II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to set forth the results of my depreciation review and analysis of the plant in service of Monarch Water and Wastewater Systems, which was conducted in the process of preparing depreciation studies of Monarch's water and wastewater plant assets as of December 31, 2014. Reports of my review and analyses are contained in the Rate Filing Package as Schedule II-E-1.4(W) titled "Monarch Utilities I, LP—All Water Systems Depreciation Study as of December 31, 2014" and Schedule II-E-1.4(S), the "Monarch Utilities I, LP—All Wastewater Systems Depreciation Study as of December 31, 2014."

In preparing the reports, I investigated and analyzed Monarch's historical plant data and reviewed Monarch's past experience and future expectations to determine the remaining lives of Monarch's water and wastewater plant assets. The studies utilized the resulting remaining lives, the results of a salvage analysis, Monarch's vintaged plant in service investment and depreciation reserve to develop recommended average remaining life depreciation rates and depreciation expense related to Monarch's plant in service.

Q. WHAT SCHEDULES IN THE RATE FILING PACKAGE ARE YOU SPONSORING?

A. I am sponsoring or co-sponsoring the schedules listed on Attachment EMR-2 and associated workpapers.

III. BACKGROUND

Q. HOW IS DEPRECIATION DEFINED?

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

Q. WHY IS DEPRECIATION IMPORTANT TO THE REVENUE REQUIREMENTS OF A UTILITY COMPANY?

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

IV. DEPRECIATION STUDY OVERVIEW

Q. WHAT IS YOUR PROFESSIONAL OPINION REGARDING THE RESULTS OF THE DEPRECIATION STUDY THAT YOU PERFORMED?

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

Q. WHAT STEPS WERE INVOLVED IN PREPARING THE SERVICE LIFE AND SALVAGE DATABASE THAT YOU UTILIZED?

A. My comprehensive depreciation analyses included a detailed analysis of Monarch's fixed capital books and records through December 31, 2014. Monarch's historical investment cost records for each account have been assembled into a depreciation database upon which detailed service life and salvage analysis were performed using standard depreciation procedures.

Q. WHAT IS THE PURPOSE OF THE HISTORICAL DATABASE?

A. The historical service life and net salvage data is a basic depreciation study tool that is assembled to prepare a depreciation study. The historical database is used to make assessments and judgments concerning the service life and salvage factors that have actually been achieved, and (along with information relative to current and prospective factors) to determine the appropriate future lives over which to recover Monarch's depreciable fixed capital investments. In accordance with this standard depreciation analysis, Monarch's depreciation database compiled through December 31, 2014, which contains detailed vintage level information, was used to

develop observed life tables. The development of the observed life tables from the historical information was completed by grouping like aged investments within each property category and identifying the level of retirements that occur through each successive age to develop the applicable observed life tables. The resulting observed lives were then fitted to standard Iowa Curves to estimate each property groups' historically achieved average service life.

Likewise, the net salvage database was used as a basis to identify historical experience and trends and to determine each property group's recommended net salvage factors. This was accomplished by preparing various three year rolling band analyses of salvage components as well as a forecast based on Monarch's historical salvage experience.

Q. IN THE PREPARATION OF THE DEPRECIATION STUDY, HAVE YOU UTILIZED INFORMATION FROM ADDITIONAL SOURCES WHEN ESTIMATING SERVICE LIFE AND SALVAGE PARAMETERS?

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

Q. PLEASE BRIEFLY DESCRIBE THE INFORMATION INCLUDED IN THE DEPRECIATION STUDY REPORTS.

A. Both the water and wastewater depreciation study reports are divided into six (6) sections. Section 1 of each of the reports contains a brief narrative summary of the

respective report. Two key portions of each of the reports are Sections 2 and 4. Section 2 includes the summary schedules listing the present and proposed depreciation rates for each depreciable property group and other depreciation rate development schedules. Section 4 contains a narrative description of the factors considered in selecting service life parameters for Monarch's property. The various other sections of the report contain detailed information and/or documentation supporting the schedules contained in Sections 2 and 4. Section 3 of the reports contain a general narrative explaining methods, procedures, and techniques, etc. universally used in the preparation of depreciation studies. In addition, Section 5 is the graphical presentation of the average service life analysis, and Section 6 is the detailed Average Remaining Life calculations.

