BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN WATER COMPANY FOR AUTHORITY TO FILE TARIFFS REFLECTING INCREASED RATES FOR WATER AND SEWER SERVICE	))))	CASE NO. WR-2003-

AFFIDAVIT OF JOHN J. SPANOS

John J. Spanos, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of John J. Spanos"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.

FILED[4]

JAN 23 2004

Missouri Public
Service Commission

John J. Spanos
John J. Spanos

State of Pennsylvania
County of Cumberland
SUBSCRIBED and sworn to
Before me this 13th day of May 2003.

Notary Public

My commission expires:

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

Exhibit No. 8
Case No(s). WR-2003-0500
Date 12/16/03 Rptr SUM

EXHIBIT
MAWC 8

Exhibit No.: _____
Issues: Depreciation
Witness: John J. Spanos
Exhibit Type: Direct
Sponsoring Party: Missouri-American Water Company
Case No.: WR-2003-
Date: May 19, 2003

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2003-

DIRECT TESTIMONY

OF

JOHN J. SPANOS

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

JEFFERSON CITY, MISSOURI

TABLE OF CONTENTS

INTRODUCTION

1. Q. Please state your name and address.

A. John J. Spanos. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

2. Q. With what firm are you associated?

A. I am associated with the firm of Gannett Fleming, Inc.

3. Q. How long have you been associated with Gannett Fleming?

A. I have been associated with the firm since college graduation in June 1986.

4. Q. What is your position in the firm?

A. I am Vice President of the Valuation and Rate Division.

5. Q. What is your educational background?

A. I have Bachelor of Science degrees in Industrial Management and Mathematics from Carnegie-Mellon University and a Master of Business Administration from York College of Pennsylvania.

6. Q. Are you a member of any professional societies?

A. Yes. I am a member of the Society of Depreciation Professionals and the American Gas Association/Edison Electric Institute Industry Accounting Committee.

7. Q. Have you taken the certification examination for depreciation professionals?

A. Yes. I passed the certification examination of the Society of Depreciation Professionals in September 1997.

8. Q. Will you outline your experience in the field of depreciation?

A. In June 1986, I was employed by Gannett Fleming Valuation and Rate

Consultants, Inc. as a Depreciation Analyst. During the period from June 1986 to December 1995, I took part in the preparation of numerous depreciation and original cost studies for utility companies in various industries. Depreciation studies of telephone companies were performed for United Telephone of Pennsylvania, United Telephone of New Jersey and Anchorage Telephone Utility. My work in the railroad industry included depreciation studies for Union Pacific Railroad, Burlington Northern Railroad and Wisconsin Central Transportation Corporation.

Assignments in the electric industry included depreciation studies for Chugach Electric Association, The Cincinnati Gas and Electric Company, The Union Light, Heat & Power Company, Northwest Territories Power Corporation and the City of Calgary - Electric System. Pipeline industry assignments included studies for TransCanada Pipelines Limited, Trans Mountain Pipe Line Company Ltd., Interprovincial Pipe Line Inc., Nova Gas Transmission Limited and Lakehead Pipeline Company.

My work for the gas industry included depreciation studies for Columbia Gas of Pennsylvania, Columbia Gas of Maryland, The Peoples Natural Gas Company, T. W. Phillips Gas & Oil Company, The Cincinnati Gas and Electric Company, The Union Light, Heat & Power Company, Lawrenceburg Gas Company and Penn Fuel Gas, Inc. Assignments in the water industry included depreciation studies for Indiana-American Water Company, Consumers Pennsylvania Water Company and The York Water Company; and depreciation and original cost studies for Philadelphia Suburban Water Company and Pennsylvania-American Water Company.

My participation in each of the above studies included assembly and analysis of historical and simulated data, field reviews, the development of preliminary estimates of service life and net salvage, calculations of annual depreciation, and the preparation of reports for submission to state or provincial public utility commissions or federal regulatory agencies. I performed these studies under the general direction of William M. Stout, P.E., the President of Gannett Fleming Valuation and Rate Consultants, Inc.

In January 1996, I was assigned to the position of Supervisor of Depreciation Studies. In July 1999, I was promoted to the position of Manager, Depreciation and Valuation Studies. In December 2000, I was promoted to my current position as Vice President of Gannett Fleming Valuation and Rate Consultants, Inc., now the Valuation and Rate Division of Gannett Fleming, Inc. I am responsible for all depreciation, valuation and original cost studies, including the preparation of final exhibits and responses to data requests for submission to the appropriate regulatory body.

