Q 69 What is the risk premium approach to estimating the cost of equity.

A 69 The risk premium approach is based on the principle that investors expect to earn a return on an equity investment that reflects a "premium" over and above the return they expect to earn on an investment in a portfolio of long-term bonds. This equity risk premium compensates equity investors for the additional risk they bear in making equity investments versus bond investments. According to the risk premium approach, the cost of equity is calculated by adding an estimate of the risk premium to the current yield on an appropriate debt instrument.

Q 70 Does it matter what debt instrument is used to estimate the interest rate component of the risk premium approach?

A 70 No. The risk premium approach can be implemented using virtually any debt instrument. However, the risk premium approach does require that the debt instrument used to estimate the risk premium be the same as the debt instrument used to calculate the interest rate component of the risk premium approach. For example, if the risk premium on equity is calculated by

comparing the returns on stocks and the returns on A-rated utility bonds, then the interest rate on A-rated utility bonds must be used to estimate the interest rate component of the risk premium approach.

Q 71 How does Dr. Brown estimate the interest rate component of his risk premium approach?

A 71 To estimate the interest rate component of his risk premium approach, Dr. Brown uses data on the yield to maturity on RWE's outstanding debt at December 31, 2003, as well as data on the yield to maturity on Moody's Baa-rated bonds. (However, it should be noted that Dr. Brown used the lowest yield to maturity on Moody's Baa-rated bonds for the six month surrounding his study.)

Q 72 How does Dr. Brown estimate the risk premium component of his risk premium approach?

A 72 For his estimate of the risk premium component, Dr. Brown calculates the difference between the geometric mean return on the market portfolio as reported by Ibbotson Associates and the geometric mean return on a short-term Treasury bill as reported by Ibbotson Associates, over the period 1926 - 2003. Dr. Brown then multiplies the difference between the geometric mean on the stock portfolio and the geometric mean return on short-term Treasury bills by his estimate of his proxy water companies' betas.

Q 73 Do you agree with Dr. Brown's application of his risk premium method?

A 73 No. Dr. Brown's risk premium analysis is characterized by several flaws that render his results useless. First, Dr. Brown calculates the risk premium on an

equity investment using a different debt instrument than he used to estimate the interest rate component of his risk premium approach. As noted above, the risk premium approach requires that the same debt instrument be used to estimate the risk premium as is used to estimate the interest rate component of the risk premium approach. Instead, Dr. Brown used corporate bonds to estimate the interest rate component, and short-term Treasury bills to estimate the risk premium

Second, Dr. Brown incorrectly used the geometric mean risk premium published by Ibbotson Associates, even though Ibbotson Associates correctly recommends using the arithmetic mean return on the stock portfolio when estimating the risk premium component of the cost of equity. Since the arithmetic mean risk premium exceeds the geometric mean risk premium by approximately 200 basis points, Dr. Brown's use of the geometric mean risk premium caused him to underestimate both the cost of equity and the weighted average cost of capital for his water company proxy group.

Third, Dr. Brown's use of beta estimates for his proxy companies that are not much different than zero essentially eliminates the risk premium on equity investments in water companies. Dr. Brown's estimate of the risk premium for an equity investment in the water companies is equal to just 0.61%, based on a beta estimate of just 0.09. If Dr. Brown had correctly used the Value Line betas for his proxy companies and the arithmetic mean risk premium reported by Ibbotson Associates, his estimate of the water companies' cost of equity would have been approximately equal to mine.

Q 74 You mentioned earlier that Dr. Brown used the interest rate on short-term Treasury bills to estimate the market risk premium in his application of the risk premium approach. What cost of equity would Dr. Brown have obtained if he had also used the interest rate on short-term Treasury bills to estimate the interest rate component of the risk premium approach?

A 74 Since the current interest rate on short-term Treasury bills is approximately 2%, he would have obtained a cost of equity of approximately 2.61% (0.61% risk premium + 2% T-bill interest rate = 2.61% cost of equity).

Q 75 What conclusions do you draw from your observation that Dr. Brown's risk premium approach would have produced a cost of equity of 2.61% if he had used a consistent interest rate in his risk premium approach?

A 75 I conclude that Dr. Brown's risk premium approach produces nonsensical results and should be dismissed entirely. No reasonable investor would accept a return of just 2.61% in water companies' equities when they could receive a return in excess of 6% on the water companies' bonds.

Q 76 You also noted that Ibbotson Associates recommends the use of the arithmetic mean risk premium rather than the geometric mean risk premium used by Dr. Brown. Why does Ibbotson Associates recommend using the arithmetic mean risk premium rather than the geometric mean risk premium to calculate the cost of equity?

A 76 Ibbotson Associates recommends that the long-run historic arithmetic mean risk premium to be used to estimate the cost of equity because the arithmetic mean is the best estimate of the expected risk premium on a forward-looking basis.

As Ibbotson Associates explains in *Stocks, Bonds, Bills, and Inflation Valuation Edition 2004 Yearbook*, the arithmetic mean return is the best approach for calculating the return investors expect to receive in the future. As Ibbotson Associates states:

> The equity risk premium data presented in this book are arithmetic average risk premia as opposed to geometric average risk premia. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. This is because both the CAPM and the building block approach are additive models, in which the cost of capital is the sum of its parts. The geometric average is more appropriate for reporting past performance, since it represents the compound average return. [Ibbotson Associates, *op. cit.*, p. 71.]

A discussion of the importance of using arithmetic mean returns in the context of CAPM or risk premium studies is contained in Rebuttal Schedule 3.

F. Capital Structure

Q 77 What capital structure does Dr. Brown recommend for the purpose of estimating TAWC's weighted average cost of capital?

A 77 Dr. Brown recommends a capital structure containing 5.02% short-term debt, 52.85% long-term debt, 0.30% preferred stock, and 41.83% common equity. (See Brown Schedule 38.)

Q 78 Does Dr. Brown explain how he arrived at his recommended capital structure for TAWC?

A 78 No. Although Dr. Brown attempts to explain on Schedule 37 how TAWC's recommended capital structure should be adjusted for double leverage, the

resulting double leverage capital structure shown on Schedule 37 is quite different from his recommended capital structure shown on Schedule 38. In particular, the double leverage capital structure shown on Schedule 37, Section 5, contains 45.86% equity, while his recommended capital structure shown on Schedule 38 contains only 41.83% equity. I can think of no reasonable explanation for the difference between Dr. Brown's recommended capital structure shown on Schedule 38 and his calculated capital structure shown on Schedule 37; and Dr. Brown has not offered any explanation of this difference.

Q 79 Do you agree with Dr. Brown's recommended capital structure?

A 79 No. Dr. Brown's recommended capital structure contains significantly more debt and less equity than the capital structures of his proxy water companies. As shown on Schedule 37, Dr. Brown's proxy water companies have an average capital structure containing 6.21% short-term debt, 41.65% long-term debt, 0.37% preferred equity, and 51.77% common equity. Since Dr. Brown used these proxy companies to estimate TAWC's cost of equity, he should either have used the average proxy company capital structure to estimate TAWC's weighted average cost of capital, or adjusted his recommended cost of equity for TAWC to reflect the additional financial risk associated with the higher leverage contained in his recommended capital structure as compared to the leverage contained in the proxy companies' average capital structure.

Q 80 How does Dr. Brown's recommended capital structure differ from TAWC's forecasted capital structure for the test year?

A 80 Dr. Brown's recommended capital structure contains significantly less equity than TAWC's forecasted capital structure for the test year. As shown in Dr. Brown's Schedule 37, TAWC's forecasted capital structure contains 44.20% equity, while Dr. Brown's recommended capital structure contains only 41.83% equity. Since common equity has the highest cost rate, Dr. Brown's recommendation to use a capital structure containing less equity than TAWC's projects for the test year, causes Dr. Brown to further understate TAWC's weighted average cost of capital.

G. Tests of Reasonableness

Q 81 Does Dr. Brown attempt to test the reasonableness of his 7.90% recommended cost of equity for TAWC?

A 81 Yes. As described on pages 8 and 58 of his testimony, Dr. Brown attempts to provide two tests of the reasonableness of his recommended cost of equity for TAWC. First, Dr. Brown examines the earned rate of return on equity for U.S. companies followed by Morningstar; he asserts that "one-half the companies in the United States earned less than an 8% equity return in their most recent fiscal year." Second, he examines an article by Jeremy J. Siegel in the *Journal of Portfolio Management.* From his reading, Dr. Brown alleges that "broader historical economic data shows an overall return to equity of 7% in the American economy." (Brown at p. 58.)

Q 82 Did Dr. Brown provide any support for his claim that "one-half the companies in the United States earned less than an 8% equity return in their most recent fiscal year"?

A 82 No. Dr. Brown did not supply any of the data behind his claim. He merely provided the queries he posed on the Morningstar website.

Q 83 Is Dr. Brown's conclusion on the earned returns for companies in the United States economy consistent with the evidence you have examined on the earned returns for United States companies?

A 83 No. I have examined the average earned rates of return on book equity for: (1) the S&P 500; (2) the S&P Industrials; and (3) 1,592 companies for which data are available in the Value Line data base. The average earned rates of return on book equity for these groups are 15.87%, 16.05%, and 10.98%, respectively. These data are shown on Rebuttal Schedule 4. Furthermore, it should be recognized that these data are conservative because Value Line calculates the earned rate of return on equity using the year-end value of equity in the denominator, whereas most companies calculate their earned rates of return using the average of beginning and end-of-year equity. Generally, the return on average year equity exceeds the return on end-of-year equity by approximately 50 basis points.

Q 84 Does Dr. Brown provide a quote from the Journal of Portfolio Management article that allegedly supports his claim that "broad historical economic data shows an overall return to equity of 7% in the American economy"?

A 84 Yes. On page 58 of his testimony, Dr. Brown provides the following quote from the Siegel article:

> The real return on stocks, as I have emphasized, has displayed a remarkable long-term stability since 1946...the real return on equity has been 7.8%

Q 85 Does the quote supplied by Dr. Brown support his claim that the overall return to equity has been 7% in the American economy?

A 85 No. First, the Siegel article mentions a long-run return of 7.8%, not the 7% reported by Dr. Brown. Second, the Siegel article refers to the *real return* on stocks, not the nominal return on stocks. The cost of equity measures the nominal rate of return on stock investments. The nominal rate of return on stock investments is equal to the real return on stock investments plus the rate of inflation. The nominal rate of return generally exceeds the real rate of return because inflation is generally positive.

Q 86 Do you have data on the average nominal rate of return on stock investments from 1946 to 1999, the period studied by Professor Siegel?

A 86 Yes. As shown in Rebuttal Schedule 5, the average return on the S&P 500 from 1946 to 1999 was 14.15%.

Q 87 As an alternative test of reasonableness, have you compared Dr. Brown's recommended 7.90% cost of equity to the allowed rates of return on equity for public utilities across the country?

A 87 Yes. In the last several years, public utility commissions have authorized rates of return on equity for utilities under their jurisdiction in the approximate range 10% to 12%, significantly higher than Dr. Brown's recommended 7.90% rate of return on equity. From this data, it is evident that his recommended rate of return on equity is unreasonably low.

IV. REBUTTAL OF MR. GORMAN

A. Discounted Cash Flow Analysis

Q 88 What DCF model does Mr. Gorman use to calculate TAWC's cost of equity?

A 88 Mr. Gorman uses an annual DCF model without flotation costs.

Q 89 Do you agree with Mr. Gorman's decision to use an annual DCF model without flotation costs to estimate TAWC's cost of equity?

A 89 No. For the reasons discussed in my direct testimony, Mr. Gorman should have used a quarterly DCF model with flotation costs to estimate TAWC's cost of equity.

Q 90 What is the impact on his DCF results of Mr. Gorman's decision to exclude quarterly compounding and flotation costs?

A 90 Inclusion of quarterly dividend compounding would have increased Mr. Gorman's DCF results by approximately 12 basis points, and inclusion of flotation costs would have increased his DCF results by approximately 17 basis points.

Q 91 Do you have any additional concerns with Mr. Gorman's DCF analysis?

A 91 Yes. I have two additional concerns with Mr. Gorman's DCF analysis. First, for his estimate of investors' growth expectations in his DCF model, Mr. Gorman used an average of the analysts' growth forecasts supplied by Zack's, Reuters, and I/B/E/S Thomson Financial. Although there is widespread overlap in the coverage of these three providers of consensus analysts' growth forecasts, I have found that the I/B/E/S Thomson Financial growth forecasts are preferable

because they have been widely studied in the finance literature. Second, Mr. Gorman obtains a DCF result for American States Water that is: (1) based on the 3% growth forecast of only one or two analysts; and (2) just slightly above the yield to maturity on A-rated utility bonds. DCF results that are approximately equal to the yield to maturity on A-rated utility bonds are unreasonable because investors would not invest in equities if they expected to earn approximately the same return as the return on a bond. Furthermore, as noted in my direct testimony, when a company is followed by just one or two analysts, I generally eliminate the company from the sample group because of the greater uncertainty associated with growth forecasts associated with such a small sample. In addition to the DCF result for American States Water, Mr. Gorman's DCF results for Middlesex Water Company and Southwest Water Company are also based on the growth forecasts of only one or two analysts. If Mr. Gorman had eliminated the DCF results for the three companies whose growth forecasts are obtained from just one or two analysts, his average DCF result would have increased nearly 100 basis points, from 10.13% to 11.08%.

B. Capital Asset Pricing Model

Q 92 What is the CAPM?

A 92 The CAPM is an equilibrium model of the security markets in which the expected or required return on a given security is equal to the risk-free rate of interest, plus the company equity "beta," times the market risk premium:

Cost of equity = Risk-free rate + Equity beta x Market risk premium

The risk-free rate in this equation is the expected rate of return on a risk-free government security, the equity beta is a measure of the company's risk relative to the market as a whole, and the market risk premium is the premium investors require to invest in the market basket of all securities compared to the risk-free security.

Q 93 How does Mr. Gorman use the CAPM to estimate the cost of equity for his proxy companies?

A 93 The CAPM requires an estimate of the risk-free rate, the company-specific risk factor or beta, and the expected return on the market portfolio. For his estimate of the risk-free rate, Mr. Gorman used the Blue Chip projected long-term Treasury bond yield of 5.8%. For his estimate of the company-specific risk, or beta, Mr. Gorman used the average Value Line beta for his proxy companies. For his estimate of the expected risk premium on the market portfolio, Mr. Gorman estimated the expected return on the market (S&P 500) and subtracted his estimate of the risk-free rate. From his calculations, Mr. Gorman obtains a CAPM result of 9.7%.

Q 94 Do you agree with Mr. Gorman's CAPM analysis?

A 94 No. I have several criticisms of Mr. Gorman's CAPM analysis. First, as his estimate of the risk premium on the market portfolio, Mr. Gorman should have used the 7.2% arithmetic mean risk premium on the market portfolio versus long-term Treasury bonds reported by Ibbotson Associates. Mr. Gorman's procedure of estimating the return on the market by adding the long-run arithmetic mean real return on the market to the current rate of inflation and

subtracting his current estimate of the return on the risk-free security from the historical long-run return on the market is inappropriate. Second, Mr. Gorman should have estimated his group average beta for his comparable companies by market weighting the betas for the individual companies in his proxy group. Third, as discussed above in the rebuttal of Dr. Brown, Mr. Gorman should have recognized the additional risk premium required on investments in micro-cap companies such as many of those in his proxy group.

Q 95 What CAPM results would Mr. Gorman have obtained for his proxy group if he had implemented the CAPM correctly?

A 95 If he had implemented the CAPM correctly, Mr. Gorman would have obtained a CAPM result of 12.3% on a market-weighted basis and 13.1% on an equally-weighted basis. See Table 3 below.

Table 3
CORRECTED CAPM RESULTS FOR MR. GORMAN'S PROXY WATER COMPANIES

Company	Market Capitalization	Beta	Size	Unadjusted CAPM	Size Premium	CAPM Cost of Equity
American States Water	413,565,364	0.70	Low-Cap	10.4%	1.70%	12.1%
Aqua America Inc.	2,220,384,335	0.75	Mid-Cap	10.8%	0.91%	11.7%
Artesian Resources	92,389,743	0.55	Micro-Cap	9.4%	4.01%	13.4%
California Water Service	633,103,067	0.70	Low-Cap	10.4%	1.70%	12.1%
Connecticut Water Co.	210,906,854	0.65	Micro-Cap	10.1%	4.01%	14.1%
Middlesex Water Co.	205,556,397	0.60	Micro-Cap	9.8%	4.01%	13.8%
Pennichuck	62,135,438	0.50	Micro-Cap	9.1%	4.01%	13.1%
SJW Corp.	314,350,525	0.55	Micro-Cap	9.4%	4.01%	13.4%
Southwest Water Co.	245,459,155	0.65	Micro-Cap	10.1%	4.01%	14.1%
York Water Company	127,096,987	0.55	Micro-Cap	9.4%	4.01%	13.4%
Simple Average		0.62		9.9%		13.1%
Market-Weighted Average		0.69		10.4%		12.3%

Q 96 Does this conclude your rebuttal testimony?

A 96 Yes, it does.

LIST OF REBUTTAL SCHEDULES AND ATTACHMENTS

Schedule 1 Copy of Vander Weide Response to Attorney General's Data Request No. 40.

Schedule 2 Report on Value Line's Safety Ranks

Schedule 3 Using the Arithmetic Mean to Estimate the Cost of Equity Capital.

Schedule 4 Average Earned Rates of Return on Book Equity for the S&P 500, S&P Industrials, and 1,592 Value Line Companies.

Schedule 5 Average Nominal Rate of Return on Stock Investments 1946 – 1999.

TENNESSEE-AMERICAN WATER COMPANY
REBUTTAL SCHEDULE 1
Copy of Response to Attorney General Data Request No 40

40. Q. With regard to Dr. Vander Weide's question number 55 and answer number 55 at page 27 of his direct testimony, provide all documents which explain the Value Line safety ranking system and which explain the criteria for assigning a safety rank to the companies listed in Dr. Vander Weide's Schedules A and B and provide Value Line's safety rankings for those companies.

RESPONSE:

In its *Guide to Using the Investment Survey*, a pamphlet provided to subscribers to the *Value Line Investment Survey*, *Value Line* defines safety rank as follows:

> **Safety Rank**. A measurement of potential risk associated with individual common stocks. The Safety Rank is computed by averaging two other Value Line indexes—the Price Stability Index and the Financial Strength Rating. Safety Ranks range from 1 (Highest) to 5 (Lowest). Conservative investors should try to limit purchases to equities ranked 1 (Highest) or 2 (Above Average) for Safety. (p. 40)

Value Line considers the Safety Rank to measure the total risk of a stock based on the stock's Price Stability relative to the other 1,700 stocks in Value Line and based on the Financial Strength Rating of the company. As *Value Line* also states at pages 2 – 3 in its guide:

> Safety Rank measures the total risk of a stock. It is derived from the stock's Index of Price Stability relative to the 1,700 other stocks and from the Financial Strength Rating of the company. Safety ranks are also given on a scale from 1 (safest) to 5 (riskiest) as follows:
>
> Rank 1 (Highest): This stock is probably one of the safest, most stable, and least risky stock market investments.
>
> Rank 2 (Above Average): This stock is safer and less risky than most.
>
> Rank 3 (Average): This stock is of average risk and safety.
>
> Rank 4 (Below Average): This stock is riskier and less safe than most.
>
> Rank 5 (Lowest): This stock is probably one of the riskiest and least safe.

The *Value Line* Safety Ranks for the companies shown in Schedules A and B are shown below.

Company	Value Line Safety Rank
Amer. States Water	3
Aqua America	3
California Water	2
Southwest Water	3
York Water Company	NA
Average	2.8

Company	Value Line Safety Rank
AGL Resources	2
Atmos Energy	3
Equitable Resources	2
KeySpan Corp.	2
NICOR Inc.	2
Northwest Nat. Gas	2
Peoples Energy	1
Piedmont	2
WGL Holdings Inc.	1
Average	1.9

TENNESSEE-AMERICAN WATER COMPANY
REBUTTAL SCHEDULE 2
Report on Value Line's Safety Ranks
[See Attached pdf file]

Value Line's Safety Ranks

Do They Really Provide Safety?
Yes! We have just completed a review of the performance of our Safety ranks during the market declines this year and last, and once again the results are clear. *Stocks with Safety ranks of 1 and 2 held up much better than all other stocks in the Value Line universe when prices fell.* These findings are not surprising since they match those of all the previous studies we have done.

As can be easily seen in the table below, stocks with Safety ranks of 1 and 2 have fallen less than those ranked 3, 4, or 5 in each of the nine market declines identified here.

Taking a look at this year's performance during the period from April to September, when the Value Line Arithmetic Index fell 33%, stocks with a Value Line Safety rank of 1 declined an average of only 20.8%. Those with a Safety rank of 2 dropped an average of 23.8%. In 2001, the pattern was the same. The Value Line Index was down 21% from May through September, but stocks ranked 1 for Safety were only off by 11.5%. Stocks with a Safety rank of 2 were down 14.0%. Similar results can be seen in each of seven other major market declines shown in the table.

What are the implications of these results? They are actually very clear. *Investors who want as little risk as possible, and yet who still want to own stocks, should buy stocks with high Safety ranks.*

Some investors might want to buy only stocks with Safety ranks of 1 or 2. Very recently, nearly 300 stocks in *The Value Line Investment Survey* met these criteria, so there are many issues to pick from. However, we don't recommend that Safety be the only criteria for choosing a stock since Safety measures the risk of holding a stock but is not a measure of performance. There should also be another reason you like a stock.

One strategy is to buy only stocks with Safety ranks of 1 or 2 and Timeliness ranks of 1 or 2. This will provide you with stocks with low risk and high relative price performance in the coming six to 12 months. At last count there were 79 stocks that rank high on both counts, but there are times when the number is much smaller. (High Safety ranks are associated with stocks that are less volatile than average and with companies with generally strong balance sheets. High Timeliness ranks, on the other hand, are associated with companies with strong earnings growth and stocks with above-average price momentum.)

A second strategy would be to buy stocks with Safety ranks of 1 or 2 and Timeliness ranks of 1, 2, or 3. This would lower your likely appreciation potential, but will also provide more stocks to chose from; nearly 250 issues recently met these criteria.

A third, and more difficult strategy, involves predicting the direction of the market, or "market timing." Here, investors would normally buy and hold stocks that appealed to them for what ever reason (high Timeliness ranks, large potential 3- to 5-year appreciation potential, favorable dividend yields, etc.), but switch to ones with high Safety ranks when they think the market may be weak. Market timing is always difficult, but an approach that utilizes high Safety ranks when the market looks poor would result in a portfolio that has less risk than that of the general market.

RESULTS OF SAFETY RANKS IN MAJOR MARKET DECLINES*

Safety Rank	2/11/66–10/7/66	12/13/68–7/2/70	4/14/72–9/11/74	6/17/81–8/11/82	8/26/87–12/4/87	7/13/90–11/2/90	4/22/98–10/08/98	5/22/01–9/21/01	4/16/02–10/9/02
Group 1	–15.6%	–28.6%	–40.5%	–10.5%	–24.7%	–19.0%	–6.1%	–11.5%	–20.8%
Group 2	–18.2	–29.6	–39.9	–16.2	–28.7	–15.5	–14.0	–14.0	–23.8
Group 3	–24.0	–41.1	–47.2	–25.2	–36.0	–24.9	–29.7	–23.4	–33.1
Group 4	–26.5	–57.0	–53.3	–33.6	–40.7	–33.2	–41.7	–41.7	–55.2
Group 5	–29.2	–64.8	–70.0	–31.4	–46.9	–33.1	–37.8	–34.3	–51.7

We periodically review the performance of a variety of Value Line's proprietary ranks. This article is an update of a study last done in February 1999.

**The major market declines shown here are based on the Value Line Arithmetic Index, which is an equally weighted index that includes all of the approximately 1,700 companies in* The Value Line Investment Survey. *Because the Value Line Index is equally weighted, small companies have the same impact as larger ones. Moves in this index are sometimes quite different from those in the Dow Jones Industrial Average or the Standard & Poor's 500 Index; each is dominated by large companies.*

TENNESSEE-AMERICAN WATER COMPANY
REBUTTAL SCHEDULE 3
USING THE ARITHMETIC MEAN TO ESTIMATE THE COST OF EQUITY CAPITAL

Consider an investment that in a given year generates a return of 30 percent with probability equal to .5 and a return of -10 percent with a probability equal to .5. For each one dollar invested, the possible outcomes of this investment at the end of year one are:

Ending Wealth	Probability
$1.30	0.50
$0.90	0.50

At the end of year two, the possible outcomes are:

Ending Wealth			*Probability*	*Value x Probability*
(1.30) (1.30)	=	$1.69	0.25	0.4225
(1.30) (.9)	=	$1.17	0.50	0.5850
(.9) (.9)	=	$0.81	0.25	0.2025
Expected Wealth	=			$1.21

The expected value of this investment at the end of year two is $1.21. In a competitive capital market, the cost of equity is equal to the expected rate of return on an investment. In the above example, the cost of equity is that rate of return which will make the initial investment of one dollar grow to the expected value of $1.21 at the end of two years. Thus, the cost of equity is the solution to the equation:

$$1(1+k)^2 = 1.21 \text{ or}$$

$$k = (1.21/1)^{.5} - 1 = 10\%.$$

The arithmetic mean of this investment is:

$$(30\%)\ (.5) + (-10\%)\ (.5) = 10\%.$$

Thus, the arithmetic mean is equal to the cost of equity capital.

The geometric mean of this investment is:

$$[(1.3)\ (.9)]^{.5} - 1 = .082 = 8.2\%.$$

Thus, the geometric mean is not equal to the cost of equity capital.

The lesson is obvious: for an investment with an uncertain outcome, the arithmetic mean is the best measure of the cost of equity capital.

TENNESSEE-AMERICAN WATER COMPANY
REBUTTAL SCHEDULE 4
AVERAGE EARNED RATES OF RETURN ON BOOK EQUITY FOR THE S&P 500, S&P INDUSTRIALS, AND 1,592 VALUE LINE COMPANIES.

S&P 500 Companies	Return on Equity
Average Return	15.87
3M Company	30.47
Abbott Labs.	26.61
ACE Limited	18.10
ADC Telecom.	(12.21)
Adobe Systems	24.98
Advanced Micro Dev.	(11.25)
AES Corp.	52.09
Aetna Inc.	11.78
Affiliated Computer	13.86
AFLAC Inc.	14.83
Agilent Technologies	(63.38)
Air Products & Chem.	13.13
Alberto Culver	15.26
Albertson's Inc.	10.33
Alcoa Inc.	8.58
Allegheny Energy	(22.04)
Allegheny Technologies	(76.47)
Allergan Inc.	42.40
Allied Waste	3.04
Allstate Corp.	12.90
ALLTEL Corp.	13.40
Altera Corp.	14.07
Altria Group	36.70
Ambac Fin'l Group	14.44
Amer. Elec. Power	12.38
Amer. Express	19.57
Amer. Int'l Group	13.00
Amer. Power Conv.	11.63
Amer. Standard	56.76
Amerada Hess	9.47
Ameren Corp.	11.62
AmerisourceBergen	11.21
Amgen	11.65
AmSouth Bancorp.	19.38
Anadarko Petroleum	14.42
Analog Devices	9.07
Andrew Corp.	0.88
Anheuser-Busch	76.55
Aon Corp.	14.67
Apache Corp.	19.27
Apollo Group 'A'	35.06
Apple Computer	1.80
Applied Biosystems	13.85
Applied Materials	2.76
Applied Micro	(2.03)
Archer Daniels Midl'd	9.67
Ashland Inc.	4.48
AT&T Corp.	13.34
Autodesk Inc.	15.51
Automatic Data Proc.	17.26
AutoNation Inc.	9.58
Avaya Inc.	(7.50)

S&P 500 Companies	Return on Equity
Avery Dennison	20.07
Avon Products	179.04
Baker Hughes	9.85
Ball Corp.	29.40
Bank of America	22.54
Bank of New York	13.72
Bard (C.R.)	19.50
Bausch & Lomb	10.09
Baxter Int'l Inc.	27.74
BB&T Corp.	10.71
Bear Stearns	16.23
Becton Dickinson	19.79
Bed Bath & Beyond	20.06
BellSouth Corp.	19.47
Bemis Co.	13.82
Best Buy Co.	23.37
Big Lots Inc.	8.14
Biogen Idec Inc.	(12.40)
Biomet	22.48
BJ Services	11.40
Black & Decker	36.53
Block (H&R)	37.12
BMC Software	4.98
Boeing	9.94
Boston Scientific	18.20
Bristol-Myers Squibb	31.73
Broadcom Corp. 'A'	(8.20)
Brown-Forman 'B'	24.45
Brunswick Corp.	11.44
Burlington Northern	9.14
Burlington Resources	19.14
Calpine Corp.	1.20
Campbell Soup	74.65
Capital One Fin'l	18.76
Cardinal Health	19.60
Caremark RX	45.39
Carnival Corp.	8.65
Caterpillar Inc.	18.73
Cendant Corp.	14.38
CenterPoint Energy	23.84
Centex Corp.	25.47
CenturyTel Inc.	9.95
ChevronTexaco	19.92
Chiron Corp.	9.16
Chubb Corp.	8.84
CIENA Corp.	(29.04)
CIGNA Corp.	14.78
Cincinnati Financial	6.22
Cinergy Corp.	11.73
Cintas Corp.	14.41
Circuit City Stores	(0.03)
Cisco Systems	15.29
Citigroup Inc.	18.35
Citizens Communic.	8.62
Citrix Sys.	18.98
Clear Channel	4.63
Clorox Co.	35.45
CMS Energy Corp.	(2.71)
Coach Inc.	33.45

S&P 500 Companies	Return on Equity
Coca-Cola	33.99
Coca-Cola Enterprises	15.44
Comerica Inc.	12.93
Computer Associates	1.63
Computer Sciences	9.70
Compuware Corp.	3.52
Comverse Technology	(0.62)
ConAgra Foods	16.44
ConocoPhillips	13.35
Consol. Edison	9.77
Constellation Energy	11.08
Convergys Corp.	15.51
Cooper Inds.	12.54
Cooper Tire & Rubber	7.16
Coors (Adolph) 'B'	13.78
Corning Inc.	2.02
Costco Wholesale	10.99
Countrywide Financial	29.35
Crane Co.	13.26
CSX Corp.	6.33
Cummins Inc.	5.69
CVS Corp.	14.40
Dana Corp.	6.73
Danaher Corp.	14.72
Darden Restaurants	20.46
Deere & Co.	16.06
Dell Inc.	42.11
Delphi Corp.	22.03
Delta Air Lines	160.24
Deluxe Corp.	(64.19)
Devon Energy	15.78
Dillard's Inc.	6.02
Disney (Walt)	5.69
Dollar General Corp.	19.72
Dominion Resources	11.82
Donnelley (R.R) & Sons	15.05
Dover Corp.	10.39
Dow Chemical	13.92
Dow Jones & Co.	60.46
DTE Energy	9.07
Du Pont	16.73
Duke Energy	6.03
Dynegy Inc. 'A'	(22.15)
E*Trade Fin'l	10.58
Eastman Chemical	7.19
Eastman Kodak	20.28
Eaton Corp.	12.89
eBay Inc.	9.13
Ecolab Inc.	21.20
Edison Int'l	13.59
El Paso Corp.	1.85
Electronic Arts	21.05
Electronic Data Sys.	6.96
EMC Corp.	4.30
Emerson Electric	15.68
Engelhard Corp.	18.39
Entergy Corp.	9.77
EOG Resources	20.01
Equifax Inc.	54.30

S&P 500 Companies	Return on Equity
Exelon Corp.	18.84
Express Scripts 'A'	20.99
Exxon Mobil Corp.	18.94
Family Dollar Stores	18.87
Fannie Mae	38.06
Federated Dept. Stores	11.02
Federated Investors	51.65
FedEx Corp.	13.31
Fifth Third Bancorp	20.20
First Data Corp.	35.40
First Horizon National	25.03
FirstEnergy Corp.	5.41
Fiserv Inc.	14.32
Fisher Scientific	24.85
Fluor Corp.	16.59
Ford Motor	7.90
Forest Labs.	22.60
Fortune Brands	20.94
FPL Group	12.49
Franklin Resources	11.66
Freddie Mac	36.88
Freep't-McMoRan C&G	23.61
Gannett Co.	14.38
Gap (The) Inc.	21.53
Gateway Inc.	(58.69)
Gen'l Dynamics	16.83
Gen'l Electric	19.68
Gen'l Mills	20.84
Gen'l Motors	11.32
Genuine Parts	15.29
Genzyme Corp.	3.51
Georgia-Pacific Group	6.15
Gilead Sciences	30.26
Gillette	61.82
Golden West Fin'l	18.49
Goldman Sachs	13.89
Goodrich Corp.	3.18
Grainger (W.W.)	12.30
G't Lakes Chemical	2.15
Guidant Corp.	28.14
Halliburton Co.	15.19
Harley-Davidson	25.72
Harrah's Entertain.	18.68
Hartford Fin'l Svcs.	(3.28)
Hasbro Inc.	15.25
HCA Inc.	21.53
Health Mgmt. Assoc.	17.31
Heinz (H.J.)	41.11
Hercules Inc.	112.12
Hershey Foods	37.09
Hewlett-Packard	9.42
Hilton Hotels	7.01
Home Depot	19.20
Honeywell Int'l	12.52
Humana Inc.	12.99
Huntington Bancshs.	16.95
Illinois Tool Works	13.21
IMS HEALTH	130.44
Ingersoll-Rand	13.20