Q. WHAT WAS THE SOURCE OF THE DATA UTILIZED AS A BASIS FOR DETERMINING THE DEPRECIATION RATES?

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

Q. ARE THERE STANDARD METHODS UTILIZED TO COMPLETE A SERVICE LIFE ANALYSIS OF A COMPANY'S HISTORICAL PROPERTY INVESTMENTS?

A. Yes. As discussed in Section 3 of the depreciation study report as well as later in this testimony, the two most common methods are the Retirement Rate Method and the Simulated Plant Record Method. The method chosen to study a company's historical

data is dependent upon whether aged or un-aged data is available. If specific aged data is available, the Retirement Rate Method is used. If only un-aged data is available, the Simulated Plant Record Method is used.

Q. WERE YOUR STUDIES PREPARED UTILIZING ONE OF THESE ACCEPTED STANDARD METHODS?

A. Yes. Aged plant records for Monarch's property is available for a period of years, therefore, the Retirement Rate Method of life analysis was utilized in the depreciation studies of Monarch's property.

V. METHODS, PROCEDURES, AND TECHNIQUES

Q. PLEASE DESCRIBE THE DEPRECIATION METHODS, PROCEDURES, AND TECHNIQUES COMMONLY UTILIZED TO DEVELOP DEPRECIATION RATES FOR UTILITY PROPERTY.

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

In addition, there are several procedures that can be used to arrange or group property by sub-groups of vintages to develop applicable service lives. These procedures include the Broad Group, the Equal Life Group, and other procedures. Due to the existence of very large quantities of property units within utility operating property, utility property is typically grouped into homogeneous categories as opposed to being depreciated on an individual unit basis. While the Equal Life Group

procedure is viewed as being the more definitive procedure for identifying the life characteristics of utility property and as a basis for developing service lives and depreciation rates, the Broad Group Procedure is more widely utilized throughout the utility industry by regulatory commissions as a basis for depreciation rates. My comments on the Equal Life Group procedure are discussed later in my testimony.

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

A brief example (with a property group that has three units/three equal life groups of like property) will demonstrate the difference between the two procedures. The example incorporates the assumption that unit No. 1 (or equal life group of property) will retire after one year, unit No. 2 (or equal life group) will retire after two years, and unit No. 3 (or equal life group) will retire after three years. Accordingly, the average life of all three (groups) is two years (1+2+3)÷3. Under the Broad Group Procedure, the average useful life and resulting depreciation rate is calculated based upon the two year average life. The resulting annual depreciation rates would be 50 percent in every year. Conversely, under the Equal Life Group Procedure, each year's average life and resulting depreciation rate is calculated by using the period of time during which the portion of the property group remains in service. Since unit

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

1

BG Average Life Calculation

Year		Investment	Recovery Period (Yrs)	ASL (Years)	Weight
1	Group # 1	300	2		150
	Group # 2	300	2		150
	Group # 3	300	2		150
	Total	900		2.00	450
2	Group # 1	0	0		0
	Group # 2	300	2		150
	Group # 3	300	2		150
	Total	600		2.00	300
3	Group # 1	0	0		0
	Group # 2	0	0		0
	Group # 3	300	2		150
	Total	300		2.00	150
Grand Total		1,800		2.00	900

BG Depreciation Rate Calculation

Investment	Recovery Period (Yrs)	Annual Rate-%	Recovery Amount
300	2		150
300	2		150
300	2		150
900		50.00%	450
0	0		0
300	2		150
300	2		150
600		50.00%	300
0	0		0
0	0		0
300	2		150
300		50.00%	150
1,800		50.00%	900

ELG Average Life Calculation

Year		Investment	Recovery Period (Yrs)	ASL (Years)	Weight
1	Group # 1	300	1		300
	Group # 2	300	2		150
	Group # 3	300	3		100
	Total	900		1.64	550
2	Group # 1	0	0		0
	Group # 2	300	2		150
	Group # 3	300	3		100
	Total	600		2.40	250
3	Group # 1	0	0		0
	Group # 2	0	0		0
	Group # 3	300	3		100
	Total	300		3.00	100
Grand Total		1,800		2.00	900