Since January 1996, I have conducted depreciation studies similar to those previously listed including assignments for Hampton Water Works Company, Omaha Public Power District, Enbridge Pipe Line Company, Inc., Columbia Gas of Virginia, Inc., Virginia Natural Gas Company, National Fuel Gas Distribution Corporation - New York and Pennsylvania Divisions, The City of Bethlehem - Bureau of Water, The City of Coatesville Authority, The City of Lancaster - Bureau of Water, Peoples Energy Corporation, The York Water Company, Public Service Company of Colorado, Reliant Energy-HLP, Massachusetts-American Water Company, Pennsylvania-American Water

Company, St. Louis County Water Company, Chugach Electric Association, Alliant Energy, Dominion Virginia Power, NUI-Virginia Gas Companies, PSI Energy, NUI - Elizabethtown Gas Company, Cinergy Corporation – CG&E, Cinergy Corporation – ULH&P, Columbia Gas of Kentucky, Idaho Power Company, Centennial Pipeline Company and B. C. Gas Utility, Ltd. My additional duties include determining final life and salvage estimates, conducting field reviews, presenting recommended depreciation rates to management for their consideration and supporting such rates before regulatory bodies.

9. Q. What is the extent of your formal instruction with respect to utility plant depreciation?

A. I have completed the "Techniques of Life Analysis", "Techniques of Salvage and Depreciation Analysis", "Forecasting Life and Salvage", "Modeling and Life Analysis Using Simulation" and "Managing a Depreciation Study" programs conducted by Depreciation Programs, Inc. Also, I have completed the "Introduction to Public Utility Accounting" program conducted by the American Gas Association.

10. Q. What is the purpose of your testimony?

A. My testimony is in support of the depreciation study conducted under my direction and supervision for Missouri-American Water Company (the "Company"). Based upon that study, I am recommending that new depreciation accrual rates be adopted by the Company.

OVERVIEW

11. Q. Please describe what you mean by the term "depreciation".

A. "Depreciation" refers to the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which can be reasonably anticipated or contemplated, against which the Company is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and the requirements of public authorities. Depreciation accrual rates are used to allocate, for accounting purposes, the cost of assets over their service lives.

In the study that I performed and that is the basis for my testimony, I used the straight line whole life method of depreciation, with the average service life procedure to develop recommended depreciation accrual rates. In addition, I calculated the amount required to amortize the variance between the book depreciation reserve and the calculated accrued depreciation. The total annual depreciation is based on a system of depreciation accounting which aims to distribute the cost of fixed capital assets over the estimated useful life of the unit, or group of assets, in a systematic and rational manner.

For General Plant Accounts 340, 342, 343, 344, 346.1, 346.2, 347 and 348; I used the straight line method of amortization. The annual amortization is based on amortization accounting which distributes the unrecovered cost of fixed capital assets over the remaining amortization period selected for each account and vintage.

12. Q. Have you prepared an exhibit presenting the results of your study?

A. Yes. The report titled, "Depreciation Study – Calculated Annual Depreciation

Accruals Related to Utility Plant as of December 31, 2002" which has been marked Exhibit No. JJS-1 sets forth the results of my study.

13. Q. How did you determine the recommended annual depreciation accrual rates?

A. The determination of annual depreciation accrual rates consists of two phases. In the first phase, service life and net salvage characteristics are estimated for each depreciable group, that is, each plant account or subaccount identified as having similar characteristics. In the second phase, the annual depreciation accrual rates are calculated based on the service life and net salvage estimates determined in the first phase.

ESTIMATION OF SERVICE LIFE AND NET SALVAGE

14. Q. Please describe the first phase of the study, that is, the manner in which you estimated the service life and net salvage characteristics for each depreciable group.

A. The service life and net salvage study consisted of compiling historical data from records related to the Company's plant; analyzing these data to obtain historical trends of survivor and salvage characteristics; obtaining supplementary information from management and operating personnel concerning the Company's practices and plans as they relate to plant operations; and interpreting the above data to form judgments of average service life and net salvage characteristics.

15. Q. What historical data did you analyze for the purpose of estimating the service life characteristics of the Company's plant?

A. The data consisted of the entries made by the Company to record plant

transactions through 2002. The transactions included additions, retirements, transfers and the related balances. The Company, in accordance with my instructions, classified the data by depreciable group, type of transaction, the year in which the transaction took place, and the year in which the plant was installed.

16. Q. What method did you use to analyze this service life data?

A. I used the retirement rate method. That method is the most appropriate when aged retirement data are available, because it develops the average rates of retirement actually experienced during the period of study. Other methods of life analysis infer the rates of retirement based on a selected type survivor curve.

17. Q. Please describe the results of your use of the retirement rate method.

A. Each retirement rate analysis resulted in a life table which, when plotted, formed an original survivor curve. Each original survivor curve as plotted from the life table represents the average survivor pattern experienced by the several vintage groups during the experience band studied. Inasmuch as this survivor pattern does not necessarily describe the life characteristics of the property group, interpretation of the original curves is required in order to use them as valid considerations in service life estimation. Iowa type survivor curves were used in these interpretations.

18. Q. Please explain briefly what an "Iowa-type survivor curve" is and how you use it in estimating service life characteristics for each depreciable group.

A. The range of survivor characteristics usually experienced by utility and

industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired.

Iowa type curves are used to smooth and extrapolate original survivor curves determined by the retirement rate method. The Iowa curves and truncated Iowa curves were used in this study to describe the forecasted rates of retirement based on the observed rates of retirement and the outlook for future retirements.

