

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF  
JOHN J. SPANOS

ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY

DEPRECIATION

DOCKET NO. R-0008-2032689

April 2008

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

RE: PENNSYLVANIA-AMERICAN WATER COMPANY

DIRECT TESTIMONY OF JOHN J. SPANOS

- 1 Q. Please state your name and address.
- 2 A. John J. Spanos. My business address is 207 Senate Avenue, Camp Hill,  
3 Pennsylvania.
- 4 Q. With what firm are you associated?
- 5 A. I am associated with the firm of Gannett Fleming, Inc.
- 6 Q. How long have you been associated with Gannett Fleming?
- 7 A. I have been associated with the firm since college graduation in June 1986.
- 8 Q. What is your position in the firm?
- 9 A. I am Vice President of the Valuation and Rate Division.
- 10 Q. What is your educational background?
- 11 A. I have Bachelor of Science degrees in Industrial Management and  
12 Mathematics from Carnegie-Mellon University and a Master of Business  
13 Administration from York College of Pennsylvania.
- 14 Q. Are you a member of any professional societies?
- 15 A. Yes. I am a member of the Society of Depreciation Professionals and the  
16 American Gas Association/Edison Electric Institute Industry Accounting  
17 Committee.
- 18 Q. Have you taken the certification examination for depreciation professionals?

1 A. Yes. I passed the certification examination of the Society of Depreciation  
2 Professionals in September 1997 and was recertified in August 2003 and  
3 January 2008.

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

5 A. In June 1986, I was employed by Gannett Fleming Valuation and Rate  
6 Consultants, Inc. as a Depreciation Analyst. During the period from June  
7 1986 to December 1995, I took part in the preparation of numerous  
8 depreciation and original cost studies for utility companies in various  
9 industries. Depreciation studies of telephone companies were performed for  
10 United Telephone of Pennsylvania, United Telephone of New Jersey and  
11 Anchorage Telephone Utility. My work in the railroad industry included  
12 depreciation studies for Union Pacific Railroad, Burlington Northern Railroad  
13 and Wisconsin Central Transportation Corporation.

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

21 My work for the gas industry included depreciation studies for  
22 Columbia Gas of Pennsylvania, Columbia Gas of Maryland, The Peoples  
23 Natural Gas Company, T. W. Phillips Gas & Oil Company, The Cincinnati  
24 Gas and Electric Company, The Union Light, Heat & Power Company,  
25 Lawrenceburg Gas Company and Penn Fuel Gas, Inc. Assignments in the

1 water industry included depreciation studies for Indiana-American Water  
2 Company, Consumers Pennsylvania Water Company and The York Water  
3 Company; and depreciation and original cost studies for Philadelphia  
4 Suburban Water Company and Pennsylvania-American Water Company.

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

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

21 Since January 1996, I have conducted depreciation studies similar to  
22 those previously listed, including assignments for Hampton Water Works  
23 Company, Omaha Public Power District, Enbridge Pipe Line Company, Inc.,  
24 Columbia Gas of Virginia, Inc., Virginia Natural Gas Company, National Fuel

1 Gas Distribution Corporation - New York and Pennsylvania Divisions, The  
2 City of Bethlehem - Bureau of Water, The City of Coatesville Authority, The  
3 City of Lancaster - Bureau of Water, Peoples Energy Corporation, The York  
4 Water Company, Public Service Company of Colorado, Reliant Energy-HLP,  
5 Massachusetts-American Water Company, St. Louis County Water Company,  
6 Missouri-American Water Company, Chugach Electric Association, Alliant  
7 Energy, Oklahoma Gas & Electric Company, Nevada Power Company,  
8 Dominion Virginia Power, NUI-Virginia Gas Companies, Pacific Gas &  
9 Electric Company, PSI Energy, NUI - Elizabethtown Gas Company, Cinergy  
10 Corporation – CG&E, Cinergy Corporation – ULH&P, Columbia Gas of  
11 Kentucky, SCANA, Inc., Idaho Power Company, El Paso Electric Company,  
12 Central Hudson Gas & Electric, Centennial Pipeline Company, CenterPoint  
13 Energy-Arkansas, CenterPoint Energy – Oklahoma, CenterPoint Energy –  
14 Entex, CenterPoint Energy - Louisiana, NSTAR – Boston Edison Company,  
15 Westar Energy, Inc., PPL Electric Utilities; PPL Gas Utilities; Wisconsin  
16 Power & Light Company; TransAlaska Pipeline; Avista Corporation;  
17 Northwest Natural Gas; Allegheny Energy Supply, Inc.; Public Service  
18 Company of North Carolina; South Jersey Gas Company, Duquesne Light  
19 Company, MidAmerican Energy Company, Laclede Gas, Duke Energy  
20 Company, Duke Energy Carolinas, Duke Energy Ohio Gas, Duke Energy  
21 Kentucky, Kentucky American Water Company, Anchorage Municipal Light  
22 and Power, E.ON U.S. Services Inc., Virginia American Water Company,  
23 Elkton Gas Services, Anchorage Water and Wastewater Utility, Bonneville  
24 Power Administration, NSTAR Electric and Gas Company, EPCOR

1 Distribution, Inc. and B. C. Gas Utility, Ltd. My additional duties include  
2 determining final life and salvage estimates, conducting field reviews and  
3 presenting recommended depreciation rates to management for their  
4 consideration.

