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Witness: John F. Wiedmayer
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-2007-0003

DIRECT TESTIMONY

OF

JOHN F. WIEDMAYER

ON

BEHALF OF

UNION ELECTRIC COMPANY

d/b/a AmerenUE

**St. Louis, Missouri
July, 2006**

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1 **DIRECT TESTIMONY**

2 **OF**

3 **JOHN F. WIEDMAYER**

4 **CASE NO. GR-2007-0003**

5 **I. INTRODUCTION**

6 **Q. Please state your name and address.**

7 A. My name is John F. Wiedmayer. My business address is 1010 Adams
8 Avenue, Audubon, Pennsylvania 19403.

9 **Q. Are you associated with any firm?**

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

11 **Q. How long have you been associated with Gannett Fleming, Inc.?**

12 A. I have been associated with the firm since I graduated from college in June,
13 1986.

14 **Q. What is your position with the firm?**

15 A. I am Project Manager, Depreciation Studies of Gannett Fleming's Valuation
16 and Rate Division.

17 **Q. What is your educational background?**

18 A. I have a Bachelor of Arts degree in Engineering from Lafayette College and a
19 Master of Business Administration from the Pennsylvania State University.

20 **Q. Do you belong to any professional societies?**

21 A. Yes. I am a member of the National and Pennsylvania Societies of

22 Professional Engineers and the Society of Depreciation Professionals. I am currently the past

1 President of the Society of Depreciation Professionals. In 2005, I served as President of the
2 Society of Depreciation Professionals.

3 **Q. Do you hold any special certification as a depreciation expert?**

4 A. Yes. The Society of Depreciation Professionals has established national
5 standards for depreciation professionals. The Society administers an examination to become
6 certified in this field. I passed the certification exam in September 1997.

7 **Q. Please outline your experience in the field of depreciation.**

8 A. In June, 1986, I was employed by Gannett Fleming Valuation and Rate
9 Consultants, Inc. as a Depreciation Analyst. I held that position from June, 1986 through
10 December, 1995. In January, 1996, I was assigned to the position of Supervisor of
11 Depreciation Studies. In August 2004, I was promoted to my present position as Project
12 Manager of Depreciation Studies. I am responsible for conducting depreciation and
13 valuation studies, including the preparation of testimony, exhibits, and responses to data
14 requests for submission to the appropriate regulatory bodies. My additional duties include
15 determining final life and salvage estimates, conducting field reviews, presenting
16 recommended depreciation rates to management for their consideration and supporting such
17 rates before regulatory bodies.

18 During the course of my employment with Gannett Fleming I have assisted in
19 the preparation of numerous depreciation studies for utility companies in various industries.
20 I assisted in the preparation of depreciation studies for the following telephone companies:
21 Alberta Government Telephone, Telus, and United Telephone of Pennsylvania. I assisted in
22 the preparation of depreciation studies for the following companies in the railroad industry:
23 CSX Transportation, Union Pacific Railroad, Burlington Northern Railroad, Burlington

1 Northern Santa Fe Railway, Amtrak, Norfolk & Western, Southern Railway, and Norfolk
2 Southern Corporation.

3 I assisted in the preparation of depreciation studies for the following
4 organizations in the gas industry: AmerenUE, Arizona Public Service Company, UGI
5 Utilities, Penelec, Metropolitan Edison, the City of Red Deer, Nova Scotia Power,
6 Newfoundland Power, Owen Electric Cooperative, Bangor Hydro Electric Company, Maine
7 Public Service Company, Michigan Electric Transmission Company, PECO, Jackson Electric
8 Cooperative Corporation, Houston Lighting and Power, TXU, Maritime Electric, Nolin
9 Rural Electric Cooperative, AmerenCIPS, AmerenCILCO, AmerenIP, and the City of
10 Calgary - Electric System.

11 I assisted in the preparation of depreciation studies for the following gas
12 companies: UGI Utilities, North Penn Gas, Equitable Gas, Centra Gas Alberta, Questar Gas
13 and Dominion East Ohio.

14 In each of the above studies, I assembled and analyzed historical and
15 simulated data, performed field reviews, developed preliminary estimates of service lives
16 and net salvage, calculated annual depreciation, and prepared reports for submission to
17 state public utility commissions or other regulatory agencies.

18 **Q. Have you previously testified on the subject of utility plant depreciation?**

19 **A.** Yes. I have submitted testimony to the Kentucky Public Service Commission,
20 the Newfoundland and Labrador Board of Commissioners of Public Utilities, the Nova
21 Scotia Utility and Review Board, the Federal Energy Regulatory Commission, the Utah
22 Public Service Commission and the Arizona Corporation Commission.