S&P 500 Companies	Return on Equity
Intel Corp.	14.90
Interpublic Group	(24.76)
Int'l Business Mach.	27.32
Int'l Flavors & Frag.	26.94
Int'l Game Tech.	22.24
Int'l Paper	4.63
Intuit Inc.	17.39
ITT Industries	19.70
Jabil Circuit	8.98
Janus Capital Group	35.91
JDS Uniphase	(3.27)
Jefferson-Pilot Corp.	13.74
Johnson & Johnson	30.13
Johnson Controls	16.22
Jones Apparel Group	12.94
JPMorgan Chase	14.77
KB Home	23.27
Kellogg	54.53
Kerr-McGee Corp.	9.63
KeyCorp	12.95
KeySpan Corp.	11.42
Kimberly-Clark	25.37
Kinder Morgan	14.31
King Pharmac.	16.61
KLA-Tencor	9.27
Knight Ridder	19.88
Kohl's Corp.	14.10
Kroger Co.	21.76
L-3 Communic. Hldgs.	10.78
Laboratory Corp.	16.93
Leggett & Platt	9.74
Lehman Bros. Holdings	14.04
Lexmark Int'l `A'	26.73
Lilly (Eli)	28.58
Limited Brands	11.09
Lincoln Nat'l Corp.	13.53
Linear Technology	18.12
Liz Claiborne	17.72
Lockheed Martin	15.58
Loews Corp.	7.25
Louisiana-Pacific	17.19
Lowe's Cos.	18.06
LSI Logic	(2.52)
Lucent Technologies	31.11
M&T Bank Corp.	10.72
Manor Care	13.57
Marathon Oil Corp.	16.65
Marriott Int'l	11.64
Marsh & McLennan	28.25
Marshall & Ilsley	16.34
Masco Corp.	15.74
Mattel Inc.	24.93
Maxim Integrated	19.87
May Dept. Stores	15.24
Maytag Corp.	262.88
MBIA Inc.	13.08
MBNA Corp.	20.91
McCormick & Co.	26.37
McDonald's Corp.	15.28

S&P 500 Companies	Return on Equity
McGraw-Hill	24.61
McKesson Corp.	12.80
MeadWestvaco	(1.26)
Medco Health Solutions	8.38
MedImmune Inc.	10.78
Medtronic Inc.	22.00
Mellon Financial Corp.	18.28
Merck & Co.	42.30
Mercury Interactive	11.63
Meredith Corp.	18.80
Merrill Lynch & Co.	14.50
MetLife Inc.	10.62
MGIC Investment	12.37
Micron Technology	2.52
Microsoft Corp.	15.14
Millipore Corp.	20.37
Molex Inc.	8.51
Monsanto Co.	6.47
Monster Worldwide	1.56
Morgan Stanley	15.22
Motorola Inc.	4.57
Mylan Labs.	20.16
Nabors Inds.	7.71
National City Corp.	22.69
National Semic.	16.82
Navistar Int'l	(15.03)
NCR Corp.	4.28
Network Appliance	10.31
New York Times	21.51
Newell Rubbermaid	20.23
Newmont Mining	5.57
Nextel Communic. 'A'	25.94
NICOR Inc.	12.32
NIKE Inc. 'B'	19.77
NiSource Inc.	9.39
Noble Corp.	7.63
Nordstrom Inc.	14.86
Norfolk Southern	7.58
North Fork Bancorp	26.80
Northern Trust Corp.	13.68
Northrop Grumman	4.79
Novell Inc.	1.98
Novellus Sys.	(0.24)
Nucor Corp.	2.68
NVIDIA Corp.	8.14
Occidental Petroleum	20.26
Office Depot	11.61
Omnicom Group	19.50
Oracle Corp.	33.53
PACCAR Inc.	16.21
Pactiv Corp.	21.67
Pall Corp.	14.37
Parametric Technology	(34.32)
Parker-Hannifin	11.59
Paychex Inc.	25.24
Penney (J.C.)	6.62
Peoples Energy	12.25
PeopleSoft	3.94
Pepsi Bottling Group	22.43

S&P 500 Companies	Return on Equity
PepsiCo Inc.	30.13
PerkinElmer Inc.	4.07
Pfizer Inc.	19.59
PG&E Corp.	18.45
Phelps Dodge	1.33
Pinnacle West Capital	8.14
Pitney Bowes	52.39
Plum Creek Timber	9.67
PMC-Sierra	(1.98)
PNC Financial Serv.	15.48
Power-One	(4.72)
PPG Inds.	16.97
PPL Corp.	19.57
Praxair Inc.	18.78
Price (T. Rowe) Group	17.11
Principal Fin'l Group	9.31
Procter & Gamble	40.31
Progress Energy	10.93
Progressive (Ohio)	24.75
Providian Fin'l	8.43
Prudential Fin'l	6.54
Public Serv. Enterprise	15.41
Pulte Homes	17.90
QLogic Corp.	16.42
Qualcomm Inc.	12.09
Quest Diagnostics	18.23
Qwest Communic.	73.59
RadioShack Corp.	38.80
Raytheon Co.	5.84
Reebok Int'l	15.21
Regions Financial	14.64
Reynolds American	4.25
Robert Half Int'l	0.81
Rockwell Automation	13.42
Rockwell Collins	30.97
Rohm and Haas	11.14
Rowan Cos.	(0.68)
Ryder System	10.08
SABRE Holdings	7.09
SAFECO Corp.	8.05
Safeway Inc.	22.01
Sanmina-SCI Corp.	(4.12)
Sara Lee Corp.	43.14
SBC Communications	13.20
Schering-Plough	6.13
Schlumberger Ltd.	15.48
Schwab (Charles)	10.58
Scientific-Atlanta	12.08
Sealed Air	17.66
Sears Roebuck	19.51
Sempra Energy	16.58
Sherwin-Williams	22.76
Siebel Systems	3.51
Sigma-Aldrich	19.32
SLM Corporation	35.07
Snap-on Inc.	7.78
Southern Co.	14.82
Southwest Airlines	5.89
Sovereign Bancorp	12.94

S&P 500 Companies	Return on Equity
Sprint Corp.	2.28
St. Jude Medical	21.15
St. Paul Travelers	10.01
Stanley Works	18.82
Staples Inc.	15.06
Starbucks Corp.	12.88
Starwood Hotels	3.74
State Street Corp.	13.62
Stryker Corp.	21.04
Sun Microsystems	(12.28)
SunGard Data Sys.	13.41
Sunoco Inc.	21.49
SunTrust Banks	13.69
SUPERVALU INC.	13.12
Symantec Corp.	15.66
Symbol Technologies	0.35
Synovus Financial	17.90
Sysco Corp.	35.37
Target Corp.	16.63
TECO Energy	(0.87)
Tektronix Inc.	10.69
Tellabs Inc.	(3.61)
Temple-Inland	4.87
Tenet Healthcare	(32.19)
Teradyne Inc.	(20.43)
Texas Instruments	7.08
Textron Inc.	7.60
Thermo Electron	7.87
Tiffany & Co.	14.67
Time Warner	5.61
TJX Companies	42.41
Torchmark Corp.	13.77
Toys 'R' Us	4.47
Transocean Inc.	1.00
Tribune Co.	10.23
TXU Corp.	12.08
Tyco Int'l Ltd.	9.80
U.S. Bancorp	19.28
U.S. Steel Corp.	(48.67)
Union Pacific	8.54
Unisys Corp.	18.54
United Parcel Serv.	18.89
United Technologies	20.16
UnitedHealth Group	35.58
Univision Communic.	3.04
Unocal Corp.	16.03
UNUMProvident Corp.	4.35
V.F. Corp.	20.26
Valero Energy	11.13
VERITAS Software	9.25
Verizon Communic.	21.75
Viacom Inc. 'B'	3.81
Visteon Corp.	(12.16)
Vulcan Materials	12.39
Wachovia Corp.	13.09
Walgreen Co.	16.08
Wal-Mart Stores	20.31
Washington Mutual	19.21
Waste Management	13.19

S&P 500 Companies	Return on Equity
Waters Corp.	30.95
Watson Pharmac.	9.96
Wells Fargo	18.09
Wendy's Int'l	13.42
Weyerhaeuser Co.	5.37
Whirlpool Corp.	31.82
Williams Cos.	(0.50)
Winn-Dixie Stores	(5.53)
Worthington Inds.	17.60
Wrigley (Wm.) Jr.	24.48
Wyeth	32.77
Xcel Energy Inc.	9.78
Xerox Corp.	14.25
Xilinx Inc.	10.93
XL Capital Ltd.	4.56
Yahoo! Inc.	5.45
Yum! Brands	56.07
Zimmer Holdings	9.26
Zions Bancorp.	13.37
Average	15.87

S&P Industrials	Return on Equity
Average Return	16.05
3M Company	30.47
Abbott Labs.	26.61
ADC Telecom.	(12.21)
Adobe Systems	24.98
Advanced Micro Dev.	(11.25)
AES Corp.	52.09
Aetna Inc.	11.78
Affiliated Computer	13.86
Agilent Technologies	(63.38)
Air Products & Chem.	13.13
Alberto Culver	15.26
Albertson's Inc.	10.33
Alcoa Inc.	8.58
Allegheny Technologies	(76.47)
Allergan Inc.	42.40
Allied Waste	3.04
ALLTEL Corp.	13.40
Altera Corp.	14.07
Altria Group	36.70
Amer. Power Conv.	11.63
Amer. Standard	56.76
Amerada Hess	9.47
AmerisourceBergen	11.21
Amgen	11.65
Anadarko Petroleum	14.42
Analog Devices	9.07
Andrew Corp.	0.88
Anheuser-Busch	76.55
Apache Corp.	19.27
Apollo Group `A'	35.06
Apple Computer	1.80
Applied Biosystems	13.85
Applied Materials	2.76
Applied Micro	(2.03)
Archer Daniels Midl'd	9.67

S&P Industrials	Return on Equity
Ashland Inc.	4.48
AT&T Corp.	13.34
Autodesk Inc.	15.51
Automatic Data Proc.	17.26
AutoNation Inc.	9.58
Avaya Inc.	(7.50)
Avery Dennison	20.07
Avon Products	179.04
Baker Hughes	9.85
Ball Corp.	29.40
Bard (C.R.)	19.50
Bausch & Lomb	10.09
Baxter Int'l Inc.	27.74
Becton Dickinson	19.79
Bed Bath & Beyond	20.06
BellSouth Corp.	19.47
Bemis Co.	13.82
Best Buy Co.	23.37
Big Lots Inc.	8.14
Biogen Idec Inc.	(12.40)
Biomet	22.48
BJ Services	11.40
Black & Decker	36.53
BMC Software	4.98
Boeing	9.94
Boston Scientific	18.20
Bristol-Myers Squibb	31.73
Broadcom Corp. 'A'	(8.20)
Brown-Forman 'B'	24.45
Brunswick Corp.	11.44
Burlington Resources	19.14
Calpine Corp.	1.20
Campbell Soup	74.65
Cardinal Health	19.60
Caremark RX	45.39
Carnival Corp.	8.65
Caterpillar Inc.	18.73
Cendant Corp.	14.38
Centex Corp.	25.47
CenturyTel Inc.	9.95
ChevronTexaco	19.92
Chiron Corp.	9.16
CIENA Corp.	(29.04)
CIGNA Corp.	14.78
Cintas Corp.	14.41
Circuit City Stores	(0.03)
Cisco Systems	15.29
Citizens Communic.	8.62
Citrix Sys.	18.98
Clear Channel	4.63
Clorox Co.	35.45
Coach Inc.	33.45
Coca-Cola	33.99
Coca-Cola Enterprises	15.44
Computer Associates	1.63
Computer Sciences	9.70
Compuware Corp.	3.52
Comverse Technology	(0.62)
ConAgra Foods	16.44

S&P Industrials	Return on Equity
ConocoPhillips	13.35
Convergys Corp.	15.51
Cooper Inds.	12.54
Cooper Tire & Rubber	7.16
Coors (Adolph) 'B'	13.78
Corning Inc.	2.02
Costco Wholesale	10.99
Crane Co.	13.26
Cummins Inc.	5.69
CVS Corp.	14.40
Dana Corp.	6.73
Danaher Corp.	14.72
Darden Restaurants	20.46
Deere & Co.	16.06
Dell Inc.	42.11
Delphi Corp.	22.03
Deluxe Corp.	(64.19)
Dillard's Inc.	6.02
Disney (Walt)	5.69
Dollar General Corp.	19.72
Donnelley (R.R) & Sons	15.05
Dover Corp.	10.39
Dow Chemical	13.92
Dow Jones & Co.	60.46
Du Pont	16.73
E*Trade Fin'l	10.58
Eastman Chemical	7.19
Eastman Kodak	20.28
Eaton Corp.	12.89
eBay Inc.	9.13
Ecolab Inc.	21.20
Electronic Arts	21.05
Electronic Data Sys.	6.96
EMC Corp.	4.30
Emerson Electric	15.68
Engelhard Corp.	18.39
Equifax Inc.	54.30
Express Scripts 'A'	20.99
Exxon Mobil Corp.	18.94
Family Dollar Stores	18.87
Federated Dept. Stores	11.02
First Data Corp.	35.40
Fiserv Inc.	14.32
Fisher Scientific	24.85
Fluor Corp.	16.59
Ford Motor	7.90
Forest Labs.	22.60
Fortune Brands	20.94
Freep't-McMoRan C&G	23.61
Gannett Co.	14.38
Gap (The) Inc.	21.53
Gateway Inc.	(58.69)
Gen'l Dynamics	16.83
Gen'l Electric	19.68
Gen'l Mills	20.84
Gen'l Motors	11.32
Genuine Parts	15.29
Genzyme Corp.	3.51
Georgia-Pacific Group	6.15

S&P Industrials	Return on Equity
Gilead Sciences	30.26
Gillette	61.82
Goodrich Corp.	3.18
Grainger (W.W.)	12.30
G't Lakes Chemical	2.15
Guidant Corp.	28.14
Halliburton Co.	15.19
Harley-Davidson	25.72
Harrah's Entertain.	18.68
Hasbro Inc.	15.25
HCA Inc.	21.53
Health Mgmt. Assoc.	17.31
Heinz (H.J.)	41.11
Hercules Inc.	112.12
Hershey Foods	37.09
Hewlett-Packard	9.42
Hilton Hotels	7.01
Home Depot	19.20
Honeywell Int'l	12.52
Humana Inc.	12.99
Illinois Tool Works	13.21
IMS HEALTH	130.44
Ingersoll-Rand	13.20
Intel Corp.	14.90
Interpublic Group	(24.76)
Int'l Business Mach.	27.32
Int'l Flavors & Frag.	26.94
Int'l Game Tech.	22.24
Int'l Paper	4.63
Intuit Inc.	17.39
ITT Industries	19.70
Jabil Circuit	8.98
JDS Uniphase	(3.27)
Johnson & Johnson	30.13
Johnson Controls	16.22
Jones Apparel Group	12.94
KB Home	23.27
Kellogg	54.53
Kerr-McGee Corp.	9.63
Kimberly-Clark	25.37
King Pharmac.	16.61
KLA-Tencor	9.27
Knight Ridder	19.88
Kohl's Corp.	14.10
Kroger Co.	21.76
L-3 Communic. Hldgs.	10.78
Laboratory Corp.	16.93
Leggett & Platt	9.74
Lexmark Int'l `A'	26.73
Lilly (Eli)	28.58
Limited Brands	11.09
Linear Technology	18.12
Liz Claiborne	17.72
Lockheed Martin	15.58
Louisiana-Pacific	17.19
Lowe's Cos.	18.06
LSI Logic	(2.52)
Lucent Technologies	31.11
Manor Care	13.57

S&P Industrials	Return on Equity
Marathon Oil Corp.	16.65
Marriott Int'l	11.64
Masco Corp.	15.74
Mattel Inc.	24.93
Maxim Integrated	19.87
May Dept. Stores	15.24
Maytag Corp.	262.88
McCormick & Co.	26.37
McDonald's Corp.	15.28
McGraw-Hill	24.61
McKesson Corp.	12.80
MeadWestvaco	(1.26)
Medco Health Solutions	8.38
MedImmune Inc.	10.78
Medtronic Inc.	22.00
Merck & Co.	42.30
Mercury Interactive	11.63
Meredith Corp.	18.80
Micron Technology	2.52
Microsoft Corp.	15.14
Millipore Corp.	20.37
Molex Inc.	8.51
Monsanto Co.	6.47
Monster Worldwide	1.56
Motorola Inc.	4.57
Mylan Labs.	20.16
Nabors Inds.	7.71
National Semic.	16.82
Navistar Int'l	(15.03)
NCR Corp.	4.28
Network Appliance	10.31
New York Times	21.51
Newell Rubbermaid	20.23
Newmont Mining	5.57
Nextel Communic. 'A'	25.94
NIKE Inc. 'B'	19.77
Noble Corp.	7.63
Nordstrom Inc.	14.86
Northrop Grumman	4.79
Novell Inc.	1.98
Novellus Sys.	(0.24)
Nucor Corp.	2.68
NVIDIA Corp.	8.14
Occidental Petroleum	20.26
Office Depot	11.61
Omnicom Group	19.50
Oracle Corp.	33.53
PACCAR Inc.	16.21
Pactiv Corp.	21.67
Pall Corp.	14.37
Parametric Technology	(34.32)
Parker-Hannifin	11.59
Paychex Inc.	25.24
Penney (J.C.)	6.62
PeopleSoft	3.94
Pepsi Bottling Group	22.43
PepsiCo Inc.	30.13
PerkinElmer Inc.	4.07
Pfizer Inc.	19.59

S&P Industrials	Return on Equity
Phelps Dodge	1.33
Pitney Bowes	52.39
Plum Creek Timber	9.67
PMC-Sierra	(1.98)
Power-One	(4.72)
PPG Inds.	16.97
Praxair Inc.	18.78
Procter & Gamble	40.31
Pulte Homes	17.90
QLogic Corp.	16.42
Qualcomm Inc.	12.09
Quest Diagnostics	18.23
Qwest Communic.	73.59
RadioShack Corp.	38.80
Raytheon Co.	5.84
Reebok Int'l	15.21
Reynolds American	4.25
Robert Half Int'l	0.81
Rockwell Automation	13.42
Rockwell Collins	30.97
Rohm and Haas	11.14
Rowan Cos.	(0.68)
SABRE Holdings	7.09
Safeway Inc.	22.01
Sanmina-SCI Corp.	(4.12)
Sara Lee Corp.	43.14
SBC Communications	13.20
Schering-Plough	6.13
Schlumberger Ltd.	15.48
Scientific-Atlanta	12.08
Sealed Air	17.66
Sears Roebuck	19.51
Sherwin-Williams	22.76
Siebel Systems	3.51
Sigma-Aldrich	19.32
Snap-on Inc.	7.78
Sprint Corp.	2.28
St. Jude Medical	21.15
Stanley Works	18.82
Staples Inc.	15.06
Starbucks Corp.	12.88
Starwood Hotels	3.74
Stryker Corp.	21.04
Sun Microsystems	(12.28)
SunGard Data Sys.	13.41
Sunoco Inc.	21.49
SUPERVALU INC.	13.12
Symantec Corp.	15.66
Symbol Technologies	0.35
Sysco Corp.	35.37
Target Corp.	16.63
Tektronix Inc.	10.69
Tellabs Inc.	(3.61)
Temple-Inland	4.87
Tenet Healthcare	(32.19)
Teradyne Inc.	(20.43)
Texas Instruments	7.08
Textron Inc.	7.60
Thermo Electron	7.87

S&P Industrials	Return on Equity
Tiffany & Co.	14.67
Time Warner	5.61
TJX Companies	42.41
Toys 'R' Us	4.47
Transocean Inc.	1.00
Tribune Co.	10.23
Tyco Int'l Ltd.	9.80
U.S. Steel Corp.	(48.67)
Unisys Corp.	18.54
United Technologies	20.16
UnitedHealth Group	35.58
Univision Communic.	3.04
Unocal Corp.	16.03
V.F. Corp.	20.26
Valero Energy	11.13
VERITAS Software	9.25
Verizon Communic.	21.75
Viacom Inc. 'B'	3.81
Visteon Corp.	(12.16)
Vulcan Materials	12.39
Walgreen Co.	16.08
Wal-Mart Stores	20.31
Waste Management	13.19
Waters Corp.	30.95
Watson Pharmac.	9.96
Wendy's Int'l	13.42
Weyerhaeuser Co.	5.37
Whirlpool Corp.	31.82
Winn-Dixie Stores	(5.53)
Worthington Inds.	17.60
Wrigley (Wm.) Jr.	24.48
Wyeth	32.77
Xerox Corp.	14.25
Xilinx Inc.	10.93
Yahoo! Inc.	5.45
Yum! Brands	56.07
Zimmer Holdings	9.26
	367 16.05

All Value Line Companies	Return on Equity
Average	10.98
1-800-FLOWERS.COM	8.91
21st Century Ins. Group	8.48
3Com Corp.	(13.38)
3M Company	30.47
7-Eleven Inc.	25.70
99(Cents) Only Stores	11.53
AAR Corp.	1.49
Abbott Labs.	26.61
Abercrombie & Fitch	23.54
Abgenix Inc.	(38.86)
Abitibi-Consolidated	(12.68)
ABM Industries Inc.	8.19
Accenture Ltd.	62.73
Accredo Health	12.72
ACE Limited	18.10
Active Power	(25.51)

All Value Line Companies	Return on Equity
Activision Inc.	9.33
Acuity Brands	13.38
Adaptec Inc.	2.94
ADC Telecom.	(12.21)
Adobe Systems	24.98
ADTRAN Inc.	12.45
Adv. Neuromodulation	7.06
Advance Auto Parts	25.43
Advanced Energy	(11.88)
Advanced Fibre	3.44
Advanced Micro Dev.	(11.25)
Advisory Board	16.19
ADVO Inc.	55.12
AEGON Ins. Group	8.58
Aeropostale	29.21
AES Corp.	52.09
Aether Systems	(19.02)
Aetna Inc.	11.78
Affiliated Computer	12.63
Affiliated Managers	9.84
Affymetrix Inc.	14.66
AFLAC Inc.	14.83
AGCO Corp.	8.21
Agilent Technologies	(63.38)
Agilysys Inc.	2.12
AGL Resources	14.00
Agnico-Eagle Mines	(4.86)
Agrium Inc.	19.03
Ahold ADR	(20.93)
Air Products & Chem.	13.13
Airgas Inc.	11.59
Alaska Air Group	(5.35)
Albany Int'l 'A'	11.58
Albany Molecular	10.61
Albemarle Corp.	10.27
Alberto Culver	15.26
Albertson's Inc.	10.33
Alcan Inc.	2.31
Alcatel ADR	(27.56)
Alcoa Inc.	8.58
Alexander & Baldwin	9.98
Allegheny Energy	(22.04)
Allegheny Technologies	(76.47)
Allergan Inc.	42.40
ALLETE	9.80
Alliance Capital Mgmt.	16.41
Alliance Semiconductor	(9.67)
Alliant Energy	6.73
Alliant Techsystems	28.76
Allied Capital Corp.	10.01
Allied Waste	3.04
Allmerica Financial	4.49
Alloy Inc.	(27.43)
Allstate Corp.	12.90
ALLTEL Corp.	13.40
ALPHARMA Inc.	3.96
Altera Corp.	14.07
Altria Group	36.70
Amazon.com	(16.24)

All Value Line Companies	Return on Equity
Ambac Fin'l Group	14.44
AMCOL Int'l	10.77
Amdocs Ltd.	12.21
Amer. Axle	20.64
Amer. Eagle Outfitters	11.51
Amer. Elec. Power	12.38
Amer. Express	19.57
Amer. Financial Group	7.91
Amer. Greetings	8.25
Amer. Healthways	16.43
Amer. Int'l Group	13.00
Amer. Italian Pasta	13.39
Amer. Power Conv.	11.63
Amer. Standard	56.76
Amer. States Water	5.59
Amer. Superconductor	(23.15)
Amer. Tower 'A'	(14.16)
Amer. Woodmark	16.41
Amerada Hess	9.47
Ameren Corp.	11.62
AmerisourceBergen	11.21
AmeriTrade Holding	10.79
Ameron Int'l	11.67
Ametek Inc.	16.59
Amgen	11.65
Amkor Technology	(10.06)
AMN Healthcare	32.54
Ampco-Pittsburgh	1.76
AmSouth Bancorp.	19.38
Anadarko Petroleum	14.42
ANADIGICS Inc.	(41.93)
Analog Devices	9.07
Analogic Corp.	13.88
Andrew Corp.	0.88
Andrx Group	8.45
Angelica Corp.	6.08
AngloGold Ashanti ADR	12.08
Anheuser-Busch	76.55
AnnTaylor Stores	12.15
Anteon Int'l	24.81
Anthem Inc.	12.44
Aon Corp.	14.67
Apache Corp.	19.27
Apogee Enterprises	3.32
Apollo Group `A'	24.05
Apple Computer	1.80
Applebee's Int'l	21.57
Applied Biosystems	13.03
Applied Ind'l Techn.	5.88
Applied Materials	3.35
Applied Micro	(2.03)
Apria Healthcare	31.69
AptarGroup	10.17
Aqua America	10.21
Aquila Inc.	(15.66)
Arch Chemicals	4.47
Arch Coal	(1.59)
Archer Daniels Midl'd	6.19
Ariba Inc.	(17.15)

All Value Line Companies	Return on Equity
Arkansas Best	10.87
Armor Holdings	5.75
Arrow Electronics	4.95
Arrow Int'l	13.29
Art Technology	(30.08)
ArthroCare Corp.	6.18
ArvinMeritor	14.46
Ascential Software	0.78
Ashland Inc.	4.48
Assoc. Banc-Corp	16.95
Astec Inds.	(15.88)
Astoria Financial	14.09
AT&T Corp.	13.34
AT&T Wireless Serv.	2.60
Atmel Corp.	(12.62)
ATMI Inc.	1.46
Atmos Energy	9.26
Autodesk Inc.	15.51
Autoliv Inc.	10.45
Automatic Data Proc.	18.95
AutoNation Inc.	9.58
AutoZone Inc.	138.48
Avanex Corp.	(38.74)
Avaya Inc.	(7.50)
Aventis ADR	24.24
Avery Dennison	20.07
Aviall Inc.	6.88
Avid Technology	18.97
Avista Corp.	6.59
Avnet Inc.	(2.51)
Avon Products	179.04
AVX Corp.	(7.76)
Aztar Corp.	10.03
Baker Hughes	9.85
Baldor Electric	9.47
Ball Corp.	29.40
Ballard Power Sys.	(13.85)
Bally Total Fitness	39.29
Bandag Inc.	12.61
Bank of America	22.54
Bank of Hawaii	17.04
Bank of Montreal	15.79
Bank of New York	13.72
Bank of Nova Scotia	17.41
Banknorth Group	14.93
Banta Corp.	12.15
Bard (C.R.)	19.50
Barnes & Noble	12.05
Barnes Group	10.26
Barr Pharmac.	19.30
Barrick Gold	4.95
Bassett Furniture	2.00
Bausch & Lomb	10.09
Baxter Int'l Inc.	27.74
BB&T Corp.	10.71
BCE Inc.	14.89
BEA Systems	13.99
Bear Stearns	16.23
BearingPoint	3.47

All Value Line Companies	Return on Equity
Beazer Homes USA	17.38
Beckman Coulter	20.26
Becton Dickinson	19.79
Bed Bath & Beyond	20.06
Belden CDT	0.68
BellSouth Corp.	19.47
Belo Corp. 'A'	8.14
Bemis Co.	13.82
Benchmark Electronics	7.81
Berkley (W.R.)	16.98
Berry Petroleum `A'	17.54
Best Buy Co.	23.37
Beverly Enterprises	12.09
BHP Billiton Ltd. ADR	9.36
Big Lots Inc.	8.14
Biogen Idec Inc.	(12.40)
Biomet	22.29
Bio-Rad Labs. 'A'	17.34
Biosite Inc.	16.19
Biovail Corp.	11.86
BISYS Group	15.20
BJ Services	11.40
BJ's Wholesale Club	12.29
Black & Decker	36.53
Black Box	9.50
Black Hills	8.10
Blair Corp.	5.40
Block (H&R)	37.12
Blockbuster Inc.	8.24
Blyth Inc.	17.00
BMC Software	4.98
Bob Evans Farms	11.43
Boeing	9.94
Boise Cascade	0.90
Bombardier Inc. 'B'	(8.28)
Bombay Co.	5.19
Borders Group	10.59
BorgWarner	13.87
Borland Software	2.31
Boston Beer 'A'	16.88
Boston Scientific	18.20
Bowater Inc.	(12.43)
Bowne & Co.	(2.61)
BP PLC ADR	15.15
Briggs & Stratton	15.65
Bright Horizons Family	13.75
Brinker Int'l	16.09
Brink's (The) Co.	3.67
Bristol-Myers Squibb	31.73
British Airways ADR	15.09
British Amer Tobacco ADR	16.53
Broadcom Corp. 'A'	(8.20)
Brocade Communic.	0.80
Brooks Automation	(33.70)
Brown & Brown	22.15
Brown Shoe	14.51
Brown-Forman 'B'	24.45
Brunswick Corp.	11.44
Brush Engineered	(4.35)

All Value Line Companies	Return on Equity
BT Group ADR	(60.68)
Buckeye Partners L.P.	20.05
Buckle Inc.	11.34
Building Materials	7.78
Bunge Ltd.	18.88
Burlington Coat	7.59
Burlington Northern	9.14
Burlington Resources	19.14
C.H. Robinson	22.07
Cable & Wireless ADR	(13.37)
Cablevision Sys. 'A'	13.67
Cabot Corp.	12.08
Cabot Microelectr's	13.88
Cabot Oil & Gas 'A'	22.55
CACI Int'l 'A'	10.60
Cadbury Schweppes	14.40
Cadence Design Sys.	8.89
CAE Inc.	8.10
Caesars Entertain.	4.90
Cal Dive Int'l	8.49
Calgon Carbon	2.77
California Pizza	11.60
California Water	7.87
Callaway Golf	10.45
Calpine Corp.	1.20
Cambrex Corp.	6.73
Campbell Soup	161.75
Can. Imperial Bank	14.43
Can. National Railway	12.03
Can. Pacific Railway	9.00
Canon Inc. ADR	14.78
Capital One Fin'l	18.76
Capitol Fed. Fin'l	5.32
Capstone Turbine	(41.35)
Caraustar Inds.	(3.69)
Cardinal Health	18.62
Career Education	15.93
Caremark RX	45.39
Carlisle Cos.	14.07
CarMax Inc.	17.10
Carnival Corp.	8.65
Carpenter Technology	(2.69)
Cascade Corp.	10.07
Cascade Natural Gas	8.57
Casella Waste Sys.	5.81
Casey's Gen'l Stores	8.29
Catalina Marketing	32.11
Catellus Develop. REIT	15.41
Caterpillar Inc.	18.73
CBRL Group	13.40
CDI Corp.	7.58
CDW Corp.	17.78
CEC Entertainment	18.70
Cedar Fair L.P.	27.80
Celera Genomics	(7.27)
Celestica Inc.	(9.27)
Celgene Corp.	4.11
Cen. Vermont Pub. Serv.	8.12
Cendant Corp.	14.38

All Value Line Companies	Return on Equity
CenterPoint Energy	23.84
Centex Corp.	25.47
Central Parking	(0.34)
CenturyTel Inc.	9.95
Cephalon Inc.	11.70
Ceridian Corp.	10.06
Cerner Corp.	8.65
CEVA Inc.	(0.36)
CH Energy Group	9.06
Charles River	17.25
Charming Shoppes	6.71
Chattem Inc.	24.45
CheckFree Corp.	(3.88)
Checkpoint Systems	9.12
Cheesecake Factory	12.63
Chemed Corp.	6.39
Chesapeake Corp.	3.30
ChevronTexaco	19.92
Chico's FAS	26.73
Children's Place	8.93
Chiron Corp.	9.16
ChoicePoint Inc.	16.05
Christopher & Banks	22.12
Chubb Corp.	8.84
Church & Dwight	17.89
CIENA Corp.	(29.04)
CIGNA Corp.	14.78
Cincinnati Bell	(8.76)
Cincinnati Financial	6.22
Cinergy Corp.	11.73
Cintas Corp.	14.41
Circuit City Stores	(0.03)
Cirrus Logic	(9.66)
Cisco Systems	15.29
Citigroup Inc.	18.35
Citizens Communic.	8.62
Citrix Sys.	18.98
City National Corp.	15.31
CKE Restaurants	3.62
Claire's Stores	19.08
CLARCOR Inc.	14.72
Clark Inc.	4.55
Clear Channel	4.63
Cleco Corp.	12.45
Cleveland-Cliffs	(15.30)
Clorox Co.	35.45
CMS Energy Corp.	(2.71)
CNA Fin'l	(27.05)
CNET Networks	(15.46)
CNF Inc.	12.42
Coach Inc.	34.34
Coachmen Ind.	3.48
Coca-Cola	33.99
Coca-Cola Bottling	58.51
Coca-Cola Enterprises	15.44
Cognex Co.	4.14
Cognizant Technology	21.66
Cognos Inc.	17.94
Coherent Inc.	(0.76)

All Value Line Companies	Return on Equity
Columbia Sportswear	18.74
Columbus McKinnon	(11.40)
Comcast Corp.	(0.52)
Comerica Inc.	12.93
Commerce Bancorp NJ	15.21
Commerce Bancshs.	14.23
Commercial Federal	11.78
Commercial Metals	3.72
Commonwealth Tel.	22.69
CommScope	2.48
Computer Associates	1.63
Computer Sciences	9.70
Compuware Corp.	3.52
Comverse Technology	(0.62)
ConAgra Foods	18.17
Concurrent Computer	(22.09)
Conexant Systems	0.34
Conmed Corp.	10.16
ConocoPhillips	13.35
CONSOL Energy	36.77
Consol. Edison	9.77
Constellation Brands	11.05
Constellation Energy	11.08
Cont'l Airlines	(26.38)
Convergys Corp.	15.51
Cooper Cameron	5.66
Cooper Cos.	16.30
Cooper Inds.	12.54
Cooper Tire & Rubber	7.16
Coors (Adolph) 'B'	13.78
Copart Inc.	10.88
Corinthian Colleges	28.13
Corn Products Int'l	8.34
Corning Inc.	2.02
Corporate Executive	18.13
Cost Plus Inc.	12.35
CoStar Group	4.27
Costco Wholesale	10.99
Cott Corp.	22.42
Countrywide Financial	29.35
Covance Inc.	13.50
Cox Communic. 'A'	1.57
CP Ships Ltd.	7.00
CPI Corp.	9.29
Crane Co.	13.26
Crawford & Co. 'B'	9.07
Credence Systems	(26.26)
Cree Inc.	6.51
Crompton Corp.	(7.26)
Crown Castle Int'l	(15.03)
Crown Holdings	(10.00)
CryoLife Inc.	(38.46)
CSG Systems Int'l	14.43
CSX Corp.	6.33
CTS Corp.	4.27
Cubic Corp.	12.23
Culp Inc.	7.35
Cummins Inc.	5.69
CUNO Inc.	12.86

