

STATE OF IOWA
BEFORE THE IOWA UTILITIES BOARD

IN RE: : DOCKET NO. RPU-09-_____
: :
IOWA-AMERICAN WATER COMPANY : RPU-2009-0004
APPLICATION FOR REVISION OF RATES :

DIRECT TESTIMONY OF
EARL M. ROBINSON

I. WITNESS INTRODUCTION

Q. What is your name, occupation and business address?

A. My name is Earl M. Robinson. I am a Principal & Director of AUS Consultants. AUS Consultants is a consulting firm specializing in preparing various financial studies including depreciation, valuation, revenue requirements, cost of service, rate of return, and other analyses and studies for the utility industry and numerous other entities. AUS Consultants provides a wide spectrum of consulting services through its practices that include Depreciation and Valuation, Intellectual Property Management, Knowledge Management, Rate of Return, Revenue Requirements and Cost of Service, and Education and Publications. My office is located at 792 Old Highway 66, Suite 200, Tijeras, NM 87059.

Q. Have you prepared an appendix which contains your qualifications and experience?

A. Yes. Appendix A to my Direct Testimony contains a summary of my qualifications and experience.

II. PURPOSE OF TESTIMONY

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to set forth the results of my review and analysis of the
3 plant-in-service of Iowa-American Water Company (“IAWC” or “Company”) which was
4 conducted in the process of preparing a depreciation study of the Company’s water plant
5 assets as of December 31, 2007. The results of my review and analyses are contained in
6 a report filed with my testimony as Exhibit __ [EMR-1], titled “Iowa American Water-
7 Water Division Depreciation Study as of December 31, 2007” (“Report”).

8 In preparing the Report, I investigated and analyzed the Company's historical plant data
9 and reviewed of the Company’s past experience and future expectations to determine the
10 remaining lives of the Company's water plant assets. The depreciation study (“Study”)
11 utilized the resulting remaining lives, the results of a salvage analysis, the Company's
12 vintaged plant-in-service investment and depreciation reserve to develop recommended
13 average remaining life depreciation rates and depreciation expense related to the
14 Company's plant-in-service.

15 **III. BACKGROUND**

16 **Q. How is depreciation defined?**

17 A. Depreciation is defined in the 1996 NARUC “Public Utility Depreciation Practices”
18 publication as follows: “Depreciation, as applied to depreciable utility plant, means the
19 loss in service value not restored by current maintenance, incurred in connection with the
20 consumption or prospective retirement of utility plant in the course of service from
21 causes which are known to be in current operation and against which the utility is not
22 protected by insurance. Among the causes to be given consideration are wear and tear,
23 decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in
24 demand, and requirements of public authorities.”

1 **Q. Why is depreciation important to the revenue requirements of a utility company?**

2 A. Depreciation is important because, as the above definition describes, depreciation
3 expense enables a company to recover in a timely manner the capital costs related to its
4 plant-in-service benefiting the company's customers. Appropriate depreciation rates will
5 allow recovery of a company's investments in depreciable assets over a life that provides
6 for full recovery of the investments, less net salvage. Without the appropriate recovery of
7 depreciation costs, the Company ultimately will not be able to meet its financial
8 obligations related to the continued provision of service to customers. Furthermore, the
9 inclusion of the appropriate level of depreciation recovery in revenue requirements serves
10 to reduce overall costs (total of depreciation and return) to customers as opposed to a
11 situation where an inadequate level of annual depreciation expense is currently being
12 provided in rates.

13 **IV. DEPRECIATION STUDY**

14 **Q. What is your professional opinion with regard to the results of the depreciation
15 Study that you performed?**

16 A. In my opinion, the proposed depreciation rates resulting from the completed
17 comprehensive depreciation Study are reasonable and appropriate given that they
18 incorporate the service life and net salvage parameters currently anticipated for each of
19 the Company's property group investments over their average remaining lives.

20 **Q. What steps were involved in preparing the service life and salvage database that you
21 utilized?**

22 A. My comprehensive depreciation analyses included a detailed analysis of the Company's
23 fixed capital books and records through December 31, 2007. The Company's historical
24 investment cost records for each account have been assembled into a depreciation

1 database upon which detailed service life and salvage analysis were performed using
2 standard depreciation procedures.

3 **Q. What is the purpose of the historical database?**

4 A. The historical service life and net salvage data is a basic depreciation study tool that is
5 assembled to prepare a depreciation study. The historical database is used to make
6 assessments and judgments concerning the service life and salvage factors that have
7 actually been achieved, and (along with information relative to current and prospective
8 factors) to determine the appropriate future lives over which to recover the Company's
9 depreciable fixed capital investments. In accordance with this standard depreciation
10 analysis, the Company's depreciation database compiled through December 31, 2007,
11 which contains detailed vintage level information, was used to develop observed life
12 tables. The development of the observed life tables from the historical information was
13 completed by grouping like-aged investments within each property category and
14 identifying the level of retirements that occur through each successive age to develop the
15 applicable observed life tables. The resulting observed lives were then fitted to standard
16 Iowa Curves to estimate each property group's historically achieved average service life.
17 Likewise, the net salvage database was used as a basis to identify historical experience
18 and trends and to determine each property group's recommended net salvage factors.
19 This was accomplished by preparing various three-year rolling band analyses of salvage
20 components as well as a forecast based on the Company's historical salvage experience.

21 **Q. In the preparation of the Study, have you utilized information from additional**
22 **sources when estimating service life and salvage parameters?**

1 A. Yes. In addition to the historical data obtained from the Company's books and records,
2 information was obtained from Company personnel relative to current operations and
3 future expectations with respect to depreciation. Discussions were held with Company
4 planning and operations management. In addition, physical inspections were also
5 conducted of various representative sites of the Company's operating property.

6 **Q. Please briefly describe the information included in the Report.**

7 A. The depreciation study Report is divided into seven (7) sections. Two key portions of
8 each of the reports are Sections 2 and 4. Section 2 includes the summary schedules
9 listing the present and proposed depreciation rates for each depreciable property group
10 and other depreciation rate development schedules. Section 4 contains a narrative
11 description of the factors considered in selecting service life parameters for the
12 Company's property. The various other sections of the Report contain detailed
13 information and/or documentation supporting the schedules contained in Sections 2 and
14 4. In addition, Section 1 contains a brief narrative summary of the Report.

15 **Q. What was the source of the data utilized as a basis for determining the depreciation**
16 **rates?**

17 A. As previously discussed, all of the historical data utilized in the course of performing the
18 detailed service life and salvage studies were obtained from the Company's books and
19 records. Historical vintaged data (additions, retirements, adjustments, and balances) were
20 obtained for each depreciable property group.

21 **Q. Are there standard methods utilized to complete a service life analysis of a**
22 **company's historical property investments?**

1 A. Yes. As discussed in Section 3 of the depreciation study Report as well as later in this
2 testimony, the two most common methods are the Retirement Rate Method and the
3 Simulated Plant Record Method. The method chosen to study a company's historical
4 data is dependent upon whether aged or un-aged data is available. If specific aged data is
5 available, the Retirement Rate Method is used. If only un-aged data is available, the
6 Simulated Plant Record Method is used.

7 **Q. Were your studies prepared utilizing one of these accepted standard methods?**

8 A. Yes. The Company maintains aged plant records. Therefore, the Retirement Rate
9 Method was utilized in the depreciation studies of the Company's property.

10 **Q. Please describe the depreciation methods, procedures, and techniques commonly**
11 **utilized to develop depreciation rates for utility property.**

12 A. Inherent in all depreciation calculations is an overall method, such as the Straight Line
13 Method (which is the most widely used approach within the utility industry) to depreciate
14 property. Other methods available to develop average service lives and depreciation rates
15 are accelerated and/or deferral approaches such as the Sum-of-the-Years-Digits Method
16 or Sinking Fund Method.