1 **Q. Have you received any additional education relating to utility plant**
2 **depreciation?**

3 A. Yes. I have completed the following courses conducted by Depreciation
4 Programs, Inc.: “Techniques of Life Analysis,” “Techniques of Salvage and Depreciation
5 Analysis,” “Forecasting Life and Salvage,” “Modeling and Life Analysis Using Simulation”
6 and “Managing a Depreciation Study.” In 2000, I became an instructor at the Society of
7 Depreciation Professional annual conference lecturing on “Salvage Concepts,” “Depreciation
8 Models,” and “Data Requirements for a Depreciation Study.”

9 **Q. What is the purpose of your testimony in this proceeding?**

10 A. The purpose of my testimony is to sponsor the depreciation study conducted
11 for Union Electric Company d/b/a AmerenUE (the “Company” or “AmerenUE”). The
12 depreciation study report titled, “Depreciation Study – Calculated Annual Depreciation
13 Accruals Related to Gas Plant at December 31, 2005” is attached hereto as Schedule JFW-
14 G1. My testimony will address (1) the methods and procedures I used in the depreciation
15 study, (2) the statistical analyses of service life and salvage data I performed, (3) my
16 estimates of survivor curves and net salvage percents, (4) my calculation of depreciation
17 accrual rates, (5) my proposed amortization of the reserve variance and (6) several examples
18 of the manner in which the study results are presented in the depreciation study report. A
19 summary of my testimony is included as Attachment A.

20 **Q. What is the purpose of the depreciation study?**

21 A. The purpose of the depreciation study is to determine the annual depreciation
22 accrual rates applicable to AmerenUE’s gas plant as of December 31, 2005.

1 **Q. Please define the concept of depreciation.**

2 A. Depreciation refers to the loss in service value not restored by current
3 maintenance, incurred in connection with the consumption or prospective retirement of utility
4 plant in the course of service from causes that can be reasonably anticipated or contemplated,
5 against which the company is not protected by insurance. Among the causes to be given
6 consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence,
7 changes in the art, changes in demand and the requirements of public authorities.

8 **Q. What is the basis of the depreciation rates currently being used by the**
9 **Company?**

10 A. The current depreciation rates for gas plant were approved by the Missouri
11 Public Service Commission in Case No. GR-2000-512. The rates became effective
12 November 1, 2000.

13 **Q. Do you see a necessity for revision of the Company's existing depreciation**
14 **rates at this time?**

15 A. Yes. Revisions to some of the Company's depreciation rates are necessary at
16 this time to insure that rates adequately reflect current information and recent changes
17 experienced by the Company in relation to average service lives and net salvage for gas
18 plant. A table on page I-5 of Schedule JFW-G1 presents a comparison between the existing
19 composite functional plant accrual rates and the proposed functional plant accrual rates. The
20 existing composite accrual rate for all accounts is 2.59 percent versus the proposed composite
21 accrual rate of 2.27 percent. Overall, a \$972,223 reduction to depreciation is recommended
22 as a result of the current depreciation study.

1 **II. OUTLINE OF DEPRECIATION STUDY REPORT**

2 **Q. Does Schedule JFW-G1 accurately portray the results of your**
3 **depreciation study as of December 31, 2005?**

4 A. Yes.

5 **Q. In preparing the depreciation study, did you follow generally accepted**
6 **practices in the field of depreciation?**

7 A. Yes.

8 **Q. Please describe the contents of your report.**

9 A. The depreciation study report consists of three parts. Part I, Introduction,
10 includes brief descriptions of the basis of the study and a summary of the study results. Part
11 II, Methods Used in the Estimation of Depreciation, presents detailed discussions of survivor
12 curves, methods of life analysis including an example of the retirement rate method, group
13 procedures for calculating annual and accrued depreciation including the true-up provision
14 for monitoring the book accumulated depreciation. Part III, Results of Study, includes a
15 qualification and description of the results, and summaries of the detailed depreciation
16 calculations. Appendices A through C include graphs and tables that relate to the service life
17 and net salvage analyses, and detailed depreciation calculations.

18 The tables on pages III-4 through III-8 present summaries of the depreciation
19 calculations as of December 31, 2005. Appendix A presents the results of the retirement rate
20 analyses prepared as the historical bases for the service life estimates. Appendix B presents
21 the results of the net salvage analyses. Appendix C presents the detailed depreciation
22 calculations related to surviving original cost as of December 31, 2005. The detailed
23 depreciation calculations present the annual and accrued depreciation amounts by account

1 and vintage year. The whole life annual accrual rate is also set forth on the tables in
2 Appendix C.