All Value Line Companies	Return on Equity
Curtiss-Wright	10.91
CVS Corp.	14.40
Cyberonics	9.79
Cymer Inc.	(2.02)
Cypress Semic.	3.54
Cytec Inds.	12.04
Cytyc Corp.	21.55
DaimlerChrysler AG	(1.21)
Dana Corp.	6.73
Danaher Corp.	14.72
Darden Restaurants	19.41
Datascope Corp.	7.86
DaVita Inc.	53.17
Dean Foods	12.61
Deere & Co.	16.06
Del Monte Foods	16.63
Dell Inc.	42.11
Delphi Corp.	22.03
Delphi Fin'l 'A'	10.82
Delta Air Lines	160.24
Deluxe Corp.	(64.19)
Dentsply Int'l	15.38
Deutsche Telekom ADR	(0.15)
Devon Energy	15.78
DeVry Inc.	12.75
Diagnostic Products	15.33
Diamond Offshore	(2.88)
Diebold Inc.	15.22
Digene Corp.	(10.05)
Dillard's Inc.	6.02
Dionex Corp.	19.73
DIRECTV Group (The)	(0.83)
Disney (Walt)	5.69
Dixie Group	4.53
Dofasco	7.64
Dollar General Corp.	19.72
Dollar Tree Stores	17.50
Dominion Resources	11.82
Domtar Inc.	(8.98)
Donaldson Co.	21.30
Donnelley (R.R) & Sons	15.05
DoubleClick Inc.	1.30
Dover Corp.	10.39
Dow Chemical	13.92
Dow Jones & Co.	60.46
Downey Fin'l	11.09
DPL Inc.	10.81
Dress Barn	12.58
Dreyer's Grand	(12.36)
DRS Technologies	7.50
DSP Group	9.05
DST Systems	31.88
DTE Energy	9.07
Du Pont	16.73
Duke Energy	6.03
Duquesne Light Hldgs	13.57
Dura Automotive 'A'	10.16
Dycom Inds.	3.80
Dynegy Inc. 'A'	(22.15)

All Value Line Companies	Return on Equity
E*Trade Fin'l	10.58
Eagle Materials	15.23
EarthLink Inc.	10.79
Eastman Chemical	7.19
Eastman Kodak	20.28
Eaton Corp.	12.89
Eaton Vance Corp.	25.49
eBay Inc.	9.13
Echelon Corp.	5.48
EchoStar Comm. 'A'	(21.74)
Eclipsys Corp.	(39.09)
Ecolab Inc.	21.20
Edison Int'l	13.59
Education Mgmt.	13.15
Edwards (A.G.)	8.96
El Paso Corp.	4.30
El Paso Electric	6.26
Electro Scientific	(16.14)
Electronic Arts	21.05
Electronic Data Sys.	6.96
ElkCorp	12.26
EMC Corp.	4.30
EMCORE Corp.	(96.35)
Emerson Electric	15.68
Empire Dist. Elec.	7.77
Emulex Corp.	7.80
EnCana Corp.	12.19
Encore Acquisition	17.48
ENDESA ADR	14.90
Energen Corp.	15.77
Energizer Holdings	21.02
Energy Conversion	(38.47)
Energy East Corp.	8.06
Enesco Group	7.11
Engelhard Corp.	18.39
Engineered Support	21.95
ENSCO Int'l	5.15
Entergy Corp.	9.77
Enterprise Products	7.01
Entrust Inc.	(44.45)
Enzo Biochem	3.51
Enzon Pharmac.	15.47
EOG Resources	20.01
Equifax Inc.	54.30
Equitable Resources	17.97
eResearchTechnology	20.88
Ericsson ADR	3.20
ESCO Technologies	11.95
eSpeed Inc.	13.29
Esterline Technologies	7.55
Ethan Allen Interiors	15.54
Everest Re Group Ltd.	14.42
ExelixisInc.	(58.59)
Exelon Corp.	18.84
Expeditors Int'l	18.89
Express Scripts 'A'	20.99
Extended Systems	(21.90)
Extreme Networks	(9.82)
Exult Inc.	7.74

All Value Line Companies	Return on Equity
Exxon Mobil Corp.	18.94
FactSet Research	23.62
Fair Isaac	12.61
Fairchild Semic.	2.72
Fairmont Hotels	1.70
Family Dollar Stores	18.87
Fannie Mae	38.06
Fastenal Co.	14.58
Fedders Corp.	10.91
Federal Signal	8.91
Federated Dept. Stores	11.02
Federated Investors	51.65
FedEx Corp.	13.31
Ferro Corp.	5.73
Fidelity National	22.25
Fifth Third Bancorp	20.20
FileNET Corp.	3.77
First Data Corp.	35.40
First Health Group	40.35
First Horizon National	25.03
First Midwest Bancorp	17.75
FirstEnergy Corp.	5.41
FirstMerit Corp.	12.32
Fiserv Inc.	14.32
Fisher Scientific	24.85
Fleetwood Enterprises	(2.94)
Flextronics Int'l	5.37
FLIR Systems	27.11
Florida Rock	13.16
Flowers Foods	9.14
Flowserve Corp.	8.42
Fluor Corp.	16.59
FMC Corp.	11.47
Foot Locker	15.20
Ford Motor	7.90
Fording Canadian Coal	34.49
Forest Labs.	22.60
Forest Oil	8.49
Forrester Research	5.49
Fortune Brands	20.94
Forward Air	17.48
Fossil Inc.	16.13
Foundry Networks	12.71
FPL Group	12.49
Franklin Electric	17.87
Franklin Resources	11.66
Freddie Mac	36.88
Fred's Inc. 'A'	11.60
Freep't-McMoRan C&G	23.61
Frontier Oil	11.63
FSI Int'l	(34.14)
FTI Consulting	14.62
FuelCell Energy	(32.86)
Fuji Photo ADR	4.70
Fuller (H.B.)	7.58
Furniture Brands	9.78
G&K Services 'A'	8.85
Gallagher (Arthur J.)	26.73
Gannett Co.	14.38

All Value Line Companies	Return on Equity
Gap (The) Inc.	21.53
Gardner Denver	7.76
Garmin Ltd.	23.82
Gartner Inc.	10.78
Gateway Inc.	(58.69)
GATX Corp.	7.32
Gaylord Entertainm.	(3.88)
GenCorp Inc.	5.14
Genentech Inc.	7.54
Genesco Inc.	14.83
Gen'l Binding	15.52
Gen'l Cable	6.14
Gen'l Dynamics	16.83
Gen'l Electric	19.68
Gen'l Mills	24.00
Gen'l Motors	11.32
Gentex Corp.	15.39
Genuine Parts	15.29
Genzyme Corp.	3.51
Georgia Gulf	13.99
Georgia-Pacific Group	6.15
Getty Images	7.29
Gibraltar Steel	6.83
Gilead Sciences	30.26
Gillette	61.82
Glatfelter	2.90
GlaxoSmithKline ADR	53.21
Global Imaging Sys.	15.83
Global Inds.	(18.12)
GlobalSantaFe Corp.	2.50
Golden West Fin'l	18.49
Goldman Sachs	13.89
Goodrich Corp.	3.18
Google Inc.	19.55
Graco Inc.	51.06
Grainger (W.W.)	12.30
Granite Construction	11.98
Green Mountain Pwr.	10.33
GreenPoint Fin'l	25.61
Griffon Corp.	15.14
Group 1 Automotive	13.76
G't Atlantic & Pacific	(39.37)
G't Lakes Chemical	2.15
G't Plains Energy	16.43
GTECH Holdings	31.98
Guess Inc.	3.98
Guidant Corp.	28.14
Guitar Center	17.77
Gymboree Corp.	12.61
Haemonetics Corp.	10.48
Hain Celestial Group	6.23
Halliburton Co.	15.19
Hancock Fabrics	13.24
Handleman Co.	11.00
Harland (John H.)	21.90
Harley-Davidson	25.72
Harman Int'l	16.07
Harmonic Inc.	(30.61)
Harrah's Entertain.	18.68

All Value Line Companies	Return on Equity
Harris Corp.	7.63
Harsco Corp.	10.76
Harte-Hanks	15.72
Hartford Fin'l Svcs.	(3.28)
Hasbro Inc.	15.25
Haverty Furniture	9.61
Hawaiian Elec.	10.84
HCA Inc.	21.53
HCC Insurance Hldgs.	13.71
Headwaters Inc.	26.13
Health Mgmt. Assoc.	17.31
Heartland Express	15.63
Heidrick & Struggles	(64.12)
Heinz (H.J.)	41.11
Helen of Troy Ltd.	20.44
Helix Technology	(2.13)
Helmerich & Payne	1.94
Henry (Jack) & Assoc.	13.52
Hercules Inc.	112.12
Hershey Foods	37.09
Hewitt Associates 'A'	17.07
Hewlett-Packard	9.42
Hibernia Corp. 'A'	14.53
Hillenbrand Inds.	21.05
Hilton Hotels	7.01
Hitachi Ltd. ADR	1.50
HNI Corp.	13.82
Holly Corp.	9.75
Home Depot	19.20
Honda Motor ADR	16.15
Honeywell Int'l	12.52
Hooper Holmes	7.22
Hormel Foods	14.83
Horton D.R.	20.65
Hot Topic Inc.	21.45
Hovnanian Enterpr. 'A'	31.39
Hubbell Inc. 'B'	14.37
Hudson United Bancorp	24.51
Hudson's Bay Co.	2.90
Hughes Supply	5.70
Human Genome	(20.51)
Humana Inc.	12.99
Hunt (J.B.)	14.67
Huntington Bancshs.	16.95
Hutchinson Techn.	14.95
IAC/InterActiveCorp	1.38
IDACORP Inc.	4.24
Identix Inc.	(9.97)
IDEX Corp.	10.53
IDEXX Labs.	14.88
IDT Corp.	(2.91)
IDX Systems	8.43
IHOP Corp.	11.09
II-VI Inc.	10.42
IKON Office Solution	7.72
Illinois Tool Works	13.21
Illumina Inc.	(57.08)
IMC Global	(17.75)
ImClone Systems	41.57

All Value Line Companies	Return on Equity
Imperial Chem. ADR	40.66
Imperial Oil Ltd.	29.10
IMS HEALTH	130.44
Inamed Corp.	15.07
Inco Limited	6.19
Incyte Corp.	(65.61)
Independence Cmnty	13.82
InFocus Corp.	(32.18)
Informatica Corp.	4.77
Ingersoll-Rand	13.20
Ingram Micro 'A'	6.57
Input/Output	(11.66)
Insight Enterprises	8.60
Insituform Techn.	1.65
Instinet Group	(5.37)
Integrated Circuit	22.55
Integrated Device	0.81
Intel Corp.	14.90
Interactive Data	9.46
Interface Inc. 'A'	(7.12)
Intergraph Corp.	2.79
Intermagnetics Gen'l	8.46
Intermet Corp.	(50.78)
Internet Security	4.37
Interpublic Group	(24.76)
Intersil Corp. 'A'	3.85
Interstate Bakeries	11.06
Interwoven Inc.	(5.61)
Int'l Business Mach.	27.32
Int'l Flavors & Frag.	26.94
Int'l Game Tech.	22.24
Int'l Paper	4.63
Int'l Rectifier	4.79
Int'l Speedway 'A'	14.96
Intuit Inc.	15.00
Invacare Corp.	11.64
Investment Techn.	11.54
Invitrogen Corp.	3.40
Ionics Inc.	(1.40)
Iron Mountain	7.93
Itron Inc.	10.65
ITT Educational	40.27
ITT Industries	19.70
IVAX Corp.	10.14
Jabil Circuit	8.98
Jack in the Box	16.01
Jacobs Engineering	15.20
Janus Capital Group	35.91
JDS Uniphase	(13.70)
Jefferson-Pilot Corp.	13.74
JetBlue Airways	13.62
JLG Industries	5.00
Jo-Ann Stores	11.84
Johnson & Johnson	30.13
Johnson Controls	16.22
Johnson Outdoors	5.42
Jones Apparel Group	12.94
Joy Global	5.00
JPMorgan Chase	14.77

All Value Line Companies	Return on Equity
Juniper Networks	2.50
K2 Inc.	3.89
Kadant Inc.	5.58
Kaman Corp.	2.78
Kansas City South'n	1.04
Kaydon Corp.	10.92
KB Home	23.27
Keane Inc.	5.42
Keithley Instruments	(2.80)
Kellogg	54.53
Kellwood Co.	11.29
Kelly Services 'A'	0.83
KEMET Corp.	(3.65)
Kennametal Inc.	2.51
Kenneth Cole 'A'	16.90
Kerr-McGee Corp.	9.63
Kerzner Int'l Ltd.	8.10
KeyCorp	12.95
KeySpan Corp.	11.42
Keystone Automotive	10.33
Kimball Int'l 'B'	1.28
Kimberly-Clark	25.37
Kinder Morgan	14.31
Kinder Morgan Energy	11.07
King Pharmac.	16.61
Kirby Corp.	10.99
KLA-Tencor	5.89
Knight Ridder	19.88
Knight Trading Group	8.75
Kohl's Corp.	14.10
Korn/Ferry Int'l	7.85
Kraft Foods	12.10
Krispy Kreme	12.50
Kroger Co.	21.76
Kronos Inc.	16.00
K-Swiss Inc.	29.96
Kyocera Corp. ADR	6.61
L-3 Communic. Hldgs.	10.78
Laboratory Corp.	16.93
Laclede Group	11.56
Lafarge No. America	7.84
Lam Research	1.25
Lamar Advertising	(2.06)
Lamson & Sessions	9.71
Lancaster Colony	16.07
Lance Inc.	13.14
Landry's Restaurants	8.27
Lattice Semiconductor	(2.42)
Lauder (Estee)	21.06
Laureate Education	1.20
Lawson Products	9.70
La-Z-Boy Inc.	11.18
LeapFrog Enterpr. 'A'	17.50
Lear Corp.	16.85
Learning Tree Int'l	7.48
Lee Enterprises	9.73
Legg Mason	18.63
Leggett & Platt	9.74
Lehman Bros. Holdings	14.04

All Value Line Companies	Return on Equity
Lennar Corp.	23.02
Lennox Int'l	12.45
Lexmark Int'l 'A'	26.73
Libbey Inc.	20.78
Liberty Corp.	4.57
Liberty Media 'A'	(4.23)
Lilly (Eli)	28.58
Limited Brands	11.09
Lincare Holdings	27.36
Lincoln Elec Hldgs.	11.68
Lincoln Nat'l Corp.	13.53
Lindsay Mfg.	12.35
Linear Technology	13.03
Linens 'n Things	9.82
Liz Claiborne	17.72
Lockheed Martin	15.58
Loews Corp.	7.25
Lone Star Steakhouse	6.48
Lone Star Techn.	(16.51)
Longs Drug Stores	5.15
Longview Fibre	0.59
Louisiana-Pacific	17.19
Lowe's Cos.	18.06
LSI Logic	(2.52)
Lubrizol Corp.	9.52
Lucent Technologies	31.11
Luxottica Group ADR	19.45
Lyondell Chemical	(26.12)
M&T Bank Corp.	10.72
M.D.C. Holdings	20.89
MacDermid Inc.	20.34
Macromedia Inc.	8.40
Macrovision Corp.	10.99
Madden (Steven) Ltd.	12.84
Magna Int'l 'A'	13.10
Magnetek Inc.	(10.96)
Mandalay Resort Group	15.24
Manhattan Assoc.	10.82
Manitowoc Co.	4.67
Manor Care	13.57
Manpower Inc.	10.50
Manugistics Group	(42.16)
Marathon Oil Corp.	16.65
Marcus Corp.	5.22
Markel Corp.	6.82
Marriott Int'l	11.64
Marsh & McLennan	28.25
Marshall & Ilsley	16.34
Martek Biosciences	6.55
Martha Stewart	(0.81)
Martin Marietta	8.94
Marvel Enterprises	32.30
Marvell Technology	2.07
Masco Corp.	15.74
Massey Energy	(5.24)
Material Sciences	(13.09)
Matsushita Elec. ADR	1.22
Mattel Inc.	24.93
Matthews Int'l	17.52

All Value Line Companies	Return on Equity
Maxim Integrated	14.95
MAXIMUS Inc.	10.60
May Dept. Stores	15.24
Maytag Corp.	262.88
MBIA Inc.	13.08
MBNA Corp.	20.91
McAfee Inc.	11.96
McClatchy Co.	11.85
McCormick & Co.	26.37
McDATA Corp. 'A'	5.79
McDermott Int'l	22.66
McDonald's Corp.	15.28
McGraw-Hill	24.61
McKesson Corp.	12.80
MDU Resources	12.69
MeadWestvaco	(1.26)
Medarex Inc.	(52.11)
Medco Health Solutions	8.38
Media General 'A'	4.91
Medicis Pharmac.	13.74
MedImmune Inc.	10.78
Medtronic Inc.	21.76
Mellon Financial Corp.	18.28
Men's Wearhouse	10.13
Mentor Corp.	27.62
Mentor Graphics	11.23
Mercantile Bankshares	10.68
Merck & Co.	42.30
Mercury Computer Sys.	14.85
Mercury General	14.10
Mercury Interactive	11.63
Meredith Corp.	18.39
Merrill Lynch & Co.	14.50
MetLife Inc.	10.62
Mettler-Toledo Int'l	14.65
MGE Energy	11.64
MGIC Investment	12.37
MGM Mirage	9.45
Michaels Stores	15.23
Micrel Inc.	2.04
Microchip Technology	11.87
Micron Technology	(25.61)
MICROS Systems	9.84
Microsoft Corp.	17.25
Midwest Air Group	(13.75)
Milacron Inc.	56.89
Millennium Chemicals	140.47
Millennium Pharmac.	(9.72)
Miller (Herman)	17.74
Millipore Corp.	20.37
Minerals Techn.	7.29
MKS Instruments	(0.01)
Modine Mfg.	6.89
Mohawk Inds.	13.49
Moldflow Corp.	0.64
Molecular Devices	5.32
Molex Inc.	5.98
Molson Inc. Ltd. 'A'	23.20
Monaco Coach	7.75

All Value Line Companies	Return on Equity
Mondavi (Robert) 'A'	6.60
Monsanto Co.	6.47
Monster Worldwide	1.56
Moog Inc. 'A'	10.06
Morgan Stanley	15.22
Motorola Inc.	4.57
MPS Group	2.75
MSC Industrial Direct	10.20
MSC.Software	0.00
MTS Systems	12.09
Mueller Inds.	4.28
Murphy Oil Corp.	13.08
Myers Inds.	5.54
Mylan Labs.	20.16
Myriad Genetics	(15.18)
Nabors Inds.	7.71
Nash Finch Co.	11.76
National City Corp.	22.69
National Commerce Fin'l	10.31
National Fuel Gas	13.55
National Instruments	7.59
National Presto Ind.	6.28
National Semic.	16.82
Nationwide Fin'l	8.17
Nat'l Bank of Canada	16.04
Nautilus Group	15.21
Navigant Consulting	9.91
Navistar Int'l	(15.03)
NBTY Inc.	16.83
NCR Corp.	4.28
NDCHealth	16.02
NEC Corp. ADR	5.77
Neiman Marcus	10.90
Nektar Therapeutics	(28.43)
Neose Technologies	(52.18)
Netegrity Inc.	(3.67)
Netflix Inc.	5.77
NetIQ Corp.	(50.27)
Network Appliance	10.31
Neurocrine Biosci.	(12.28)
New Jersey Resources	15.61
New York Community	11.27
New York Times	21.51
Newell Rubbermaid	20.23
Newfield Exploration	15.41
Newmont Mining	5.57
Newport Corp.	(2.40)
News Corp. Ltd. ADR	6.37
Nexen Inc.	27.99
Nextel Communic. 'A'	25.94
NICOR Inc.	12.32
NIKE Inc. 'B'	18.54
NiSource Inc.	9.39
Nissan Motor ADR	24.88
Noble Corp.	7.63
Noble Energy	13.07
Nokia Corp. ADR	25.50
Noranda Inc.	(1.43)
Nordson Corp.	11.71

All Value Line Companies	Return on Equity
Nordstrom Inc.	14.86
Norfolk Southern	7.58
Norsk Hydro ADR	12.13
Nortel Networks	(64.79)
North Fork Bancorp	26.80
Northeast Utilities	6.94
Northern Trust Corp.	13.68
Northrop Grumman	4.79
Northwest Airlines 'A'	28.04
Northwest Nat. Gas	9.00
Novartis AG ADR	16.48
Novell Inc.	1.98
Novellus Sys.	(0.24)
Novo Nordisk ADR	19.25
NSTAR	13.66
Nu Skin Enterprises	24.62
Nuance Communic.	(13.64)
Nucor Corp.	2.68
NUI Corp.	(4.91)
NVIDIA Corp.	8.14
NVR Inc.	84.82
O2Micro Int'l Ltd.	8.53
Oakley Inc.	11.69
OCA Inc.	10.73
Occidental Petroleum	20.26
O'Charleys Inc.	7.38
Ocular Sciences	12.59
Odyssey Healthcare	21.56
Office Depot	11.61
OGE Energy	11.80
Ohio Casualty	4.11
Old Nat'l Bancorp	9.84
Old Republic	12.58
Olin Corp.	11.93
OM Group	(5.09)
OMI Corp.	15.85
Omnicare Inc.	12.35
Omnicom Group	19.50
On Assignment	(1.63)
ONEOK Inc.	16.64
Open Text Corp.	17.36
Openwave Systems	(56.52)
Oracle Corp.	33.53
Orbotech Ltd.	2.71
O'Reilly Automotive	12.76
Oshkosh B'Gosh 'A'	8.19
Osteotech Inc.	11.29
Otter Tail Corp.	11.65
Outback Steakhouse	16.92
Overseas Shipholding	13.50
Owens & Minor	13.07
Oxford Inds.	16.61
P.F. Chang's	12.34
PACCAR Inc.	16.21
Pacific Sunwear	18.70
PacifiCare Health	12.26
Packaging Corp.	5.28
Pactiv Corp.	21.67
Pall Corp.	15.39

All Value Line Companies	Return on Equity
palmOne Inc.	1.62
Panera Bread Co.	15.64
Papa John's Int'l	22.96
Par Pharmaceutical	31.01
Parametric Technology	(34.32)
PAREXEL Int'l	4.69
Park Electrochemical	(1.57)
Parker Drilling	(26.85)
Parker-Hannifin	7.78
Park-Ohio	12.47
PartnerRe Ltd.	14.52
Pathmark Stores	3.14
Patina Oil & Gas	29.64
Patterson Cos.	18.64
Paxar Corp.	7.69
Paychex Inc.	25.24
Payless ShoeSource	(0.01)
PC Connection	4.51
Peabody Energy	8.39
PEC Solutions	10.22
Pediatrix Medical	14.73
Pegasus Solutions	3.70
Penford Corp.	7.43
Penney (J.C.)	6.62
Pentair Inc.	11.43
People's Bank	6.36
Peoples Energy	12.25
PeopleSoft	3.94
Pep Boys	7.37
Pepco Holdings	7.70
Pepsi Bottling Group	22.43
PepsiAmericas Inc.	9.83
PepsiCo Inc.	30.13
Performance Food	9.23
PerkinElmer Inc.	4.07
Perrigo Co.	11.57
PETCO Animal	129.44
Petro-Canada	22.27
Petroleo Brasileiro ADR	36.99
PETsMART Inc.	16.63
Pfizer Inc.	19.59
PG&E Corp.	18.45
Pharmac. Product	9.03
Phelps Dodge	1.33
Philips Electronics NV	5.55
Phillips-Van Heusen	33.25
Photon Dynamics	(10.60)
Photronics Inc.	(15.62)
Piedmont Natural Gas	11.80
Pier 1 Imports	17.49
Pilgrim's Pride	12.54
Pinnacle Systems	10.56
Pinnacle West Capital	8.14
Pioneer Natural Res.	16.50
Pitney Bowes	52.39
Pixar	13.26
Pixelworks Inc.	4.63
Placer Dome	10.25
Plantronics Inc.	20.80

All Value Line Companies	Return on Equity
Playboy Enterprises 'B'	4.01
Playtex Products	76.02
Plexus Corp.	(2.82)
Plum Creek Timber	9.67
PMC-Sierra	(1.98)
PMI Group	10.56
PNC Financial Serv.	15.48
PNM Resources	6.33
Pogo Producing	20.30
Polaris Inds.	34.72
Polo Ralph Lauren `A`	12.96
Polycom Inc.	2.48
Pope & Talbot	(16.94)
Popular Inc.	17.95
POSCO ADR	15.06
Potash Corp.	4.03
Potlatch Corp.	11.30
Power-One	(4.72)
Powerwave Techn.	(10.29)
PPG Inds.	16.97
PPL Corp.	19.57
Praxair Inc.	18.78
Precision Castparts	7.90
PRG-Schultz Int'l	6.75
Price (T. Rowe) Group	17.11
priceline.com	6.99
Principal Fin'l Group	9.31
Priority Healthcare	14.75
Procter & Gamble	38.38
Progress Energy	10.93
Progressive (Ohio)	24.75
ProQuest Co.	27.38
Protective Life	9.83
Protein Design	(8.01)
Providian Fin'l	8.43
Prudential Fin'l	6.54
Public Serv. Enterprise	15.41
Puget Energy Inc.	7.03
Pulitzer Inc.	4.95
Pulte Homes	17.90
QAD Inc.	31.42
QLogic Corp.	16.42
Quaker Chemical	13.20
Qualcomm Inc.	12.09
Quanex Corp.	9.63
Quanta Services	(0.73)
Quantum Corporation	(2.17)
Quebecor World	3.32
Quest Diagnostics	18.23
Questar Corp.	14.20
Quiksilver Inc.	13.10
Qwest Communic.	73.59
Radio One 'D'	2.63
RadioShack Corp.	38.80
Ralcorp Holdings	12.96
Rambus Inc.	9.67
RARE Hospitality	12.00
Raymond James Fin'l	9.33
Rayonier Inc. (REIT)	7.02

All Value Line Companies	Return on Equity
Raytheon Co.	5.84
Reader's Digest	16.15
RealNetworks Inc.	(4.01)
Red Hat Inc.	3.42
Reebok Int'l	15.21
Regal-Beloit	6.32
Regeneron Pharmac.	(78.06)
Regions Financial	14.64
Regis Corp.	15.40
Reinsurance Group	8.53
Reliant Energy	3.68
Renaissance Learning	23.55
Renal Care Group	18.46
Rent-Way Inc.	(28.08)
Repsol-YPF ADR	15.98
Republic Services	11.31
Research in Motion Ltd	3.02
ResMed Inc.	15.96
Respironics Inc.	13.54
Reuters ADR	(15.51)
Revlon Inc. 'A'	8.63
Reynolds & Reynolds	26.03
Reynolds American	4.25
RF Micro Devices	6.54
Rite Aid Corp.	(22.67)
RLI Corp.	10.58
Robbins & Myers	5.00
Robert Half Int'l	0.81
Rock-Tenn 'A'	7.00
Rockwell Automation	13.42
Rockwell Collins	30.97
Rogers Corp.	11.58
Rohm and Haas	11.14
Rollins Inc.	25.76
Roper Inds.	9.81
Ross Stores	30.19
Rouse Co.	11.34
Rowan Cos.	(0.68)
Royal Bank of Canada	17.15
Royal Caribbean Cruises	6.58
Royal Dutch Petr.	15.69
Royal Group Ltd.	5.36
RPM Int'l	14.06
RSA Security	4.95
Ruby Tuesday	20.88
Ruddick Corp.	12.09
Russell Corp.	8.80
Ryan's Restaurant	13.95
Ryder System	10.08
Ryerson Tull	(3.77)
Ryland Group	29.31
SABRE Holdings	7.09
SAFECO Corp.	8.05
Safeguard Scientifics	(14.09)
Safeway Inc.	22.01
Saks Inc.	3.92
Salton Inc.	3.72
SanDisk Corp.	13.63
Sanmina-SCI Corp.	(4.12)

All Value Line Companies	Return on Equity
Sapient Corp.	(3.21)
Sara Lee Corp.	65.26
Sauer-Danfoss	2.82
SBC Communications	13.20
SCANA Corp.	12.05
Schein (Henry)	13.89
Schering-Plough	6.13
Schlumberger Ltd.	15.48
Scholastic Corp.	7.06
Schulman (A.)	4.16
Schwab (Charles)	10.58
Scientific-Atlanta	6.77
Scotts Co. 'A'	14.25
Scripps (E.W.) 'A'	13.58
Sea Containers Ltd. 'A'	8.00
SeaChange Int'l	3.81
Seagate Technology	48.70
Sealed Air	17.66
Sears Roebuck	19.51
SEI Investments	39.30
Selective Ins. Group	7.73
SEMCO Energy	1.74
Semitool Inc.	(9.18)
Sempra Energy	16.58
Semtech Corp.	9.97
Sensient Techn.	13.43
Sepracor Inc.	21.95
Sequa Corp. 'A'	0.07
Service Corp. Int'l	5.57
ServiceMaster Co.	19.38
Sharper Image	13.29
Shaw Commun. 'B'	(4.81)
Shaw Group	7.27
Shell Canada	13.46
Shell Transport	15.69
Sherwin-Williams	22.76
ShopKo Stores	6.62
Siebel Systems	3.51
Sierra Pacific Res.	(9.28)
Sigma-Aldrich	19.32
Silgan Holdings	48.51
Silicon Labs.	19.49
Silicon Storage	(19.65)
Sinclair Broadcast	5.41
Six Flags Inc.	(4.76)
Skechers U.S.A.	(4.64)
SkillSoft ADR	(1.51)
SLM Corporation	35.07
Smart & Final	10.27
Smith (A.O.)	9.05
Smith Int'l Inc.	10.08
Smithfield Foods	10.06
Smucker (J.M.)	9.98
Smurfit-Stone Cont.	(2.69)
Snap-on Inc.	7.78
Sola Int'l	10.30
Sonic Corp.	19.69
Sonoco Products	12.45
Sony Corp. ADR	3.80

All Value Line Companies	Return on Equity
Sotheby's Holdings 'A'	(20.78)
Sourcecorp	8.79
South Jersey Inds.	11.59
Southern Co.	14.82
Southern Union	4.74
SouthTrust Corp.	16.17
Southwest Airlines	5.89
Southwest Gas	6.10
Southwestern Energy	14.54
Sovereign Bancorp	12.94
Speedway Motorsports	12.40
Sprint Corp.	2.28
SPX Corp.	12.80
St. Joe Corp.	15.57
St. Jude Medical	21.15
St. Paul Travelers	10.01
Standard Motor Prod.	1.60
Standard Pacific Corp.	19.78
Standard Register	0.45
Standex Int'l	11.06
Stanley Works	18.82
Staples Inc.	15.06
Starbucks Corp.	12.88
StarTek Inc.	16.69
Starwood Hotels	3.74
State Street Corp.	13.62
Station Casinos	22.73
Steak n Shake	12.93
Steel Technologies	6.63
Steelcase Inc 'A'	(2.20)
Stericycle Inc.	16.57
STERIS Corp.	13.84
Stewart & Stevenson	(12.71)
Stewart Enterpr. 'A'	4.18
Stillwater Mining	(1.13)
STMicroelectronics	5.23
Storage Technology	10.93
Strayer Education	92.18
Stride Rite Corp.	9.52
Stryker Corp.	21.04
Sun Microsystems	(0.49)
SunGard Data Sys.	13.41
Sunoco Inc.	21.49
Sunrise Senior Living	12.68
SunTrust Banks	13.69
Superior Inds. Int'l	12.44
SUPERVALU INC.	13.12
SurModics Inc.	16.18
Swift Transportation	9.39
Sybase Inc.	10.45
Sycamore Networks	(5.19)
Symantec Corp.	15.66
Symbol Technologies	0.35
Symyx Technologies	3.60
Synopsys Inc.	17.57
Synovus Financial	17.90
Sysco Corp.	35.41
Taiwan Semic. ADR	14.21
Take-Two Interactive	18.73

All Value Line Companies	Return on Equity
Talbots Inc.	16.99
Talisman Energy	14.08
Target Corp.	16.63
Tasty Baking	(5.56)
TBC Corp.	12.66
TCF Financial	23.44
TDC A/S ADS	7.33
Tech Data	6.39
Techne Corp.	19.18
Technitrol Inc.	6.23
Teck Cominco Ltd. 'B'	4.11
TECO Energy	(0.87)
Tecumseh Products 'A'	3.83
Tektronix Inc.	4.51
Telecom N. Zealand	45.93
Telecom. de Chile ADR	(1.37)
Teleflex Inc.	10.27
Telefonica SA ADR	18.18
Telefonos de Mexico ADR	32.01
Telephone & Data	2.40
TeleTech Holdings	0.64
Tellabs Inc.	(3.61)
Temple-Inland	4.87
Tenet Healthcare	(32.19)
Tennant Co.	8.54
Tenneco Automotive	39.65
TEPPCO Partners L.P.	7.79
Teradyne Inc.	(20.43)
Terex Corp.	8.13
Tesoro Petroleum	11.46
Tetra Tech	13.82
TETRA Technologies	9.18
Texas Inds.	(3.32)
Texas Instruments	7.08
Textron Inc.	7.60
Thermo Electron	7.87
Thomas & Betts	5.85
Thomas Inds.	9.73
Thomson Corp.	8.46
Thor Inds.	18.95
Thoratec Corp.	1.21
THQ Inc.	7.06
Three-Five Sys.	(18.49)
TIBCO Software	1.92
Tidewater Inc.	4.29
Tiffany & Co.	14.67
Timberland Co. 'A'	27.51
Time Warner	5.61
Timken Co.	5.14
Titan Corp	8.18
TJX Companies	42.41
Toll Brothers	17.59
Tollgrade Communic.	2.15
Tommy Hilfiger	11.15
Too Inc.	10.12
Tootsie Roll Ind.	12.11
Topps Co.	6.00
Torchmark Corp.	13.77
Toro Co.	18.45