17 In addition, there are several procedures that can be used to arrange or group property by
18 sub-groups of vintages to develop applicable service lives. These procedures include the
19 Broad Group, the Equal Life Group and other procedures. Due to the existence of very
20 large quantities of property units within utility operating property, utility property is
21 typically grouped into homogeneous categories as opposed to being depreciated on an
22 individual unit basis. While the Equal Life Group procedure is viewed as being the more
23 definitive procedure for identifying the life characteristics of utility property and as a

1 basis for developing service lives and depreciation rates (see my comments on the Equal
2 Life Group procedure later in my testimony), the Broad Group Procedure is more widely
3 utilized throughout the utility industry by regulatory commissions as a basis for
4 depreciation rates.

5 The distinction between the two procedures is in the manner in which recovery of the
6 cost is achieved. Under the Broad Group Procedure, the useful life and resulting
7 depreciation rate is based upon the overall average life of all of the property within the
8 group, while under the Equal Life Group Procedure, the useful life and resulting
9 depreciation rate is based upon separately recovering the investment in each equal life
10 group within the property category over the actual life of the property in that group.

11 A brief example (with a property group that has three units/three equal life groups of like
12 property) will demonstrate the difference between the two procedures. The example
13 incorporates the assumption that unit No. 1 (or equal life group of property) will retire
14 after one year, unit No. 2 (or equal life group) will retire after two years, and Unit No. 3
15 (or equal life group) will retire after three years. Accordingly, the average life of all three
16 (groups) is two (2) years $(1+2+3)\div 3$. Under the Broad Group Procedure, the average
17 useful life and resulting depreciation rate is calculated based upon the two year average
18 life. The resulting annual depreciation rates would be fifty percent in every year.

19 Conversely, under the Equal Life Group Procedure, each year's average life and resulting
20 depreciation rate is calculated by using the period of time during which the portion of the
21 property group remains in service. Since unit No. 1 (or that portion of the account) was
22 retired from service after one year, the entire investment for that property is recovered
23 over one year. Likewise, since unit No. 2 (or that portion of the account) will have a

1 service life of two years, the recovery of that portion of the account will occur over two
2 years. Lastly, unit No. 3 (or that portion of the account) is recovered over three years.
3 Hence, the useful average life for the property group in the first year is 1.64 years and the
4 first year's annual depreciation rate is 61.11 percent. In the second year, the useful
5 average life of the surviving group is 2.4 years and the second year's depreciation rate
6 drops to 41.67 percent. This occurs because during the first year, unit No. 1 (or that
7 portion of the account) was fully recovered. Likewise, in year three the useful life of the
8 surviving group is 3 years and the depreciation rate further drops to 33.33 percent. See
9 the following Table EMR-1 (BG and ELG).

1

BG Average Life Calculation

BG Depreciation Rate Calculation

<u>Year</u>		<u>Investment</u>	<u>Recovery Period (Yrs)</u>	<u>ASL (Years)</u>	<u>Weight</u>	<u>Investment</u>	<u>Recovery Period (Yrs)</u>	<u>Annual Rate-%</u>	<u>Recovery Amount</u>
1	Group # 1	300	2		150	300	2		150
	Group # 2	300	2		150	300	2		150
	Group # 3	<u>300</u>	2		<u>150</u>	<u>300</u>	2		<u>150</u>
	Total	900		2.00	450	900		50.00%	450
2	Group # 1	0	0		0	0	0		0
	Group # 2	300	2		150	300	2		150
	Group # 3	<u>300</u>	2		<u>150</u>	<u>300</u>	2		<u>150</u>
	Total	600		2.00	300	600		50.00%	300
3	Group # 1	0	0		0	0	0		0
	Group # 2	0	0		0	0	0		0
	Group # 3	<u>300</u>	2		<u>150</u>	<u>300</u>	2		<u>150</u>
	Total	300		2.00	150	300		50.00%	150
Grand Total		1,800		2.00	900	1,800		50.00%	900

2
3

ELG Average Life Calculation

ELG Depreciation Rate Calculation

<u>Year</u>		<u>Investment</u>	<u>Recovery Period (Yrs)</u>	<u>ASL (Years)</u>	<u>Weight</u>	<u>Investment</u>	<u>Recovery Period (Yrs)</u>	<u>Annual Rate-%</u>	<u>Recovery Amount</u>
1	Group # 1	300	1		300	300	1		300
	Group # 2	300	2		150	300	2		150
	Group # 3	<u>300</u>	3		<u>100</u>	<u>300</u>	3		<u>100</u>
	Total	900		1.64	550	900		61.11%	550
2	Group # 1	0	0		0	0	0		0
	Group # 2	300	2		150	300	2		150
	Group # 3	<u>300</u>	3		<u>100</u>	<u>300</u>	3		<u>100</u>
	Total	600		2.40	250	600		41.67%	250
3	Group # 1	0	0		0	0	0		0
	Group # 2	0	0		0	0	0		0
	Group # 3	<u>300</u>	3		<u>100</u>	<u>300</u>	3		<u>100</u>
	Total	300		3.00	100	300		33.33%	100
Grand Total		1,800		2.00	900	1,800		50.00%	900

4
5
6

1 Finally, the depreciable investment needs to be recovered over a defined period of time
2 (through use of a technique), such as the Whole Life or Average Remaining Life of the
3 property group. The distinction between the Whole Life and Average Remaining Life
4 Techniques is that under the Whole Life Technique, the depreciation rate is based on a
5 snapshot and determines the recovery of the investment and average net salvage over the
6 average service life of the property group for that moment in time. The Whole Life
7 technique requires either frequent updates to keep the “snapshot” current or the use of an
8 artificial deferred account that holds “excess” or “deficient” depreciation reserves. In
9 comparison, under the Average Remaining Life Technique, the resulting annual
10 depreciation rate incorporates the recovery of the investment (and future net salvage) less
11 any recovery experienced to date over the average remaining life of the property group.
12 The Average Remaining Life Technique is clearly superior in that it incorporates all of
13 the current and future cost components in setting the proposed annual depreciation rate as
14 opposed to only some of the current and future cost components as is the case with the
15 Whole Life Technique. This means that any changes that occur in between depreciation
16 studies are automatically trued-up in the subsequent study. No artificial deferral account
17 needs to be established to accomplish such a true-up.

18 The depreciation methods, procedures, and techniques can be used interchangeably. For
19 example, one could use the Straight Line Method with the Broad Group Procedure and
20 the Average Remaining Life Technique, or the Straight Line Method with the Equal Life
21 Group Procedure and Average Remaining Life Technique, or combinations thereof.

22 **Q. Which of these methods, procedures and techniques did you use in your**
23 **depreciation studies?**

1 A. The depreciation rates set forth in my depreciation study Report was developed utilizing
2 the Straight Line Method, the Broad Group Procedure, and the Average Remaining Life
3 Technique.

4 **Q. Why did you utilize these methods, procedure and technique?**

5 A. The Straight Line Method is widely understood, recognized, and utilized almost
6 exclusively for depreciating utility property.

7 The Broad Group Procedure recovers the Company's investments over the average period
8 of time in which the property is providing service to the Company's customers. While I
9 have used the Equal Life Group procedure in other studies, I used the Broad Group
10 Procedure in this study because it is consistent with depreciation methods and procedures
11 generally accepted by regulatory commissions and is the approach underlying the
12 Company's current depreciation rates.