5 Q. Have you submitted testimony to any state, federal or provincial utility  
6 commissions on the subject of utility plant depreciation?

7 A. Yes. I have submitted testimony to the Pennsylvania Public Utility  
8 Commission, the Commonwealth of Kentucky Public Service Commission,  
9 the Public Utilities Commission of Ohio, the Nevada Public Utility  
10 Commission, the Public Utilities Board of New Jersey, the Missouri Public  
11 Service Commission, the Massachusetts Department of Telecommunications  
12 and Energy, the Idaho Public Utility Commission, the Louisiana Public Service  
13 Commission, the State Corporation Commission of Kansas, the Oklahoma  
14 Corporate Commission, the Public Service Commission of South Carolina,  
15 Railroad Commission of Texas – Gas Services Division, the New York Public  
16 Service Commission, Illinois Commerce Commission, the Indiana Utility  
17 Regulatory Commission, the California Public Utilities Commission, the  
18 Arkansas Public Service Commission, the Public Utility Commission of Texas,  
19 the Regulatory Commission of Alaska, and the North Carolina Utilities  
20 Commission. I have also submitted testimony to the Alberta Energy & Utility  
21 Board and the Federal Energy Regulatory Commission ("FERC").

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

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

7 Q. What is the purpose of your testimony?

8 A. I was asked by Pennsylvania-American Water Company to prepare  
9 depreciation studies with regards to plant in service as of December 31, 2007  
10 and as of December 31, 2008 for its Coatesville Wastewater System.

11 Q. Have you prepared exhibits presenting the results of your studies?

12 A. Yes. Exhibit No. 6-A presents the results of the depreciation study as of  
13 December 31, 2007. Exhibit No 6-B presents the results of the depreciation  
14 study as of December 31, 2008. In addition, I am responsible for the  
15 responses to Depreciation Data Filing Requirements FR VI.1, FR VI.2, FR  
16 VI.3, FR VI.4, FR VI.5 and FR VI.6 which are presented as an Appendix to  
17 this testimony.

18 Q. Please describe Exhibits No. 6-A and 6-B.

19 A. Exhibit No. 6-A, titled "Depreciation Study of Coatesville Wastewater  
20 System - Calculated Annual Depreciation Accruals Related to Utility Plant in  
21 Service at December 31, 2007," includes the results of the depreciation  
22 study as related to the original cost at December 31, 2007. The report also  
23 includes the detailed depreciation calculations. Exhibit No. 6-B, titled  
24 "Depreciation Study of Coatesville Wastewater System - Calculated Annual

1 Depreciation Accruals Related to Utility Plant in Service at December 31,  
2 2008," includes the results of the depreciation study as related to the  
3 estimated original cost at December 31, 2008. The report also includes  
4 explanatory text, statistics related to the estimation of service life, and the  
5 detailed depreciation calculations.

6 Q. What was the purpose of your depreciation study?

7 A. The purpose of the depreciation study was to estimate the annual  
8 depreciation accruals related to utility plant in service for ratemaking  
9 purposes and, using Commission-approved procedures, to estimate  
10 Pennsylvania-American Water Company's book reserve at December 31,  
11 2008.

12 Q. Is Pennsylvania-American Water Company's claim for annual depreciation  
13 in the current proceeding based on the same method of depreciation as was  
14 used in its most recent wastewater rate proceeding in Docket No. R-  
15 00005212?

16 A. Yes, it is. For most plant accounts, the current claim for annual depreciation  
17 is based on the straight line remaining life method of depreciation. For  
18 Accounts 389.1, 390, 392, 393, 394, 396 and 397, the claim is based on the  
19 straight line remaining life method of amortization. The annual amortization  
20 is based on amortization accounting which distributes the unrecovered cost  
21 of fixed capital assets over the remaining amortization period selected for  
22 each account.

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

1 A. The equal life group procedure is used in the current proceeding for all  
2 depreciable accounts and installation years. The equal life group procedure  
3 for all vintages has also been used in this same manner in the Company's  
4 last four water rate proceedings.

5 Q. Is Pennsylvania-American Water Company's claim for accrued depreciation  
6 in the current proceeding made on the same basis as has been used by the  
7 Company in other rate proceedings?