All Value Line Companies	Return on Equity
Toronto-Dominion	8.54
Total ADR	9.09
Total System Svcs.	19.24
Tower Automotive	2.13
Toyota Motor ADR	14.20
Toys 'R' Us	4.47
Tractor Supply	19.76
Trans World Entertain	4.69
Transaction Sys. 'A'	19.21
TransAlta Corp.	4.46
Transatlantic Hldgs.	12.77
TransCanada Corp.	13.15
Transmeta Corp.	(55.41)
Transocean Inc.	1.00
Tredegar Corp.	5.16
Trex Co.	16.50
Triad Hospitals	6.47
Triarc Cos. 'A'	(4.54)
Tribune Co.	10.23
Trinity Inds.	(0.86)
TriQuint Semic.	(7.71)
Trizec Properties	10.36
Tupperware Corp.	20.99
Tweeter Home	(7.06)
TXU Corp.	12.08
Tyco Int'l Ltd.	9.80
Tyson Foods 'A'	7.10
U.S. Bancorp	19.28
U.S. Cellular	3.00
U.S. Steel Corp.	(48.67)
UGI Corp.	17.56
UIL Holdings	5.99
Unifi Inc.	(0.11)
UniFirst Corp.	8.72
Unilever NV (NY Shs)	90.81
Unilever PLC ADR	90.81
Union Pacific	8.54
UniSource Energy	8.36
Unisys Corp.	18.54
United Industrial Corp.	36.89
United Natural Foods	10.78
United Online	18.71
United Parcel Serv.	18.89
United Rentals	4.05
United Stationers	12.34
United Technologies	20.16
UnitedHealth Group	35.58
Unitrin Inc.	5.30
Universal Corp.	18.26
Universal Forest	13.16
Universal Health Sv. `B'	17.72
Univision Communic.	3.04
Unocal Corp.	16.03
UNUMProvident Corp.	4.35
Urban Outfitters	16.67
USF Corp.	5.98
USG Corp.	20.02
UTStarcom Inc.	23.80
V.F. Corp.	20.26

All Value Line Companies	Return on Equity
Valassis Communic.	139.36
Valeant Pharmac.	10.19
Valero Energy	11.13
Valmont Inds.	9.73
Valspar Corp.	12.94
ValueVision Media	(3.15)
Varian Inc.	11.72
Varian Medical Sys.	23.22
Varian Semiconductor	2.43
Vectren Corp.	10.37
Veeco Instruments	1.11
VeriSign Inc.	10.57
VERITAS Software	8.86
Verizon Communic.	21.75
Vertex Pharmac.	(90.53)
Viacom Inc. 'B'	3.81
Viad Corp.	13.19
ViaSat Inc.	6.91
Vintage Petroleum	11.54
Vishay Intertechnology	1.77
Visteon Corp.	(12.16)
VISX Inc.	19.60
Vitesse Semiconductor	(10.38)
Vodafone Group ADR	(11.84)
Volt Info. Sciences	1.96
Volvo AB ADR	5.97
Vulcan Materials	12.39
Wachovia Corp.	13.09
Walgreen Co.	16.08
Wal-Mart Stores	20.31
Walter Inds.	4.17
Washington Federal	13.78
Washington Group Int'l	6.36
Washington Mutual	19.21
Washington Post	8.73
Waste Connections	12.15
Waste Management	13.19
Waters Corp.	30.95
Watson Pharmac.	9.96
Watts Water Techn.	8.60
Wausau-Mosinee	4.52
WD-40 Co.	27.85
Weatherford Int'l	6.21
WebEx Communic.	16.64
WebMD Corp.	1.27
webMethods Inc.	(2.48)
Websense Inc.	12.94
Webster Fin'l	14.16
Weight Watcher's	96.38
Weis Markets	9.48
Wellman Inc.	0.94
WellPoint Health Ntwks	17.22
Wells Fargo	18.09
Wendy's Int'l	13.42
Werner Enterprises	10.39
West Corp.	13.39
West Marine	8.50
West Pharmac. Svcs.	10.59
Westar Energy	10.33

All Value Line Companies	Return on Equity
Western Digital	59.71
Western Gas Res.	18.21
Western Wireless 'A'	7.05
Westwood One	11.96
Wet Seal 'A'	(23.05)
Weyerhaeuser Co.	5.37
WGL Holdings Inc.	14.04
Whirlpool Corp.	31.82
Whole Foods Market	13.12
Wild Oats Markets	2.05
Wiley (John) & Sons	20.67
Williams Cos.	(0.50)
Williams-Sonoma	19.53
Wilmington Trust	16.78
Wilson Greatbatch	10.32
Wind River Sys.	(5.96)
Winn-Dixie Stores	17.76
Winnebago	23.13
Wisconsin Energy	11.36
WMS Industries	(0.58)
Wolverine World Wide	12.02
Worthington Inds.	17.60
WPP Group ADR	4.10
WPS Resources	9.10
Wrigley (Wm.) Jr.	24.48
Wyeth	32.77
Xcel Energy Inc.	9.78
Xerox Corp.	14.25
Xilinx Inc.	10.93
XL Capital Ltd.	4.56
XTO Energy	19.54
Yahoo! Inc.	5.45
Yankee Candle	39.30
Yellow Roadway	6.70
York Int'l	13.34
Yum! Brands	56.07
Zale Corp.	15.23
Zebra Techn. 'A'	14.06
Zimmer Holdings	9.26
Zions Bancorp.	13.37
Zoran Corp.	2.99
Zygo Corp.	1.21
Average Return 1,592 Companies	10.98

TENNESSEE-AMERICAN WATER COMPANY
REBUTTAL SCHEDULE 5
AVERAGE NOMINAL RETURN ON STOCK INVESTMENTS 1946 - 1999

Year	S&P 500 Total Return
1999	0.2104
1998	0.2858
1997	0.3336
1996	0.2307
1995	0.3743
1994	0.0131
1993	0.0999
1992	0.0767
1991	0.3055
1990	(0.0317)
1989	0.3149
1988	0.1681
1987	0.0523
1986	0.1847
1985	0.3216
1984	0.0627
1983	0.2251
1982	0.2141
1981	(0.0491)
1980	0.3242
1979	0.1844
1978	0.0656
1977	(0.0718)
1976	0.2384
1975	0.3720
1974	(0.2647)
1973	(0.1466)
1972	0.1898
1971	0.1431
1970	0.0401
1969	(0.0850)
1968	0.1106
1967	0.2398
1966	(0.1006)
1965	0.1245
1964	0.1648
1963	0.2280
1962	(0.0873)
1961	0.2689
1960	0.0047
1959	0.1196
1958	0.4336
1957	(0.1078)
1956	0.0656
1955	0.3156
1954	0.5262
1953	(0.0099)

Year	S&P 500 Total Return
1952	0.1837
1951	0.2402
1950	0.3171
1949	0.1879
1948	0.0550
1947	0.0571
1946	(0.0807)
Average	0.1415

TENNESSEE-AMERICAN WATER COMPANY
TRA CASE NO. 04-00288
REBUTTAL TESTIMONY OF MICHAEL A. MILLER

1. Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. Michael A. Miller, 1600 Pennsylvania Avenue, Charleston, West Virginia.

2. Q. DID YOU FILE DIRECT TESTIMONY IN THIS CASE?

A. Yes.

3. Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I will address the inaccurate and unsupported accusations about the Company's motives discussed in the direct testimony of AG witness Dr. Brown. In addition, I will address the testimonies of AG witnesses Mr. Buckner, and Mr. Chrysler. I will also have limited comments about the testimony of CMA witness Mr. Gorman; and the testimonies of the City's witnesses Mr. Quarles, Ms. Madison, and Mr. Hamilton. The general topics are as follows:

1. Capital Structure
2. Capital Cost Other Than Cost of Equity
3. Return on Equity
4. Salaries and Wages
5. Incentive Plan Costs
6 AG Service Level Concerns
7. Public Fire Service and Cost of Service Allocations

GENERAL

4. Q. WHAT GENERALLY WAS YOUR REACTION TO DR. BROWN'S TESTIMONY THAT DISCUSSES THE MOTIVES OF THE COMPANY IN FILING THIS RATE CASE?

A. I was rather surprised by the unprofessional, inaccurate, and unsupported statements in Dr. Brown's testimony regarding the Company's requested Weighted Cost of Capital (WCC) and its basis for arriving at that request. Dr. Brown incorrectly accuses the Company of manufacturing a WCC in this case to meet future achieved cost of capital results that he claims RWE mandated for the RWE/Thames Water Division (including American Water and Company). This accusation also includes the assertion that the Company's expert cost of equity witness, Dr. Vander Weide, was directly influenced or persuaded by the Company to manipulate his recommendation in this case to meet those targets in the WCC requested in this case. There is also an inaccurate and unsupported accusation that all of this was done as a means to recover the premium paid by RWE for the purchase of American Water Works. (See Dr. Brown's testimony beginning at line 16, page 13 through line 19 on page 21.)

5. Q. WHAT IS THE COMPANY'S REACTION TO THESE ACCUSATIONS?

A. These accusations are a serious and unwarranted attack on the credibility of the Company and its witnesses. To my knowledge that credibility has never been questioned, and we do not take lightly the harsh and unsupported attempts by Dr. Brown to attack the Company and its witnesses in his testimony. The Company believes Dr. Brown's accusations are absolutely false.

6. Q. WHY HAS DR. BROWN TAKEN SUCH A HARSH APPROACH?

A. It appears to me that Dr. Brown has raised speculative, unsupported and erroneous accusations in order to divert attention from his unreasonable recommendation of a 7.9% ROE in this case. His recommendation of 7.9% is 200 basis points lower than the ROE the AG agreed to and the TRA adopted in the Company's last rate case proceeding just two years ago. There will be further testimony in this area in the sections below.

7. Q. PLEASE ADDRESS THE ACCUSATION ABOUT THE COMPANY'S MOTIVES IN REQUESTING A WCC OF 8.0% IN THIS CASE?

A. Dr. Brown has selectively included in his testimony a number of excerpts from the web page of RWE, and comments by the CEO of RWE, who indicated in a speech made in April, 2004 that the target Return on Capital Employed for the RWE/Thames Water Division was 8%. From these comments, Dr. Brown has wrongly concluded that executives and managers of RWE, American Water, and Tennessee American Water (including me) have manipulated this rate filing. Essentially he argues that we have requested WCC in this case in order to pull a "fast one" on the TRA and the customers of the Company in order to recover a portion of the premium paid by RWE for the American Water common stock. Dr. Brown also speculatively asserts that the Company dictated the results to a highly respected professor in the area of finance at Duke University (a gentleman who has testified before numerous regulatory commissions across the country) thus putting his reputation, integrity and credibility in question. In essence, without a shred of evidence and in complete disregard for Dr. Vander Weide's reputation, he suggests that Dr. Vander Weide manipulated his expert determination of the cost of equity in this case to meet the Company's pre-determined cost of capital.

8. Q. DID YOU AS TREASURER/COMPTROLLER OF THE COMPANY AND THE PERSON RESPONSIBLE FOR THIS RATE FILING RECEIVE ANY INSTRUCTIONS, DIRECTIONS, OR ORDERS FROM ANY PERSON WITHIN RWE, AMERICAN WATER, OR THE COMPANY TO ARRIVE AT A PRE-DETERMINED WCC IN THIS CASE?

A. Absolutely not. I have worked for American Water for nearly 29 years and I received no such instructions in the preparation of this case or any other case in which I have participated. I have been the primary Company financial witness in rate cases in Virginia, West Virginia, Kentucky, Maryland and Tennessee. In performing my job the relations I maintain with regulatory commissions and the credibility which I maintain with those regulatory commissions has been of great importance to me. In addition I hold an active CPA license and with that comes adherence to a very stringent code of ethics. If the accusations of Dr. Brown concerning my conduct were true I would not be permitted to retain that license. I

would not participate in a scheme as described by Dr. Brown because without my credibility I could not continue to appear before regulatory commissions as an effective witness nor could I continue to hold a CPA license

9. Q. HOW DID THE COMPANY ARRIVE AT THE REQUESTED WCC OF 8.0% IN THIS CASE?

A. The Company filed this case using the capital structure of Tennessee American as forecasted for the attrition year in this case. That is precisely the approach we have used in each of our past rate case filings (both before and after the RWE acquisition of the common stock of American Water). The cost of Long-term Debt and Preferred Stock were determined by averaging the cost of the portfolio of issues of Debt and Preferred Stock on the books and records of the Company, except the Company used forecasts of the interest rates for the $3.2 million, 8.25% series of LT Debt that will mature and be refinanced in June 2005. This was covered in my direct testimony and these calculations are fully supported by the books and records of the Company. There is certainly no way the Company could have manipulated these Debt and Preferred Stock issues and coupon rates which have been in place for varying lengths of time (some ten years or more) to assist in arriving at a pre-determined WCC as suggested by Dr. Brown. The cost rate for short-term debt was determined by looking at financial forecasts for the attrition year as explained in my direct testimony. The cost of equity was taken from a range of ROE determined independently by Dr. Vander Weide. It is important to note that Dr. Vander Weide's range for ROE was 10.4% to 11.4% and the Company elected to use 10.7% in its request. If the Company were only interested in increasing rates to the maximum as suggested by Dr. Brown we could have just as easily requested the top of the range, 11.4%, or at least the mid-point of the range 10.9%. The Company chose to file for a 10.7% ROE because, after reviewing numerous factors and the returns awarded in other jurisdictions across the country the Company concluded that 10.7% was a reasonable ROE on which to base its filing in this case. As shown in my direct and this rebuttal testimony the determination of WCC in this case was a product of a large number

of calculations that could not be manipulated as suggested by Dr. Brown to arrive at a pre-determined WCC.

10. Q. DO THE RATE FILINGS MADE BY OTHER AMERICAN WATER SUBSIDIARIES IN 2004 SUPPORT THE ACCUSATIONS PUT FORTH BY DR. BROWN?

A. No. I am attaching to this testimony Rebuttal Exhibit MAM-1 which indicates the WCC requested by each American Water subsidiary in 2004. There have been 11 rate filings by American Water Subsidiaries in 2004. The WCC requested in those filings range from a low of 6.95% for California American-Sacramento to a high of 10% for Texas American. As the exhibit indicates there is a wide range of WCC requested in those rate filings.

11. Q. IF A MANDATE TO FILE RATE CASES AT 8% EXISTED WOULD THERE BE THE WIDE RANGE OF REQUESTS SHOWN ON REBUTTAL EXHIBIT MAM-1?

A. No. All the requests would have been at least 8%.

12. Q. HOW WERE THE WCC ON THE EXHIBIT DETERMINED AND WHY IS THERE SUCH A WIDE RANGE OF REQUESTS?

A. The WCC for each filing was determined in the same manner as that described above for the Company. The capital structure for each subsidiary was used and the various debt and preferred issues specific to those subsidiaries were used to calculate the weighted cost of debt and preferred stock. The ROE requested was determined by an independent cost of capital expert witness and that rate applied to the common equity ratio. The reason for the wide range of WCC is that each company has a different mix of debt, preferred stock, and common stock and each company has different coupon rates for their debt and preferred stock. The results also vary because numerous cost of equity witnesses were used and the determination of the cost of equity varies depending on the expert opinion of each witness based on the facts and risks applicable to the particular company. Again I

believe Rebuttal Exhibit MAM-1 clearly indicates that no mandate of a pre-determined WCC by RWE or American Water exists.

13. Q. WOULD YOU PLEASE DISCUSS THE 8.0% ROCE DERIVED FROM THE RWE WEBSITE REFERRED TO BY DR. BROWN AND ITS RELATIONSHIP TO THE WCC REQUESTED BY THE COMPANY IN THIS CASE?

A. Yes. Dr. Brown's erroneous assertions are based on an ROCE target for the RWE Water Division. That ROCE target has absolutely no relationship to the WCC used to determine the return on rate base for setting rates of a U.S. regulated utility. In other words, Dr. Brown is comparing "apples to oranges."

14. Q. WHAT ARE THOSE DIFFERENCES?

A. First, the financial statements of RWE are prepared in accordance with International Accounting Standards (IAS). This rate filing is prepared using U.S. GAAP. The differences in the two accounting standards are substantial, and this difference alone makes any comparison invalid. Dr. Brown does not even mention that. Second, the ROCE target of 8% for the Water Division (taken from the Web Site of RWE and referred to by Dr. Brown to form the basis for his unsupported accusations) is determined by dividing the Operating Result (similar to EBIT in U.S. GAAP) by total invested capital employed. The ROCE is a pre-tax and pre-capital cost return on total capital employed. A pre-tax return on total capital employed under IAS is not comparable to the WCC applied to rate base to determine fair and just rates under U.S. GAAP. The very essence of Dr. Brown's misplaced accusations are an invalid comparison.

15. Q. WHAT IS THE COMPANY'S RESPONSE TO THE SECOND ACCUSATION MADE BY DR. BROWN AS TO DR. VANDER WEIDE?

A. Dr. Brown implies that the Company convinced or worse required its expert cost of equity witness, Dr. Vander Weide, to arrive at a predetermined cost of equity in order to reach a predetermined WCC in this case. It is inappropriate to accuse Dr. Vander Weide of such conduct. Dr. Vander Weide is a widely respected

professor from Duke University. As stated in his testimony he has testified in numerous cases as an expert witness. Dr. Brown should limit his opinion to the methods and calculations used by Dr. Vander Weide in arriving at his recommendation, but his personal attack against Dr. Vander Weide is unfounded and absolutely unwarranted.

16. Q. DID YOU OR ANY ONE IN THE COMPANY ATTEMPT TO HAVE DR. VANDER WEIDE ALTER HIS RECOMMENDATION ON THE COST OF EQUITY CAPITAL TO ARRIVE AT AN 8% WCC?

A. Absolutely not. Neither I nor anyone else associated with Tennessee American, American Water, or RWE did (nor would) consider such an action. We contracted with Dr. Vander Weide to provide his expert, independent opinion of the cost of equity expected by investors in companies of similar risk, and no attempt was made by the Company to influence his results.

17. Q. WOULD YOU ADDRESS DR. BROWN'S THIRD ACCUSATION?

A. Dr. Brown has indicated that by manipulating its WCC, including influencing Dr. Vander Weide to take part in this activity, the Company is attempting to recover from the rate payers of the Company a portion of the premium paid by RWE to acquire the common stock of American Water Works. He attempts to take the comments of the former CEO of American Water Works, James Barr, and turn that into an argument that it was the intention of RWE to recover that premium from the regulated rate payers. The facts are that Mr. Barr did not say what Dr. Brown has indicated and his accusations are false.

18. Q. HOW HAS DR. BROWN TAKEN COMMENTS BY MR. BARR AND DEVELOPED AN INACCURATE POSITION?

A. Dr. Brown alleges on page 19 of his testimony beginning on line 13 that "a chief concern was that RWE was paying more than market price for AWWC only because RWE would be in a position to raise consumer's rates later so RWE would recover the premium." The position taken by Dr. Brown in this testimony

is cited completely out of context. I was involved with the regulatory approval for the RWE acquisition of AWWC in all five states under my responsibility and know the position espoused by Dr. Brown was not contemplated. On the contrary, RWE and American Water repeatedly assured regulators in these filings that no attempt would be made to recover that premium. Dr. Brown indicates that RWE attempted to publicly make representations designed to rebut concern over its approach to closing the gap between the market value of AWWC and the premium price RWE paid for the purchase of AWWC, with the apparent inference that this was a promise that RWE did not intend to be keep. He correctly quotes from AWWC's SEC Form 8K filed May 8, 2002 that, "RWE has clearly stated strongly and consistently that it will not seek to recover the purchase premium price in rates." Dr. Brown then attempts, by referring to the comments of Mr. Barr as included on his Schedule 2, page 2 of 2, that four factors will be major issues in the regulatory approval process as proof of the intention of RWE to recover the premium. In fact, Mr. Barr was indicating that 1) foreign ownership, 2) premium recovery, 3) community involvement-customer service, and 4) People-what happens to them, would be concerns of the regulatory commissions asked to approve the transaction. Mr. Barr was giving assurances that AWWC and RWE would address those concerns in order to obtain regulatory approval for the transaction.

19. Q. DID AWWC AND RWE ADDRESS THOSE CONCERNS BEFORE THE VARIOUS REGULATORY COMMISSIONS WHERE APPROVAL OF THE TRANSACTION WAS REQUIRED?

A. Mr. Barr accurately predicted the concerns of the regulatory commissions. Each of the four items he identified were raised by the various Commissions. Obviously those concerns were addressed adequately by RWE and American Water because approval for the transaction was obtained in every jurisdiction where it was required.

20. Q. IS THE COMPANY ATTEMPTING TO RECOVER A PORTION OF THE PREMIUM RWE PAID FOR THE PURCHASE OF AWWC IN THIS CASE?

A. Absolutely not. The Company's request for a WCC of 8.0% in this case is the WCC the Company believes is the proper cost of capital that should be approved in this case. The items that make up the debt components of the capital structure are directly reflected on the Company's books and records and have not been altered for the filing of this case to arrive at some pre-determined result. The cost of equity determination was selected from the range recommended by Dr. Vander Weide. Dr. Vander Weide is a highly competent and respected expert who has no incentive to jeopardize his career, reputation and credibility in this case. As pointed out on Rebuttal Exhibit MAM-1, it is coincidence that the WCC of 8% requested in this case is the same number as the ROCE on invested capital employed under IAS accounting and only applicable to the RWE Water Division.

21. Q. HOW DID RWE INDICATE TO THE REGULATORY COMMISSIONS IT WOULD RECOUP THE PREMIUM?

A. RWE consistently indicated that it planned to offset the premium through growth of its regulated and non-regulated business in the U.S. market, **not** through rate recovery of the premium. That was true at the time of the acquisition and that remains true today.

22. Q. DR. BROWN USED INFORMATION FROM THE RWE WEB SITE TO ARGUE THAT THE ROCE ACHIEVED IN 2003 BY AMERICAN WATER AND THE GAP TO REACH THE ROCE TARGET FOR THE WATER DIVISION WILL BE BORNE BY THE RATE PAYERS. IS THAT TRUE?

A. No. It is **not** true. There are a number of reasons the target was not met in 2003. The transaction was closed in early 2003. RWE and American Water are living by their commitment not to recover the premium in rates. The gap mentioned by Dr. Brown is not solely related to the premium. Rate recovery of invested capital improvements, increases in benefit costs, weather and a number of other factors contributed to the gap and to the extent those costs are legitimately recoverable in

rates, they are being addressed in rate applications. However, premium recovery is not being requested in rate applications and recovery of that premium will be addressed through the growth efforts.

23. Q. PLEASE ADDRESS THE RWE DIVIDENDS DISCUSSED IN DR. BROWN'S TESTIMONY?

A. On page 17 of his testimony Dr. Brown says "TnAm's requested overall return of 8% is designed to support extreme growth in dividend payments." This is another example of Dr. Brown's expansive and inappropriate use of a statement from a web page to manufacture another speculative and erroneous accusation. First, the reference Dr. Brown cites applies to RWE and has no bearing on TAWC's dividend policy. Dr. Brown provides no justification or proof that a target for RWE of increasing dividends 15% annually is extreme. Dr. Brown fails to indicate that RWE is comprised of numerous subsidiaries, including segments in electric and energy, and also includes non-regulated businesses across the globe. He provides no analysis to determine the risk or cost of capital that RWE may have in other countries or in its non-regulated businesses, and he provides no analysis or proof that the dividend growth target for RWE is extreme or out of line with the investor expectations in the markets where they obtain capital. The statement about RWE's target to increase dividends annually comes from a "dividend policy" which can be met through earnings, retained earnings or a change in the retained earnings retention rate. It may be interesting to the TRA that American Water Works prior to the acquisition by RWE had a record of increasing dividends annually for over 25 years and touted that fact to potential investors in its stock. The false accusation by Dr. Brown that the RWE dividend policy is designed to increase rates or to recover a premium is not supported nor is it accurate. Dr. Brown substituted speculation and accusations for analysis. His accusation that the Company generated a pre-determined WCC is just wrong. TAWC's dividend policy has not changed since the acquisition. Dividends of TAWC are determined as 75% of earnings. Those earnings are the result of its cost of service and just and reasonable rates established by the TRA. The 8%

WCC requested in this case was the product of the level of debt and preferred stock (including the coupon rates) and the common equity of TAWC, all as recorded unaltered on the books and records of TAWC. The cost of equity was determined by an independent party who is an expert in that area. Dr. Brown has not provided **one bit of credible evidence** that disputes these facts.

24. Q. PLEASE SUMMARIZE YOUR COMMENTS ON THE ACCUSATIONS REGARDING WCC BY DR. BROWN?

A. As I have shown above, the 8% WCC requested by the Company in this case is nothing more than coincidence regarding its relationship to the target of 8% ROCE for the RWE/Thames Water Division. The obvious purpose of the attack by Dr. Brown is to divert attention from his unreasonable recommendation for ROE of 7.9%. I have carried out my duties in a professional manner and I believe the harsh approach used by Dr. Brown is unwarranted, inappropriate, and unprofessional. It is inappropriate for Dr. Brown to make such serious and untrue accusations based on his speculative, erroneous and unsupported theory of a wide ranging plan by RWE, American Water, TAWC and myself to deceive the TRA and the TAWC customers. Dr. Vander Weide will cover the deficiencies in the methods and calculations used by Dr. Brown in arriving at his recommendation for ROE, as will I later in this rebuttal testimony.

CAPITAL STRUCTURE

25. Q. HAVE YOU REVIEWED THE TESTIMONY CONCERNING CAPITAL STRUCTURE FILED BY DR. BROWN?

A. Yes.

26. Q. DR. BROWN MAKES COMMENTS THAT RWE CONTROLS THE CAPITAL FLOWING FROM AND TO THE SUBSIDIARIES? WOULD YOU COMMENT ON THESE MATTERS?

A, On pages four and five of his testimony Dr. Brown indicates that RWE controls the flow of capital to the Company, sets pricing policies and RWE is the source of capital. These comments are not reflective of the manner in which the Company obtains its debt capital. The Company obtains its capital from American Water Capital Corp. (AWCC) as indicated in my direct testimony. Since the acquisition by RWE, the S&P rating for AWCC has been elevated from A- to A based on the financial strength of RWE. This is an example of one major benefit that was identified in the petitions for approval of the acquisition. That elevation of the S&P bond rating has permitted the Company to obtain capital from AWCC at a lower coupon rate than it could before the acquisition and those savings will flow to the customers in each rate case. The Company is not bound or required to obtain its capital from AWCC. If the Company can obtain debt from the market or other sources at a lower rate it is free to do so. Likewise AWCC is not bound to obtain its capital through bond sales and ST credit facilities from RWE. AWCC is free to obtain that capital from any source it desires. However, RWE has been the purchaser of all recent bond and ST credit facilities because AWCC has not been able to attract a better rate in the market. All this means is that AWCC has been successful in obtaining LT and ST Debt at or below market rates and this creates savings that are being passed to the rate payers in this case. It is not accurate, however, as Dr. Brown portrays the situation that RWE controls all capital inflow to TAWC nor is it accurate that they set pricing policies. Their only influence on the price of the Company's debt comes from a better S&P rating to AWCC and a willingness to purchase the debt issuances of AWCC at or below market rates.

27. Q. DR. BROWN ASSERTS THAT THE COMPANY IGNORED THE RELATIONHIP WITH RWE IN DEVELOPING THE CAPITAL STRUCTURE INCLUDED IN ITS PETITION. WOULD YOU COMMENT ON THIS?

A. Yes, on page 22 of his testimony he makes that comment. As with so many areas of his testimony Dr. Brown attempts to make a play on words in an effort to discredit the Company. The fact is the Company determined the capital structure used in its filing from the books and records of the Company to determine its "stand alone" capital structure. The Company to my knowledge has never filed a rate case that included the imputation of double leverage from its parent. The reason for this is simple; the Company does not believe the use of a double leverage capital structure is appropriate for determining the cost of capital for the Company in a rate setting proceeding. This reason is much different than the one given by Dr. Brown, that the Company just ignored this relationship. Dr. Brown should look at the filings prior to the acquisition by RWE and he would see that those filings did not include the imputation of the American Water Works capital structure into its requested capital structure. The Company was not accused of ignoring its parent company relationship in those cases. Again this is an attempt by Dr. Brown to inappropriately discredit the Company without merit to his argument.

28. Q. WHAT CAPITAL STRUCTURE METHODOLOGY HAS BEEN UTILIZED BY DR. BROWN IN ARRIVING AT HIS RECOMMENDATION FOR THE COST OF CAPITAL?

A. Dr. Brown determines his recommended capital structure by starting with the Company's capital structure as filed and adjusting that capital structure for the impact of double leverage. He then goes through an analysis to determine in his terms the level of capital structure that comes from external sources (non parent company related) and the portion of the capital that in his opinion is derived from the parent company relationship. He then applies the average capital structure ratio's from his twelve water company sample group and his estimated cost rates for LT and ST Debt, preferred stock and common equity to arrive at a Weighted Average Cost of Capital (WACC) that he applies to his parent company derived portion of the capital structure. He then applies the actual cost rates for what he considers external debt to arrive at an average cost of capital for that portion of

the capital structure. He then sums the total of the external cost of capital and the parent company supplied capital to arrive at his overall recommendation for WACC.

29. Q. WHAT IS THE COMPANY'S POSITION ON THE "DOUBLE LEVERAGE" CAPITAL STRUCTURE PROPOSED BY DR. BROWN?

A. The Company does not believe that the use of a "double leverage" capital structure in setting rates for TAWC is appropriate. The Company believes one of the major components of regulation is to determine what the cost of capital for a regulated business is. Where the regulated business obtains that capital should have no bearing on the determination of a fair and reasonable cost of capital used to determine just and reasonable rates for that entity. Whether it be an individual, an institutional investor or a utility holding company that makes the equity investment should have no bearing on establishing the true cost of the capital for a regulated entity. Just because the equity investor happens to be a utility holding company does not and should not have a bearing on determining the true cost of capital for setting just and reasonable rates. The individual investing in a mutual fund or an institutional investor can just as easily use their borrowing power to obtain the funds to invest in equity capital as could a utility holding company, but in the case of rate making they are handled quite differently. The cost of equity is what the market determines it to be and should not be influenced by where the equity investor obtains the funds to purchase that equity interest. The Company believes the capital structure of TAWC as included in the Company's filing should be used in determining the cost of capital in this proceeding.

30. Q. HAS THE TRA HISTORICALLY USED A "DOUBLE LEVERAGE" CAPITAL STRUCTURE IN SETTING THE RATES OF THE COMPANY?

A. Yes.

31. Q. IF THE TRA DECIDES TO USE A DOUBLE LEVERAGE CAPITAL STRUCTURE IN THIS CASE WHAT IS THE COMPANY'S POSITION ON DR. BROWN'S CAPITAL STRUCTURE?

A. If the TRA elects to continue to determine just and reasonable rates using the a capital structure impacted by parent company capital, Dr. Brown's capital structure captures the impact of double leverage except for the items that have been calculated incorrectly by Dr. Brown, which are addressed in the rebuttal testimony of Dr. Vander Weide. Dr. Vander Weide will address some questions he has about differences in the make up of Dr. Brown's capital structures as indicated on Schedules 37 and 38 attached to Dr. Brown's testimony. Other than those differences, the only remaining issue with Dr. Brown's capital structure would be the cost of equity which will be addressed in the following sections of this testimony and in the rebuttal testimony of Dr. Vander Weide.

COST OF CAPITAL OTHER THAN COST OF EQUITY

32. Q. HAVE YOU REVIEWED UPDATED INFORMATION ON CURRENT BOND MARKET CONDITIONS SINCE YOU FILED YOUR DIRECT TESTIMONY?

A. Yes. In my direct testimony I included Exhibit MAM-2 which recapped bond market information from January 2003 through July 2004. From this information I obtained average quarterly spreads between A-rated utility bonds and 30-year T-bonds according to the Value Line Publications. From this information I determined the latest two and four quarter spreads and applied those spreads to the 2005 Value Line forecast for 30-year T-bonds to arrive at a reasonable forecast of the coupon rate for the Company's bond refinancing that will occur in June 2005, the attrition year in this case. I have updated direct testimony Exhibit MAM-2 to reflect the Value Line recap of bond rates through the latest publication date of January 7, 2005. In addition, I have updated the forecasted interest rates for the Company's June 2005 LT debt refinancing. The results of this update are shown on Rebuttal Exhibit MAM-2 attached to this testimony.

The Company would expect to issue LT debt in the amount of $3.2 million in June 2005 for a term of 30-years at a coupon rate of 6.14%.

33. Q. DO YOU HAVE FURTHER COMMENTS REGARDING REBUTTAL EXHIBIT MAM-2?

A. Yes. I will use the forecasted interest rate of 6.14% in my rebuttal concerning Dr. Brown's recommendation of an ROE of 7.9% in the following section of this testimony.

RETURN ON EQUITY

34. Q. HAVE YOUR REVIEWED THE TESTIMONY OF DR. BROWN REGARDING RETURN ON EQUITY?

A. Yes.

35. Q. DO YOU HAVE ANY GENERAL COMMENTS ABOUT THAT TESTIMONY?

A. Yes. As I read Dr. Brown's testimony, it is his opinion and belief that his analysis fully captures investor expectations and produces an ROE of 7.90%. He relies on the average of his DCF calculations and risk premium calculations to arrive at his recommendation of a 7.9% ROE. His application of the risk premium method produces an ROE of 6.8% which is only 66 basis points above the projected 30-year A-rated utility bond rates for 2005, and his recommendation for ROE of 7.9% is only 176 basis points above those bond rates. The Company does not believe the risk premiums just described are in line with the risk premium between 30-year A-rated utility bonds and the ROE's granted other water companies of similar risk in regulatory jurisdictions where American Water subsidiaries have received orders. The 7.9% ROE is manifestly inadequate. The end result of the Dr. Brown's calculations produce a result that is significantly below ROEs in all other U.S. regulatory jurisdictions for water companies of similar risk. I will address the ROEs awarded in other states and Dr. Vander

Weide will address the shortcomings of the determination of a 7.9% ROE using the DCF and risk premium calculations.

36. Q. WHAT IS THE DIFFERENCE IN REVENUE REQUIREMENT AT THE 7.9% ROE RECOMMENDED BY DR. BROWN AND THE 10.7% ROE TAKEN FROM THE ACCEPTABLE RANGE FOR ROE RECOMMENDED BY DR. VANDER WEIDE AND USED TO DETERMINE THE OVERALL COST OF CAPITAL INCLUDED IN THE COMPANY'S PETITION?