13 Finally, the amount of annual depreciation must be based upon the productive life over
14 which the un-depreciated capital investment is recovered (the Average Remaining Life
15 Technique). The utilization of the Average Remaining Life Technique to develop the
16 applicable annual depreciation expense (over the average remaining life) assures that the
17 Company's property investment is fully recovered over the useful life of the property, and
18 that inter-generational inequities are avoided as current and future customers will pay
19 their fair share of depreciation expense. The determination of the productive remaining
20 life for each property group relies on a study of both past experience and future
21 expectations and develops the appropriate total life and applicable depreciation rates for
22 each of the Company's property groups. The Average Remaining Life Technique
23 incorporates all of the Company's fixed capital cost components, thereby better assuring

1 full recovery of the Company's embedded net plant investment and related costs. The
2 Average Remaining Life Technique gives consideration not only to the average service
3 life and survival characteristics plus the net salvage component, but also recognizes the
4 level of depreciation which has been accrued to date in developing the proposed
5 depreciation rate. The Average Remaining Life Technique is used by regulated
6 companies and regulatory agencies because it allows full recovery by the end of the
7 property's useful life -- no more and no less.

8 **Q. Please explain the utilization of group depreciation procedures.**

9 A. Group depreciation procedures are utilized to depreciate property when more than one
10 item of property is being depreciated. Such an approach is appropriate because all of the
11 items within a specific group typically do not have identical service lives, but have lives
12 which are dispersed over a range of time. Utilizing a group depreciation procedure
13 allows for a uniform application of depreciation rates to groups of similar property in lieu
14 of performing extensive depreciation calculations on an item-by-item basis. The Broad
15 Group approach is a recognized common group depreciation procedure.
16 The Broad Group Procedure recovers the investment within the asset group over the
17 average service life of the property group. Given that there is dispersion within each
18 property group, there are variations of retirement ages for the many investments within
19 each property group. That is, some properties retire early (before average service life)
20 while others retire at older ages (after average service life). This dispersion of retirement
21 ages defines the survival pattern experienced by the applicable property group.

22 **Q. What factors influence the determination of the recommended annual depreciation**
23 **rates included in your depreciation reports?**

1 A. The depreciation rates reflect four principal factors: (1) the plant-in-service by vintage;
2 (2) the book depreciation reserve; (3) the future net salvage; and, (4) the composite
3 remaining life for the property group. Factors considered in arriving at the service life
4 are the average age, realized life and the survival characteristics of the property. The net
5 salvage estimate is influenced by both past experience and future estimates of the cost of
6 removal and gross salvage amounts.

7 **Q. Please explain further the assumptions considered when utilizing your depreciation**
8 **approach.**

9 A. According to my approach, the Company will recover its un-depreciated fixed capital
10 investment through annual depreciation expense in each year throughout the useful life of
11 the property. The Average Remaining Life Technique incorporates the future life
12 expectancy of the property, the vintaged surviving plant-in-service, the survival
13 characteristics, together with the book depreciation reserve balance and future net salvage
14 in developing the amounts for each property account. Accordingly, Average Remaining
15 Life depreciation meets the objective of providing a Straight Line recovery of the
16 Company's fixed capital property investments.

17 **Q. Please explain further the group procedure you have used.**

18 A. My depreciation calculations, as applied in the Study, follow a group depreciation
19 approach. The group approach refers to the method of calculating annual depreciation
20 based on the summation of the investment in any one plant group rather than calculation
21 of depreciation for each individual unit of plant. In theory, each unit achieves average
22 service life by the time of retirement. Accordingly, the full cost of the investment will be
23 credited to plant-in-service when the retirement occurs, and likewise the depreciation

1 reserve will be debited with an equal retirement cost. No gain or loss is recognized at the
2 time of property retirement because of the assumption that the property was retired at
3 average service life.

4 **Q. What are the net salvage factors included in the determination of depreciation**
5 **rates?**

6 A. Net salvage is the difference between gross salvage, or the proceeds received when an
7 asset is disposed of, and the cost of removing the asset from service. Net salvage is said
8 to be positive if gross salvage exceeds the cost of removal. If the cost of removal exceeds
9 gross salvage, the result is negative salvage. Many retired assets generate little, if any,
10 positive salvage. Instead, numerous Company asset groups generate negative net salvage
11 at the end of their lives due to the cost of removal.

12 The cost of removal includes costs such as demolishing, dismantling, tearing down,
13 disconnecting or otherwise retiring/removing plant, as well as any environmental clean
14 up costs associated with the property. Net salvage includes any proceeds received from
15 any sale of plant.

16 Net salvage experience is studied for a period of years to determine the trends which have
17 occurred in the past. These trends are considered, together with any changes that are
18 anticipated in the future, to determine the future net salvage factor for remaining life
19 depreciation purposes. The net salvage percentage is determined by comparing the total
20 net positive or negative salvage to the book cost of the property investment retired.

21 The method used to estimate the retirement cost is a standard analysis approach which is
22 used to identify a company's historical experience with regard to what the end of life cost
23 will be relative to the cost of the plant when first placed into service. This information,

1 along with knowledge about the average age of the historical retirements that have
2 occurred to date, allows an estimation of the level of retirement cost that will be
3 experienced by the Company at the end of each property group's useful life. The study
4 methodology utilized has been extensively set forth in depreciation textbooks and has
5 been the accepted practice by depreciation professionals for many decades. Furthermore,
6 the cost of removal analysis is the current standard practice used for mass assets by
7 essentially all depreciation professionals in estimating future net salvage for the purpose
8 of identifying the applicable depreciation rate for a property group. There is a direct
9 relationship between the installation of specific plant and its corresponding removal. The
10 installation is its beginning of life cost while the removal is its end of life cost. Also, it is
11 important to note that Average Remaining Life depreciation rates incorporate future net
12 salvage which is typically more representative of recent versus long-term historical
13 average net salvage.

14 The Company's historical net salvage experience was analyzed to identify the historical
15 net salvage factor for each applicable property group. This analysis routinely finds that
16 historical retirements have occurred at average ages significantly shorter than the
17 property group's average service life. The occurrence of historical retirements at an age
18 which is significantly younger than the average service life of the property category
19 demonstrates that the historical data does not appropriately recognize the true level of
20 retirement cost at the end of the property group's useful life. An additional level of cost
21 to retire will occur due to the passage of time until all the current plant is retired at end of
22 its life. That is, the level of retirement costs will increase over time until the average
23 service life is attained. The additional inflation in the estimate of retirement cost is

1 related to those additional years' cost increases (primarily the result of higher labor costs
 2 over time) that will occur prior to the end of the property group's average life.
 3 To provide further explanation of the issue, several general principles surrounding
 4 property retirements and related net salvage should be highlighted. As property
 5 continues to age, assets that typically generate positive salvage when retired will generate
 6 a lower percentage of positive salvage as compared to the original cost of the property.
 7 By comparison, if the class of assets is one that typically generates negative net salvage
 8 (cost of removal) with increasing age at retirement, the negative net salvage percentage as
 9 compared to original cost will typically be greater. This situation is routinely driven by
 10 the higher labor costs that occur with the passage of time.

11 A simple example will aid in understanding the above net salvage analysis and the
 12 required adjustment to the historical results. Assume the following scenario: A company
 13 has two cars, Car #1 and Car #2, each purchased for \$20,000. Car #1 is retired after 2
 14 years and Car #2, is retired after 10 years. Accordingly, the average life of the two cars is
 15 six years. Car #1 generates 75% salvage or \$15,000 when retired and Car #2 generates
 16 5% salvage or \$1,000 when retired.