ELG Depreciation Rate Calculation

Investment	Recovery Period (Yrs)	Annual Rate-%	Recovery Amount
300	1		300
300	2		150
300	3		100
900		61.11%	550
0	0		0
300	2		150
300	3		100
600		41.67%	250
0	0		0
0	0		0
300	3		100
300		33.33%	100
1,800		50.00%	900

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

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

Q. WHICH OF THESE METHODS, PROCEDURES, AND TECHNIQUES DID YOU USE IN YOUR DEPRECIATION STUDIES?

A. The depreciation rates set forth in my depreciation study reports were developed utilizing the Straight Line Method, the Broad Group Procedure, and the Average Remaining Life Technique.

Q. IF YOU DID NOT USE THE EQUAL LIFE GROUP PROCEDURE IN THE DEVELOPMENT OF MONARCH'S DEPRECIATION RATES, WHY DID YOU SPEND TIME EXPLAINING THE PROCESS?

A. The discussion of the various/significant methods, procedures, and techniques, and specifically the Equal Life Group (ELG) Procedure, is an ongoing education process. That is, the ELG discussion is presented to develop a better understanding of depreciation processes that are available, along with their benefits, notwithstanding any unwillingness and/or objection to the use of a more defined and correct procedure, i.e. the Equal Life Group Procedure. The ELG procedure, while not widely used (it is used by some regulatory agencies for some types of industries plus it is used more widely by Canadian jurisdictions), is a process that with continued education and understanding of the process and its benefits, and ultimate acceptance by regulatory agencies, will enhance operating companies more timely capital recovery in accordance with the consumption of property in providing customer service plus when adopted would reduce the overall total cost to customers (through lower rate base remaining in service over time).

Q. WHY DID YOU UTILIZE THE METHOD, PROCEDURE, AND TECHNIQUE INCORPORATED WITHIN THE PROPOSED DEPRECIATION RATES?

A. The Straight Line Method is widely understood, recognized, and currently utilized almost exclusively for depreciating utility property within the United States.

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

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

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

VI. GROUP DEPRECIATION

Q. PLEASE EXPLAIN THE UTILIZATION OF GROUP DEPRECIATION.

A. Group depreciation is utilized to depreciate property when more than one item of property is being depreciated. Such an approach is appropriate because all of the items within a specific group typically do not have identical service lives, but have lives that are dispersed over a range of time. Utilizing group depreciation allows for a uniform application of depreciation rates to groups of similar property in lieu of performing extensive depreciation calculations on an item-by-item basis. The Broad Group approach is a recognized common group depreciation procedure.

The Broad Group Procedure recovers the investment within the asset group over the average service life of the property group. Given that there is dispersion within each property group, there are variations of retirement ages for the many investments within each property group. That is, some properties retire early (before average service life) while others retire at older ages (after average service life). This dispersion of retirement ages defines the survival pattern experienced by the applicable property group.

Q. WHAT FACTORS INFLUENCE THE DETERMINATION OF THE RECOMMENDED ANNUAL DEPRECIATION RATES INCLUDED IN YOUR DEPRECIATION REPORTS?

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

Q. PLEASE EXPLAIN FURTHER THE ASSUMPTIONS CONSIDERED WHEN UTILIZING YOUR DEPRECIATION APPROACH.

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

Q. DO YOU HAVE ADDITIONAL COMMENTS RELATED TO THE GROUP APPROACH THAT YOU HAVE USED?

A. Yes, my depreciation calculations, as applied in this study, follow a group depreciation approach. The group approach refers to the method of calculating

annual depreciation based on the summation of the investment in any one plant group rather than calculation of depreciation for each individual unit of plant. In theory, each unit achieves average service life by the time of retirement. Accordingly, the full cost of the investment will be credited to plant in service when the retirement occurs, and likewise the depreciation reserve will be debited with an equal retirement cost. No gain or loss is recognized at the time of property retirement because of the assumption that the property was retired at average service life.

VII. NET SALVAGE

Q. WHAT ARE THE NET SALVAGE FACTORS INCLUDED IN THE DETERMINATION OF DEPRECIATION RATES?

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

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

Net salvage experience is studied for a period of years to determine the trends that have occurred in the past. These trends are considered, together with any changes that are anticipated in the future, to determine the future net salvage factor

for remaining life depreciation purposes. The net salvage percentage is determined by comparing the total net positive or negative salvage to the book cost of the property investment retired.