8 A. Yes. The current claim for accrued depreciation has been made on the  
9 same basis for over fifteen years for water assets and for other wastewater  
10 assets owned by Pennsylvania American Water Company. The book  
11 reserve has been brought forward from the original cost study associated  
12 with the acquisition of the Coatesville Wastewater System by Pennsylvania  
13 American Water Company, approved by the Commission at Docket No. A-  
14 2300073F0002.

15 Q. How was the book reserve used in the calculation of annual depreciation?

16 A. The book reserve was allocated by account and then to vintages to  
17 determine original cost less accrued depreciation by vintage. The total  
18 annual accrual is the sum of the results of dividing the original costs less  
19 accrued depreciation by the vintage composite remaining lives.

20 Q. How was the book reserve at December 31, 2008 estimated?

21 A. The book reserve at December 31, 2008, by account, was projected by  
22 adding estimated accruals and salvage and subtracting estimated  
23 retirements and cost of removal from the book reserve at December 31,  
24 2007. Annual accruals were estimated using the annual accruals calculated

1 as of December 31, 2007. For most accounts, salvage and cost of removal  
2 were estimated by (1) expressing actual salvage and cost of removal as a  
3 percent of retirements by account, and (2) applying those percents to the  
4 projected retirements by account. The projected book reserve by account  
5 was allocated to vintages for the purpose of the annual accrual calculation  
6 based on calculated accrued depreciation at December 31, 2008.

7 Q. Has a service life study of Pennsylvania-American Water Company's  
8 wastewater utility property been performed?

9 A. Yes. A service life study was performed through 2007. The service life  
10 study is the basis for the service lives I used to calculate annual accruals.

11 Q. Briefly outline the procedure used in performing the service life study.

12 A. The service life study consisted of assembling and compiling historical data  
13 from the records related to the wastewater utility plant of Pennsylvania-  
14 American Water Company's Coatesville Wastewater System; statistically  
15 analyzing such data to obtain historical trends of survivor characteristics;  
16 obtaining supplementary information from management and operating  
17 personnel concerning Company practices and plans as they relate to plant  
18 operations; and interpreting the above data to form judgments of service life  
19 characteristics.

20 Iowa type survivor curves were used to describe the estimated survivor  
21 characteristics of the mass property groups. Individual service lives were  
22 used for major individual units of plant, such as the treatment plant. The life  
23 span concept was recognized by coordinating the lives of associated plant

1 installed in subsequent years with the probable retirement date defined by  
2 the life estimated for the major unit.

3 Q. What statistical data were employed in the historical analyses performed for  
4 the purpose of estimating service life characteristics?

5 A. The data consisted of the entries made to record retirements and other  
6 transactions related to the wastewater plant during the period 2001-2007.  
7 These entries were classified by depreciable group, type of transaction, the  
8 year in which the transaction took place, and the year in which the plant was  
9 installed. Types of transactions included in the data were plant additions,  
10 retirements, transfers, and balances.

11 Q. What was the source of these data?

12 A. They were assembled from Company records related to its utility plant in  
13 service.

14 Q. Were the methods used in the service life study the same as those used in  
15 other depreciation studies for water or wastewater utility plant presented  
16 before this Commission?

17 A. Yes. The methods are the same ones that have been presented previously  
18 for a number of water and wastewater companies, including Pennsylvania-  
19 American Water Company's water operations, before the Pennsylvania  
20 Public Utility Commission and that have been accepted by the Commission  
21 in its past orders concerning water and wastewater utilities.

22 Q. Are the factors considered in your estimates of service life presented in  
23 Exhibit No. 6-B?

1 A. Yes. A discussion of the factors considered in the estimation of service  
2 lives is presented by account on pages I-3 through I-5 of Exhibit No. 6-B.

3 Q. Please outline the contents of Exhibit No. 6-B.

4 A. Exhibit No. 6-B is presented in two parts. Part I, Methods Used in Study,  
5 includes an introduction; the estimation of survivor curves and the calcula-  
6 tion of annual depreciation; and an explanation of the manner in which net  
7 salvage was incorporated in the calculations.

8 Part II, Results of Study, presents a description of the results,  
9 summaries of the depreciation calculations, graphs and tables which relate  
10 to the service life study, and the detailed depreciation calculations.

11 Table 1, pages II-4 and II-5, presents the estimated survivor curve, the  
12 net original cost at December 31, 2008, and the book reserve and  
13 calculated annual depreciation for each account or subaccount of Utility  
14 Plant. Table 2, page II-6, presents the bringforward to December 31, 2008,  
15 of the book depreciation reserve as of December 31, 2007. Table 3 on  
16 page II-7 sets forth the calculation of the annual accruals used in the  
17 bringforward. Table 4, page II-8, presents the experienced and estimated  
18 net salvage during the five-year period, 2004 through 2008.