	<u>Unit Cost</u>	<u>Ret. Age (Yrs.)</u>	<u>% Salv.</u>	<u>Salvage Amount</u>
Car #1	\$20,000	2	75%	\$15,000
<u>Car #2</u>	<u>\$20,000</u>	10	5%	<u>\$ 1,000</u>
Total	\$40,000	6	40%	\$16,000

17 Assume an analysis of the experienced net salvage at year three (3). Based upon
 18 the Car #1 retirement, which was retired at a young age (2 years) as compared to the
 19 average six-year life of the property group, the analysis indicates that the property group
 20 would generate 75% salvage. This indication is incorrect, however, because it is the

1 result of basing the estimate on incomplete data. That is, the estimate is based upon the
2 salvage generated from a retirement that occurred at an age which is far less than the
3 average service life of the property group. The actual total net salvage that occurred over
4 the average life of the assets (which experienced a six-year average life for the property
5 group) is 40%, as opposed to the initial incorrect estimate of 75%.

6 This is exactly the situation that occurs with the majority of the Company's historical net
7 salvage data, except that most of the Company's property groups routinely experience
8 negative net salvage (cost of removal) as opposed to positive salvage.

9 **Q. Please explain what factors affect the length of the average service life that the
10 Company's property may achieve.**

11 A. Several factors contribute to the length of the average service life which the property
12 achieves. The three major factors are: (1) physical; (2) functional; and (3) contingent
13 casualties.

14 The physical factor includes such things as deterioration, wear and tear and the action of
15 the natural elements. The functional factor includes inadequacy, obsolescence and
16 requirements of governmental authorities. Obsolescence occurs when it is no longer
17 economically feasible to use the property to provide service to customers or when
18 technological advances have provided a substitute with superior performance. The
19 remaining factor, contingent casualties, includes retirements caused by accidental damage
20 or construction activity of one type or another.

21 In performing the life analysis for any property being studied, both past experience and
22 future expectations must be considered in order to fully evaluate the circumstances that

1 may have a bearing on the remaining life of the property. This ensures the selection of an
2 average service life which best represents the expected life of each property investment.

3 **Q. What study procedures were utilized to determine service lives for the Company's**
4 **property?**

5
6 A. Several study procedures were used to determine the prospective service lives
7 recommended for the Company's plant-in-service. These include the review and analysis
8 of historical, as well as anticipated, retirements, current and future construction
9 technology, historical experience and future expectations of salvage and the cost of
10 removal.

11 Service lives are affected by many different factors, some of which can be determined
12 from studying past experience, others of which must rely heavily on future expectations.

13 When physical characteristics are the controlling factor in determining the service life of
14 property, historical experience is a useful tool in selecting service lives. In cases where
15 there are changes in technology, regulatory requirements, company policy or the
16 development of a less costly alternative, historical experience is of lesser or little value.

17 However, even when considering physical factors, the future lives of various properties
18 may vary from those experienced in the recent past.

19 While a number of methods are available to study historical data, as I mentioned
20 previously, the two methods most commonly utilized to determine average service lives
21 for a company's property are the Retirement Rate Method and the Simulated Plant Record
22 Method. Given that the Company maintains vintaged investment records, the Retirement
23 Rate Method was the method chosen to analyze the historical data.

24 **Q. Please explain further the use of the retirement rate method.**

1 A. With this method of analysis, the Company's actuarial service life data, which is sorted
2 by age, is used to develop a survivor curve (observed life table). This survivor curve is
3 the basis upon which smooth curves (standard Iowa Curves) are matched or fitted to then
4 determine the average service life being experienced by the property account under study.
5 Computer processing provides the capability to review various experience bands
6 throughout the life of the account to observe trends and changes. For each experience
7 band analysis, an "observed life table" is constructed using the exposure and retirement
8 experience within the selected band of years. In some cases, the total life cycle of the
9 property has not been achieved and the experienced life table, when plotted, results in a
10 "stub curve." It is the "stub curve," or the total life curve, if the total life curve is
11 achieved, which is matched or fitted to the standard Iowa Curves. The matching process
12 is performed both by computer analysis, using a least squares technique, and by
13 overlaying the observed life tables on the selected smooth curves for visual reference.
14 The fitted smooth curve is a benchmark which provides a basis to determine the
15 estimated average service life for the property group under study.

16 **Q. Do the depreciation study reports contain charts which compare the analysis of the**
17 **Company's actual historical data to the service life parameters you are proposing as**
18 **a basis for your recommended annual depreciation rates?**

19 A. Yes. The Company's historical plant account records included vintaged retirement data
20 and, therefore, were studied using the Retirement Rate Method. The resulting observed
21 life tables and plottings of the selected Iowa Curves are contained in Section 5 of the
22 depreciation study Report.

1 **Q. You have referred to the use of the Iowa or smoothed survivor curves. Can you**
2 **generally describe these curves and their purpose?**

3 A. The preparation of a depreciation Study typically incorporates smoothed curves to
4 represent the experienced or estimated survival characteristics of the property. The
5 "smoothed" or standard survivor curves are the "Iowa" family of curves developed at
6 Iowa State University and which are widely used and accepted throughout the utility
7 industry. The shape of the curves within the Iowa family is dependent upon whether the
8 maximum rate of retirement occurs before, during or after the average service life. If the
9 maximum retirement rate occurs earlier in life, it is a left (L) mode curve; if it occurs at
10 average life, it is a symmetrical (S) mode curve; if it occurs after average life, it is a right
11 (R) mode curve. In addition, there is the origin (O) mode curve for plant which has
12 heavy retirements at the beginning of life.

13 At any particular point in time, actual company plant may not have completed its life
14 cycle. Therefore, the survivor table generated from the company data is not complete.
15 This situation requires that an estimate be made with regard to the incomplete segment of
16 the property group's life experience. Further, actual company experience often varies
17 from age interval to age interval, making its utilization for average service estimation
18 difficult. Accordingly, the Iowa Curves are used to both extend Company experience to
19 zero percent surviving as well as to smooth actual Company data.

20 **Q. What is the principal reason for completing the detailed historical life and salvage**
21 **analysis?**

22 A. The detailed historical analysis is prepared as a tool from which to make informed
23 assessments as to the appropriate service life and salvage parameters over which to

1 recover the company's plant investment. However, in addition to the available historic
2 data, consideration must be given to current events, the company's ongoing operations,
3 company management's future plans, and general industry events which are anticipated
4 to impact the lives that will be achieved by plant-in-service.

5 **Q. What is the basis for the Company's currently approved depreciation rates?**

6 A. As shown in the depreciation Study Exhibit, Exhibit __ [EMR-1] Section 2, pages 2-16
7 and 2-17, the current depreciation rates for the Company's plant are generally based upon
8 depreciation parameters set forth in a study completed using plant investment data
9 through December 31, 1996. The current account level depreciation rates composite to an
10 annual depreciation rate of 2.69 percent when applied to each of the December 31, 2007
11 plant-in-service account balances.

12 **Q. What are the most notable changes in annual depreciation rates and expense**
13 **between the present and proposed depreciation rates as set forth in Section 2 of the**
14 **depreciation Reports?**

15 A. With regard to water plant-in-service, several of the proposed rates reflect marked
16 changes (as outlined in Section 4 of the Report) from the current depreciation rates.
17 The accounts for which the most notable depreciation expense changes occurred in
18 comparison to the current depreciation rates include: Account 331.20 - Mains - 10-16
19 Inch; Account 331.30 - Mains - 6-8 Inch; Account 334.11 - Meters –Bronze; Account
20 334.12 - Meters – Plastic; Account 340.20 Computers and Peripherals, Account 340.30 -
21 Mainframe Computer Software; and, Account 346 - Communication Equipment.
22 The proposed depreciation rate for Account 331.20 - Mains - 10-16 Inch, increased from
23 1.27 percent to 1.48 percent. The proposed depreciation rate is the result of combined

1 changes of both the average service life and net salvage parameters. The average service
2 life and net salvage was changed in accordance with the life indication developed through
3 an analysis of the Company's historical data and consideration of future expectations.