The method typically used to estimate the retirement cost is a standard analysis approach that is used to identify a company's historical experience with regard to what the end of life cost will be relative to the cost of the plant when first placed into service. This information, along with knowledge about the average age of the historical retirements that have occurred to date, allows an estimation of the level of retirement cost that will be experienced by Monarch at the end of each property group's useful life. The study methodology utilized has been extensively set forth in depreciation textbooks and has been the accepted practice by depreciation professionals for many decades. Furthermore, the cost of removal analysis is the current standard practice used for mass assets by essentially all depreciation professionals in estimating future net salvage for the purpose of identifying the applicable depreciation rate for a property group. There is a direct relationship between the installation of specific plant and its corresponding removal. The installation is its beginning of life cost while the removal is its end of life cost. Also, it is important to note that Average Remaining Life depreciation rates incorporate future net salvage, which is typically more representative of recent versus long-term historical average net salvage.

Such analysis routinely finds that historical retirements have occurred at average ages significantly shorter than the property group's average service life. The occurrence of historical retirements at an age that is significantly younger than the

average service life of a property category demonstrates that the historical data does not appropriately recognize the true level of retirement cost at the end of the property group's useful life. An additional level of cost to retire will occur due to the passage of time until all the current plant is retired at end of its life. That is, the level of retirement costs will increase over time until the average service life is attained. The additional inflation in the estimate of retirement cost is related to those additional years' cost increases (primarily the result of higher labor costs over time) that will occur prior to the end of the property group's average life.

To provide further explanation of the issue, several general principles surrounding property retirements and related net salvage should be highlighted. As property continues to age, assets that typically generate positive salvage when retired will generate a lower percentage of positive salvage as compared to the original cost of the property. By comparison, if the class of assets is one that typically generates negative net salvage (cost of removal) with increasing age at retirement, the negative net salvage percentage as compared to original cost will typically be greater. This situation is routinely driven by the higher labor costs that occur with the passage of time.

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

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

Assume an analysis of the experienced net salvage at year three. Based upon the Car #1 retirement, which was retired at a young age (two years) as compared to the average six year life of the property group, the analysis indicates that the property group would generate 75% salvage. This indication is incorrect, however, because it is the result of basing the estimate on incomplete data. That is, the estimate is based upon the salvage generated from a retirement that occurred at an age that is far less than the average service life of the property group. The actual total net salvage that occurred over the average life of the assets (which experienced a six year average life for the property group) is 40%, as opposed to the initial incorrect estimate of 75%.

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

Concerning the inclusion of future net salvage in annual depreciation rates, the following directive is included in the NARUC uniform system of accounts:

NARUC Accounting Directive—Class A Water Utilities 1984

Net Salvage

Balance Sheet Account
Account 108.1 Accumulated Depreciation of Utility Plant in Service

Note: B. "At the time of retirement of depreciable utility plant in service, this account shall be charged with the book cost of the property retired plus the cost of removal, and shall be credited with the salvage value and any other

amounts recovered, such as insurance. When retirement, cost of removal and salvage are entered originally in retirement work orders, the net total of such work order may be included in a separate sub-account hereunder. Upon completion of the work order, the proper distribution to subdivisions of this account shall be made as provided in the following paragraph (see paragraphs' C and D):

Impact of Not Recording and Recovering Net Salvage

- Not in compliance with NARUC Uniform System of Accounts
- Inter-generational inequity (Defers Recovery to Later Generation Customer)
- Higher cost to customer (Retains Rate Base When Negative Net Salvage Not Appropriately Recorded/Recovered) Over Life of Assets
- Company exposure to under or non-recovery of future end of life costs
- Fails revenues and consumption matching principle
- Fails to recognize that those who use/consume the property should pay their fair share
- Fails ratable recovery of fixed cost (First costs and End of life costs)

Accordingly, it is imperative for all operating companies to ratably recover both first cost (Original Cost) and end of life cost (Cost of Removal/Retirement and/or Gross Salvage) through its annual depreciation expense as well as incorporate such costs into their tariff rates. As noted above, to do otherwise results in a significant violation of the match principle (related to customers), who benefit from the use of the property in the receipt of customer service, that they should pay for the consumption of the property used to provide them service.