3 **Q. Please summarize your recommendations and their bases.**

4 A. I recommend that the Commission approve the annual depreciation accrual
5 rates presented in Schedule 1 of Schedule JFW-G1 and the remaining life amortization of the
6 variance between the calculated accrued depreciation and the book accumulated depreciation
7 that I have determined and presented in Schedule 2 of Schedule JFW-G1.

8 The annual depreciation accrual rates and the reserve variance amortization
9 that I am recommending are based on standard professional and industry practices using
10 estimates of survivor curves and net salvage percents. These estimates are based on
11 informed judgment that incorporates statistical analyses of historical retirement data, field
12 reviews of the property, discussions with management regarding the outlook for plant, and a
13 review of the estimates made for other gas utilities.

14 **III. METHODS AND PROCEDURES USED IN THE STUDY**

15 **Q. What was the basis for determining the annual depreciation related to**
16 **gas plant as of December 31, 2005?**

17 A. A study of service life and net salvage was prepared which incorporated
18 available historical data through 2005. The survivor curve and net salvage estimates
19 resulting from the study are the bases of the calculated annual and accrued depreciation as of
20 December 31, 2005. The straight-line method, average service procedure and the average
21 remaining life basis using the survivor curve and net salvage estimates and attained ages
22 were applied by depreciable group to gas plant as of December 31, 2005 to calculate
23 depreciation. Use of the remaining life basis recognizes the current status of the accumulated

1 provision for depreciation and aims to allocate the previously unallocated service value over
2 the remaining life. The term “service value” means the difference between original cost and
3 net salvage value of gas plant.

4 **Q. Please outline the steps you took to perform the depreciation study.**

5 A. I reviewed the available sources of data and discussed past causes of
6 retirement and the outlook for future retirements with AmerenUE engineering and operations
7 management. I specified the data to be extracted and coded for the historical analyses,
8 supervised the statistical analyses of data, and calculated depreciation.

9 **Q. Briefly describe the steps you took to conduct the service life and net**
10 **salvage study.**

11 A. I assembled and compiled historical data from the continuing property and
12 other records of AmerenUE; I analyzed the data to obtain historical trends of survivor and
13 salvage characteristics; I obtained supplementary information from AmerenUE’s
14 management and operating personnel concerning past practices and future plans as they
15 relate to plant operations; and I selected appropriate survivor curves and net salvage percents.

16 **IV. STATISTICAL ANALYSES OF DATA**

17 **Q. What historical data did you analyze for the purpose of estimating the**
18 **service lives and net salvage characteristics of AmerenUE’s gas plant?**

19 A. The service life data consisted of the entries made by AmerenUE to record gas
20 plant transactions from the earliest available year through 2005. For most plant accounts, the
21 plant accounting data comprised the period 1931 through 2005. The transactions included
22 additions, retirements, transfers, acquisitions and the related balances. I classified data by

1 depreciable group, type of transaction, the year in which the transaction took place, and the
2 year in which the plant was installed.

3 The net salvage data consisted of the entries to accumulated depreciation. The
4 transactions included retirements, cost of removal and gross salvage. For most plant
5 accounts, the net salvage data comprised the period 1984-2005.

6 **Q. What method did you use to analyze the service life data?**

7 A. I used the retirement rate method. That method is the most appropriate when
8 aged retirement data are available, because it develops the average rates of retirement
9 actually experienced during the period of study. Other methods of life analysis infer the rates
10 of retirement based on a selected type survivor curve. The retirement rate method is
11 described in Part II of the depreciation study report.

12 **Q. Please describe how you used the retirement rate method to analyze**
13 **AmerenUE's service life data.**

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

1 **Q. Please explain briefly what an “Iowa type survivor curve” is and how you**
2 **use it in estimating service life characteristics for each depreciable group.**

3 A. Iowa type curves are a widely used group of survivor curves that contain the
4 range of survivor characteristics usually experienced by utility and other industrial properties.
5 The Iowa curves were developed at the Iowa State College Engineering Experiment Station
6 through an extensive process of observation and classification of the ages at which industrial
7 property had been retired.

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

12 The estimated survivor curve designations for each depreciable group indicate
13 the average service life, the family within the Iowa system and the relative height of the
14 mode. For example, the Iowa 50-R3 indicates an average service life of thirty-four years for
15 the depreciable group; a Right, or R, type curve (i.e., the mode occurs to the right of or after
16 average life for right modal curves); and a relatively medium height, 3, for the mode
17 (possible modes for R type curves range of 0.5 to 5).