A. The differences between the Company and Dr. Brown in the capital structure and cost of equity equate to a revenue requirement difference of approximately $2.0 million. This difference demonstrates how important the ROE issue is in this case.

37. Q. HAS DR. BROWN MISSED AN IMPORTANT CONSIDERATION IN HIS RECOMMENDATION OF A 7.9% ROE?

A. I believe he has. An ROE authorized by a regulatory commission must pass the constitutional tests established in the landmark cases Bluefield Water and Hope Gas. Those cases as decided by the U. S. Supreme Court provide the basic tests for regulatory commissions in establishing a fair an reasonable return on equity. Those orders establish that the cost of equity established for a regulated entity must provide the opportunity to achieve an ROE that 1) permits the Company to attract capital, 2) maintains the financial integrity of the Company, and 3) the cost of equity capital should be authorized at a rate comparable to that of companies of similar risk. The Company believes Dr. Brown's recommendation if approved by the TRA would fail these basic tests. The rebuttal testimony will focus on the comparable earnings test by comparing the authorized equity returns of TAWC's sister companies as approved in other regulatory jurisdictions.

38. Q. WHY SHOULD THE TRA CONSIDER THE A-RATED UTILITY BONDS TO BENCHMARK THE BASIS POINTS SPREAD (RISK PREMIUM) FOR THE COMPANY'S ROE IN THIS CASE?

A. The utility business is a long-term business. Utility plant investments are recovered over many years, with useful depreciation lives for water mains, for instance, of upwards of 70 years. Many water lines and treatment plants remain in service for over 100 years. It is also a ratemaking and financial community axiom that there is greater risk associated with the ownership of the equity in a company than with the ownership of the debt of a company, based on the simple fact that the shareholders stand "last in line" in the event of dissolution. Consequently, a comparison of current rates for long-term bonds in relation to authorized ROEs provides a viable and meaningful benchmark of the extent of that additional risk as authorized by regulatory commissions for companies with the most similar risk to that of the Company. A-rated utility bonds provide the best reflection of the risk associated with equity because the interest rates on those bonds reflect the cost at which the utility could obtain that long-term debt in the market at any given time.

39. Q. YOU INDICATED EARLIER THAT YOU DISAGREE WITH THE ROE RECOMMENDATIONS OF THE AG WITNESSES. WHY?

A. The recently authorized ROEs for other American Water operating subsidiaries, when compared to the Value Line interest rate for A-rated utility bonds at the time of the Order, demonstrates just how unreasonable the AG's ROE recommendation is. This comparison is a simple method the Commission can use to benchmark the risk between A-rated utility bonds and equity recognized by Commissions in other jurisdictions in determining a fair and reasonable rate of return on equity, and to benchmark the fairness and reasonableness of the recommended ranges of ROE in this case.

40. Q. WHAT ARE THE ROEs CALCULATED USING THIS APPROACH?

A. On Rebuttal Exhibit MAM-3 I applied the projected 2005 30-year A-rated utility bond rate of 6.14% (as determined at the bottom of Rebuttal Exhibit MAM-2) and then added the average spread (risk premium) of the American Water subsidiaries authorized return on equity to produce an ROE of 10.25%. This is very close to

the range provided by Dr. Vander Weide. The Company performed this same analysis based on information available at the time it filed this case and it was one of the prime factors in the Company's decision to request an ROE of 10.7% in this case.

41. Q. WHY SHOULD THE TRA REVIEW THE LEVEL OF ROE AUTHORIZED BY OTHER REGULATORY JURISDICTIONS?

A. The Company does not obtain its equity capital in the open market, but obtains that equity from American Water. Each of the rate of return witnesses recognizes this fact and utilizes a proxy group of publicly-traded water companies to determine a market expectation of ROE. There is an incredibly wide range of recommendations from the cost of capital witnesses for the Company and the AG in this case. If the Company (as would any company) is to be able to attract capital when needed to maintain facilities and improve service it must have the opportunity to achieve an ROE that is comparable to companies with similar risk. I believe it is appropriate, if not essential, that the TRA review all available data on ROE, including the level of ROE that other regulatory commissions are recognizing as fair and reasonable based on the most current data. All of these subsidiaries obtain their equity capital from the same parent, all obtain their debt from AWCC, all have similar capital structures, and all face similar financial and business risks. These returns can, at the very least, provide a frame of reference and comparison for the TRA to benchmark its determination of a fair and reasonable return on equity in this case.

42. Q. YOU INCLUDED THE RECOMMENDED ROE OF THE AG IN THIS CASE ON THIS SCHEDULE. HOW DO THOSE RECOMMENDATIONS COMPARE?

A. I included those ROEs to show how low they are. The recommended 7.9% ROE of the AG to the calculated 2005 A-rated utility bonds produces a spread of only 176 basis points, far below that recognized in any other jurisdiction in which American Water operates. The AG's recommendation is 235 basis points below

the average spread produced from the latest authorized ROE for all American Water Subsidiaries receiving Commission orders since 2001. The Company believes an ROE spread to current A-rated utility bond projections this far below other regulatory jurisdictions is unreasonable and out of touch with market expectations.

43. Q. IS THE COMPANY ASKING THE TRA TO USE THE METHOD JUST DESCRIBED TO DETERMINE THE ROE?

A. No. The Company is only asking that the TRA consider the information as a benchmark in determining the reasonableness of the ROE it establishes in this case and to point out the unreasonableness of the AG's recommended ROE. The Company believes that a comparison of other Commission established risk premiums between ROE and the A-rated utility bonds at the time the ROE was established, when compared to the current bond market expectations, provides a valuable point of reference for the TRA. This is particularly true when the comparative companies compete for the same equity capital, obtain their capital from the same source, and have very similar business and financial risk.

44. Q. HOW DOES THE AG'S RECOMMENDATION ON ROE IN THIS CASE COMPARE TO THE ROE APPROVED BY THE COMMISSION IN THE COMPANY'S LAST RATE CASE, CASE NO. 03-00118?

A. The Company was authorized an ROE of 9.9% in its last rate case. I have looked at the bond market conditions at the time the settlement in that case was reached and compared the current bond market conditions to the bond market conditions in July 2003 and find no justification for a reduction from the currently authorized ROE of 9.9%. In fact the numbers support an increase in authorized ROE.

45. Q. WOULD YOU DEMOSTRATE THE FACTORS THAT CONTRIBUTE TO YOUR BELIEVE THAT AN INCREASE IN ROE IS WARRANTED WHEN THE CURRENT BOND MARKETS ARE COMPARED TO THOSE AT THE TIME OF THE ORDER IN THE PRIOR RATE CASE?

A. Yes. I have prepared a schedule to demonstrate this fact and attached that schedule to this testimony titled Rebuttal Exhibit MAM-4.

46. Q. PLEASE EXPLAIN THIS EXHIBIT?

A. The first section compares the interest rates as published by Value Line for 30-year A-rate utility bonds, 10-year A-rated corporate bonds, 30-year T-bonds and 10-year T-bonds at the time the settlement was reached in the Company's previous rate case to the 9.9% ROE approved by the TRA. In the second section I then applied those equity to bond spreads to the most current Value Line rates for those same bonds. The results produced ROE's ranging from 10.68% to 9.97% and an average of the four ROE results of 10.35%. The last section compares the Value Line forecast at the time of the last case for 30-year T-bonds in the attrition year for that case (2004) to the ROE of 9.9% approved in that case. That spread of 4.8% is then applied to the current Value Line forecast for 30-year T-bonds in the 2005 attrition year used in this case. This calculation resulted in an ROE of 10.20%.

47. Q. YOU HAVE PROVIDED SEVERAL CALCULATIONS THAT IN THE COMPANY'S OPINION SHOULD BE USED TO BENCHMARK THE ROE THE TRA ULTIMATELY DECIDES IN THIS CASE. WOULD YOU RECAP THOSE CALCULATIONS?

A. Yes. The following schedule will recap the ROE results from Rebuttal Exhibits MAM-3 and MAM-4.

Table MAM-1

Rebuttal Exhibit MAM-3:	
Average of AW subs. Auth. ROE	10.24%
ROE using current bond information and AW avg. spread	10.25%
Rebuttal Exhibit MAM-4:	
Avg. ROE based on current bond market	10.35%
ROE based on current 2005 bond forecast	10.20%
Average of four calculations	**10.26%**

48. Q. WHAT DO YOU BELIEVE THE TABLE ABOVE INDICATES?

A. I believe the above table if viewed by any prudent investor would indicate that the cost of equity based on a reasonable risk premium applied to the current bond market conditions and forecasts for the 2005 attrition year in this case would indicate an ROE of at least 10.26% as reasonable. I believe this table also indicates that when current bond market conditions are compared to those at the time of the Company's previous case an increase in the ROE authorized in this case is warranted and certainly no reduction of 200 basis points in the currently authorized ROE of 9.9% as recommended by Dr. Brown is warranted. I believe that this table also indicates that Dr. Brown's recommendation of a 7.9% ROE is unreasonable and could not pass any of the basic tests for a fair and reasonable ROE established in the **Bluefield** and **Hope** cases, particularly the test of comparable earnings to companies of similar risk.

49. Q. HAVE YOU REVIEWED THE TESTIMONY OF CMA WITNESS GORMAN REGARDING THE COST OF EQUITY?

A. Yes.

50. Q. WHAT POSITION DOES THE COMPANY TAKE ON HIS TESTIMONY?

A. I will leave the rebuttal of the specific problems in Mr. Gorman's calculations to Dr. Vander Weide and limit my discussion on his testimony to the end results analysis. On page 3 of his testimony Mr. Gorman says, "I show in my testimony that a current estimate of TAWC's cost of capital still supports a 9.9% return, and market evidence also shows that there has been little to no change in capital market cost since TRA's last rate decision for TAWC. All of this supports no change to the Company's currently authorized return on equity." I would indicate that Mr. Gorman indicates he sees little if any change in the bond markets since the Company's last rate case Order of June 25, 2004. I would point out the 9.9% ROE currently authorized was placed into effect on August 1, 2003, based on a partial settlement and TRA directive in July 2003. If Mr. Gorman had compared the bond markets at the time the 9.9% ROE was authorized (July 2003) he would

have obtained a higher recommendation. I do agree with Mr. Gorman on one point, the current market evidence does not support a reduction in the authorized ROE at all, which is a sharp contrast to the **unreasonable** reduction of 200 basis points recommended by Dr. Brown.

OPERATING EXPENSES – GENERAL OBSERVATIONS

51. Q. DO YOU HAVE A GENERAL OBSERVATION TO MR. BUCKNER'S APPROACH TO DETERMINING THE APPROPRIATE LEVEL OF OPERATING EXPENSES FOR SETTING RATES IN THIS CASE?

A. Yes. The AG appears to ignore the fact that Tennessee regulatory rules and regulations permit the use of a forecasted test-year through the use of an attrition year that would coincide with the time the rates from this case will be effective. In this case the attrition year is 2005. The AG provides little if any justification or proof that the Company's forecasted operation expenses for the attrition year are not reflective of the costs that will be present during that period. The AG readily accepts the Company's going-level revenues which reflect the adjustment of Dr. Spitznagel to normalize sales for weather, and the Company's adjustments to reflect customer growth in the attrition year. Both of these adjustments serve to significantly increase the going-level water sales and revenue as indicated in Mr. Diskin's testimony. However, the AG position gives no consideration to the production expenses directly related to those specific adjustments nor does it recognize numerous other appropriate adjustments to reflect known and measurable adjustments that are appropriate for determining proper attrition year expense levels. The AG's position on numerous operating expenses in this case do not reflect a reasonable adherence to the regulatory principle of matching revenue and expenses. The AG is attempting to take a "snap shot" of the Company during a period of significant change and impose an unfair and detrimental revenue requirement for the Company in this case. As discussed previously, and will be touched on in the following section of this testimony regarding the service concerns raised by Mr. Chrysler, the AG witnesses have

attempted to use that snap shot and selective cites from the RWE web site and AWWC SEC filings to bring forth speculative and erroneous accusations about TAWC, American Water and RWE's motives, credibility, and commitment to service and customer satisfaction.

52. Q. ON WHAT DO YOU BASE THIS BELIEF?

A. AG witness Buckner readily admits on pages 3 and 4 of his testimony that he has limited his recommendation to the actual expenses as of September 30, 2004 for the level of employees and 12 other expense categories. Later in his testimony he takes the same approach regarding property and gross receipts taxes. The testimony of TAWC witnesses Watson and Diskin will address the problems with Mr. Buckner's approach, as will the following sections of my testimony.

SALARIES AND WAGES

53. Q. MR. BUCKNER ELIMINATES ELEVEN POSITIONS WHICH WERE INCLUDED IN THE COMPANY'S FILING. WHAT IS THE COMPANY'S POSITION ON THIS ADJUSTMENT?

A. We disagree with the position. Mr. Bucker limits his salary and wage recommendation to that generated by the level of employees which the Company had as of September 30, 2004. This does not reflect the number of employees that will be required to continue adequate service levels during the attrition year. Mr. Watson, V.P and General Network Manager for TAWC, the person responsible for the day to day operations, will address the need and specific service issues related to those eleven positions.

54. Q. WHAT REASONING DOES MR. BUCKNER USE TO JUSTIFY HIS ADJUSTMENT?

A. Mr. Buckner again uses speculation to come to an incorrect conclusion that "there appears to be a pattern of petitioning for funding by the American Water Companies for vacant positions in their cost of service." He goes on to assert,

"this systematic **bloating** of employee levels by TAWC should be disallowed." He then asserts that the Company's employee level is based on speculation. In attempting to justify his assertions he refers to recent orders of American Water subsidiaries in Indiana and West Virginia.

55. Q. WOULD YOU ADDRESS THE ASSERTION ABOUT A PATTERN BEING ESTABLISHED BY AMERICAN WATER?

A. Yes. Mr. Buckner is basing this on nothing but speculation, he provides no credible evidence. Parts of his statements are incorrect concerning orders from other jurisdictions, and his conclusions are primarily based on the misleading "snap shot" period during which the Company has transitioned through unprecedented change. Mr. Buckner appears to give no consideration to the impact of that change process or the explanations the Company has provided the AG during the discovery process. The changes the Company have undergone since the beginning of 2003 are covered in my direct testimony and will also be covered by Mr. Watson in his rebuttal testimony concerning their specific impacts on TAWC. Those changes include movement of the call center and billing functions to a National Call Center, transition of transactional accounting functions (not financial statement or rate case preparation responsibility) to the National Shared Service Center. The purpose of those two transitions was to take advantage of the economies of scale of American Water by greatly expanding service and customer availability to that service at a lower cost to the rate payers. Those subjects were addressed by the Company in the 2003 rate case (in my testimony), not contested by the AG, and were approved by the TRA. In addition, the Company has gone through a realignment of the Regional Offices of American Water and a restructuring that included alignment of the various functions in TAWC (distribution, production, water quality, outside customer service, engineering, etc.). Those two transitions were undertaken to again take advantage of the economies of scale available to American Water and to improve service to the customers and rate payers at a lower cost. I addressed this issue in my direct testimony and will not repeat the specifics here, but as indicated in my

direct testimony the regional alignment and restructuring have generated a synergy (savings) of $400,000 which is being passed to the rate payers in this case.

56. Q. HAVE THESE CHANGES IMPACTED TAWC DURING THE PERIOD THROUGH SEPTEMBER 2004?

A. Of course, as with any company, change of this type requires a transition period where many aspects of the Company must adjust. This does not happen overnight. Mr. Buckner chooses to use this period of change to attempt to project the operating expense levels that will be present during the 2005 attrition year in this case, the timeframe on which the TRA is being asked to establish fair and just rates in this case. Mr. Buckner's approach would significantly **impair** the Company's ability to provide the level of service that TAWC is known for, has maintained during a period of significant change only due to the extraordinary effort of its employees, and has no stronger commitment than to continue in the future.

57. Q. WOULD YOU PLEASE ADDRESS THE COMMISSION ORDERS TO WHICH MR. BUCKNER REFERS?

A. I did not participate in the Indiana American case, but have read the Order. My understanding of that case is that it was based on an historical test-year and the circumstances and timing were very different than those present in this case. I was, however, directly involved in the West Virginia American case and was the person responsible for preparing and filing the case, was a primary witness, and represented the Company in the discussions that lead to the settlement agreement in that case which was approved by the Commission. West Virginia uses an historical test-year, adjusted for known and measurable changes. The Commission staff did limit their initial recommendation to the historical test-year employee level. However, the initial Staff recommendation was for a rate increase of $4.3 million and final settlement with the Staff, CAD and several other interveners provided a $10.0 million increase. The stipulation settlement

included an exhibit from the staff that indicates a significant increase in the O&M expenses from the staff's initial position. Mr. Buckner's assertion in his testimony about the initial W.Va. staff position is misleading and inaccurate when viewed from the final outcome of that case.

58. Q. HOW DID THE COMPANY DETERMINE THE PROPER LEVEL OF EMPLOYEES TO INCLUDE IN ITS PETITION?

A. This was addressed in my direct testimony under the subtitle "Management Fees" beginning on page 14. TAWC reviewed its operations as they existed prior to the restructuring and determined the level of employees in its supervisory category that would be required to carry out the high level of service for which it is known. The result of that analysis was that TAWC would require 106 employees to maintain its historical service levels after the restructuring including 85 union positions. I also indicated in my direct testimony that in the 2003 rate case TAWC was authorized 119 employees and that the reduction to 106 had been accomplished primarily through retirement and attrition, and that some of the functions previously present at TAWC were now being handled by Service Company employees in order to again to take advantage of available economies of scale, which led to the net savings of $400,000 mentioned previously.

59. Q. MR. BUCKNER MENTIONS THE CHANGE FROM 119 EMPLOYEES TO THE 106 EMPLOYEES REQUESTED BY THE COMPANY. WOULD YOU COMMENT ON THAT?

A. It appears Mr. Buckner bases his assertion about systematic bloating of employee levels on this change. He appears to indicate that the Company used those vacancies to inflate its earnings. This is not accurate. During the transition there were expenses associated with the transition, other costs have changed during the period between rate filings, as did revenue levels. The Company did not achieve an ROE in excess of that authorized by the TRA in the 2003 rate case as evidenced by the Table MAM-2 below. Mr. Buckner's assertion about the bloating of employees is not accurate.

Table MAM-2

	2003	2004
ROE Authorized	9.90%	9.90%
ROE Achieved	8.70%	7.87%

60. Q. WHAT LEVEL OF EMPLOYEES IS MR. BUCKNER RECOMMENDING?

A. He is recommending a level of 95 employees. That level includes only 74 union positions. The 11 union vacancies eliminated by Mr. Buckner are the result of the circumstances specific to the restructuring at TAWC, not a "systematic bloating" of employee levels. Mr. Watson will cover in detail the efforts by TAWC to act in the best interest of its employees by providing the opportunity for impacted employees to bid on open or restructured positions, and how this led to a very arduous and lengthy process of bidding prescribed by the TAW union contracts and the impact of effects bargaining with the union. This was the reason for the 11 vacancies at September 30, 2004 not the reasons speculatively put forth by Mr. Buckner.

61. Q. MR. BUCKNER ASSERTS THAT THE COMPANY'S EMPLOYEE LEVEL IS SPECULATIVE. IS HE CORRECT?

A. No. The level of 106 employees included in the Company's petition is the result of a tremendous amount of thought and work to determine the level of employees necessary to meet the Company's mission of service after the restructuring. The Company has never had any intent other than to fill those positions once the lengthy union bidding process was complete. The employee level of 106 reflected the number of employees who will be required to meet the service mission during the attrition year in this case. Mr. Watson will provide rebuttal testimony about the Company's efforts to fill those positions and the current status. In summary, offers have been extended to fill all 12 positions, they will be hired as temporary employees until the final physicals and other final screening

and hiring processes are completed at which time they will be added to the payroll of TAWC.

62. Q. IS THERE A CONTRADICTION IN THE TESTIMONY OF THE AG WITNESSES BUCKNER AND CHRYSLER IN THIS AREA?

A. I believe there is. While Mr. Buckner recommends elimination of 11 union positions which the Company has expressed are critical to continuation of the superior service record, Mr. Chrysler expresses concern over the Company's commitment to service levels and customer satisfaction in the attrition year. The AG's witnesses can't have it both ways.

INCENTIVE PLAN COSTS

63. Q. WHAT ADJUSTMENTS TO THE COMPANY'S FILING DID THE AG MAKE RELATED TO INCENTIVE PLAN COSTS?

A. The AG witness eliminated the entire request for the Annual Incentive Plan (AIP). The AG cited several reasons for this adjustment all of which the Company believes are speculative. Mr. Buckner incorrectly indicates that most of goals regarding payment under the AIP relate to financial targets and goes on to indicate that there is no mechanism for the rate payers to share in the benefits that inure from the AIP. He also incorrectly asserts that the AIP is circular in that it only rewards the TAWC employees for merely increasing the rates charged to rate payers.

64. Q. DOES THE COMPANY AGREE WITH THE AG'S RECOMMENDATION TO ELIMINATE THE AIP COST?

A. No. Mr. Buckner's reasoning does not comport to the basic principles of rate making. He is incorrect when he indicates only the shareholders benefit from the strong financial performance of the Company. The AIP is structured to incorporate a culture in management to continually strive to seek out efficiencies and cost saving measures whenever possible. It is not true in the regulated

environment that only the shareholders benefit when strong financial performance is obtained. As the Company continues to operate more productively and efficiently, the savings from those efforts offset other cost increases until other factors (such as, capital investment, inflation, etc.) drive the need to increase rates. Once new rates are approved those savings then are flowed directly to the customers. Efficiency and productivity gains, and associated cost savings promoted by the incentive plans, will directly benefit the customers in that they help offset increased costs in other areas of the business and prolong the need to raise rates. Once a rate increase is necessary it will be less than what the need to increase rates would have been if the efficiency and productivity gains, and associated cost savings, had not been made. The customers are the ultimate beneficiaries of the financial benefits that accrue from the strong financial performance of the Company.

It would be inappropriate to pass the savings generated to the rate payers from cost savings initiatives but deny the Company recovery of the costs that contribute to generation of those savings. If this theory of regulation were routinely imposed on Companies it would be a disincentive for any regulated company to pursue efficiency and productivity gains if the cost to generate those savings were not recovered by the Company. The Company does not believe that is the message that the Authority wishes to send to the utility companies operating in Tennessee.

65. Q. ARE THERE OTHER JUSTIFICATIONS FOR THE RATE RECOVERY OF INCENTIVE TYPE COMPENSATION?

A. Yes. Incentive pay plans should not be viewed as a form of entitlement in utility operations; they should be viewed as an integral part of the overall compensation package. It is the norm in most utility compensation packages. One of the goals of the incentive plans is to provide a competitive overall compensation package in order to attract and retain employees possessing the high qualifications and technical skills required to manage and operate a major utility. The customers

benefit in the form of enhanced service and lower cost when the Company is able to attract, motivate and retain employees with high qualifications and management skills.

66. Q. YOU SAY THAT THE PRESENCE OF INCENTIVE PLANS IS PREVALENT IN THE UTILITY INDUSTRY. WHAT SUPPORT DO YOU HAVE FOR THIS?

A. I am attaching a report issued by the firm of Towers/Perrin, the Company's actuary as Rebuttal Exhibit MAM-5. I must note that copies of incentive plans of other utilities are not easily accessible to the Company, and many companies do not share those plans for public knowledge. The Company was able to obtain from one of its consultants, Towers Perrin, a copy of a recap of the information they had obtained in a survey they performed of various regulated entities. Exhibit MAM-5 is a letter issued to the Company recapping the survey results regarding the prevalence of incentive plans in the utilities responding to the survey. The letter indicates that 99% of the utilities responding had incentive pay plans for their executives and 95% of the utilities had incentive pay plans for their middle management and professional employees. The Company believes this data strongly supports the Company's position that if it is to attract and retain highly qualified and capable employees, the AIP is an important aspect of its overall compensation plan.

67. Q. WHAT IS THE COMPANY'S POSITION ON MR. BUCKNER'S ASSERTION THAT IN SOME YEARS THERE IS NO PAYMENT OF THE AIP?

A. I agree with him on this point. The AIP is not intended to be, nor is it, an employee give away. There are aggressive goals concerning financial and operation results, including challenging individual goals for each employee to assure their contribution to service goals. Given the potential for annual fluctuation in the AIP cost, depending on the extent the Company and each individual meets the goals established for payment of the AIP, the use of a three-year average would be reasonable. When the ability to predict costs due to annual

fluctuations may be difficult, the use of historical averages in the rate making process is appropriate for consideration. The Company believes it would be appropriate for the TRA to use a three-year average of the AIP costs or to award half of the AIP requested in this case even in a forecasted test-year filing. The three-year average for the years 2002-2004 per the books and records of the Company is $53,853 compared to the Company's requested AIP cost of $105,157. The TRA has approved a cost of service, including AIP, in prior cases and the Company does not believe it is appropriate to eliminate the AIP cost entirely as suggested by Mr. Buckner.

AG SERVICE LEVEL CONCERNS

68. Q. MR. CHRYSLER RAISES CONCERNS ABOUT TAWC, AMERICAN WATER, AND RWE'S COMMITMENT TO CONTINUED SUPERIOR SERVICE, WATER QUALITY AND CUSTOMER SATISFACTION. DO YOU AGREE?

A. No. Mr. Chrysler is consistent with Dr. Brown and Mr. Buckner in taking events from a period of transition and arriving at a speculative conclusion. On page 3 of his testimony he says, "The CAPD is very concerned that recent merger and acquisition activity, changes in management philosophy....." He goes on to say on page 13, beginning on line 246, "we now find ownership that seems driven more by profits and financial goals. Top-down directed annual financial goals, annual rate requests, and an end to the customer service surveys reflect a company less interested in quality of service for a World Class Water Company than its predecessor, American Water Works." Mr. Chrysler does not provide one bit of evidence for this speculative conclusion, other than the Company indicating no customer surveys were conducted in 2003 and 2004.

69. Q. HAS TAWC'S MANAGEMENT PHILOSOPHY REGARDING SERVICE AND CUSTOMER SATISFACTION CHANGED?

A. No. System wide customer satisfaction surveys were not performed in 2003 and 2004, but that is no reason for Mr. Chrysler to speculate that the philosophy has changed. The firm who performed those studies for American Water ceased doing business in 2003. During this time the Company accomplished a major realignment and restructuring, and a great many other changes. It is a disservice to the loyal and dedicated employees of TAWC, who have made extraordinary efforts during this period of change to maintain the high level of service, for Mr. Chrysler to make such speculative claims.

70. Q. WHAT HAS BEEN THE PRIMARY FOCUS OF THAT CHANGE EFFORT?

A. In each and every meeting I attend on the change initiatives the only focus has been on structuring the Company to being more responsive to customers needs, improving the service we provide, and adapting to meet the needs of the customer. As indicated in my direct and this rebuttal testimony; the realignment of the regions, restructuring along functional lines, moving to the shared service center and moving to the call center have all been geared toward providing improved service to the customers and rate payers at a lower cost. That does not sound to me like a change in management philosophy, and in fact it is not as suggested by Mr. Chrysler.

71. Q. WILL THERE BE CUSTOMER SURVEYS GOING FORWARD?

A. It is my understanding that the Company is in the process of developing those surveys with a consultant. When those surveys are completed and the results obtained, the Company does not object to providing those results if directed to do so by the TRA.

72. Q. HAS SERVICE DECLINED IN THE TRANSITION PERIOD YOU DESCRIBE ABOVE?

A. No. Mr. Watson will cover several areas where preventative maintenance and other service areas need to be done. While those types of activities can be delayed on a short-term basis without impacting service, the system integrity can

not be maintained over the longer term without adequate attention. This is why the Company is so concerned about Mr. Bucker's recommendation to eliminate 11 critical union positions. As stated earlier, the Company has been able to maintain service through this transition period through the loyal and dedicated work of its employees, but this can not go on indefinitely. That is why the Company has offered employment to 11 people as of January 14, 2005 and as soon as possible after the union bidding process was complete.

73. Q. WOULD YOU ADDRESS THE ASSERTION BY MR. CHRYSLER CONCERNING ANNUAL RATE FILINGS?

A. This assertion is unfair. The Company last placed rates into effect in August 2003 or 19 months from the time rates in this case will be effective. Prior to the 2003 rate case, the Company has not had an increase in rates since 1996, a period of seven years. I believe this clearly points out that the Company does not have a history of annual rate filings. As stated in response to question 59 above (Table MAM-2) and my direct testimony, it is the capital spending and return on that investment (including additional depreciation expense) and expense increases (primarily pensions and production costs) that have driven the need to request an increase in rates at this time. That is evidenced by the ROE of 7.87% achieved in 2004, or two hundred basis points below the level authorized in the 2003 case. Further erosion of those earnings will occur in 2005 without appropriate rate relief.

74. Q. DOES THE COMPANY MEASURE ITS SERVICE LEVELS?

A. Yes. First I would like to alleviate any doubt in the TRA's mind that service has deteriorated. I am attaching three schedules that were provided to the AG during the discovery process that address service metrics. Those schedules cover the areas of meter reading, main breaks, services installed, services repaired, and call center performance. Those exhibits are titled Rebuttal Exhibit MAM-6, Rebuttal Exhibit MAM-7 and Rebuttal Exhibit MAM-8. Rebuttal Exhibit MAM-6 indicates, as acknowledged by Mr. Chrysler, that the Company has significantly

improved its meter reading performance from 2003 to 2004. Rebuttal Exhibit MAM-7 indicates that there has been no increase in the number of main breaks, the Company has installed more services in 2004 than 2003 and it repaired approximately the same number of services. I believe these metrics indicate no decline in service. Rebuttal Exhibit MAM-8 includes the performance metrics of the Alton Call Center from the time of TAWC's move to that facility through the latest reporting month. Those reports indicate steady improvement in the service metrics, many of which are those metrics identified by Mr. Chrysler. I believe these exhibits clearly indicate that TAWC takes its service obligation seriously, and does monitor its service level regularly in order to maintain the high level of service. I would also mention that there has been no public outcry about the service level and the number of TRA complaints against the Company are minimal.

75. Q. WHAT POSITION DOES TAWC TAKE REGARDING PROVIDING SERVICE METRICS IN REGULAR REPORTS TO THE TRA?

A. TAWC does not object to such a request if the TRA should so direct the Company. Mr. Watson indicates in his testimony concern on exactly what metrics and if in fact some of the metrics proposed by Mr. Chrysler apply to TAWC. To comply with every metric mentioned by Mr. Chrysler would require potentially costly programming expense. The best way to address this issue if the TRA so directs, would be for representatives of the Company, AG, and TRA Staff to have a meeting to identify and come to consensus on meaningful metrics for TAWC that would not impose unneeded costs to the Company.

PUBLIC FIRE SERVICE

76. Q. IS THE REVENUE RECOVERY ATTRIBUTABLE TO PUBLIC FIRE SERVICE AN ISSUE IN THIS CASE?

A. In the Company's opinion, recovery of the portion of the revenue requirement previously supplied by municipalities is not an issue in this case, nor does it

appear to be an issue with the CMA or City of Chattanooga. Dr. Brown, however, indicates on page 59 of his testimony that public fire service is again an issue. If Dr. Brown meant the issue was the method in which the public fire cost of service was allocated among the other classes of customers I might agree. However that is not what Dr. Brown indicates. On page 63 of his testimony Dr. Brown says, "the Consumer Advocate's position regarding the responsibility of the shareholders of TnAm to bear this charge has not changed.

77. Q. PLEASE ADDRESS THE COMPANY'S POSITION?

A. The Company could not disagree with Dr. Brown more. After a long and arduous debate on this subject in the 2003 rate case I was hopeful that the issue of recovery of public fire service revenue was behind us. The CMA and City appear to believe the issue is behind us as does the Company. However, Dr. Brown is attempting to reopen the entire public fire service recovery issue that was clearly decided by a TRA Order. The TRA ruled that the shareholders of TAWC should not bear the cost of public protection in case in 03-00118. The Company does not believe that the Amendment to Tennessee Code Ann., Section 65-5-201 (c) raises any question that the shareholders should bear this cost in contradiction to the TRA Order in Case 03-00118.

78. Q. IS THERE ANY SPECIFIC ASSERTIONS OF DR. BROWN CONCERNING HIS INTEPRETATION OF THE LEGISLATION THAT THE COMPANY TAKES EXCEPTION WITH?

A. Dr. Brown uses one small word change to the amendment in an attempt to reopen this issue. On page 63, Dr. Brown beginning at line 4 says, "In particular, the new law provides that TnAm cannot collect the City's portion of fire hydrant revenue, but it does allow TnAm to collect the City's share of this revenue from common rate payers, **if** (emphasis added)approved by the TRA. It would appear to me that Dr. Brown could have just as easily quoted the legislative language instead of paraphrasing it. As quoted from the actual legislation code, this section reads, "The utility, however, may recover its costs of providing fire hydrant

service by charging rates, joint rates, tolls, fares, charges or schedules to its non-municipal government customers within the service area **as** (emphasis added) approved by the TRA. By paraphrasing the code Dr. Brown is attempting to make an issue where none should exist.

79. Q. WHAT IS THE COMPANY'S INTERPRETATION OF THE CODE?

A. The Company believes the clear intent of the code was to permit private utilities such as TAWC to file a general rate proceeding within 120 days of the effective date of the amendment, a petition that would permit the shifting of any public fire protection revenue generated by existing tariffs to the remaining customer classes. The intent of the legislation was to give the utilities time to do this (120 days) so they would not be financially harmed by this legislation. The intent of the legislation was clearly not to harm the utilities or as Dr. Brown suggests move this cost onto the backs of the shareholders and not the customers who receive the ultimate benefit of that service. A play on words by Dr. Brown as described above can not change the intent, nor should it give rise to a reopening of the issue clearly decided in Case 03-00118.