With regard to the inclusion of negative net salvage levels in the development of proposed depreciation rates, it should be noted that the level of negative net salvage included in the proposed depreciation rates is simply a benchmark from

which to further estimate future net salvage in subsequent depreciation studies. It is probable that the current estimates of negative net salvage amounts will simply be the floor above which future negative net salvage levels will increase. To appropriately and proportionately allocate the true total asset cost (original cost adjusted for net salvage) over its applicable service life, proper consideration must be given, in each accounting period, to the total costs that are anticipated to occur relative to Monarch's assets that provide customer service.

Q. WERE THERE ADDITIONAL FACTORS RELATED TO NET SALVAGE IN THE MONARCH DEPRECIATION STUDIES THAT NEEDED TO BE CONSIDERED?

A. Yes, relative to Monarch historical retirements and net salvage to date, contained on the books and records for various property groups were sometime limited, and accordingly, for the such property groups sufficient information did not necessarily exist to provide a comprehensive basis for analyzing the historical retirement and net salvage data to be used as a starting point to estimate future service lives for some property groups and more specifically for estimating net salvage factors. This situation occurred both because of the somewhat limited nature of the property investments, plus during earlier years, the prior owners had likely not maintained the detailed historical information. However, with the current owner's acquisition, systems have been implemented with the goal of capturing and maintaining the required retirement information. Thus for property groups that have, in more recent years, experienced retirements, etc. the available historical information was analyzed,

and this information together with industry data was considered in the estimation of average service lives for property groups.

In reviewing the historical data, it was further determined that little or no detailed salvage information (gross salvage and cost of removal) has been captured to date. However, Monarch fully recognizes the importance and appropriateness of fully recording any experienced gross salvage and cost of removal especially in light of the fact that group depreciation accounting is being implemented. Systems and processes will be implemented to ensure that any and all gross salvage and cost of removal will be captured to Monarch's book depreciation reserve account, in accordance with NARUC utility accounting requirements as opposed to other potential accounts, during future periods.

For any applicable property groups that currently lack historical data for the purpose of life or salvage analysis, such estimates of average service life and net salvage for Monarch's depreciable property groups were developed via a review of the study results for various operating companies within the industry and through professional knowledge gained over more than 35 years of performing depreciation studies. The referenced industry data is contained on Table 6, within Section 2 of the applicable depreciation study reports. The current estimates, especially with regard to net salvage, is considered the baseline from which more detailed future information can be used to further update the net salvage component to be included in annual depreciation rates. It is imperative, from a capital recovery process, that current depreciation rates incorporate both the recovery of first cost (original cost) and end of life cost (net salvage) to ensure that the full cost of providing service is ratably

recovered from customers, that benefit from the property's use, over the life of the property.

VIII. DEPRECIATION STUDY ANALYSIS

Q. PLEASE EXPLAIN WHAT FACTORS AFFECT THE LENGTH OF THE AVERAGE SERVICE LIFE THAT MONARCH'S PROPERTY MAY ACHIEVE.

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

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

In performing the life analysis for any property being studied, both past experience and future expectations must be considered in order to fully evaluate the circumstances that may have a bearing on the remaining life of the property. This ensures the selection of an average service life that best represents the expected life of each property investment.

Q. WHAT STUDY PROCEDURES WERE UTILIZED TO DETERMINE SERVICE LIVES FOR MONARCH'S PROPERTY?

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

Service lives are affected by many different factors, some of which can be determined from studying past experience, others of which must rely heavily on future expectations. When physical characteristics are the controlling factor in determining the service life of property, historical experience is a useful tool in selecting service lives. In cases where there are changes in technology, regulatory requirements, company policy, or the development of a less costly alternative, historical experience is of lesser or little value. However, even when considering physical factors, the future lives of various properties may vary from those experienced in the recent past.

While a number of methods are available to study historical data, as I mentioned previously, the two methods most commonly utilized to determine average service lives for a company's property are the Retirement Rate Method and the Simulated Plant Record Method. Aged plant records for Monarch's property is available for a period of years, therefore, the Retirement Rate Method of life analysis was utilized in the depreciation studies of Monarch's property.