4 The proposed average service life decreased from ninety-five years to ninety years, while
5 the future negative net salvage for the property group increased from negative fifteen to
6 thirty-five percent.

7 The depreciation rate for Account 331.30 – Mains - 6-8 Inch increased from 1.44 percent
8 to 1.84 percent. The drivers underlying the proposed depreciation rate is the use of a 85
9 year average service life (the same life as underlying the present depreciation rate) while
10 future net salvage is estimated at negative thirty-five percent for the proposed

11 depreciation rate. By comparison, net salvage of negative fifteen percent is contained
12 within the present depreciation rate for this property group. The average service life and
13 net salvage was changed in accordance with the life indication developed through an
14 analysis of the Company's historical data and consideration of future expectations.

15 The proposed depreciation rate for Account 334.11 - Meters-Bronze, decreased from 8.53
16 percent to 5.82 percent. The proposed depreciation rate is the result of combined changes
17 of both the average service life and net salvage parameters. The average service life was
18 changed in accordance with the life indication developed through an analysis of the
19 Company's historical data and consideration of future expectations. The proposed
20 average service life increased from fourteen years to sixteen years, while the future
21 negative net salvage for the property group decreased from eight percent two percent.

22 Also, contributing to the depreciation rate reduction is the fact that the book depreciation

1 reserve for this property group's investment is somewhat higher than required for the age
2 of the surviving investment.

3 The depreciation rate for Account 334.12 – Meters-Plastic decreased from 21.43 percent
4 to 1.21 percent. The average service life for this account remained the same at thirteen
5 years while the future net salvage underlying the current depreciation rate is eight percent
6 versus the future net salvage of two percent under the proposed depreciation rate. The
7 book depreciation reserve for this property group's modest investment is measurably
8 higher than required for the age of the surviving investment; hence, the resulting annual
9 depreciation rate is significantly reduced.

10 The depreciation rate for Account 340.20 - Computers & Peripherals increased from 9.87
11 percent to 20.21 percent. The depreciation parameters underlying the proposed
12 depreciation rates are a six year average service life and zero percent net salvage while
13 the depreciation parameters underlying the present depreciation rates are a seven year
14 average service life and zero percent net salvage. Contributing to the increase in the
15 propose annual depreciation rate over the current depreciation rate is the fact that the
16 Company's current book depreciation reserve for the property account is low in
17 comparison the average age of the current property group's investment and related
18 average service life.

19 The depreciation rate for Account 340.30 – Mainframe Computer Software increased
20 from 5.60 percent to 10.41 percent. The drivers underlying the proposed depreciation rate
21 is a thirteen year average service life and estimated net salvage of zero percent (as
22 summarized on Table 5, Sec 2 of this Report). The underlying depreciation parameter

1 basis for the present depreciation rate is a five year average service life and zero percent
2 net salvage.

3 The depreciation rate for Account 346 – Communication Equipment decreased from
4 10.31 percent to 6.08 percent. The drivers underlying the proposed depreciation rate is a
5 twelve year average service life and estimated future net salvage of zero (0) percent.

6 The underlying depreciation parameter basis for the present depreciation rate is a seven
7 year average service life and zero percent net salvage.

8 The utilization of the recommended depreciation rates based upon the Straight Line
9 Average Remaining Life Procedure results in the setting of depreciation rates which will
10 continuously true up the Company's level of capital recovery over the life of each asset
11 group. Application of this procedure, which is based upon the current best estimates of
12 service life together with the Company's plant-in-service and accrued depreciation,
13 produces annual depreciation rates that will result in the Company recovering 100 percent
14 of its investment -- no more, no less.

15 It is recommended that the Company continue to apply depreciation rates and maintain its
16 book depreciation reserve on an account-level basis. The maintenance of the book
17 reserve on an account-level basis requires both the development of annual depreciation
18 expense and distribution of other reserve account charges to an individual level.

19 Maintaining the Company's depreciation records in this detail will aid in completing the
20 various rate studies and, most importantly, clearly identify the Company's level of capital
21 recovery relative to each category of plant investment.

22 **Q. What is the net change in annual depreciation expense under the proposed**
23 **depreciation rates in comparison to present depreciation rates?**

1 A. Table 1, Section 2, page 2-2 indicates a net increase in annualized depreciation expense
2 of \$331,593 in comparison to the depreciation expense produced by the current
3 depreciation rates, when applied to the Company's plant-in-service investment as of
4 December 31, 2007.

5 **Q. What is the result of the Company's proposed account level depreciation rates?**

6 A. Application of the proposed account level depreciation rates to the plant-in-service as of
7 December 31, 2007 produces a composite annual depreciation rate of 2.95 percent.

8 **Q. What is your recommendation to the Board?**

9 A. I recommend that the proposed depreciation rates set forth in the depreciation Study
10 report be uniformly and prospectively adopted by the Board for regulatory purposes as
11 well as by the Company for accounting purposes.

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

13 A. Yes, it does.

AFFIDAVIT

State of New Mexico)
)
County of Bernalillo)

ss:

I, Earl M. Robinson, being first duly sworn, state that I am Principal & Director of AUS Consultants, that the foregoing Direct Testimony is true and correct to the best of my knowledge, information and belief.



Earl M. Robinson

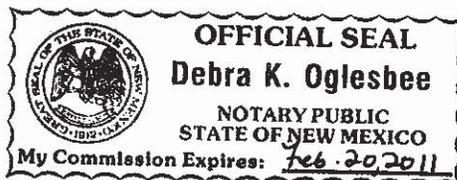
Subscribed and sworn to before me, this 23 day of April, 2009.



Notary Public

[seal]

My Commission Expires: Feb. 20, 2011



My County of Residence is: Bernalillo

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

Experience includes approximately 40 years of service in the public utility field. Mr. Robinson has performed services in the areas of depreciation, original cost, valuation, cost of service, and bill analysis within numerous regulatory jurisdictions and property tax agencies throughout the Eastern, Midwestern, Southwestern, and Pacific regions of the United States, Canada plus various areas of the Caribbean.

EXPERIENCE

1977 to Date

AUS Consultants. Various positions - currently Principal & Director. Mr. Robinson has prepared studies and coordinated analysis related to valuation, depreciation, original cost, trended original cost, cost of service, bill analysis, as well as analysis of expenses, revenues and income for various municipal and an extensive number of investor-owned electric, gas, water, wastewater, and telecommunications utilities.

Studies prepared have required the review of company records, inspection of property, the preparation of property inventories and original costs, preparation and review of mortality studies, selection of proper service lives, life characteristics and analysis of salvage, and analysis of capital recovery impact of changing depreciation methods.

During his many years of experience, Mr. Robinson has been involved in and/or responsible for an extensive quantity of comprehensive depreciation studies. Numerous early year's depreciation studies were prepared manually without the convenience of computer software systems. Subsequent, during the mid/late 1970's, Mr. Robinson became responsible for the completion of the many depreciation studies performed for the firm's clients. As part of that responsibility, Mr. Robinson was involved in not only performing the studies, but also in assisting AUS Consultants' MIS department in developing and testing various computer depreciation models. The studies performed by Mr. Robinson or under his direction have included all types of utilities, including electric, gas, water, wastewater, and telecommunications. During Mr. Robinson's career he has been involved in the preparation of more than a hundred depreciation related projects.