18 **Q. What method of analysis was used in the study of net salvage?**

19 A. The method of analysis for net salvage consisted of expressing annual
20 amounts of gross salvage and cost of removal as percents of the related retirement amounts.
21 The annual amounts and percents were smoothed through the use of a three-year moving
22 average. The most recent five-year average also was computed.

1 **Q. Did you prepare the schedules of net salvage amounts and percents**
2 **presented in Appendix B of the depreciation study report?**

3 A. Yes, I did.

4 **V. SURVIVOR CURVE AND NET SALVAGE ESTIMATES**

5 **Q. What were the bases for your estimates of survivor curves and net**
6 **salvage?**

7 A. The survivor curve and net salvage estimates were based on my judgment
8 which incorporated the analyses of historical data, a review of utility policies and outlook
9 with engineering and operations management, and comparisons of survivor curve and net
10 salvage estimates from studies of other gas utilities.

11 **Q. Are the factors which you considered in the estimation of survivor curve**
12 **and net salvage percents presented in the depreciation study report?**

13 A. Yes. The factors which I considered in estimating survivor curves and net
14 salvage percents are set forth in Part II of the report.

15 **VI. CALCULATION OF DEPRECIATION**

16 **Q. What method of depreciation was used to calculate the annual**
17 **depreciation as of December 31, 2005?**

18 A. The straight-line method, average service procedure and remaining life basis
19 was used to calculate the annual and accrued depreciation.

20 **Q. Why is this method and procedure appropriate for AmerenUE?**

21 A. The straight-line method is used throughout the regulated utility industry to
22 describe the loss in service value of utility property. The average service life procedure is

1 widely used throughout the gas industry and has been approved for AmerenUE by the
2 Missouri Public Service Commission.

3 **Q. Please describe the average service life procedure.**

4 A. When considering more than a single item of property, a group procedure is
5 appropriate because normally all of the items within a group do not have identical lives, but
6 have lives that are dispersed over a range of time. In the average service life procedure, a
7 constant accrual rate based on the average life of all property in the group is applied to the
8 surviving property. The accrued depreciation is based on the average service life of the
9 group and the average remaining life of each vintage within the group derived from the area
10 under the survivor curve between the attained age of the vintage and the maximum age.

11 **Q. Did you calculate the annual depreciation rates and accrued depreciation**
12 **amounts?**

13 A. Yes, the annual and accrued depreciation calculations summarized in Part III
14 of the depreciation study report and detailed in Appendix C were prepared under my
15 supervision.

16 **VII. RESERVE VARIANCE AMORTIZATION**

17 **Q. Please explain what you mean by the term “Reserve Variance**
18 **Amortization”.**

19 A. The reserve variance amortization is a way to adjust annual depreciation
20 expense in order to align the book reserve with the calculated accrued depreciation or
21 theoretical reserve. The reserve variance is the difference between the company’s book
22 accumulated depreciation (i.e., book reserve) and the theoretical reserve. A reduction in the

1 reserve variance is achieved by either increasing or decreasing the amortization amounts
2 depending on whether a reserve excess or deficiency exists.

3 **Q. How did you determine the reserve variance amortization for**
4 **AmerenUE?**

5 A. The reserve variance amortization for AmerenUE as of December 31, 2005 is
6 calculated in Schedule 2 on pages III-6 through III-7 of the depreciation study report. Each
7 account's reserve variance amortization shown in column 7 is the reserve variance in column
8 5 divided by the composite remaining life in column 6. The total reserve variance
9 amortization is negative \$596,040 which is a reduction to depreciation.

10 **Q. Did you make any adjustments to the book accumulated depreciation**
11 **amounts maintained at the plant account level?**

12 A. Yes. I reallocated the functional plant book reserve amounts for Distribution
13 and General Plant within functional category in proportion the theoretical reserve amounts
14 calculated at the plant account level. The reserve variance amortizations presented on
15 Schedule 2 in Schedule JFW-G1, are based on book reserve amounts that have been
16 reallocated in the manner described above.