The estimated survivor curve designations for each depreciable group indicate the average service life, the family within the Iowa system and the relative height of the mode. For example, the Iowa 80-R2 indicates an average service life of eighty years; a right-moded, or R, type curve (the mode occurs after average life for right-moded curves); and a moderate height, 2, for the mode (possible modes for R type curves range from 1 to 5).

19. Q. What historical data did you analyze for the purpose of estimating net salvage characteristics?

A. The data consisted of the entries made by the Company to record retirements, cost of removal and gross salvage during the period 1987 through 2002.

20. Q. What method did you use to analyze this net salvage data?

A. The net salvage data were analyzed by expressing the net salvage and its two components, cost of removal and gross salvage, as percents of the

original cost retired on annual, three-year moving average and most recent five-year average bases. The use of averages smooths the annual fluctuations and assists in identifying underlying trends.

21. Q. Please describe the manner in which you used the analyses of net salvage to estimate net salvage percents.

A. The results of the net salvage analyses provided indications of historical net salvage levels. The judgments of net salvage incorporated these historical indications and consideration of estimates made for other water companies.

CALCULATION OF DEPRECIATION

22. Q. Please describe the second phase of the process that you used, that is, the calculation of annual depreciation accrual rates.

A. After I estimated the service life and net salvage characteristics for each depreciable group, I calculated annual depreciation accrual rates for each group in accordance with the straight line remaining life method, using the average service life procedure.

23. Q. What group procedure is being used in this proceeding for depreciable accounts?

A. The average service life procedure is used in the current proceeding for all depreciable accounts and installation years. The average service procedure also was used in the Company's last rate proceeding.

24. Q. Please describe briefly the amortization of certain General Plant accounts.

A. General Plant Accounts 340, 342, 343, 344, 346.1, 346.2, 347 and 348 include a very large number of units, but represent less than two percent of

depreciable utility plant. Depreciation accounting is difficult for these assets, inasmuch as periodic inventories are required to properly reflect plant in service. In amortization accounting, units of property are capitalized in the same manner as they are in depreciation accounting. However, retirements are recorded when a vintage is fully amortized rather than as the units are removed from service. That is, there is no dispersion of retirement. All units are retired when the age of the vintage reaches the amortization period.

DESCRIPTION OF REPORT

25. Q. Please outline the contents of your report.

A. My report is presented in three parts. Introduction includes statements related to the scope and basis of the depreciation study. Methods Used in the Estimation of Depreciation includes descriptions of the estimation of survivor curves and net salvage and the calculation of annual depreciation accrual rates.

Results of Study presents a description of the results, summaries of the depreciation calculations, graphs and tables which relate to the service life and net salvage studies, and the detailed depreciation calculations.

Table 1 on pages III-4 and III-5 presents the estimated survivor curve, the net salvage percent, the original cost as of December 31, 2002, the calculated annual depreciation accrual amount and rate, book reserve, future accruals and the composite remaining life for each account or subaccount. The section beginning on page III-7 presents the results of the retirement rate analyses prepared as the historical bases for the service life estimates. The section beginning on page III-120 presents the results of the analyses of

historical net salvage data. The section beginning on page III-135 presents the depreciation calculations related to surviving original cost as of December 31, 2002.

26. Q. Please use an example to illustrate the manner in which the study is presented in the report.

A. I will use Account 331, Mains - Transmission and Distribution, as my example, inasmuch as it is a large depreciable group and is representative of the presentation.

The retirement rate method was used to analyze the survivor characteristics of this group. The life tables for the 1956-2002 and 1978-2002 experience bands are presented on pages III-69 through III-76 of the report. The life tables, or original survivor curves, are plotted along with the estimated smooth survivor curve, the 90-R2.5 on page III-68. The net salvage analysis for the period 1987 through 2002 is presented on pages III-129.

The calculation of the annual depreciation accrual rate related to the original cost at December 31, 2002, of utility plant is presented on page III-163. The calculation is based on the 90-R2.5 survivor curve, negative twenty-five percent net salvage and the attained age. The tabulation sets forth the installation year, the original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual amount. The totals are brought forward to the table on page III-4.

RECOMMENDATION

27. Q. What is your recommendation regarding annual depreciation accrual

rates for the Company?

A. I recommend that the Company use a composite annual depreciation accrual rate for each account or subaccount. My recommended depreciation accrual rates, based on the depreciation study, are set forth for each account in column 6 of Table 1 on pages III-4 and III-5 of Exhibit JJS-1. In my opinion, these are reasonable and appropriate depreciation accrual rates for the Company.

28. Q. Are your recommended depreciation accrual rates reasonable for plant added subsequent to December 31, 2002?

A. Yes. The annual depreciation accrual rates calculated as of December 31, 2002, can reasonably be applied to the total balance including new plant additions during the next several years.

29. Q. Does this complete your direct testimony?

A. Yes, it does.