A Certified Depreciation Professional (CDP), Mr. Robinson, as a Principal & Director of AUS Consultants provides services to the firm's clients with regard to depreciation and cost based valuation issues. With more than forty (40) years' experience, he began his career as a staff member of the Plant Accounting Department of United Telephone (now Sprint) Eastern Group Headquarters subsequent to which he has spent the past thirty-five (35) plus years, as a consultant, preparing depreciation and valuation studies for gas, pipeline, electric, telecommunications, water, and wastewater utilities. In conjunction with the provision of these services, Mr. Robinson has testified on many occasions before numerous regulatory agencies (including state, federal, and property tax agencies throughout the U.S., Canada, and the Caribbean in support of the many studies completed for his diverse list of clients. In addition he has negotiated depreciation rates with various state regulatory agencies, the FCC Staff, and the FERC Staff. Mr. Robinson has also participated in several FCC, State, Company three-way depreciation re-prescription meetings.

With regard to valuation matters Mr. Robinson has been involved with the development of cost indexes from the earliest part of his career through the present. During his earlier years, he assisted and/or developed and utilized cost indexes to prepare reproduction cost and related fair value determinations for various of the firm's regulated utility clients. Subsequently, he attained extensive experience in preparing custom indexes, replacement cost, and depreciated replacement cost studies, having been responsible for preparing many such cost studies relative to various clients within the telecommunications industry during

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

the past twenty (20) plus year period.

He is also responsible for developing and publishing the firm's AUS Telephone Plant Index (successor to the Handy Whitman and C A Turner Telephone Construction Cost Index), a reproduction cost index subscribed to by various operating companies, regulatory agencies, and consultants.

Mr. Robinson is a founding member and past President of the Society of Depreciation Professionals, a professional organization that provides depreciation training, as well as provides a forum for discussion of depreciation issues. He is also a member of the American Gas Association (AGA) Accounting Services Committee and past chairman of the Statistics, Bibliography, Court Regulatory Sub-Committee of the AGA Depreciation Committee. As a member of that organization, he co-authored a publication entitled "An Introduction to Net Salvage of Public Utility Plant". Mr. Robinson has completed various previous presentations on the subject of depreciation studies as well as depreciated replacement cost to industry organizations and to property tax appraiser staffs.

1975 to 1977

Gannett, Fleming, Corrdry & Carpenter, Inc. Valuation Analyst in the Valuation Division where his duties and responsibilities included the classifications, analysis and coordination of data in the development of depreciation rates for various companies including telephone, gas, water and electric utilities.

1971 to 1975

Weber, Fick & Wilson (Acquired by AUS Consultants), Public Utility Analyst engaged in the unitization and subsequent application of costs in the pricing of inventories for original cost determination, depreciation and salvage studies to determine proper annual depreciation rates and trended original cost studies used in the determination of utility rate base.

1966 to 1971

United Telephone Company of Pennsylvania (now Sprint/United Telephone Company of Pa.). As a staff member of the Plant Accounting Department, his duties and responsibilities included various plant accounting ledgers, unitization of location and mass property accounts, as well as special studies related to insurance and tax valuations of utility plant in service.

TESTIMONY

Jurisdictions testified in include Alberta, Arizona, California, Connecticut, Delaware, District of Columbia, FERC, Florida, Indiana, Illinois, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and Virgin Islands. Extensive expert testimony has been presented on the subjects including Depreciation, Capital Recovery, Plant in Service Measures of Value, Depreciated Reproduction Cost, and Depreciated Replacement Cost. Numerous additional depreciation studies have been completed and filed in various different jurisdictions for which testimony appearances were not required.

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

PERSONAL

Education:

Graduate of Harrisburg Area Community College with an Associate of Arts Degree in Accounting, and has undertaken further studies at University Center of Harrisburg. Successfully completed numerous programs related to service life and salvage estimation, forecasting, and evaluation sponsored by Depreciation Programs, Inc. at Calvin College Campus, Grand Rapids, Michigan. In addition, Mr. Robinson successfully completed cost of service seminars sponsored by the American Water Works Association. He received his CDP (Certified Depreciation Professional) designation by Exam during 1996.

List of Clients Served

CATV

Storer Broadcasting Company
(DE, MD, MN)

Cable Television Consortium

ELECTRIC

Atlantic City Electric d/b/a Conectiv Power Delivery
Borough of Butler - Electric Dept.
Conectiv Power Delivery
Consolidated Edison Co of NY
Consolidated Hydro, Inc.
Delmarva Power and Light Company
Delaware
Maryland
Duquesne Light Company
Hershey Electric Company
Kentucky Utilities
Lockhart Power Company
Louisville Gas & Electric Co. - Elec. Div.
Montana – Dakota Utilities Co – Elec. Div

Nantahala Power and Light Company
New York State Electric and Gas Corp
Northern Indiana Public Service Co
Pennsylvania Power Company
Philadelphia Electric Company
Potomac Electric Power Company
Maryland
Washington DC
Progress Energy - Carolinas
Progress Energy - Florida, Inc
Public Service Company of New Mexico
Rochester Gas and Electric Corporation
Wellsboro Electric Company
Vermont Electric Power, Inc

GAS

ATCO Gas
ATCO Pipelines
Atlanta Gas Light Company
Bay State Gas Company
C & T Enterprises, Inc.
Valley Cities Waverly Gas Company
Canadian Western Natural
Gas Company Limited
Citizens Gas & Coke Utility
Columbia Gas of Pennsylvania, Inc.
Connecticut Natural Gas Corporation

North Carolina Gas Service
North Penn Gas
Northern Indiana Public Service Co.
Northern Utilities, Inc.-Maine
Northern Utilities, Inc.-New Hampshire
Oklahoma Natural Gas Company
Pacific Gas & Electric Company
Paiute Pipeline
Pennsylvania Gas & Water Company
PG Energy Inc.
Pennsylvania and Southern Gas Company

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

Consolidated Edison Co of New York	Valley Cities Division
East Ohio Gas	Waverly Division
Elkton Gas Service	Pipeline Industry Group
Granite State Gas Transmission, Inc.	Providence Gas Company
Great Plains Natural Gas Co.	Public Service Electric & Gas Co
Kansas Gas Service	Public Service Company of New Mexico
Louisville Gas & Electric Co. - Gas Division	Roanoke Gas Company
Montana Dakota Utilities - Gas Division	Rochester Gas and Electric Corporation
National Fuel Gas Distr. Corp., NY	Saxonburg Heat & Light Company
National Fuel Gas Supply	Southern Connecticut Gas Company
NICOR Gas Company	Southwest Gas Corporation
Northeast Heat & Light Company	T.W. Phillips Gas & Oil Company
	Williams Companies

GENERAL CLIENTS

Arthur Andersen	Ernst & Young
Pricewaterhouse Coopers	Standard & Poors

REGULATORY AND GOVERNMENTAL

Arizona Corporation Commission	Diamond State Telephone Company
Mountain States Telephone & Telegraph	Kansas Corporation Commission
Southwest Gas Corporation	Southwest Bell
Baltimore County, MD	Public Service Comm. of Nevada
Bensalem Township - Water	Nevada Bell
Bethlehem Authority - Water	Town of Waterford, CT
Borough of Butler, NJ	Northeast Utilities
Borough of Media Water Works	Washington, D.C. - PSC
City of New Orleans, LA	C&P Telephone Company
Delaware Public Service Commission	Potomac Electric Power Company
Delaware River Port Authority	

TELECOMMUNICATIONS

Ace Telephone Association - IA & MN	Paging Industry Study Group
Air Touch Communications	AirTouch Paging
ALLTEL Pennsylvania, Inc.	Mobile Comm
AT&T-Advance Solutions, Inc-CA	Paging Network, Inc.
BellSouth Telecommunications	Skytel
Buffalo Valley Telephone Company	USA Mobile Communications
Cellular Industry Study Group	Quaker State Telephone Company
AT&T Wireless	Qwest Communications Corporation
BellSouth Communications	Qwest – Arizona
GTE Mobilnet	Qwest – Iowa
BrightHouse Networks-Citrus County	Qwest -- Montana
Cable & Wireless	Qwest -- Washington
Chenango & Unadilla Telephone Company	RCA Global Communications, Inc.
Cingular Wireless	SBC Ameritech Corporation
Cingular Wireless – California	SBC -- Arkansas
Cingular Wireless – Houston	SBC -- Kansas