19 The section beginning on page II-9 presents the results of the  
20 retirement rate analyses prepared as the historical bases for the service life  
21 estimates. The section beginning on page II-45 presents the depreciation  
22 calculations related to original cost. The tabulations on pages II-47 through  
23 II-70 present the calculation of annual depreciation by vintage by account  
24 for each depreciable group of utility plant. The tabulation on pages II-72 and

1 II-73 presents the retirements, salvage, and cost of removal by account for  
2 each year during the period 2004 through 2008.

3 Q. Please outline the contents of Exhibit No. 6-A.

4 A. Exhibit No. 6-A includes a description of the results, summaries of the  
5 depreciation calculations, and the detailed depreciation calculations as of  
6 December 31, 2007. The descriptions and explanations presented in  
7 Exhibit No. 6-B are also applicable to the depreciation calculations  
8 presented in Exhibit No. 6-A. The graphs and tables related to service life  
9 presented in Exhibit No. 6-B also support the service life estimates used in  
10 Exhibit No. 6-A, inasmuch as the estimates are the same for both test years.  
11 The summary tables and detailed depreciation calculations as of December  
12 31, 2007, are organized and presented in the same manner as those as of  
13 December 31, 2008.

14 Q. Are there any significant changes to the life estimates from the time of  
15 acquisition?

16 A. Yes, there is. The treatment plant and some related equipment will be  
17 retired at year end 2009 when the new treatment plant is built.

18 Q. Can you explain how you are recommending handling the existing treatment  
19 plant assets?

20 A. The existing treatment plant assets have been segregated into two  
21 categories. The first group of assets will be utilized when the new treatment  
22 plant is put into service. The second group of assets will be retired from  
23 service at year end 2009 in conjunction with the new treatment plant  
24 construction. The accounts or asset classes directly affected by the

1 construction of the new treatment plant are; 354.4, 354.70, 371.30, 380.4  
2 and 389.1. The assets are separated from the other assets in the account  
3 and assigned a recommended rate reflecting the anticipated retirement  
4 date.

5 Q. Please use an example to illustrate the manner in which the study is  
6 presented in Exhibits No. 6-A and 6-B.

7 A. I will use Account 361.10, Collection Sewer Mains, as my example,  
8 inasmuch as it is the largest depreciable group and represents 47 percent of  
9 the original cost of depreciable utility plant as of December 31, 2008.

10 The retirement rate method was used to analyze the survivor  
11 characteristics of this group. The life table for the 2001-2007 experience  
12 band is presented on pages II-25 through II-27 of Exhibit No. 6-B. The life  
13 table, or original survivor curve, is plotted along with the estimated smooth  
14 survivor curve, the 60-S2.5, on page II-24.

15 The calculation of the annual depreciation related to the original cost at  
16 December 31, 2007, of utility plant is presented on page 16 of Exhibit No. 6-  
17 A. The calculation is based on the 60-S2.5 survivor curve, the attained age,  
18 and the allocated book reserve. The calculation at December 31, 2008 is  
19 presented on page II-56 of Exhibit No. 6-B and is based in part on the  
20 bringforward of the book reserve. The tabulations in Exhibits 6-A and 6-B  
21 set forth the installation year, the original cost, calculated accrued  
22 depreciation, allocated book reserve, future accruals, remaining life and  
23 annual accrual. The totals are brought forward to Table 1 on page 3 in  
24 Exhibit No. 6-A and on page II-4 in Exhibit No. 6-B.

- 1 Q. Do the exhibits exclude the original cost of certain plant?
- 2 A. Yes. The amounts received from customers as advances or contributions  
3 have been excluded from the original cost used in the study. The original  
4 cost excluded by account for customer advances or contributions are set  
5 forth in the detailed depreciation calculations of Exhibit No. 6-A and 6-B.  
6 The amounts are designated with a 9999 vintage.
- 7 Q. In what manner is net salvage incorporated in the depreciation calculations?
- 8 A. As stated on page I-10 of Exhibit No. 6-B, no adjustment for net salvage  
9 was made to the calculated annual depreciation amounts. The total  
10 calculated annual depreciation set forth on page II-8 of Exhibit No. 6-B  
11 reflects an addition for the amortization of negative net salvage in  
12 accordance with the practice of this Commission. The amortization is based  
13 on experience during the period 2004 through December 31, 2007, plus  
14 estimates for the year 2008 for the calculation as of December 31, 2008.  
15 The detail by plant account of regular retirements, salvage, and cost of  
16 removal for each year is presented on pages II-72 and II-73 of Exhibit No. 6-  
17 B. The totals are brought forward to Table 4 on page II-8 of Exhibit No. 6-B  
18 in which the amounts of the five-year amortizations are calculated.
- 19 Q. Does this complete your testimony at this time?
- 20 A. Yes, it does.