17 **VIII. EXAMPLES OF PRESENTATION**

18 **Q. Please illustrate the procedure followed in your depreciation study and**
19 **the manner in which it is presented in the depreciation study report using an account as**
20 **an example.**

21 A. I will use Account 376, Mains, to illustrate the manner in which the study was
22 conducted. As the initial step of the service life study, aged plant account data were
23 compiled for the years 1931 through 2005. These data have been coded in the course of

1 AmerenUE's normal recordkeeping according to: 1) account or property group; 2) type of
2 transaction; 3) year in which the transaction took place; and, 4) year in which the gas plant
3 was placed in service. The retirements and other transactions were analyzed by the
4 retirement rate method. The survivor curve estimate is based on the statistical analysis for
5 the period 1931-2005. The original and smooth survivor curves are plotted on page A-13 of
6 Appendix A in the depreciation study report. The original life table for the 1931-2005
7 experience band is set forth on pages A-14 through A-16. The net salvage estimate is based
8 in part on the analysis of 1984 through 2005 removal cost and salvage experienced for
9 Account 376 as shown on pages B-12 through B-13 of Appendix B in the depreciation study
10 report.

11 The calculation of annual depreciation for the original cost of mains at
12 December 31, 2005 is presented by vintage, on pages C-7 through C-9 in the depreciation
13 study report. The accrued depreciation was calculated by the average service life procedure
14 using the Iowa 50-R3 survivor curve.

15 The total depreciation accrual on page C-9 of the depreciation study report
16 was brought forward to column 7 of Schedule 1 on page III-4. The total calculated accrued
17 depreciation on page C-9 was brought forward to column 4 of Schedule 2 on page III-6.

18 The calculated accrued depreciation was used to determine the reserve
19 variance amortization in column 7 of Schedule 2 in the manner previously described. The
20 reserve variance amortizations in column 7 of Schedule 2 were also presented in column 4 of
21 Schedule 3, pages III-8 through III-9, and added to whole-life annual accruals in column 3 to
22 determine the total annual depreciation in column 5 of Schedule 3.

1 **Q. Does this conclude your direct testimony?**

2 **A. Yes, it does.**

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company)
d/b/a AmerenUE for Authority to File)
Tariffs Increasing Rates for Gas Service)
Provided to Customers in the Company's)
Missouri Service Area.)

Case No. GR-2007-0003

AFFIDAVIT OF JOHN F. WIEDMAYER

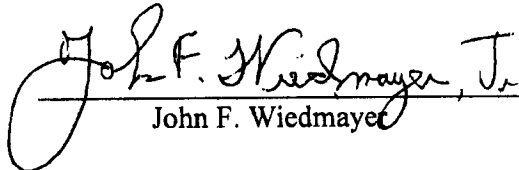
STATE OF PENNSYLVANIA)
) ss
COUNTY OF Montgomery)

John F. Wiedmayer, being first duly sworn on his oath, states:

1. My name is John F. Wiedmayer. I work in Audubon, Pennsylvania and I am a Project Manager with the firm of Gannett Fleming, Inc.

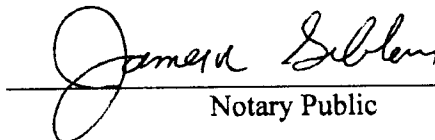
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 15 pages, Attachment A and Schedule JFW-G1, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.



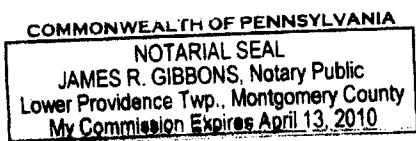
John F. Wiedmayer

Subscribed and sworn to before me this 3 day of July, 2006.



Notary Public

My commission expires: 4/13/2010



EXECUTIVE SUMMARY

John F. Wiedmayer

*Project Manager, Depreciation Studies Practice
Gannett Fleming, Inc.*

* * * * *

The purpose of my testimony is to sponsor the depreciation study conducted for Union Electric Company d/b/a AmerenUE, titled “Depreciation Study – Calculated Annual Depreciation Accruals Related to Gas Plant at December 31, 2005.” My testimony addresses (1) the methods and procedures I used in the depreciation study, (2) the statistical analyses of service life and salvage data I performed, (3) my estimates of survivor curves and net salvage percents, (4) my calculation of depreciation accrual rates, (5) my proposed amortization of the reserve variance and (6) several examples of the manner in which the study results are presented in the depreciation study report. The specific annual depreciation accrual rates that I recommend the Commission approve are presented in Schedule 1 of Schedule JFW-G1 and the remaining life amortization of the variance between the calculated accrued depreciation and the book accumulated depreciation that I have determined are presented in Schedule 2 of Schedule JFW-G1.

These annual depreciation accrual rates and the reserve variance amortization are based on standard professional and industry practices using estimates of survivor curves and net salvage percents. These estimates are based on informed judgment that incorporates statistical analyses of historical retirement data, field reviews of the property, discussions with management regarding the outlook for plant, and a review of the estimates made for other gas utilities.