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

Cingular Wireless - Massachusetts
Commonwealth Telephone Company
CTC of Michigan
CTC of Virginia
Denver & Ephrata Telephone & Telegraph Co.
D & E Network
D & E System
Embarq Florida, Inc.
Empire Telephone Corporation
Illinois Consolidated Telephone Co.
Jamestown Telephone Corporation
Leesport Telephone Company
Lewisberry Telephone Company
Los Angeles Cellular Telephone Co.
MCI International, Inc.
MCI Telecommunications Corp.
MFS Communication Company, Inc.
Marianna & Scenery Hill Tel. Co.
Mid State Telephone Company
Motorola, Inc.
Nevada Bell
New Jersey Telephone Company
The North-Eastern Pennsylvania Tel. Co.
Pacific Bell
Pactel Cellular

SBC -- Michigan
SBC -- Missouri
SBC -- Ohio
SBC -- Oklahoma
SBC -- Wisconsin
SBC -- West -- California
SBC -- West -- Nevada
Southwestern Bell Telephone Company
Standard Telephone Company
Telecommunications d'Haiti
Telephone Utilities of Pennsylvania
United Telephone Company of New Jersey
Verizon Wireless
Verizon -- California
Verizon -- Kentucky
Verizon -- Massachusetts
Verizon -- Montana
Verizon -- South Carolina
Verizon -- Utah
Verizon -- Washington
Verizon -- Wyoming
Verizon -- Total Company
Virgin Islands Telephone Corporation
Williams Communication
WilTel, Inc.

WATER

Artesian Water Company
City of Auburn
Bethlehem Authority - Water
California Water Service Company
California-American Water Company
Citizens Water - California
Citizens Water - Arizona
Clinton Water Company
Columbia Water Company
Commonwealth Water Company
Consumers New Jersey Water Company
Dauphin Consolidated Water Supply Co.
Dominguez Water Company
Elizabethville Water Company
City of Fairfax
Garden State Water Company
Hackensack Water Company
Hershey Water Company
Illinois-American Water Company
Indian Rock Water Company
Indianapolis Water Company
Iowa-American Water Company
Keystone Water Company
Manufacturers Water Company
Masury Water Company
Middlesex Water Company

New Mexico-American Water Company, Inc.
Newtown Artesian Water Company
New York-American Water Company
Ohio-American Water Company
Palm Coast Utility Corporation
Pennichuck East Utility
Pennichuck Water Works
Pennsylvania-American Water Company
Pennsylvania Gas and Water Company
Pennsylvania Water Company
Erie & Sayre Divisions
Philadelphia Suburban Water Company
Pinelands Water Company
Public Service Water Company
Riverton Consolidated Water Company
Roaring Creek Water Company
Rock Springs Water Company
Shenango Valley Water Company
Southern California Water Company
Spring Valley Water Company
Tidewater Utilities, Inc.
United Water - Delaware
United Water - Toms River
United Water - New Jersey
United Water - Pennsylvania
United Water - Virginia

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

Monmouth Consolidated Water Company
New Haven Water Company
New Jersey Water Company

Virginia American Water Company
Western Pennsylvania Water Company
York Water Company

STEAM

Consolidated Edison Co of New York

WASTEWATER

California - American Water Company
Citizens Sewer – Arizona
Illinois-American Company -- Wastewater
New Jersey Water Company
Sewer Districts

Palm Coast Utility Corporation
Pinelands Sewer Company
Wynnewood Sewer Company

PROFESSIONAL QUALIFICATIONS

CDP (Certified Depreciation Professional) by Exam during October, 1996

PROFESSIONAL AFFILIATIONS

American Water Works Association
American Gas Association
American Railway Engineering Association
Pennsylvania Gas Association
Pennsylvania Municipal Authorities Association
Member AGA Accounting Services Committee
Society of Depreciation Professionals-Founding Member, Chairman Coordinating and Membership Committees,
Treasurer, President, and Past President

PUBLICATIONS

AGA/EEI Depreciation Accounting Committee, Contributing Author 1989, "An Introduction to Net Salvage of Public Utility Plant"

"Replacement Cost and Service Life Studies", *Journal of Property Tax Management*, Fall 1994, Volume 6, Issue 2

SPEECHES AND PRESENTATIONS

"*Depreciated Replacement Cost*", Institute of Property Taxation - 18th Annual Conference, San Francisco, CA

"*RCNLD Issues for Utilities*", The National Association of Railroad & Public Utilities Tax Representative, 1997 Annual Conference, North Lake Tahoe, NV

"*Useful Service Lives of Cellular Industry Assets*", State of Florida, Department of Revenue, Industry/Government Task Force (April 1997)

"*Appraisal and Valuation Issues Associated with Technology Changes within the Wireless*

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

Industry, 30th Annual Wichita Program - Appraisal for Ad Valorem Taxation of Communications, Energy, and Transportation Program, Wichita State University - July 30-August 3, 2000

"Physical/Functional Obsolescence, Residual Values/Floors (Net Salvage)", 32th Annual Wichita Program - Appraisal for Ad Valorem Taxation of Communications, Energy, and Transportation Program Wichita State University - July 28-August 1, 2002

"Depreciation Study Preparation", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Lake Tahoe, Nevada - October 28, 2002

"Use of Replacement Cost to Value High Tech Equipment" Southeastern Association of Tax Administrators, 53rd Annual Conference, Savannah, Georgia - July 14-July 16, 2003

"Property Tax: Use of Replacement Cost in the Appraisal of Telecommunications Companies", Western States Association of Tax Representatives (WSATR), WSATA 2003 Annual Meeting, Austin, TX - Sept. 9, 2003

"Replacement Cost & Depreciated Replacement Cost Presentation", Southwestern Bell Telephone Company – Arkansas PSC – Tax Division - August, 2003

"Valuation of Assets", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Scottsdale, Arizona - December 9, 2003

"Property Tax: Use of Replacement Cost in the Appraisal of Telecommunications Companies", Oklahoma State Board of Equalization Public Service Valuation Guidelines Subcommittee – Oklahoma City, OK – Feb 5, 2004

"Net Salvage Issues In Rate Cases", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, San Antonio, Texas - May 17, 2004

"Current Depreciation Issues: Point-Counterpoint", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Savannah, Georgia – November 14, 2006

"Depreciation & Cost of Removal", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Tucson, Arizona – October 24, 2007

"Whole Life versus Remaining Life", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, San Francisco, California – May 21, 2008

"Obsolescence-Measuring the Impact for Industries Experiencing Change" *"Depreciation & Cost of Removal"*, IPT 32nd Annual Conference, Atlanta, Georgia, June 23, 2008

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

SUMMARY OF TESTIMONY APPEARANCES – HEARINGS & DEPOSITIONS (PLUS DECLARATIONS)