80. Q. DO YOU HAVE ANY FURTHER COMMENTS ON THE REVENUE RECOVERY OF PUBLIC FIRE PROTECTION?

A. Just one, on page 64 of his testimony Dr. Brown says "the shifting of public fire protection is tantamount to an implicit fire protection fee built into the common rate payer's water service." The customers that receive the ultimate benefit of that fire protection are not the municipalities but the end users of the water service. Many regulatory jurisdictions recognize this and have allocated all or a substantial portion of public fire service cost to those end users. The concept is quite common across the U.S. and we believe this was the clear intent of the Tennessee General Assembly. I covered this area in my testimony in case 03-00118, but to mention just a few jurisdictions who do allocate fire service to the end users would include: 1) West Virginia, 2) Pennsylvania, 3) California, 4) Virginia, 5) Missouri, and 6) Iowa.

81. Q. WHAT IS THE COMPANY'S POSITION ON THE ALLOCATION OF THE PUBLIC FIRE SERVICE TO THE OTHER CLASSES OF CUSTOMERS IN THIS CASE?

A. The Company proposed to allocate the $897,000 of public fire revenue approved by the TRA in Case 03-00118 pro rata to all remaining customer classes. Mr. Gorman agrees with the Company's proposal on allocating the shift of fire protection to the other customer classes across the board, but recommends any overall rate increase should be allocated 50% to the customer charge and 50% through volumetric charges. Dr. Brown is silent as to any method to allocate an overall rate increase in this case. He does propose to allocate the shift of public fire service revenue based on the State Board of Equalization's 2002 estimates of property values. The Company believes that absent a cost of service study, both a justifiable increase in overall rates in this case and the public fire service reallocation should be done pro rata across the board. The Company however is agreeable to any reasonable cost of service allocation that could be built as a consensus by all the interveners in this case.

82. Q. DO YOU HAVE ANY COMMENTS ABOUT THE TESTIMONY OF MR. HAMILTON, MS. MADISON OR MR. QUARLES APPEARING ON BEHALF OF THE CITY OF CHATTANOOGA?

A. Just a few brief comments. Ms. Madison, in response to question 18 on page 6 indicates that both water and sewer rates are based on water used. I would like to clarify that sewer rates are calculated based on water consumption, however each utility has its own distinct tariff and an increase in water rates has no direct bearing on the sewer tariffs. Just one other point concerning Ms. Madison's testimony, the city will receive a substantial reduction in water rates when the remaining public fire charges are reallocated to the other classes. This reduction should benefit the existing residents and businesses located in Chattanooga either through lower taxes or by offsetting the need to increase taxes. Regarding the testimony of Mr. Hamilton, in the Company's last rate case the Company demonstrated that its industrial classification rates were very competitive to

surrounding areas, and in fact lower than those in Atlanta and Nashville for high volume users. The Company believes its rates, even with this requested increase, are very reasonable when compared to surrounding areas, given the high quality and reliability of the service provided. The Company believes its water rates, level of service and reliability are an encouragement to development not a hindrance. Regarding the testimony of Mr. Quarles, it is not clear about the City's position of allocation of public fire protection. In the first sentence he appears to indicate the Company's proposal to allocate both an overall rate increase and a shifting of the public fire as a fair way to do it. In the last sentence he seems to indicate the City may not be in favor of shifting the public fire across the board. Regardless, the Company believes its across the board allocation for an overall rate increase and the shifting of the public fire service is reasonable.

83. Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

TENNESSEE REGULATORY AUTHORITY

STATE OF PENNSYLVANIA

COUNTY OF DAUPHIN

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Mike A. Miller, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his testimony would set forth in the annexed transcript consisting of 39 pages.

Michael A. Miller

Michael A. Miller

Sworn to and subscribed before me
this 17th day of January 2005.

Roberta L. Gautsch

Notary Public

My commission expires _____.

NOTARIAL SEAL
ROBERTA L. GAUTSCH Notary Public
Derry Twp., Dauphin County, PA
My Commission Expires Oct. 10, 2006

American Water Subsidiaries
Overall Capital Costs for Rate Cases
Filed in 2004

Company	Date Filed	Requested Return on Capital
Cal-Am Water Company- Coronado	March-04	9.01%
Cal-Am Water Company- Larkfield	March-04	6.96%
Cal-Am Water Company- Sacramento	March-04	6.95%
Cal-Am Water Company- Village	March-04	9.00%
Kentucky-American Water Company	April-04	8.25%
New Mexico-American Water Company	May-04	7.84%
Long Island Water Corporation	April-04	8.12%
Ohio-American Water Company	March-04	8.33%
Texas-American Water Company	July-04	10.00%
Virginia-American Water Company	January-04	8.37%
West Virginia-American Water Company	March-04	8.01%

Tennessee American Water
Analysis of Interest Rates of Past Year

Value Line Publication Date	As of Market Date	"A" Rated Utility Bonds	30-year Treasury Bonds	Spread	10-year Corporate Bonds	10-year Treasury Bonds	Spread	13-Week Treasury Bills	Federal Reserve Rate
4/11/2003	4/3/2003	6.780%	4.930%	1.850%	5.130%	3.910%	1.220%	1.100%	1.250%
4/18/2003	4/10/2003	6.330%	4.940%	1.390%	5.160%	3.940%	1.220%	1.130%	1.250%
4/25/2003	4/16/2003	6.320%	4.910%	1.410%	5.100%	3.940%	1.160%	1.660%	1.250%
5/2/2003	4/24/2003	6.330%	4.840%	1.490%	5.260%	3.920%	1.340%	1.140%	1.250%
5/9/2003	5/1/2003	6.190%	4.780%	1.410%	5.070%	3.840%	1.230%	1.090%	1.250%
5/16/2003	5/8/2003	6.040%	4.680%	1.360%	4.840%	3.680%	1.160%	1.090%	1.250%
5/23/2003	5/15/2003	5.810%	4.480%	1.330%	4.660%	3.530%	1.130%	1.050%	1.250%
5/30/2003	5/22/2003	5.480%	4.260%	1.220%	4.400%	3.310%	1.090%	1.070%	1.250%
6/6/2003	5/29/2003	5.620%	4.340%	1.280%	4.560%	3.340%	1.220%	1.090%	1.250%
6/13/2003	6/5/2003	5.740%	4.410%	1.330%	4.490%	3.340%	1.150%	1.040%	1.250%
6/20/2003	6/12/2003	5.500%	4.210%	1.290%	4.280%	3.160%	1.120%	0.910%	1.250%
6/27/2003	6/19/2003	5.710%	4.410%	1.300%	4.520%	3.340%	1.180%	0.810%	1.250%
7/4/2003	6/26/2003	5.500%	4.560%	0.940%	4.670%	3.540%	1.130%	0.880%	1.000%
Quarterly Average		5.950%	4.596%	1.354%	4.780%	3.599%	1.181%	1.082%	1.231%
7/11/2003	7/2/2003	5.540%	4.580%	0.960%	4.660%	3.540%	1.120%	0.860%	1.000%
7/18/2003	7/10/2003	5.540%	4.700%	0.840%	4.840%	3.660%	1.180%	0.880%	1.000%
7/25/2003	7/17/2003	5.750%	4.890%	0.860%	5.070%	3.920%	1.150%	0.890%	1.000%
8/1/2003	7/24/2003	5.950%	5.090%	0.860%	5.310%	4.170%	1.140%	0.910%	1.000%
8/8/2003	7/31/2003	6.290%	5.360%	0.930%	5.600%	4.410%	1.190%	0.940%	1.000%
8/15/2003	8/7/2003	6.170%	5.210%	0.960%	5.360%	4.220%	1.140%	0.930%	1.000%
8/22/2003	8/14/2003	6.370%	5.400%	0.970%	5.670%	4.530%	1.140%	0.950%	1.000%
8/29/2003	8/21/2003	6.240%	5.280%	0.960%	5.640%	4.480%	1.160%	0.960%	1.000%
9/5/2003	8/28/2003	6.190%	5.210%	0.980%	5.560%	4.410%	1.150%	0.970%	1.000%
9/12/2003	9/4/2003	6.280%	5.310%	0.970%	5.650%	4.500%	1.150%	0.960%	1.000%
9/19/2003	9/11/2003	6.190%	5.200%	0.990%	5.410%	4.310%	1.100%	0.950%	1.000%
9/26/2003	9/18/2003	6.020%	5.070%	0.950%	5.260%	4.160%	1.100%	0.950%	1.000%
10/3/2003	9/25/2003	5.970%	4.990%	0.980%	5.190%	4.080%	1.110%	0.930%	1.000%
Quarterly Average		6.038%	5.099%	0.939%	5.325%	4.184%	1.141%	0.929%	1.000%
10/10/2003	10/2/2003	5.910%	4.930%	0.980%	5.130%	3.990%	1.140%	0.930%	1.000%
10/17/2003	10/9/2003	6.090%	5.210%	0.880%	5.550%	4.290%	1.260%	0.900%	1.000%
10/24/2003	10/16/2003	6.150%	5.310%	0.840%	5.680%	4.460%	1.220%	0.920%	1.000%
10/31/2003	10/23/2003	6.020%	5.200%	0.820%	5.450%	4.320%	1.130%	0.940%	1.000%
11/7/2003	10/30/2003	6.200%	5.190%	1.010%	5.460%	4.340%	1.120%	0.950%	1.000%
11/14/2003	11/6/2003	6.070%	5.240%	0.830%	5.610%	4.410%	1.200%	0.940%	1.000%
11/21/2003	11/13/2003	5.920%	5.100%	0.820%	5.480%	4.270%	1.210%	0.950%	1.000%
11/28/2003	11/20/2003	5.770%	5.010%	0.760%	5.320%	4.150%	1.170%	0.940%	1.000%
12/5/2003	11/26/2003	5.830%	5.070%	0.760%	5.430%	4.250%	1.180%	0.930%	1.000%
12/12/2003	12/4/2003	5.930%	5.160%	0.770%	5.530%	4.370%	1.160%	0.910%	1.000%
12/19/2003	12/11/2003	5.860%	5.100%	0.760%	5.380%	4.230%	1.150%	0.890%	1.000%
12/26/2003	12/18/2003	5.670%	4.940%	0.730%	5.250%	4.130%	1.120%	0.880%	1.000%
1/2/2004	12/23/2003	5.750%	5.050%	0.700%	5.380%	4.260%	1.120%	0.890%	1.000%
1/9/2004	12/30/2003	5.770%	5.080%	0.690%	5.400%	4.260%	1.140%	0.930%	1.000%
Quarterly Average		5.924%	5.114%	0.811%	5.432%	4.266%	1.166%	0.921%	1.000%

Value Line Publication Date	As of Market Date	"A" Rated Utility Bonds	30-year Treasury Bonds	Spread	10-year Corporate Bonds	10-year Treasury Bonds	Spread	13-Week Treasury Bills	Federal Reserve Rate
1/16/2004	1/8/2004	5.770%	5.090%	0.680%	5.370%	4.260%	1.110%	0.870%	1.000%
1/23/2004	1/15/2004	5.560%	4.860%	0.700%	5.070%	3.970%	1.100%	0.870%	1.000%
1/30/2004	1/21/2004	5.550%	4.840%	0.710%	5.080%	3.950%	1.130%	0.870%	1.000%
2/6/2004	1/29/2004	5.720%	5.000%	0.720%	5.250%	4.170%	1.080%	0.930%	1.000%
2/13/2004	2/5/2004	5.700%	4.980%	0.720%	5.240%	4.170%	1.070%	0.930%	1.000%
2/20/2004	2/12/2004	5.660%	4.930%	0.730%	5.110%	4.040%	1.070%	0.910%	1.000%
2/27/2004	2/19/2004	5.570%	4.890%	0.680%	4.980%	4.030%	0.950%	0.930%	1.000%
3/5/2004	2/27/2004	5.620%	4.910%	0.710%	5.020%	4.030%	0.990%	0.950%	1.000%
3/12/2004	3/4/2004	5.580%	4.880%	0.700%	4.970%	4.020%	0.950%	0.963%	1.000%
3/19/2004	3/11/2004	5.410%	4.660%	0.750%	4.640%	3.700%	0.940%	0.940%	1.000%
3/26/2004	3/19/2004	5.470%	4.700%	0.770%	4.700%	3.750%	0.950%	0.930%	1.000%
4/2/2004	3/25/2004	5.490%	4.690%	0.800%	4.680%	3.740%	0.940%	0.930%	1.000%
Quarterly Average		5.592%	4.869%	0.723%	5.009%	3.986%	1.023%	0.919%	1.000%
4/9/2004	4/1/2004	5.580%	4.800%	0.780%	4.890%	3.880%	1.010%	0.930%	1.000%
4/16/2004	4/7/2004	5.800%	5.010%	0.790%	5.190%	4.160%	1.030%	0.930%	1.000%
4/23/2004	4/15/2004	5.970%	5.210%	0.760%	5.420%	4.400%	1.020%	0.940%	1.000%
4/30/2004	4/22/2004	5.960%	5.190%	0.770%	5.360%	4.380%	0.980%	0.950%	1.000%
5/7/2004	4/29/2004	6.060%	5.310%	0.750%	5.480%	4.540%	0.940%	0.970%	1.000%
5/14/2004	5/6/2004	6.120%	5.370%	0.750%	5.580%	4.600%	0.980%	0.990%	1.000%
5/21/2004	5/13/2004	6.340%	5.560%	0.780%	5.800%	4.850%	0.950%	0.990%	1.000%
5/28/2004	5/20/2004	6.170%	5.420%	0.750%	5.600%	4.700%	0.900%	1.020%	1.000%
6/4/2004	5/27/2004	6.080%	5.320%	0.760%	5.500%	4.600%	0.900%	1.060%	1.000%
6/11/2004	6/3/2004	6.140%	5.410%	0.730%	5.570%	4.710%	0.860%	1.160%	1.000%
6/18/2004	6/10/2004	6.180%	5.470%	0.710%	5.660%	4.790%	0.870%	1.270%	1.000%
6/25/2004	6/17/2004	6.070%	5.350%	0.720%	5.590%	4.680%	0.910%	1.250%	1.000%
7/2/2004	6/24/2004	6.050%	5.340%	0.710%	5.530%	4.640%	0.890%	1.270%	1.000%
Quarterly Average		6.040%	5.289%	0.751%	5.475%	4.533%	0.942%	1.056%	1.000%
7/9/2004	7/1/2004	6.050%	5.290%	0.760%	5.450%	4.560%	0.890%	1.210%	1.250%
7/16/2004	7/8/2004	5.950%	5.220%	0.730%	5.330%	4.470%	0.860%	1.260%	1.250%
7/23/2004	7/15/2004	5.960%	5.210%	0.750%	5.330%	4.480%	0.850%	1.330%	1.250%
7/30/2004	7/22/2004	5.940%	5.190%	0.750%	5.390%	4.440%	0.950%	1.350%	1.250%
8/6/2004	7/29/2004	6.050%	5.290%	0.760%	5.520%	4.580%	0.940%	1.440%	1.250%
8/13/2004	8/5/2004	5.900%	5.150%	0.750%	5.350%	4.400%	0.950%	1.470%	1.250%
8/20/2004	8/13/2004	5.780%	5.050%	0.730%	5.190%	4.250%	0.940%	1.440%	1.500%
8/27/2004	8/19/2004	5.810%	5.030%	0.780%	5.140%	4.210%	0.930%	1.470%	1.500%
9/3/2004	8/26/2004	5.800%	5.010%	0.790%	5.140%	4.210%	0.930%	1.540%	1.500%
9/10/2004	9/2/2004	5.780%	5.000%	0.780%	5.160%	4.210%	0.950%	1.590%	1.500%
9/17/2004	9/9/2004	5.770%	4.990%	0.780%	5.140%	4.200%	0.940%	1.630%	1.500%
9/24/2004	9/16/2004	5.630%	4.870%	0.760%	5.010%	4.070%	0.940%	1.660%	1.500%
10/1/2004	9/23/2004	5.540%	4.790%	0.750%	4.960%	4.020%	0.940%	1.710%	1.750%
10/8/2004	9/30/2004	5.600%	4.890%	0.710%	5.080%	4.120%	0.960%	1.700%	1.750%
Quarterly Average		5.826%	5.070%	0.756%	5.228%	4.301%	0.926%	1.486%	1.429%
10/15/2004	10/7/2004	5.700%	5.000%	0.700%	5.200%	4.240%	0.960%	1.690%	1.750%
10/22/2004	10/14/2004	5.570%	4.820%	0.750%	4.990%	4.020%	0.970%	1.720%	1.750%
10/29/2004	10/21/2004	5.510%	4.770%	0.740%	4.950%	4.000%	0.950%	1.830%	1.750%
11/5/2004	10/28/2004	5.560%	4.820%	0.740%	4.990%	4.050%	0.940%	1.900%	1.750%
11/12/2004	11/4/2004	5.570%	4.820%	0.750%	5.040%	4.070%	0.970%	1.970%	1.750%
11/19/2004	11/11/2004	5.720%	4.960%	0.760%	5.180%	4.240%	0.940%	2.060%	2.000%
11/26/2004	11/18/2004	5.520%	4.810%	0.710%	5.070%	4.110%	0.960%	2.130%	2.000%
12/3/2004	11/24/2004	5.590%	4.840%	0.750%	5.130%	4.200%	0.930%	2.170%	2.000%
12/10/2004	12/2/2004	5.780%	5.060%	0.720%	5.340%	4.410%	0.930%	2.210%	2.000%
12/17/2004	12/9/2004	5.540%	4.830%	0.710%	5.090%	4.17%	0.920%	2.230%	2.000%
12/24/2004	12/16/2004	5.520%	4.830%	0.690%	5.090%	4.18%	0.910%	2.190%	2.250%
12/31/2004	12/22/2004	5.480%	4.830%	0.650%	5.100%	4.19%	0.910%	2.180%	2.250%
1/7/2004	12/29/2004	5.570%	4.940%	0.650%	5.240%	4.32%	0.910%	2.220%	2.250%
Quarterly Average		5.587%	4.872%	0.717%	5.108%	4.169%	0.938%	2.038%	1.962%

	2005 Projected 30-Yr. "A" Rated Util. Bond Rate	2005 Value Line Forecast	Average Spread
2004 Value Line Projection (11-26-05): "A" Rated Utility Bonds 30-Yr			
Latest 2 Qtr Avg. Spread	6.14%	5.40%	0.736%
Latest 4 Qtr Avg. Spread	6.14%	5.40%	0.736%

Tennessee American Water
Comparison of Authorized ROE's - American Water Subsidiaries

Company:	Order Date	Authorized ROE	Value Line "A" Utility Bonds	Date	Spread over "A" Util. Bonds
California-Am.	5/6/2004	10.05%	5.49%	MAR.04	4.56%
Illinois-Am.	8/12/2003	10.27%	5.95%	Jul 03	4.32%
Iowa -Am.	8/20/2001	10.45%	7.58%	JUL 01	2.87%
Kentucky-Am.	5/9/2001	11.00%	7.43%	MAR. 01	3.57%
Missouri-Am.	4/6/2004	10.00%	5.62%	FEB.04	4.38%
Pennsylvania-Am.	1/16/2004	10.60%	5.77%	DEC. 03	4.83%
New Jersey-Am.	2/18/2004	9.75%	5.50%	JAN. 04	4.25%
Hawaii-Am.	5/6/2004	10.60%	5.49%	MAR. 04	5.11%
Virginia-Am.	6/15/2004	10.10%	6.18%	JUN. 04	3.92%
Ohio-Am.	2/7/2002	10.30%	6.84%	DEC. 01	3.46%
Tennessee-Am.	8/7/2003	9.90%	5.95%	JUL. 03	3.95%
West Virginia-Am. (See Note Below)	1/7/2005	9.85%	5.78%	Dec 04	4.07%
Averages		10.24%	6.13%		4.11%
AG witness opinion of proper ROE		7.90%	6.14%	Jul 05	1.76%
AG variance from average		2.34%			2.35%

Conclusion:	4 Quarter Spread	2 Quarter Spread
Value Line "A" Utility Bonds projection based on		
2005 Projected 30 Yr. T-Bond plus .806% (4 Qtr. Avg.)	6.14%	
2005 Projected 30 Yr. T-Bond plus 0.737% (2 Qtr. Avg.)		6.14%
Average Spread of AWW Companies	4.11%	4.11%
ROE Calculated on Average Spread	**10.25%**	**10.25%**

Note 1: Indiana and Arizona Orders are not shown because they are both currently under appeal.
Note 2: West Virginia Order issued effective January 7, 2005 approving stipulated overall revenue requirement. Company's cost of service calculation attached to stipulation indicates 9.85% ROE

Tennessee American
Analyis of Interest Rates in Relation to ROE

Per Value Line Publications:

Publication 7-4-03:		**ROE Awarded in 2003 Rate Case**	**Spread**
30-yr, A-rated Utility Bonds	5.50%	9.90%	4.40%
10-yr. A-rated Corp. Bonds	4.67%	9.90%	5.23%
30-yr T-Bonds	4.56%	9.90%	5.34%
10-yr. T-Bonds	3.54%	9.90%	6.36%
13-week T-Bills	0.88%		
Fed Funds	1.00%		

Publication1-7-05:		**Spread Last Case**	**ROE**
30-yr, A-rated Utility Bonds	5.57%	4.40%	9.97%
10-yr. A-rated Corp. Bonds	5.24%	5.23%	10.47%
30-yr T-Bonds	4.94%	5.34%	10.28%
10-yr. T-Bonds	4.32%	6.36%	10.68%
13-week T-Bills	2.20%		
Fed Funds	2.25%		
Average			10.35%

FORECAST INFORMATION:

Publication 5-30-03:		**ROE Last Case**	**Spead**
2004 Forecast for 30-yr. T-Bonds	5.10%	9.90%	4.80%

Publication 11-26-04:		**Spread**	**ROE**
2005 Forecast for 30-yr. T-Bonds	5.40%	4.80%	10.20%

TOWERS PERRIN

Memorandum

DATE: August 3, 2004

TO: Debbie Krauss-Kelleher — American Water
Timothy Mckitrick — American Water

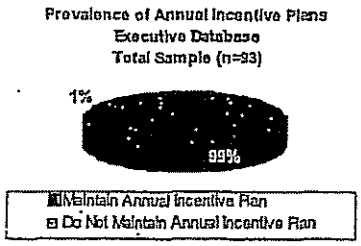
FROM: James Dickinson — Towers Perrin
Amani Macaulay — Towers Perrin

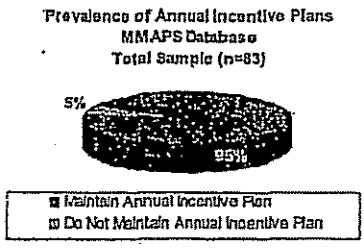
RE: ANNUAL INCENTIVE PLAN PREVALENCE

American Water requested that Towers Perrin provide information regarding the prevalence of annual incentive plans in the utility industry. In response, we collected prevalence information based on the total sample of companies that provided data to our energy/utility compensation databases. Specifically, data were collected from the following sources:

- Towers Perrin's 2003 Energy Services Industry Executive Compensation Database
- Towers Perrin's 2003 Energy Services Industry Middle Management & Professional (MMAPS) Database

The following charts provide prevalence information for the companies in each database.





The charts show that annual incentive plans are very prevalent in the energy/utility industry, with 99 percent and 95 percent of energy/utility companies in our executive and middle management & professional compensation databases, respectively, maintaining a formal annual incentive plan.

A listing of the companies included in both samples is provided on the following pages.

2003 Energy Services Industry Executive Compensation Database Participants

AES
AGL Resources
Allegheny Energy
Allete
Alliant Energy
Ameren
American Electric Power
American Transmission
Atmos Energy
Avista
Black Hills
Calpine
CenterPoint Energy
Central Vermont Public Service
CH Energy Group
Cinergy
Cleco
CMS Energy
Consolidated Edison
Constellation Energy Group
Dominion Resources
DTE Energy Services
Duke Energy
Dynegy
Edison International
El Paso Corporation
Energen
Energy East
Energy Northwest
Enron
Entergy
Equitable Resources
Exelon
FirstEnergy
FPL Group
Great Plains Energy
Hawaiian Electric
IDACORP
KeySpan
LG&E Energy
Lower Colorado River Authority
MDU Resources
MGE Energy
MidAmerican Energy
Mirant
National Grid USA
New York Power Authority
Nicor
Northeast Utilities
NorthWestern Energy
NRG Energy
NSTAR
Nuclear Management
NUI
NW Natural
OGE Energy
Oglethorpe Power
Omaha Public Power
Otter Tail
Pacific Gas & Electric
PacifiCorp
Pepco Holdings
Pinnacle West
PNM Resources
Portland General Electric
PPL
Progress Energy
Public Service Enterprise Group
Puget Energy
Reliant Resources
Salt River Project
SCANA
SEMCO Energy
Sempra Energy
Southern Company
STP Nuclear Operating
TECO Energy
Tennessee Valley Authority
TNP Enterprises
Tractebel
TransCanada
TXU
UIL Holdings
UniSource Energy
United States Enrichment
Unitil
Vectren
Washington Gas
Westar Energy
Williams Companies
Wisconsin Energy
WPS Resources
Xcel Energy

2003 Energy Services Industry Middle Management & Professional Database Participants

AES
AGL Resources
Allegheny Energy
Alliant Energy
Ameren
American Electric Power
American Transmission
Atmos Energy
Avista
Black Hills
Calpine
CenterPoint Energy
Central Vermont Public Service
CH Energy Group
Cinergy
Cleco
CMS Energy
Consolidated Edison
Constellation Energy Group
Dominion Resources
Duke Energy
Dynegy
Edison International
El Paso Corporation
Energy East
Enron
Entergy
Exelon
FirstEnergy
Great Plains Energy
Hawaiian Electric
IDACORP
KeySpan
LG&E Energy
Lower Colorado River Authority
MGE Energy
MidAmerican Energy
Mirant
New York Power Authority
Nicor
Northeast Utilities
NorthWestern Energy
NRG Energy
NSTAR
Nuclear Management
NW Natural
OGE Energy
Oglethorpe Power
Omaha Public Power
Otter Tail
Pacific Gas & Electric
PacifiCorp
Pepco Holdings
Pinnacle West
PNM Resources
Portland General Electric
PPL
Progress Energy
Public Service Enterprise Group
Puget Energy
Reliant Resources
Salt River Project
SCANA
SEMCO Energy
Sempra Energy
Southern Company
STP Nuclear Operating
TECO Energy
Tennessee Valley Authority
TNP Enterprises
Tractebel
TransCanada
TXU
UIL Holdings
UniSource Energy
United States Enrichment
Unitil
Washington Gas
Westar Energy
Williams Companies
Wisconsin Energy
WPS Resources
Xcel Energy

* * * * *

Debbie, we hope this information satisfies your request. Please feel free to call if you have any questions or should you require further information.

cc: Larry Parks — Towers Perrin

Direct Dials: 215-246-3920
215-246-6538

Tennessee American Water
Estimated Bills Compared to All Bills Rendered

2003	# Estimates	Total # Bills	% of Estimates to All Bills
January			
February			
March			
April			
May			
June			
July	9,287	67,866	13.68%
August	13,176	65,660	20.07%
Sept	19,190	79,327	24.19%
October	8,509	68,114	12.49%
November	1,699	66,360	2.56%
December	4,404	46,562	9.46%
Totals	56,265	393,889	14.28%

2004	# Estimates	Total # Bills	% of Estimates to All Bills	
January	3,371	116,145	2.90%	
February	7,540	67,748	11.13%	Inclement Weather
March	4,247	81,161	5.23%	
April	2,551	65,960	3.87%	
May	1,192	53,739	2.22%	
June	2,275	81,372	2.80%	
July	5,217	65,442	7.97%	
August	3,729	65,247	5.72%	
Sept	10,030	82,716	12.13%	Inclement weather
October	6,668	70,553	9.45%	
November	9,935	68,927	14.41%	Inclement Weather
December	11,891	45,835	25.94%	Inclement Weather/Not all routes for Dec. Read at this time
	68,646	864,845	7.94%	

Rebuttal Exhibit MAM-6
1 of 1

Tennessee American Water
Main Breaks

	2003	2004
January	89	75
February	38	30
March	42	38
April	40	30
May	20	32
June	33	56
July	44	26
August	47	22
Sept	44	45
October	50	20
November	25	29
December	31	26
TOTALS	503	429

Tennessee American Water
Services Installed

	2003	2004
January	60	108
February	48	118
March	114	139
April	79	94
May	73	79
June	106	97
July	93	107
August	93	123
Sept	57	101
October	128	121
November	64	71
December	29	47
TOTALS	944	1205

Tennessee American Water
Services Repaired

	2003	2004
January	54	49
February	93	31
March	56	32
April	46	25
May	43	23
June	51	51
July	35	35
August	41	34
Sept	39	49
October	50	52
November	25	33
December	21	9
TOTALS	554	423

American Water

TENNESSEE-AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
JULY 2003

Last Updated - 10/16/03 9:57 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Jul 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	89.47% 288	> 90%	87.46% 535.75	↑ ↓
Survey Information % IN % Taken of IN	96.50% N/A N/A	> 90%	95.94% 85.85% 19.32%	↓ N/A N/A
Avg % Ans within 30 sec	68.08%	> 80%	60.62%	↓
Avg % Abandon after 30 sec	4.46%	< 5.5%	5.55%	↑
Avg Speed of Answer (sec)	56.70	< 30	65.65	↑
Max Queue Time in IVR	29:36	<	51:23	↑
% IVR Self-Serv Calls Offered	10.68%	> 15%	10.84%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	183	0	N/A	N/A
# Payments in Suspense Customer Disputes	344 69		450 43.75	↑ ↓
# Of Accounts on Hold	8,920		15,086.75	↑
PUC Complaints	0		N/A	N/A

Operations Management

Metric	Jul 2003	Goal	4 Month Avg	Trend
Total # of Calls	304,821		255,854.75	↓
Avg Handle Time	5:18	< 5:00	5:47	↑
% First Call Effectiveness	92.45%		92.64%	↑
% Contacts Closed >= 3 days	95.47%		95.95%	↑
Avg # Past Due S/Os	198	< 292	N/A	N/A
Avg # Open U/Cs Call Center Field	153 116 2	< 146	N/A N/A N/A	N/A N/A N/A
% of Bill Exceptions	7.32%	< 2%	N/A	N/A
% Est. Readings	7.63%	0%	N/A	N/A
Rev Adjustments # of Adjustments	($31,739.17) 8,529		N/A N/A	N/A N/A
Avg Daily Revenue	$231,893.83		N/A	N/A
Billed Revenue	$2,318,938.33		N/A	N/A
Avg Daily A/R Days Outstanding	$4,630,506.62 27.9		N/A N/A	N/A N/A

Metric	Jul 2003	Budget	Q2 2003	Trend
Charged Off % of Rev	$91,266.87 3.94%		N/A N/A	N/A N/A

American Water

TENNESSEE-AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
AUGUST 2003

Last Updated - 11/1/03 4:11 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Aug 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	86.92% 373	> 90%	87.85% 401.75	↓ ↓
Survey Information % IN % Taken of IN	96.27% N/A N/A	> 90%	95.84% 85.85% 19.32%	↓ N/A N/A
Avg % Ans within 30 sec	40.6%	> 80%	58.98%	↓
Avg % Abandon after 30 sec	10.97%	< 5.5%	5.33%	↓
Avg Speed of Answer (sec)	126.67	< 30	64.41	↓
Max Queue Time in IVR	49:03	<	51:23	↑
% IVR Self-Serv Calls Offered	9.80%	> 15%	10.41%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	493	0	183	↓
# Payments in Suspense Customer Disputes	230 77		371 49.25	↑ ↓
# Of Accounts on Hold	11,178		10,102	↓
PUC Complaints	0		0	↔

Operations Management

Metric	Aug 2003	Goal	4 Month Avg	Trend
Total # of Calls	317,708		272,130.25	↓
Avg Handle Time	5:50	< 5:00	5:39	↓
% First Call Effectiveness	92.07%		92.59%	↑
% Contacts Closed >= 3 days	94.47%		95.81%	↑
Avg # Past Due S/Os	531	< 293	198	↓
Avg # Open U/Cs Call Center Field	252 206 0	< 147	153 118 2	↓ ↓ ↑
% of Bill Exceptions	9.86%	< 2%	7.32%	↓
% Est. Readings	11.27%	0%	7.63%	↓
Rev Adjustments # of Adjustments	($45,010.28) 3,253		($31,739.17) 8,529	↓ ↑
Avg Daily Revenue	$224,129.32		$231,893.83	↓
Billed Revenue	$4,482,586.47		$2,316,938.33	↑
Avg Daily A/R Days Outstanding	$4,898,073.74 30.5		$4,630,506.62 27.9	↓ ↓

Metric	Aug 2003	Budget	Q2 2003	Trend
Charged Off % of Rev	$9.99 0%		N/A N/A	N/A N/A

American Water

TENNESSEE-AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
SEPTEMBER 2003

Last Updated - 12/1/03 4:11 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Sep 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	86.46% 403	> 90%	88.00% 362	↓ ↑
Survey Information % IN % Taken of IN	95.82% N/A N/A	> 90%	95.72% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	66.17%	> 80%	51.67%	↑
Avg % Abandon after 30 sec	4.43%	< 5.5%	7.22%	↑
Avg Speed of Answer (sec)	49.96	< 30	85.23	↑
Max Queue Time in IVR	29:43	<	49:03	↑
% IVR Self-Serv Calls Offered	12.7%	> 15%	10.14%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	261	0	338	↑
# Payments in Suspense Customer Disputes	187 N/A		311.75 57.25	↑ N/A
# Of Accounts on Hold	11,890		9,842.75	↓
PUC Complaints	1		0	↓

Operations Management

Metric	Sep 2003	Goal	4 Month Avg	Trend
Total # of Calls	331,010		294,027	↓
Avg Handle Time	6:46	< 5:00	5:43	↓
% First Call Effectiveness	92.21%		92.57%	↑
% Contacts Closed >= 3 days	81.7%		85.44%	↑
Avg # Past Due S/Os	343	< 293	364.5	↑
Avg # Open U/Cs Call Center Field	216 128 2	< 147	202.5 162 1	↓ ↑ ↓
% of Bill Exceptions	7.82%	< 2%	9.08%	↑
% Est. Readings	15.14%	0%	10.17%	↓
Rev Adjustments # of Adjustments	($34,563.69) 2,842		($38,374.72) 5,891	↑ ↑
Avg Daily Revenue	$218,562.46		$226,717.49	↓
Billed Revenue	$4,808,374.17		$3,400,762.40	↑
Avg Daily A/R Days Outstanding	$4,976,100.46 31.8		$4,764,290.18 29.4	↓ ↓