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
Alberta	Canadian Western Natural Gas Company Limited	980413	Depreciation
	ATCO Pipelines	1292783	Depreciation
Arizona	Arizona Corp. Comm./ Mtn. Bell	9981-E-1051	RCN/RCND *
	Arizona Corp. Comm./ Southwest Gas Corp.	U-1551-80-70	RCN/RCND *
	Qwest Corporation-Arizona	TX2001-000662	Property Tax Valuation Deposition
California (PUC & State Board of Equalization)	MCI Telecommunications Corporation	274	Replacement Cost/ Depr. Repl. Cost
		SAU87-38	Replacement Cost/ Depr. Repl. Cost
		SAU91-101	Replacement Cost/ Depr. Repl. Cost
	SBC-California	SAU 279	Property Tax Valuation Declaration
	SBC-California	January 31, 2005	Property Tax Valuation Declaration
	Southern California Water Company	ABJ-4	Depreciation
Connecticut	Southern Connecticut Gas Co.	89-09-06	P.I.S. Measures of Value and Depreciation
Delaware	Artesian Water Company	82-20	Depreciation
		87-3	Depreciation
	United Water - Delaware	96-164	Depreciation
		98-98	Depreciation
	Delaware Public Service Comm./ Diamond State Telephone Co.	81-8	P.I.S. Measures of Value and Depreciation
Delmarva Power & Light Company	05-304	Depreciation	
	Tidewater Utilities, Inc/ Public Water and Supply, Inc	99-466	Depreciation

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
District of Columbia	Potomac Electric Power Co.	F.C. 869	Depreciation
	Washington, DC PSC/C&P Tel Corp.	F.C. 777	Depreciation
	Washington, DC PSC/ Potomac Electric Power Co.	F.C. 785 F.C. 813	Capital Recovery/ Depreciation
FERC	Granite State Gas Transmission, Inc.	RP91-164-000	Depreciation
	Paiute Pipeline	RP96-306-000	Depreciation
Florida (County of Duval)	BellSouth Telecommunications	Petitions 1795-1800	Replacement Cost/ Depr. Repl. Cos
(County of Lee)	Sprint-Florida, Inc (Embarq)	Case No. 02-CA-013330-1	Replacement Cost
(County of St. Lucie)	BellSouth Telecommunications	1999 Petitions	Replacement Cost/ Depr. Repl. Cost
(County of Citrus)	Embarq	Case No. 2003-CA4473, 2004-CA4565, 2005-CA5010	Property Tax Valuation Deposition
(County of Lee)	Embarq	Case No. 02-13330 CA-WCM	Property Tax Valuation Deposition
	Progress Energy – Florida	050078-EI	Depreciation
Illinois	Illinois - American Water Company	00-0340 02-0690 07-0507	Depreciation Depreciation Depreciation
	Illinois Consolidated Telephone Co.	81-0264 82-0623	RCN/RCND * RCN/RCND *
Indiana	Northern Indiana Public Service Company	Cause No. 41746	Depreciation
Iowa (Dept of Rev)	Qwest Corporation-Iowa	883	Property Tax Valuation Deposition

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
Kansas	Kansas Gas Service	03-KGSG-602-RTS	Depreciation
Kentucky	Kentucky Utilities	Case No. 2003-00434	Depreciation
	Louisville Gas & Electric Electric Gas	Case No. 2003-00433	Depreciation
Maryland	Delmarva Power & Light Company	9093	Depreciation
	Potomac Electric Power Company	9092	Depreciation
Massachusetts	Bay State Gas Company	92-111	Depreciation
		DTE 05-27	Depreciation
Montana	Montana-Dakota Utilities Co-Elec	Docket # 2007.7.79	Depreciation
	Qwest Corporation-Montana	06DORFC001 06DOTFC017	Property Tax Valuation Deposition
Nevada	Southwest Gas Corporation	04-3011	Depreciation
New Jersey	Atlantic City Electric d/b/a Conectiv Power Delivery	ER03020110	Depreciation
	Borough of Butler/ Butler Elec. Dept.	792-84	Valuation of Plant in Service Customer Revenue and Purchase Power
	Commonwealth Water Co.	842-100	Depreciation
	Consumers NJ Water Company	WR00030174	Depreciation
	Garden State Water Co.	WR91091483	Depreciation
	Middlesex Water Company	WR8602-240 WR90080884J WR96110818	Depreciation Depreciation Depreciation
	Monmouth Cons. Water Co.	8312-1113	Depreciation
	New Jersey Water Company	834-292	Depreciation
	Public Service Electric & Gas	GR05100845	Depreciation

**PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	United Water Resources (formerly Hackensack Water Co.)	8506-663 WR90080792J WR95070303	Depreciation Depreciation Depreciation
	Toms River Water Company	WR95050219	Depreciation
New Hampshire	Northern Utilities, Inc.	DR91-081	Depreciation
New Mexico	New-Mexico American Water Company, Inc.	2813 03-00206-UT	Depreciation Depreciation
New York	New York-American Water Co.	28911	Depreciation
	New York State El & Gas Corp. Electric Business & Common Plt	05-E-1222	Depreciation
	Spring Valley Water Co., Inc.	89-W-1151 92-W-0645	Depreciation Depreciation
North Carolina	Nantahala Power and Light Co.	E-13, SUB157	Depreciation
North Dakota	Montana-Dakota Utilities Co-Gas	Case No. PU-399-02-183	Depreciation
Oklahoma (State Board of Equalization)	SWBT-Oklahoma	EQ-2004-10	Property Tax Valuation Deposition
Pennsylvania	Borough of Media Water Works	R-912150	Depreciation
	Columbia Gas of Penna.	R-80031129	Depreciation and Valuation
	Commonwealth Telephone Co.	I-00920020	Depreciation
	Keystone Water Company	R-842755 R-842756 R-842759	Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation
	Mid Penn Tel. Corp.	R-80071264	Depreciation
	Penna.-American Water Co.	R-891208	Depreciation
	Penna. Gas & Water Co. - Gas Division	R-821961 R-832475	Depreciation Depreciation

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<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	Penna. Gas & Water Co. - Water Division	R-822102 R-850178 R-870853	Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation
	Penna. Gas & Water Co. - Scranton Division	R-901726 R-922482	PIS Meas. of Value/Depreciation Depreciation
	Penna. Gas & Water Co. - Spring Brook Division Nesbitt Service Area Crystal Lake Service Area	R-911966 R-922404	PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Ceasetown/Watres Service Area	R-93266	Depreciation
	Penna. Power Company	R-811510 R-821918 R-832409 R-842740 R-850267 R-870732	PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Pennsylvania & Southern Gas Company	R-870686	Depreciation
	PG Energy Inc.	R-963612 R-984280 R-00061365	PIS Meas. Of Value/Depr PIS Meas. Of Value/Depr PIS Meas. OF Value/Depr
	Philadelphia Suburban Water Company	R-911892 R-922476 R-932868	Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Riverton Consolidated Water Co.	R-842675	Capital Recovery/Depreciation
	United Water - Pennsylvania	R-00973947	Depreciation
	Western Pennsylvania Water Company	R-842621 R-842622 R-842623 R-842624 R-842625	Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciatio

**PROFESSIONAL QUALIFICATIONS
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<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	Wellsboro Electric Company	R-00016356	Depreciation
Rhode Island	Providence Gas Company	1914 2286	Depreciation Depreciation
South Carolina	Lockhart Power Company	87-435-E	Depreciation
Tennessee (Board of Equalization)	Bellsouth – Tennessee	67-5-903	Property Tax Valuation Deposition
Utah	Verizon Wireless	05-0826, 05-0829	Property Tax Valuation Deposition & Hearing
Virgin Islands	Virgin Islands Tel. Corp.	264 314 316	Depreciation Depreciation Depreciation

* Reproduction Cost New/Reproduction Cost New Depreciated.

AFFIDAVIT

State of New Mexico)
)
County of Bernalillo) ss:

I, Earl M. Robinson, being first duly sworn, state that I am Principal & Director of AUS Consultants, that the foregoing Direct Testimony is true and correct to the best of my knowledge, information and belief.

 /s/ Earl M. Robinson
Earl M. Robinson

SUBSCRIBED and sworn to before me this 23rd day of April, 2009.

 /s/ Debra K. Oglesbee

My commission expires: February 20, 2011