Metric	Sep 2003	Budget	Q2 2003	Trend
Charged Off % of Rev	$46,895.82 0.98%		N/A N/A	N/A N/A

American Water

TENNESSEE-AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
OCTOBER 2003

Last Updated - 1/1/04 4:13 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Oct 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	86.62% 452	> 90%	87.67% 350	↓ ↑
Survey Information % IN % Taken of IN	96.49% N/A N/A	> 90%	95.54% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	78.66%	> 80%	54.24%	↑
Avg % Abandon after 30 sec	2.54%	< 5.5%	6.77%	↑
Avg Speed of Answer (sec)	30.04	< 30	78.88	↑
Max Queue Time in IVR	32:48	<	49:03	↑
% IVR Self-Serv Calls Offered	13.92%	> 15%	10.95%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	221	0	312.33	↑
# Payments in Suspense Customer Disputes	298 N/A		274.75 64.67	↓ N/A
# Of Accounts on Hold	10,447		10,250.75	↓
PUC Complaints	2		0.33	↓

Operations Management

Metric	Oct 2003	Goal	4 Month Avg	Trend
Total # of Calls	324,913		310,211.25	↓
Avg Handle Time	6:01	< 5:00	5:39	↓
% First Call Effectiveness	92.15%		92.43%	↑
% Contacts Closed >= 3 days	95.25%		91.35%	↓
Avg # Past Due S/Os	260	< 280	357.33	↑
Avg # Open U/Cs Call Center Field	217 109 3	< 140	206.67 150.67 1.33	↓ ↑ ↓
% of Bill Exceptions	8%	< 2%	8.54%	↑
% Est. Readings	7.3%	0%	12.28%	↑
Rev Adjustments # of Adjustments	($85,508.75) 4,607		($37,104.38) 4,874.67	↓ ↑
Avg Daily Revenue	$223,743.42		$223,267.29	↑
Billed Revenue	$5,146,098.66		$3,869,966.32	↑
Avg Daily A/R Days Outstanding	$4,813,030.08 30.1		$4,834,893.61 30.3	↑ ↑

Metric	Oct 2003	Budget	Q3 2003	Trend
Charged Off % of Rev	$104,844.35 2.04%		$138,172.68 1.19%	↑ ↓

American Water

TENNESSEE-AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
NOVEMBER 2003

Last Updated - 2/1/04 4:11 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Nov 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	93.69% 553	> 90%	87.10% 379	↓ ↑
Survey Information % IN % Taken of IN	96.86% N/A N/A	> 90%	95.77% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	80.1%	> 80%	61.49%	↑
Avg % Abandon after 30 sec	2.37%	< 5.5%	5.63%	↑
Avg Speed of Answer (sec)	27.26	< 30	63.93	↑
Max Queue Time in IVR	40:17	<	49:03	↑
% IVR Self-Serv Calls Offered	16.93%	> 15%	11.76%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	215	0	289.5	↑
# Payments in Suspense Customer Disputes	53 N/A		264.75 73	↑ N/A
# Of Accounts on Hold	8,712		10,608.75	↑
PUC Complaints	0		0.75	↑

Operations Management

Metric	Nov 2003	Goal	4 Month Avg	Trend
Total # of Calls	292,159		319,613	↑
Avg Handle Time	6:52	< 5:00	5:44	↓
% First Call Effectiveness	92.96%		92.36%	↓
% Contacts Closed >= 3 days	95.44%		95.54%	↑
Avg # Past Due S/Os	276	< 280	333	↑
Avg # Open U/Cs Call Center Field	210 94 0	< 140	209.25 140.25 1.75	↓ ↑ ↑
% of Bill Exceptions	7.07%	< 2%	8.37%	↑
% Est. Readings	1.62%	0%	10.74%	↑
Rev Adjustments # of Adjustments	($80,130.30) 2,994		($49,205.47) 4,807.75	↓ ↑
Avg Daily Revenue	$197,558.30		$223,413.30	↓
Billed Revenue	$3,951,165.90		$4,188,999.41	↓
Avg Daily A/R Days Outstanding	$4,679,225.11 33.1		$4,829,427.72 30.2	↑ ↓

Metric	Nov 2003	Budget	Q3 2003	Trend
Charged Off % of Rev	$26,822.24 0.68%		$136,172.68 1.19%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
DECEMBER 2003

Last Updated - 2/26/04 4:07 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Dec 2003	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	86.07% 222	> 90%	85.68% 445.25	↑ ↓
Survey Information % IN % Taken of IN	N/A N/A N/A	> 90%	96.13% N/A N/A	N/A N/A N/A
Avg % Ans within 30 sec	77.36%	> 80%	66.65%	↑
Avg % Abandon after 30 sec	2.84%	< 5.5%	5.20%	↑
Avg Speed of Answer (sec)	29.92	< 30	57.46	↑
Max Queue Time in IVR	40:39	<	49:03	↑
% IVR Self-Serv Calls Offered	18.44%	> 15%	13.21%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	194	0	297.5	↑
# Payments in Suspense Customer Disputes	N/A N/A		192 77	N/A N/A
# Of Accounts on Hold	10,058		10,556.75	↑
PUC Complaints	0		0.75	↑

Operations Management

Metric	Dec 2003	Goal	4 Month Avg	Trend
Total # of Calls	324,359		316,447.5	↓
Avg Handle Time	5:31	< 5:00	5:52	↑
% First Call Effectiveness	93.11%		92.51%	↓
% Contacts Closed >= 3 days	96.72%		95.51%	↓
Avg # Past Due S/Os	241	< 279	352.5	↑
Avg # Open U/Cs Call Center Field	241 105 6	< 140	223.5 134.25 1.25	↓ ↑ ↓
% of Bill Exceptions	6.24%	< 2%	8.19%	↑
% Est. Readings	4.46%	0%	9.00%	↑
Rev Adjustments # of Adjustments	($30,845.64) 3,116		($61,303.26) 3,424	↑ ↑
Avg Daily Revenue	$201,834.56		$216,332.06	↓
Billed Revenue	$4,642,194.78		$4,597,056.30	↑
Avg Daily A/R Days Outstanding	$4,687,780.14 32.5		$4,841,607.35 31.3	↑ ↓

Metric	Dec 2003	Budget	Q3 2003	Trend
Charged Off % of Rev	$33,081.64 0.71%		$138,172.68 1.19%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
JANUARY 2004

Last Updated - 4/1/04 4:11 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Jan 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	86.62% 539	> 90%	85.41% 407.5	↑ ↑
Survey Information % IN % Taken of IN	94.97% N/A N/A	> 90%	96.46% N/A N/A	↓ N/A N/A
Avg % Ans within 30 sec	72.04%	> 80%	75.38%	↓
Avg % Abandon after 30 sec	4.61%	< 5.5%	3.08%	↓
Avg Speed of Answer (sec)	46.18	< 30	34.57	↓
Max Queue Time in IVR	193:55	<	25:19	↓
% IVR Self-Serv Calls Offered	18.70%	> 15%	15.45%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	244	0	222.75	↓
# Payments in Suspense Customer Disputes	N/A N/A		179.33 N/A	N/A N/A
# Of Accounts on Hold	12,617		10,276.75	↓
PUC Complaints	0		0.75	↑

Operations Management

Metric	Jan 2004	Goal	4 Month Avg	Trend
Total # of Calls	381,586		318,110.25	↓
Avg Handle Time	5:28	< 5:00	5:47	↑
% First Call Effectiveness	93.27%		92.82%	↓
% Contacts Closed >= 3 days	94.64%		98.22%	↑
Avg # Past Due S/Os	326	< 279	280	↓
Avg # Open U/Cs Call Center Field	175 115 2	< 139	220.75 109 2.75	↑ ↓ ↑
% of Bill Exceptions	6.11%	< 2%	7.29%	↑
% Est. Readings	1.99%	0%	7.27%	↑
Rev Adjustments # of Adjustments	($49,326.26) 3,289		($57,762.10) 3,389.75	↑ ↑
Avg Daily Revenue	$231,664.22		$210,770.84	↑
Billed Revenue	$5,096,612.82		$4,636,958.38	↑
Avg Daily A/R Days Outstanding	$5,191,872.92 31.3		$4,789,033.95 31.8	↓ ↑

Metric	Jan 2004	Budget	Q4 2003	Trend
Charged Off % of Rev	$46,214.48 0.91%		$164,746.23 1.2%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
FEBRUARY 2004

Last Updated - 5/1/04 4:19 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Feb 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	88.36% 543	> 90%	85.71% 441.5	↑ ↑
Survey Information % IN % Taken of IN	96.16% N/A N/A	> 90%	95.99% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	85.44%	> 80%	76.79%	↑
Avg % Abandon after 30 sec	2.25%	< 5.5%	3.13%	↑
Avg Speed of Answer (sec)	24.65	< 30	33.88	↑
Max Queue Time in IVR	63:32	<	26:50	↓
% IVR Self-Serv Calls Offered	20.08%	> 15%	17.07%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	203	0	218.5	↑
# Payments in Suspense Customer Disputes	123 32		175.5 N/A	↑ N/A
# Of Accounts on Hold	10,934		10,456.5	↓
PUC Complaints	3		0.5	↓

Operations Management

Metric	Feb 2004	Goal	4 Month Avg	Trend
Total # of Calls	334,297		330,754.25	↓
Avg Handle Time	5:41	< 5:00	5:42	↑
% First Call Effectiveness	94.22%		93.07%	↓
% Contacts Closed >= 3 days	95.16%		96.22%	↑
Avg # Past Due S/Os	270	< 279	275.5	↑
Avg # Open U/Cs Call Center Field	136 90 2	< 140	210.75 105.75 2.75	↑ ↑ ↑
% of Bill Exceptions	6.40%	< 2%	6.85%	↑
% Est. Readings	6.39%	0%	3.95%	↓
Rev Adjustments # of Adjustments	($60,289.63) 2,938		($61,452.74) 3,501.5	↑ ↑
Avg Daily Revenue	$198,524.08		$214,046.27	↓
Billed Revenue	$3,970,481.61		$4,709,016.04	↓
Avg Daily A/R Days Outstanding	$4,525,151.34 31.9		$4,842,977.06 31.6	↑ ↓

Metric	Feb 2004	Budget	Q4 2003	Trend
Charged Off % of Rev	$101,713.15 2.56%		$164,748.23 1.2%	↑ ↓

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
MARCH 2004

Last Updated - 6/1/04 4:20 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Mar 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	88.83% 1,087	> 90%	86.1% 464.25	↑ ↑
Survey Information % IN % Taken of IN	97.09% N/A N/A	> 90%	95.92% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	80.79%	> 80%	78.50%	↑
Avg % Abandon after 30 sec	2.08%	< 5.5%	3.07%	↑
Avg Speed of Answer (sec)	26.49	< 30	32.56	↑
Max Queue Time in IVR	27:26	<	30:01	↑
% IVR Self-Serv Calls Offered	18.39%	> 15%	18.6%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	151	0	214	↑
# Payments in Suspense Customer Disputes	N/A 33		88 32	N/A ↓
# Of Accounts on Hold	12,410		10,580.25	↓
PUC Complaints	0		0.75	↑

Operations Management

Metric	Mar 2004	Goal	4 Month Avg	Trend
Total # of Calls	366,062		333,100.25	↓
Avg Handle Time	5:50	< 5:00	5:37	↓
% First Call Effectiveness	93.27%		93.42%	↑
% Contacts Closed >= 3 days	95.66%		96.19%	↑
Avg # Past Due S/Os	208	< 252	278	↑
Avg # Open U/Cs Call Center Field	140 82 4	< 126	190.5 101 2.5	↑ ↑ ↓
% of Bill Exceptions	5.88%	< 2%	6.43%	↑
% Est. Readings	3.22%	0%	3.63%	↑
Rev Adjustments # of Adjustments	($36,253.49) 4,253		($55,147.96) 3,084.25	↑ ↓
Avg Daily Revenue	$195,007.42		$207,770.06	↓
Billed Revenue	$4,485,170.61		$4,415,113.78	↑
Avg Daily A/R Days Outstanding	$4,121,284.87 29.5		$4,771,007.38 32.1	↑ ↑

Metric	Mar 2004	Budget	Q4 2003	Trend
Charged Off % of Rev	$0.00 0%		$164,748.23 1.2%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
APRIL 2004

Last Updated - 7/1/04 4:50 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Apr 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	89.7% 1,644	> 90%	87.39% 597.75	↑ ↑
Survey Information % IN % Taken of IN	96.39% N/A N/A	> 90%	96.07% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	84.46%	> 80%	78.8%	↑
Avg % Abandon after 30 sec	1.8%	< 5.5%	2.94%	↑
Avg Speed of Answer (sec)	21.81	< 30	31.72	↑
Max Queue Time in IVR	27:20	<	30:08	↑
% IVR Self-Serv Calls Offered	17.08%	> 15%	18.88%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	193	0	198	↑
# Payments in Suspense Customer Disputes	N/A 45		123 32.5	N/A ↓
# Of Accounts on Hold	11,491		11,504.75	↑
PUC Complaints	0		0.75	↑

Operations Management

Metric	Apr 2004	Goal	4 Month Avg	Trend
Total # of Calls	357,242		356,576	↓
Avg Handle Time	6:46	< 5:00	5:38	↓
% First Call Effectiveness	93.10%		93.46%	↑
% Contacts Closed >= 3 days	96.19%		96.20%	↑
Avg # Past Due S/Os	268	< 252	261	↓
Avg # Open U/Cs Call Center Field	126 90 5	< 126	173 98 3.5	↑ ↑ ↓
% of Bill Exceptions	6.12%	< 2%	6.15%	↑
% Est. Readings	2.03%	0%	3.97%	↑
Rev Adjustments # of Adjustments	($48,580.68) 3,353		($44,178.76) 3,399	↓ ↑
Avg Daily Revenue	$226,832.17		$206,755.23	↑
Billed Revenue	$4,990,307.73		$4,548,614.96	↑
Avg Daily A/R Days Outstanding	$4,424,542.30 27.3		$4,631,522.32 31.3	↑ ↑

Metric	Apr 2004	Budget	Q1 2004	Trend
Charged Off % of Rev	$81,734.85 1.64%		$147,927.63 1.09%	↑ ↓

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
MAY 2004

Last Updated - 8/1/04 4:21 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	May 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.46% 1,896	> 90%	88.24% 853.25	↑ ↑
Survey Information % IN % Taken of IN	96.93% N/A N/A	> 90%	96.14% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	88.68%	> 80%	80.55%	↑
Avg % Abandon after 30 sec	1.17%	< 5.5%	2.68%	↑
Avg Speed of Answer (sec)	16.09	< 30	29.62	↑
Max Queue Time in IVR	27:49	<	31:07	↑
% IVR Self-Serv Calls Offered	16.86%	> 15%	18.54%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	200	0	197.75	↓
# Payments in Suspense Customer Disputes	N/A 28		123 36.67	N/A ↑
# Of Accounts on Hold	111,388		11,863	↓
PUC Complaints	0		0.75	↑

Operations Management

Metric	May 2004	Goal	4 Month Avg	Trend
Total # of Calls	328,221		364,796.75	↑
Avg Handle Time	5:34	< 5:00	5:41	↑
% First Call Effectiveness	94.15%		93.46%	↓
% Contacts Closed >= 3 days	95.58%		95.38%	↓
Avg # Past Due S/Os	271	< 252	267.75	↓
Avg # Open U/Cs Call Center Field	78 51 6	< 126	144 94.25 3.25	↑ ↑ ↓
% of Bill Exceptions	6.66%	< 2%	6.12%	↓
% Est. Readings	1.26%	0%	3.36%	↑
Rev Adjustments # of Adjustments	($7,823.71) 3,221		($48,612.52) 3,458.25	↑ ↑
Avg Daily Revenue	$215,267.36		$213,133.02	↑
Billed Revenue	$4,520,614.59		$4,635,643.19	↓
Avg Daily A/R Days Outstanding	$4,830,624.64 31.4		$4,565,712.86 29.9	↓ ↓

Metric	May 2004	Budget	Q1 2004	Trend
Charged Off % of Rev	$93,169.79 2.06%		$147,927.63 1.09%	↑ ↓

Rebuttal Exhibit MAM-8
11/17

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
JUNE 2004

Last Updated - 9/1/04 5:45 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Jun 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	92.7% 1,594	> 90%	89.7% 1,292.5	↑ ↑
Survey Information % IN % Taken of IN	97.56% N/A N/A	> 90%	96.68% N/A N/A	↑ N/A N/A
Avg % Ans within 30 sec	82.28%	> 80%	84.7%	↓
Avg % Abandon after 30 sec	2.02%	< 5.5%	1.83%	↓
Avg Speed of Answer (sec)	22.76	< 30	21.86	↓
Max Queue Time in IVR	30:54	<	29:08	↓
% IVR Self-Serv Calls Offered	17.52%	> 15%	18.1%	↓
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	364	0	186.75	↓
# Payments in Suspense Customer Disputes	N/A 37		123 34.5	N/A ↓
# Of Accounts on Hold	8,973		36,555.75	↑
PUC Complaints	0		0.75	↑

Operations Management

Metric	Jun 2004	Goal	4 Month Avg	Trend
Total # of Calls	382,462		351,455.5	↓
Avg Handle Time	5:19	< 5:00	5:43	↑
% First Call Effectiveness	94.07%		93.64%	↓
% Contacts Closed >= 3 days	95.6%		95.65%	↑
Avg # Past Due S/Os	419	< 253	254.25	↓
Avg # Open U/Cs Call Center Field	94 60 6	< 128	119.75 78.25 4.25	↑ ↑ ↓
% of Bill Exceptions	7.53%	< 2%	6.25%	↓
% Est. Readings	2.81%	0%	3.21%	↑
Rev Adjustments # of Adjustments	($38,901.07) 2,790		($36,236.88) 3,441.25	↓ ↑
Avg Daily Revenue	$235,927.67		$208,913.66	↑
Billed Revenue	$5,190,408.66		$4,491,643.64	↑
Avg Daily A/R Days Outstanding	$5,494,058.60 32.6		$4,475,400.79 29.9	↓ ↓

Metric	Jun 2004	Budget	Q1 2004	Trend
Charged Off % of Rev	$61,149.98 1.18%		$147,927.63 1.09%	↑ ↓

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
JULY 2004

Last Updated - 10/1/04 6:21 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Jul 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.58% 1,785	> 90%	90.72% 1,555.25	↑ ↑
Survey Information % IN % Taken of IN	98.84% 80.43% 16.01%	> 90%	98.99% N/A N/A	↓ N/A N/A
Avg % Ans within 30 sec	71.65%	> 80%	83.90%	↓
Avg % Abandon after 30 sec	3.4%	< 5.5%	1.79%	↓
Avg Speed of Answer (sec)	39.50	< 30	21.47	↓
Max Queue Time in IVR	50:24	<	28:22	↓
% IVR Self-Serv Calls Offered	17.5%	> 15%	17.49%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	346	0	227	↓
# Payments in Suspense Customer Disputes	N/A 55		N/A 35.75	N/A ↓
# Of Accounts on Hold	10,896		36,085.5	↑
PUC Complaints	0		0	↔

Operations Management

Metric	Jul 2004	Goal	4 Month Avg	Trend
Total # of Calls	415,693		363,496.75	↓
Avg Handle Time	5:21	< 5:00	5:37	↑
% First Call Effectiveness	93.01%		93.6%	↑
% Contacts Closed >= 3 days	93.94%		95.76%	↑
Avg # Past Due S/Os	425	< 253	291.5	↓
Avg # Open U/Cs Call Center Field	151 90 6	< 127	109.25 70.75 5.25	↓ ↓ ↓
% of Bill Exceptions	7.26%	< 2%	6.55%	↓
% Est. Readings	3.69%	0%	2.35%	↓
Rev Adjustments # of Adjustments	($49,458.72) 3,101		($32,889.74) 3,404.25	↓ ↑
Avg Daily Revenue	$231,391.17		$218,028.43	↑
Billed Revenue	$5,090,605.78		$4,796,625.40	↑
Avg Daily A/R Days Outstanding	$4,770,948.43 28.8		$4,717,627.60 30.2	↓ ↑

Metric	Jul 2004	Budget	Q2 2004	Trend
Charged Off % of Rev	$164,593.80 3.23%		$236,054.62 1.61%	↑ ↓

Rebuttal Exhibit MAM-8
13/17

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
AUGUST 2004

Last Updated - 11/1/04 6:30 AM

Update

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Aug 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.44% 1,905	> 90%	91.38% 1,729.75	↑ ↑
Survey Information % IN % Taken of IN	97.1% 83.35% 14.35%	> 90%	96.92% 80.43% 16.01%	↑ ↑ ↓
Avg % Ans within 30 sec	86.35%	> 80%	81.36%	↑
Avg % Abandon after 30 sec	1.37%	< 5.5%	2.16%	↑
Avg Speed of Answer (sec)	16.91	< 30	25.36	↑
Max Queue Time in IVR	34:55	<	34:07	↓
% IVR Self-Serv Calls Offered	18.76%	> 15%	17.26%	↑
% Correspondence Response < 3 days	100%	100%	100%	↔
Total Cust Imp S/O Past Due	338	0	275.75	↓
# Payments in Suspense Customer Disputes	N/A 70		N/A 41.25	N/A ↓
# Of Accounts on Hold	11,333		35,687	↑
PUC Complaints	0		0	↔

Operations Management

Metric	Aug 2004	Goal	4 Month Avg	Trend
Total # of Calls	383,040		370,904.5	↓
Avg Handle Time	5:22	< 5:00	5:30	↑
% First Call Effectiveness	93.38%		93.59%	↑
% Contacts Closed >= 3 days	93.88%		95.34%	↑
Avg # Past Due S/Os	414	< 253	345.75	↓
Avg # Open U/Cs Call Center Field	142 78 7	< 126	112 72.75 5.75	↓ ↓ ↓
% of Bill Exceptions	7.98%	< 2%	6.9%	↓
% Est. Readings	1.98%	0%	2.45%	↑
Rev Adjustments # of Adjustments	($47,552.17) 3,160		($36,191.04) 3,116.25	↓ ↓
Avg Daily Revenue	$231,560.62		$227,493.53	↑
Billed Revenue	$5,094,333.71		$4,947,984.19	↑
Avg Daily A/R Days Outstanding	$4,901,871.78 29.6		$4,880,043.49 30	↓ ↑

Metric	Aug 2004	Budget	Q2 2004	Trend
Charged Off % of Rev	$49,750.48 0.98%		$236,054.62 1.61%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
SEPTEMBER 2004

Last Updated - 11/30/04 5:33 AM

Update

Scorecard statistics are automatically updated once per day. You may use the update button to retrieve the current statistics.
Note: The update will take approximately 2 minutes to complete.

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Sep 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.78% 1,501	> 90%	91.76% 1,795	↑ ↓
Survey Information % IN % Taken of IN	97.23% 73.53% 22.4%	> 90%	97.05% 81.73% 15.27%	↑ ↓ ↑
Avg % Ans within 30 sec	84.59%	> 80%	81.88%	↑
Avg % Abandon after 30 sec	1.69%	< 5.5%	2.05%	↑
Avg Speed of Answer (sec)	21.5	< 30	24.07	↑
Max Queue Time in IVR	83:04	<	31:50	↓
% IVR Self-Serv Calls Offered	18.47%	> 15%	17.68%	↑
% Correspondence Response < 3 days	93.67%	100%	100%	↓
Total Cust Imp S/O Past Due	244	0	312	↑
# Payments In Suspense Customer Disputes	N/A 50		N/A 47.5	N/A ↓
# Of Accounts on Hold	11,025		35,647.5	↑
PUC Complaints	0		0	↔

Operations Management

Metric	Sep 2004	Goal	4 Month Avg	Trend
Total # of Calls	354,884		377,354	↑
Avg Handle Time	6:16	< 5:00	5:24	↑
% First Call Effectiveness	92.38%		93.67%	↑
% Contacts Closed >= 3 days	94.81%		94.68%	↓
Avg # Past Due S/Os	399	< 253	382.25	↓
Avg # Open U/Cs Call Center Field	153 93 6	< 126	116.25 69.75 6.25	↓ ↓ ↑
% of Bill Exceptions	7.79%	< 2%	7.37%	↓
% Est. Readings	8.03%	0%	2.44%	↓
Rev Adjustments # of Adjustments	($71,099.63) 3,841		($35,933.92) 3,068	↓ ↓
Avg Daily Revenue	$224,373.00		$228,689.23	↓
Billed Revenue	$4,936,205.96		$4,973,990.68	↓
Avg Daily A/R Days Outstanding	$5,569,270.03 34.7		$4,999,375.86 30.6	↓ ↓

Metric	Sep 2004	Budget	Q2 2004	Trend
Charged Off % of Rev	$120,308.34 2.44%		$236,054.62 1.61%	↑ ↓

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
OCTOBER 2004

Last Updated - 12/18/04 5:26 AM

Update

Scorecard statistics are automatically updated once per day. You may use the update button to retrieve the current statistics.
Note: The update will take approximately 2 minutes to complete.

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Oct 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.71% 2,054	> 90%	91.86% 1,696.25	↓ ↑
Survey Information % IN % Taken of IN	97.27% 79.40% 18.1%	> 90%	97.13% 79.20% 17.46%	↑ ↑ ↑
Avg % Ans within 30 sec	82.85%	> 80%	81.01%	↑
Avg % Abandon after 30 sec	1.26%	< 5.5%	2.16%	↑
Avg Speed of Answer (sec)	17.32	< 30	25.45	↑
Max Queue Time in IVR	29:49	<	29:57	↑
% IVR Self-Serv Calls Offered	20.12%	> 15%	18.04%	↑
% Correspondence Response < 3 days	78.61%	100%	98.44%	↓
Total Cust Imp S/O Past Due	267	0	323	↑
# Payments in Suspense Customer Disputes	N/A 55		N/A 53	N/A ↓
# Of Accounts on Hold	11,422		10,556.75	↓
PUC Complaints	0		0	↔

Operations Management

Metric	Oct 2004	Goal	4 Month Avg	Trend
Total # of Calls	374,990		384,019.75	↑
Avg Handle Time	5:19	< 5:00	5:20	↑
% First Call Effectiveness	93.14%		93.24%	↑
% Contacts Closed >= 3 days	96.09%		94.53%	↓
Avg # Past Due S/Os	576	< 253	414.25	↓
Avg # Open U/Cs Call Center Field	178 87 8	< 126	135 80.25 6.25	↓ ↓ ↓
% of Bill Exceptions	8.09%	< 2%	7.64%	↓
% Est. Readings	4.26%	0%	4.12%	↓
Rev Adjustments # of Adjustments	($78,463.27) 4,589		($51,752.90) 3,223	↓ ↓
Avg Daily Revenue	$244,612.19		$230,813.11	↑
Billed Revenue	$5,136,855.97		$5,077,886.53	↑
Avg Daily A/R Days Outstanding	$4,766,356.95 27.2		$5,184,037.21 31.4	↑ ↑

Metric	Oct 2004	Budget	Q3 2004	Trend
Charged Off % of Rev	$57,624.09 1.12%		$334,652.62 2.21%	↑ ↑

American Water

TENNESSEE AMERICAN WATER COMPANY
MONTHLY CUSTOMER CARE SCORECARD
NOVEMBER 2004

Last Updated - 12/18/04 5:28 AM

Update

Scorecard statistics are automatically updated once per day. You may use the update button to retrieve the current statistics.
Note: The update will take approximately 2 minutes to complete.

Legend: Goal Met/Goal Not Met ↑ Positive Trend ↓ Negative Trend ↔ Constant

Customer Service

Metric	Nov 2004	Goal	4 Month Avg	Trend
Quality Monitoring # of calls evaluated	91.9% 900	> 90%	91.63% 1,811.25	↑ ↓
Survey Information % IN % Taken of IN	96.10% 74.36% 18.04%	> 90%	97.10% 79.26% 17.64%	↓ ↓ ↑
Avg % Ans within 30 sec	83.01%	> 80%	81.13%	↑
Avg % Abandon after 30 sec	1.43%	< 5.5%	1.98%	↑
Avg Speed of Answer (sec)	19.18	< 30	24.15	↑
Max Queue Time in IVR	26:47	<	29:40	↑
% IVR Self-Serv Calls Offered	20.41%	> 15%	18.68%	↑
% Correspondence Response < 3 days	81.67%	100%	93.07%	↓
Total Cust Imp S/O Past Due	328	0	298.75	↓
# Payments in Suspense Customer Disputes	N/A 77		N/A 57.5	N/A ↓
# Of Accounts on Hold	16,498		11,169	↓
PUC Complaints	1		0	↓

Operations Management

Metric	Nov 2004	Goal	4 Month Avg	Trend
Total # of Calls	360,112		382,151.75	↑
Avg Handle Time	5:18	< 5:00	5:20	↑
% First Call Effectiveness	93.61%		92.98%	↓
% Contacts Closed >= 3 days	96.30%		94.74%	↓
Avg # Past Due S/Os	622	< 252	453.25	↓
Avg # Open U/Cs Call Center Field	201 65 9	< 126	156 87 6.75	↓ ↑ ↓
% of Bill Exceptions	7.9%	< 2%	7.78%	↓
% Est. Readings	9.79%	0%	4.50%	↓
Rev Adjustments # of Adjustments	($43,010.82) 4,221		($61,643.45) 3,672.75	↑ ↓
Avg Daily Revenue	$218,546.68		$232,850.59	↓
Billed Revenue	$4,808,026.99		$5,084,500.36	↓
Avg Daily A/R Days Outstanding	$4,629,649.42 29.6		$5,002,111.80 30	↑ ↑

Metric	Nov 2004	Budget	Q3 2004	Trend
Charged Off % of Rev	$55,144.02 1.15%		$334,652.62 2.21%	↑ ↑

Grimes, Dale

From: MMiller@wvawater.com
Sent: Sunday, January 16, 2005 4:33 PM
To: Grimes, Dale; Pappas, T.G.; French, Davidson
Cc: PDiskin@pawc.com; jwatson@vawc.com; jim.vanderweide@duke.edu; LBrooks@wvawater.com
Subject: Final Draft of Miller Rebuttal

Attached below are what should be the good draft of my rebuttal testimony. I have incorporated all the changes that I have received. I had made some changes on my own before making the changes you guys sent me today. If you see something minor change if you think it is more significant call on my cell phone number below and I will get back to you. I am also attaching all of my exhibits. I have to make a very minor change on Rebuttal Exhibit MAM-2. Since I don't know how to create PDF files, I have asked Lisa to make the change and send you a revised Exhibit 2 in the morning. Good Luck and if you have question call.

Michael A. Miller
American Water Works Service Co.
P.O. Box 1906
Charleston, WV 25327
Office: 304-340-2009
Cell: 304-552-6419
Fax: 304-353-6332

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

REBUTTAL TESTIMONY OF
PAUL R. HERBERT

ON BEHALF OF TENNESSEE-AMERICAN WATER COMPANY

CASE NO. 04-00288

CONCERNING

COST OF SERVICE ALLOCATION

AND

CUSTOMER RATE DESIGN

JANUARY 2005

BEFORE THE TENNESSEE REGULATORY AUTHORITY

RE: TENNESSEE-AMERICAN WATER COMPANY

CASE NO. 04-00288

REBUTTAL TESTIMONY OF PAUL R. HERBERT

1. Q. Please state your name and address.

A. My name is Paul R. Herbert. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

2. Q. By whom are you employed?

A. I am employed by Gannett Fleming, Inc.

3. Q. Are you the same Paul R. Herbert that submitted direct testimony in this case?

A. Yes, I am.

4. Q. What is the subject of your rebuttal testimony?

A. My rebuttal testimony will address Chattanooga Manufacturers Association (CMA) witness Mr. Michael Gorman, and the Consumer Advocate and Protection Division's witness Dr. Steve N. Brown, concerning the cost of service and proposed rates.

5. Q. Please address the testimony of Mr. Gorman.

A. Mr. Gorman recommends an alternative rate increase proposal which would allocate 50% of the increase to customer charges and 50% to consumption charges rather than the across-the-board increase proposed by the Company.

6. Q. What is the basis for his proposal?

A. He states that since approximately 60% of the increase in revenue requirement is caused by an increase in small mains, meters and services, the revenue increase should be more customer-cost related translating to higher customer charges.

7. Q. Do you agree with this conclusion?

A. This may be appropriate if the existing rate structure was perfectly aligned with costs, however this is rarely the case. Although the Company would generally favor increased customer charges in order to stabilize revenues, the proposal for an across-the-board increase was determined to be more appropriate at this time.

8. Q. Please address the testimony of Mr. Brown.

A. Mr. Brown discusses the effect of the recent legislation under Tenn. Code Ann. § 65-5-101(d) (2004), which requires privately-owned water companies to cease charging the municipality which it serves for fire protection and recover the cost from other, non-government ratepayers. The effect is to shift approximately $900,000 of revenue requirement, which is currently paid by the City, to other customer classes through their water rates.

9. Q. Please comment.

A. As I read Mr. Brown's testimony, he infers that the $900,000 now paid by the City comes at no cost to other ratepayers. While this is true in looking at customers' water bills alone, these same ratepayers generally are taxpayers to the City. The City, as part of its annual budget, must recover the $900,000 cost for fire protection from its

citizens through property taxes. So, while Mr. Brown complains about the "dramatic shift" of fire protection costs to ratepayers, the real shift is from customers' tax bills to their water bills.

10. Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND, TO-WIT:

AFFIDAVIT

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the Commonwealth and County aforesaid, personally came and appeared Paul R. Herbert, who, being by me first duly shown deposed and said that;

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his rebuttal testimony would set forth in the annexed transcript.

Paul R. Herbert

Taken, subscribed and sworn to before me this 17th day of January, 2005.

Notary Public

NOTARIAL SEAL
CHERYL ANN RUTTER, Notary Public
Camp Hill Boro, Cumberland County
My Commission Expires Feb. 20, 2007

TENNESSEE-AMERICAN WATER COMPANY
CASE NO. 04-00288
REBUTTAL TESTIMONY
Paul T. Diskin

1. Q. WILL YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD?

A. My name is Paul T. Diskin and my business address is 800 W. Hershey Park Drive, Hershey, PA 17033.

2. Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes, I have.

3. Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I will rebut the positions supported by CMA witness Gorman, CAD witness Buckner as well as supply the Company's most updated claim at this point in time.

4. Q. PLEASE DESCRIBE THE ADJUSTMENTS OF CMA WITNESS GORMAN FOR WHICH YOU HAVE A DISAGREEMENT.

A. I do not agree with his proposed adjustments concerning pension, and two components of working capital, average cash and other deferred debits. First, the Company based its claim on

information it received in May 2004 from its actuary, Towers and Perrins, which detailed the expected contributions for years 2004 through 2009. The amount for 2005 was a blended calculation of the estimated ERISA minimum required contribution by IRS regulations for 2004 and 2005. The estimated contributions for those years are added together and then divided by 2 to arrive at the expected calculation. That number is then allocated back to each of the subsidiaries of American Water who participate in the pension plan. As shown on Schedule 1 of Exhibit No. 4, the expected contributions for 2004 and 2005 for American Water were respectively, $16.6 million and $74.3 million. The addition of those two amounts is $95.9 million, which when divided by 2 is $45.5 million. That number, which is spread back to all of American Water subsidiaries, is show on Schedule 2 of Exhibit 4 at the bottom of the first column. Tennessee American's portion is 2.36%, which yields a number of $1,072,620. That number is then multiplied by a percentage of labor costs not charged to operations to arrive at the operating expense portion of pension expense. This is the level of pension expense the Company will record (and pay) in the 2005 attrition year, not the historic level

for pension expense for the twelve months ended September 30, 2004 as recommended by CAD witness Buckner.

5. Q. COULD YOU PLEASE CONTINUE YOUR COMMENTS ON CMA WITNESS GORMAN PROPOSALS?

A. Yes, I can. I do not agree with the elimination of average cash and other deferred debits from the Company's rate base. Average cash is a component of cash working capital that has been accepted by the TRA in numerous rate proceedings. As a matter of fact, the amounts claimed for average cash is identical to the amount accepted by the TRA and witness Gorman who testified in the previous rate proceeding at Docket No. 03-00118.

6. Q. DO YOU AGREE WITH MR GORMAN'S ADJUSTMENT CONCERNING OTHER DEFERRED DEBITS?

No, I do not agree with Mr. Gorman's proposed adjustment to eliminate completely any recovery of Other Deferred Debits ("ODD") from the Company's rate base claim. The Company has gone back and reviewed the calculations presented in its original filing and has agreed that the amount is misstated due to the failure to reflect amortizations until the mid-point of the attrition year. The new claim would be $1,196,132 or a reduction of

$256,715 to the Company's rate base claim. The Company has not proposed any adjustment to its rate base claim at this point in time since it discovered during the research of this issue that it failed to include a full year's amortization of security expenses thus understating its expenses by $84,131. For purposes of this proceeding, we have made the assumption that the additional expense offsets the reduction in rate base claim. Exhibit no. 5 details the previous calculation and the new revised calculation.

7. Q. DO YOU HAVE ANYTHING FURTHER TO SAY CONCERNING MR GORMAN'S ADJUSTMENT FOR "ODD"?

A. Yes, I do. Mr. Gorman asserts that the three year amortization of security costs would be fully amortized by the attrition year. The Company was only authorized to start amortizing these costs claimed in the prior rate proceeding beginning in August of 2003, not during the twelve months ended July 31, 2002 as witness Gorman alleges on page 9, lines 7 through 12 of his testimony. A three year amortization starting in August of 2003 would expire in July of 2006, which is outside the attrition year. The Company's revised claim now reflects the outstanding balance as of June 30, 2005.

8. Q. DO YOU AGREE WITH MR. GORMAN'S CHARACTERISATION OF THE TRANSITION CHARGES FOR THE CALL CENTER AND SHARED SERVICES?

A. No, I do not. My review of the testimony submitted by Company witness Miller in the prior proceeding does not reveal that the Company position was that those costs were final and completed. As a matter of fact Mr. Gorman mentions on page 9, line 20, of his testimony, that Mr. Miller estimated the Shared Service costs to be at a certain level. It is extremely difficult to estimate costs such as these until all of the costs have been recorded.

9. Q. PLEASE DESCRIBE THE ADJUSTMENTS OF CAD WITNESS BUCKNER FOR WHICH YOU HAVE A DISAGREEMENT.

A. I do not agree with his proposed adjustments concerning the labor costs not charged to operating percentage, fuel and power and chemicals. The Company's original claim for the labor costs not charged to operations percentage for the twelve months ended March 31, 2004 was 83.39%. The Company filed a response to CAPD question 37 which stated that the 83.39% was incorrect and that actual percentage for the twelve months ended March 31, 2004 was 80.53%. The 83.39% was the labor costs not charged to operations percentage for the attrition year in the Company's previous rate filing. I believe that the labor costs not charged to operations percentage calculated for the attrition year in the prior proceeding is more indicative of the percentage of not charged to operations going forward.

10. Q. WHAT IS YOUR DISAGREEMENT WITH CAD WITNESS BUCKNER'S ADJUSTMENT FOR FUEL AND POWER?

A. The Company has projected additional usage of 92,021 (ccf) based upon its the weather normalization adjustment. Additional

revenue associated with weather normalization of $446,054 has also been projected to coincide with this adjustment. Additional revenue of $117,367 and usage of 41,448 has also been projected from the addition of new customers. CAD witness Buckner has used a twelve-month rolling average which does not contain those higher usage levels reflected in the Company's revenue calculation. If witness Buckner's reduction to fuel and power is accepted, the Company's projected revenue level should be reduced accordingly.

11. Q. WHAT IS YOUR DISAGREEMENT WITH CAD WITNESS BUCKNER'S ADJUSTMENT FOR CHEMICALS?

A. My initial concerns are the same as addressed above concerning the failure to match usage and revenue. I have an additional concern due to price increases to certain chemicals which have become effective on January 1, 2005. During 2004, the Company was paying a rate of .0513 per lb for caustic soda and .1590 per lb for chlorine. Effective January 1, 2005, the price per pound for caustic soda rose to .1163, a 126.7% increase and the price per pound for chlorine rose from to .3340, an increase of 110.1%. The use of a twelve month rolling average adjusted for inflation cannot compensate for such drastic increases. We are setting rates for a prospective time period, but CAD witness Buckner's adjustment is based upon those historic twelve month average numbers. Even though his adjustment provides for an inflation increase, the 1.56 percent increase identified on Workpaper: E-Chem1 does not compensate for the significant increases in the

contract rates for 2005 for these two chemicals. Exhibit 6 contains letters from our chemical supplier in Tennessee in support of the numbers referenced above.

12. Q. DO YOU AGREE WITH THE REMAINDER OF CAD WITNESS BUCKNER'S ADJUSTMENTS CONCERNING THE REMAINING AREAS OF EXPENSE?

A. Company witnesses Miller and Watson will address the labor expense adjustments proposed by CAD. Witness Buckner has projected amounts in some cases which are higher than the Company proposal and some lower than the Company's proposal. The net effect of all of those adjustments approximates $70,000 in a lower revenue requirement for the Company. That number is accepted and the Company is only contesting the operating and maintenance adjustments mentioned in the Company's rebuttal testimonies.

13. Q. DO YOU AGREE WITH CAD WITNESS BUCKNER'S CALCULATION OF PROPERTY TAXES?

A. No, I do not. It is my understanding that a different methodology was utilized by the CAD in the previous proceeding. The method was based upon applying the assessment rate based on the latest property tax returns to the attrition year rate base. Using the rate base at March 31, 2004 of $85,553,595 and the property tax paid in 2004 of $2,304,480, you would arrive a percentage of 2.69%. Applying that rate times the Rate base mid point of attrition year of $87,611,392 would produce a projected amount of property taxes of $2,356,746.

14. Q. DO YOU AGREE WITH CAD WITNESS BUCKNER CALCUALTION OF GROSS RECEIPTS TAX?

A. No, I do not. Witness Buckner used the 2003 gross receipt tax return in his calculation which severely understates the Company revenue level which should be used in the calculation of its projected tax liability. The revenue amount on which that tax liability was calculated is approximately $28.5 million as shown in the TRA Data Request, Set I, number 46, which is referenced in witness Buckner's testimony. The Company's unadjusted book revenue amount for the twelve months ended March 31, 2004 was $30.9 million or $2.4 million higher than the amount used in the 2003 tax return. That amount also does not include the approximate $702,000 of additional revenue from the previous rate increase which the Company has built into its normalized test year along with the customer growth which has occurred since 2003. The final component that is missing from the 2003 tax return is the weather normalization adjustment which the Company has made increasing its revenue levels by around $446,000. The failure to include the additional revenues to be received from the rate increase, weather normalization and customer growth substantially understates the Company's

projected gross receipt tax liability.

15. Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

TENNESSEE REGULATORY AUTHORITY

STATE OF PENNSYLVANIA

COUNTY OF DAUPHIN

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Paul T. Diskin, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his testimony would set forth in the annexed transcript consisting of 9 pages.

Paul T. Diskin

Sworn to and subscribed before me
this 17th day of January 20054.

Notary Public

My commission expires _____.

NOTARIAL SEAL
Emily T. Hicks, Notary Public
Derry Township Dauphin County
My Commission Expires March 4, 2006

American Water
Five-Year Projection of Pension Funding Requirements
($ in Millions)

Estimated ERISA Minimum Required Contribution

	2004	2005	2006	2007	2008
American Water	$16.6	$74.3	$88.7	$58.9	$11.4

Assumptions

- Interest Rate: 9.00%
- Current Liability Interest Rate

Plan Year	AW Plan as of July 1
2004	6.25%
2005	5.80%
2006	5.04%
2007	5.00%
2008	4.98%

- Mortality: 1983 GAM for plan years beginning prior to July 1, 2005, 1994 GAM thereafter
- Salary Increase Rate: 5.00% per year for the AW pension plan

American Water Pension
Allocation of Cash Contributions

Pension Plan: Annual Valuation
using data collected as of July 1, 2003

COMPANY	Allocation Percentage *	2005
AMERICAN WATER WORKS COMPANY	0.50%	$227,250
AMERICAN WATER SERVICES (Dedham)	0.48%	218,160
AMERICAN WATER SERVICES (Corp)	0.24%	109,080
AWW SERVICE COMPANY		
Voorhees	5.21%	2,367,945
Belleville, IL Lab (R)	0.75%	340,875
Hershey, PA Data Center (W)	1.03%	468,135
Richmond, IN Data Center (H)	0.09%	40,905
Western (L)	1.19%	540,855
Haddon Heights IS	0.39%	177,255
Northeast Region	0.60%	272,700
Southeast Region	1.20%	545,400
Indiana Region	0.52%	236,340
Illinois Region	0.95%	431,775
Alton, IL Call Center	3.65%	1,658,925
Shared Services	2.70%	1,227,150
Total AWW Service Company	18.28%	8,308,260
VIRGINIA - AM - EASTERN DISTRICT	0.12%	54,540
NEW JERSEY - AM	9.64%	4,381,380
PENNSYLVANIA - AM	19.84%	9,017,280
ILLINOIS - AM	7.37%	3,349,665
NORTHERN ILLINOIS - UNION***	0.74%	336,330
INDIANA - AM	6.66%	3,026,970
IOWA - AM	1.18%	536,310
MISSOURI - AM	11.48%	5,217,660
OHIO - AM	1.66%	754,470
CALIFORNIA - AM	3.77%	1,713,465
NEW MEXICO - AM	0.38%	172,710
ARIZONA - AM	2.19%	995,355
KENTUCKY - AM	2.47%	1,122,615
MARYLAND - AM	0.13%	59,085
TENNESSEE - AM	2.36%	1,072,620
VIRGINIA - AM	1.51%	686,295
WEST VIRGINIA - AM	6.18%	2,808,810
MICHIGAN - AM	0.10%	45,450
HAWA	0.39%	177,255
LONG ISLAND - NONUNION	0.64%	290,880
LONG ISLAND - UNION**	1.69%	768,105
TOTAL SYSTEM	100.00%	$45,450,000

* The allocation percentage for each company is equal to the ratio of valuation earnings for that company to total valuation earnings for the entire American system.

** Based on January 1, 2003 Actuarial Report prepared by John Hancock.

*** Based on April 1, 2003 data

TENNESSEE-AMERICAN WATER COMPANY
OTHER DEFERRED DEBITS
@ 6-30-05

ACCOUNT NUMBER					ORIGINAL AMOUNT	REVISED AMOUNT
183.01	PRELIMINARY SURVEY - CUSTOMER SERVICE	$915,709			**$915,709**	$793,069
183.02	PRELIMINARY SURVEY - FINANCIAL SERVICES	343,096			**343,096**	297,151
186.49	COST OF MANAGEMENT AUDIT - NET AMORTIZATION $3,872.86 at 14 months amtz	0	-	**54,220**	(54,220)	0
186.01	SECURITY COSTS	248,262			248,262	114,012
	TOTAL				$1,452,847	$1,204,232

BRENNTAG

January 11, 2005

Mr. Mark Wudarski
American Water Works
Phone: 856-810-5682
Fax: 856-810-5649

Dear Mark:

Your 2004 price for Chlorine ton cylinders delivered to Tennessee American Water, Chattanooga, TN was $0.159/lb. Your price increased January 1, 2005 by $0.175/lb for a new price of $0.334/lb. Pricing is fob delivered Chattanooga, TN.

If you should have any questions, please feel free to contact me at your convenience.

Sincerely,

Terry A. Eades

TAE/pgt

Brenntag Mid-South, Inc.
1405 Highway 136 West (42420)
PO Box 20
Henderson, KY 42419-0020

Bonded
CHEMICALS
Inc.

American Water
9 Wiehl St
Chattanooga TN 37403

Mark Wudarski,

This letter is to inform you of your pricing on liquid Caustic Soda 50% Technical grade used at the Tennessee American Water Plant in Chattanooga, Tennessee.

2004 pricing	$0.0513 / wet pound
2005 pricing	$0.1163 / wet pound

The increase is due to increased raw material cost of the product. If you have any further questions, I can be reached at (614) 777-9240

Best regards,

Brett McMillen
Sales Manager

Bonded Chemicals – 2645 Charter Street – Columbus OH 43228
Phone (614) 777-9240 Fax (614) 777-9244

BASS, BERRY & SIMS PLC
A PROFESSIONAL LIMITED LIABILITY COMPANY
ATTORNEYS AT LAW

R. DALE GRIMES
TEL: (615) 742-6244
FAX: (615) 742-2744
dgrimes@bassberry.com

AMSOUTH CENTER
315 DEADERICK STREET, SUITE 2700
NASHVILLE, TN 37238-3001
(615) 742-6200

www.bassberry.com

OTHER OFFICES

NASHVILLE MUSIC ROW
KNOXVILLE
MEMPHIS

January 18, 2005

VIA HAND DELIVERY

Chairman Pat Miller
c/o Sharla Dillon, Docket Manager
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

Re: Petition of Tennessee American Water Company to Change and Increase Certain Rates and Charges So As to Permit It to Earn a Fair and Adequate Rate of Return on Its Property Used and Useful In Furnishing Water Service to Its Customers, Docket No. 04-00288.

Dear Chairman Miller:

Enclosed please find the original and five (5) copies of the Rebuttal Testimony and exhibits of the following witnesses:

1. Mr. Paul T. Diskin;

2. Mr. Michael A. Miller;

3. Mr. John Watson;

4. Dr. James H. Vander Weide; and

5. Mr. Paul Herbert.

Also we have enclosed an electronic version in PDF format, that includes this letter and the testimony and exhibits.

Should you have any questions with respect to this filing, please do not hesitate to contact me at the telephone number listed above.

With kindest regards, I remain

Very truly yours,

R. Dale Grimes

RDG/tn
Enclosures

JDF/tn
Enclosure

cc: Certificate of Service List
Jean Stone, Esq.
Mr. Paul Diskin
Mr. Michael Miller
T. G. Pappas, Esq.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served via the method(s) indicated, on this the 18th day of January, 2005, upon the following:

[ ] Hand [✓] Mail [ ] Facsimile [ ] Overnight [✓] Electronic	Michael A. McMahan, Esq. Phillip A. Noblett, Esq. Lawrence W. Kelly, Esq. Nelson, McMahan & Noblett 801 Broad Street, Suite 400 Chattanooga, TN 37402
[✓] Hand [ ] Mail [ ] Facsimile [ ] Overnight [ ] Electronic	Timothy C. Phillips, Esq. Vance L. Broemel, Esq. Office of the Attorney General Consumer Advocate and Protection Division P.O. Box 20207 Nashville, TN 37202
[✓] Hand [ ] Mail [ ] Facsimile [ ] Overnight [ ] Electronic	Henry M. Walker, Esq. Boult, Cummings, Conners & Berry, PLC Suite 700 1600 Division Street P.O. Box 340025 Nashville, TN 37203
[ ] Hand [✓] Mail [ ] Facsimile [ ] Overnight [✓] Electronic	David C. Higney, Esq. Grant, Konvalinka & Harrison, P.C. 633 Chestnut Street, 9th Floor Chattanooga, TN 37450

TENNESSEE AMERICAN WATER COMPANY
CASE NUMBER TRA04-0288
REBUTTAL TESTIMONY OF
JOHN S. WATSON

Q1. PLEASE STATE YOUR NAME AND THE PURPOSE OF YOUR TESTIMONY.

A1. My name is John S. Watson. I previously filed direct testimony in this proceeding, and now offer rebuttal testimony on certain recommendations made by (1) Consumer Advocate and Protection Division witness Terry Buckner, (2) Consumer Advocate and Protection Division witness Michael D. Chrysler, (3) City of Chattanooga witness Dolly Madison.

LABOR EXPENSE

Q2. MR. TERRY BUCKNER IN HIS TESTIMONY PROPOSED SEVERAL ADJUSTMENTS TO THE COMPANY'S PAYROLL AND PAYROLL RELATED EXPENSE. DO YOU AGREE AND PLEASE DISCUSS THE VACANCY ADJUSTMENT MADE BY MR. BUCKNER?

A2 No, I do not agree with Mr. Buckner's assertion that the adjustment for labor is appropriate. Tennessee American Water during that past 18 months, has undergone a major restructuring of the company, wherein functional areas across the organization have been modified and all management and staff positions were redesigned and job descriptions were re-written. Mr. Buckner fails to consider that in the utility business, underlying all decisions on the labor activities of the Company is the obligation to provide service to the customers within our certificated territory. Mr. Buckner also fails to consider that the Company is obligated to go through a complicated process regarding workforce changes of this type, which are required by the bargaining unit agreements the Company has negotiated with the labor union. The Company has had a significant number of retirements in the workforce in the past 18 months. Further, the company and labor union have negotiated to fill vacancies that occur in the workforce in a certain manner which gives preference to existing employees being given an opportunity to bid into a position that is vacant, or if an existing position is impacted, the impacted employee is allowed to bump other employees who hold

positions with the company on a seniority basis. For example, this process is very long and involved and requires the Company to bid each position it intends to fill for a minimum of five (5) working days. If an existing employee bids on that position, then the company continues the process by bidding the existing employee's former position, and so on until no employee in the bargaining unit bids on the job that was posted. In those cases where an employee retires, the company can only fill the position once the retiring employee vacates that position and then must utilize the bidding process to determine if an existing employee will fill it. Only after following the bidding process, can the Company offer the position and seek to hire from outside the Company.

The Company and the Bargaining Unit have aggressively pursued this process, including the need to consolidate back-office clerical union positions and to hire additional employees into outside field positions, and the bidding was concluded on December 18, 2004. The Company beginning the week of January 10, 2005 assembled a three member interview team and interviewed approximately 30 of the pre-screened applicants for the remaining open positions. As a result, those with successful interviews for the vacant bargaining unit positions received a job offer for each of the eleven (11) open positions, and I fully expect to have all accept the offers extended by the Company. (See Exhibit JSW-R1).

In addition, the Company has posted internally and by newspaper advertisement the position of HR Generalist and has identified three applicants that were interviewed the week of January 10th, 2005. This process will fill the vacancy for that particular position at Tennessee American Water shown on the Company Organizational Chart in response to Interrogatory Number 3 from the Staff of the Tennessee Regulatory Authority.

Finally, I reviewed the Schedules PAY-1, PAY-2, PAY-3 filed with Mr. Buckner's testimony to determine if the proper level of employees were included.

I found several errors and have recapped those adjustments believed to be critical to the Company on Exhibit JSW Payroll Adjustment R-2. The first necessary adjustment, was that I could not find my name listed on Schedule PAY-3 for salaried employees. I added my salary to Exhibit JSW R-2 to adjust Schedule PAY-6. I also did not find the HR Generalist position which has been interviewed and will be filled in the next two weeks. I showed this adjustment on Exhibit JSW R-2 to adjust Schedule PAY-6. I have reduced one salaried employee who retired effective January 1, 2005 and the Company does not intend to fill at this time. In addition, I have added the eleven (11) hourly personnel that the Company is hiring now. Finally, the company does not agree with the adjustment for capitalized labor and non-utility labor percentages. Schedule PAY-4, PAY-5, and PAY-6 do not reflect the capitalized labor percentages to be present during the attrition year. Mr. Buckner used the capitalized labor percentages for the period ending September 30, 2004 which were impacted by the restructuring. In many cases we used contract labor to fill the need for capital activities. These duties will be performed by in-house labor once at full compliment and will return the capitalized payroll closer to historic levels. Paul Diskin's direct and rebuttal testimony also cover this area. The company maintains that 16.61% is the appropriate level for capitalized labor. The non-utility labor percentage used in PAY-6 is abnormally high and non-recurring in May through September 2004; and the calculation on PAY-6 has ignored the previous levels experienced in the period March 2003 through April 2004. The Company believes the methodology for the adjustment for non-utility labor is flawed and the appropriate adjustment to the level before the restructuring and is shown on Exhibit JSW Payroll Adjustment R-2.

Q.3. MR. BUCKNER HAS MADE AN ADJUSTMENT IN THE COMPANY'S LABOR DUE TO A STANDARD 2080 HOURS PER YEAR. DO YOU CONCUR WITH THIS ADJUSTMENT?

A.3. No, I disagree with the adjustment to reduce the labor hours in the attrition year to 2080 from 2088 hours as the Company originally proposed. First, certain Tennessee American Water employees do not work a standard Monday through Friday schedule, and personnel such as process technicians, and certain service personnel will work 2080, 2088, or 2096 hour annual work schedule in 2005 due to shift work. Also, the numbers of working days in a calendar year vary. The company has selected the mid-point of that range when calculating the payroll expense that is requested in its rate filing. For these reasons, I have adjusted the hours to arrive at an increase of $13,192 to reflect the 2088 hours as the mid-point.

MANAGEMENT PHILOSOPY AND SERVICE QUALITY

Q4. DO YOU AGREE WITH THE TESTIMONY OF MR. MICHAEL CHRYSLER THAT THE RECENT MERGER AND ACQUISITION ACTIVITY, CHANGES IN MANAGEMENT PHILOSOPHY, MOVEMENT OF THE CALL CENTER AND THE ACCOUNTING FUNCTION PLACES NEGATIVE PRESSURE ON SERVICE QUALITY LEVELS FOR TENNESSEE AMERICAN WATER CONSUMERS? PLEASE COMMENT.

A4. No, I do not agree. In fact, I would suggest that in the areas discussed by Mr. Chrysler the exact opposite is true. For example, in the case of the call center, had Tennessee American Water put into effect the same technologies that are being employed at the Call Center in Alton, Illinois, Tennessee American Water would have had to duplicate those technologies locally, but could not have duplicated those services cost effectively. Certain functions that are performed at the Call Center, such as handling call volumes during extreme weather events along the East Coast in the past two years where over 5000 customer calls were answered in a 24 hour period, and power outages in the Northeast have permitted

customers to reach a company representative to discuss their bill or water service and this could not have been handled as effectively on a local level as has been demonstrated by the Call Center in Alton.

My thoughts on the accounting function are very similar to those expressed regarding the Call Center. As a result of the functions being placed at the Shared Service Center in Mount Laurel, NJ, a number of technologies are employed to track financial information and reports, and the Shared Service Center has the expertise and staffing with sufficient training programs centrally located to provide all of the accounting functions necessary for the business. These duties include such areas as taxes, fixed asset management, finance, procurement, payroll, and others and are performed routinely using a uniform technology platform. The Shared Service Center can share resources within the center to address a peak workload, provide expertise and remain current through training to meet changing guidelines, procedures, rules and regulations and to provide financial support to Tennessee American Water and other operating companies it serves.

Q5. IN MR. CHRYSLER'S TESTIMONY AND IN ANSWER TO QUESTION 16, HE ASSERTS THAT THE COMPANY HAS FILED FREQUENT RATE INCREASES. DO YOU AGREE?

A5. No. We have not filed "frequent" rate cases. They have only been filed when needed. Every Company rate case filed during the ten (10) years reviewed by Mr. Chrysler, the TPSC and now the TRA have granted increases.

The Company has shown fiscal restraint by making prudent capital expenditures and has held operating costs, such that rates were below the average increase for what consumers would expect to pay for products and services.

Q.6. MR. CHRYSLER'S TESTIMONY QUESTIONS (REFERENCE TO RESPONSES QUESTION 9 THROUGH 18) THE COMPANY'S DECISION-MAKING PROCESS INVOLVING THE METRICS FOR QUALITY OF SERVICE WHICH HE DESIRES FOR THE COMPANY TO PRODUCE. DO YOU AGREE AND PLEASE DISCUSS THE COMPANY'S ACTIVITIES REGARDING SERVICE METRICS AND SERVICE QUALITY.

A.6. I am quite aware of the service levels and the response to customer inquiries and service requests that Tennessee American Water employees provide to our customers on a daily basis. Mr. Chrysler has provided no direct evidence in his testimony that Tennessee American has changed its service level in any detrimental way following the recent merger and acquisition of American Water by RWE and Thames Water. The Company has been cooperative in discussing and furnishing additional data regarding the Alton Call Center which the Consumer Advocate and Protection Division (CAPD) indicated that it wanted to review. The Company is willing to work with the TRA and the CAPD staff to develop metrics that reflect the water industry and in particular the service provided by Tennessee American Water. The inference that the Company does not meet the customer's expectations for service quality is unfounded, as the Company routinely performs the work requested and meets the customer expectations for provision of water utility service. As explained in the Company's response to TRA First Set of Interrogatories Question #15, the Company provides the customer, in accordance with the customer's request, the option to elect to have the Company respond to their request in the morning or in the afternoon. In addition, in cases of an urgent nature, the company will dispatch personnel to a customer's address as needed to respond that same day, and in many cases, will leave the task they are performing to meet that customer's need.

Next, I would like to address the service metrics that Mr. Chrysler, on behalf of the CAPD, wishes the Company to track. In his testimony and in answer to his Question

#11, he comments that "the company does not keep track of the necessary metrics..."and continues in answer to his Question #12 further indicates and suggests a list of service metrics such as "Cash Transactions Processed (Nashville), Appliance Installations, Risers Inspected, (Meters) Skipped..." that are appropriate for "a Tennessee utility" to measure. It is inappropriate that Mr. Chrysler use those metrics, since they do not apply to Tennessee American Water, as Tennessee American Water is not in the business of providing gas utility service. As such, Tennessee American Water does not process cash in its office in Chattanooga, and so this metric should not be considered for Tennessee American Water. Also, it should be noted the Tennessee American Water neither performs appliance installations nor inspect risers in the provision of water service in Tennessee. Such metrics are inappropriate to use in measuring performance and the CAPD should withdraw those metrics from consideration.

In regard to customer survey data and frequency of customer surveys performed involving Tennessee American Water customers, I have just recently become aware that an initiative to continue a customer survey is being performed by American Water and the process and data gathering has commenced, the details of which will be addressed by the Company's witness Michael Miller in greater detail.

Q.7. WOULD YOU DISCUSS MICHAEL CHRYSLER'S TESTIMONY IN RESPONSE TO QUESTION #19 OF HIS TESTIMONY, REGARDING THE CHANGE IN COMPANY OWNERSHIP AND ANY IMPACT ON CUSTOMER COMMUNICATION.

A.7. Yes, I am surprised and disappointed by the characterization of Mr. Chrysler's impression of the Company. Since the change in ownership of the Company as the result of the acquisition and merger in January 2003, American Water and Tennessee American Water have continued to take an active approach to communication with customers, as well as employees. The Company is committed and proud to provide

service to water consumers served by Tennessee American Water. All of the customers being served are receiving service that meets or exceeds state and federal water quality standards and annually receive a Consumer Confidence Report from the company giving them information about the water they drink. Also, the company continues to provide reliable quality water service to the entire customer base of Tennessee American Water, twenty-four hours a day and seven days a week.

Q.8. WOULD YOU RESPOND TO THE TESTIMONY OF DOLLY MADISON, CITY OF CHATTANOOGA TREASURER, CONCERNING HER CONCLUSION REGARDING THE IMPACT ON SEWER SERVICE USERS RESULTING FROM THE INCREASE IN WATER SERVICE TARIFFS OF TENNESSEE AMERICAN WATER AND OTHERWISE THE IMPACT ON THE WATER SERVICE COSTS TO CITY GOVERNMENT.

A.8. The conclusion that Ms. Dolly Madison reaches that sewer users will pay higher water rates cannot be argued, if one were to assume that the rate request were approved as filed. However, the increase to the City of Chattanooga overall, would be mitigated by the elimination of fire hydrant charges which will be discontinued due to recent state legislation, as has been reflected in the Company's rate filing, and as a result the net effect would be a reduction overall in the revenue that Tennessee American Water received from the City of Chattanooga. Also, the increase to the City Buildings and the Wastewater Treatment Plant located on Moccasin Bend Road would represent less that $35,000 increase per year, while at the same time a decrease of approximately $650,000 in fire hydrant charges would not longer be an obligation of the City of Chattanooga to pay. The net effect on the City would be to reduce the expenses for water services to the City overall.

Q.9. DOES THIS CONCLUDE YOUR TESTIMONY?

A.9. Yes, this concludes my testimony.

Exhibit JSW R-1

NEW HIRES AND POSITIONS - January 2005

Name	Position	Hire Date	Pay
Boyer, John	Field Representative	1/28/2005	$20.78
Haws, Erich	Field Representative	1/24/2005	$20.78
Justice, Matthew	Field Representative	1/31/2005	$20.78
Welch, Billy Joe	Heavy Equipment Operator	1/25/2005	$20.51
Blevins, Tobey	Truck Driver/Utility Worker	1/27/2005	$20.35
Goins, Steve	Truck Driver/Utility Worker	2/3/2005	$20.35
Hindman, Roy	Truck Driver/Utility Worker	2/7/2005	$20.35
McNabb, David	Truck Driver/Utility Worker	2/1/2005	$20.35
Watts, Daniel	Truck Driver/Utility Worker	2/2/2005	$20.35
King, Elijah	Utility Worker	2/4/2005	$20.08
Moore, Jeff	Utility Worker	1/26/2005	$20.08

TENNESSEE AMERICAN WATER
DOCKET NUMBER 04-00288
OPERATIONS AND MAINTENANCE PAYROLL LABOR
FOR ATTRITION YEAR ENDING 12/31/2005
EXHIBIT JSW R-2

Name	Position Title	Hire Date	Hourly Rate	Annual Hrs	Annual Base Pay	Attrition Year Totals
Hourly						
Boyer, John	Field Representative	1/28/2005	$20.78	2088	$ 43,388.64	
Haws, Erich	Field Representative	1/24/2005	$20.78	2088	$ 43,388.64	
Justice, Matthew	Field Representative	1/31/2005	$20.78	2088	$ 43,388.64	
Welch, Billy Joe	Heavy Equipment Operator	1/25/2005	$20.51	2088	$ 42,824.88	
Blevins, Tobey	Truck Driver/Utility Worker	1/27/2005	$20.35	2088	$ 42,490.80	
Goins, Steve	Truck Driver/Utility Worker	2/3/2005	$20.35	2088	$ 42,490.80	
Hindman, Roy	Truck Driver/Utility Worker	2/7/2005	$20.35	2088	$ 42,490.80	
McNabb, David	Truck Driver/Utility Worker	2/1/2005	$20.35	2088	$ 42,490.80	
Watts, Daniel	Truck Driver/Utility Worker	2/2/2005	$20.35	2088	$ 42,490.80	
King, Elijah	Utility Worker	2/4/2005	$20.08	2088	$ 41,927.04	
Moore, Jeff	Utility Worker	1/26/2005	$20.08	2088	$ 41,927.04	
				Sub-Total		$ 469,298.88
Salaried						
Watson John S.	Vice President & Manager	7/19/2004			$ 106,500.00	
Hannah, Jayne	Operations Superintendent	1/1/2005 (retired)			$ (90,042.33)	
Jane Doe	Human Resource Generalist	1/30/2005			$ 45,000.00	
				Sub-Total	$ 61,457.67	
		Total Payroll Adjustment				$ 530,756.55
ANNUAL HOURS TO 2088 HOURS		AVG. RATE	$ 21.89	592 hours		$ 12,958.88
74 employees @ 8 hours each=592 hours		$3366898/153920				
		Company O & M Labor to be Added Below				$ 543,715.43

	PAYROLL (CAPD)	PAYROLL (COMPANY) AS REBUTTED	O & M PORTION OF REVENUE
UNION EMPLOYEES	3,366,898	3,836,197	469,299
2088 HOURS VS. 2080 HOURS	-	12,959	12,959
NON-UNION HOURLY EMPLOYEES	42,429	42,429	-
SALARIED EMPLOYEES	1,344,995	1,406,453	61,458
TOTAL	4,754,322	5,298,037	543,715
CAPITALIZATION %	20.67%	16.61%	4.06%
NON-UTILITY %	1.83%	0.20%	-1.63%
CAPITALIZED PORTION	982,718	880,004	102,714
NON-UTILITY PORTION	87,004	10,596	76,408
EXPENSE PORTION	3,684,600	4,407,437	722,838
O & M PORTION OF REVENUE (1)	3,684,600	4,407,437	722,838

(1) THE AMOUNT OF O & M PORTION OF REVENUE DOES NOT INCLUDE INCENTIVE PAY
WHICH IS DISCUSSED IN DETAIL IN COMPANY WITNESS MICHAEL MILLER'S DIRECT AND REBUTTAL TESTIMONY