Q. PLEASE EXPLAIN THE USE OF THE RETIREMENT RATE METHOD.

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

Q. DO THE DEPRECIATION STUDY REPORTS CONTAIN CHARTS THAT COMPARE THE ANALYSIS OF MONARCH'S ACTUAL HISTORICAL DATA TO THE SERVICE LIFE PARAMETERS YOU ARE PROPOSING AS A BASIS FOR YOUR RECOMMENDED ANNUAL DEPRECIATION RATES?

A. Yes. Graphical representations of Monarch's plant balances versus simulated plant balances based upon the estimated lives and Iowa Curves are contained in Section 5 of the reports.

Q. YOU HAVE REFERRED TO THE USE OF THE IOWA OR SMOOTHED SURVIVOR CURVES. CAN YOU GENERALLY DESCRIBE THESE CURVES AND THEIR PURPOSE?

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

At any particular point in time, actual company plant may not have completed its life cycle. Therefore, the survivor table generated from the company data is not

complete. This situation requires that an estimate be made with regard to the incomplete segment of the property group's life experience. Further, actual company experience often varies from age interval to age interval, making its utilization for average service estimation difficult. Accordingly, the Iowa Curves are used to both extend company experience to zero percent surviving as well as to smooth actual company data.

Q. WHAT IS THE PRINCIPAL REASON FOR COMPLETING THE DETAILED HISTORICAL LIFE AND SALVAGE ANALYSIS?

A. The detailed historical analysis is prepared as a tool from which to make informed assessments as to the appropriate service life and salvage parameters over which to recover Monarch's plant investment. However, in addition to the available historic data, consideration must be given to current events, Monarch's ongoing operations, management's future plans, and general industry events that are anticipated to impact the lives that will be achieved by plant in service.

For any applicable property groups that currently lack historical data for the purpose of life or salvage analysis, such estimates of average service life and net salvage for Monarch's depreciable property groups were developed via a review of the study results for various operating companies within the industry and through professional knowledge gained over more than 35 years of performing depreciation studies. The referenced industry data is contained on Table 6, within Section 2 of the applicable depreciation study reports.

The current estimates, especially with regard to net salvage, is considered the baseline from which more detailed future information can be used to further update

the net salvage component to be included in annual depreciation rates. It is imperative, from a capital recovery process, that current depreciation rates incorporate both the recovery of first cost (original cost) and end of life cost (net salvage) to ensure that the full cost of providing service is ratably recovered from customers, that benefit from the property's use, over the life of the property.

IX. COMPREHENSIVE DEPRECIATION STUDY RESULTS AS OF 12-31-14

Q. WHAT IS THE BASIS FOR MONARCH'S CURRENTLY APPROVED WATER DEPRECIATION RATES?

A. As shown in Schedule II-E-1.4(W), Table 1, pages 2-1 and 2-2 of the Water Depreciation Study, the prior depreciation rates for the plant were based upon depreciation parameters set forth in a study completed using Monarch's Water plant investment data through December 31, 2006. The current account level depreciation rates composite to an annual depreciation rate of 2.55 percent when applied to each of the December 31, 2014, plant in service account balances.

Q. WHAT ARE THE MOST NOTABLE CHANGES IN ANNUAL DEPRECIATION RATES AND EXPENSE BETWEEN THE PRESENT AND PROPOSED DEPRECIATION RATES AS SET FORTH IN SECTION 2 OF THE MONARCH WATER DEPRECIATION STUDY?

A. With regard to plant in service, several of the proposed rates reflect changes (as outlined in Section 4 of the study) from the current depreciation rates.

The accounts for which the most notable depreciation expense changes occurred in comparison to the current depreciation rates include Account 310.20—

Electrical Equipment, Account 311.20—Electric Pumping Equipment, Account 331.40—Mains, and Account 341.50—Transportation Equipment.

The depreciation rate for Account 310.20—Electrical Equipment declined from 5.83 percent to 2.53 percent. The drivers underlying the proposed depreciation rate is an Iowa 26-R0.5 life and curve and estimated net salvage of negative 10 percent, while the underlying depreciation parameter basis for the present depreciation rate is identified as an Iowa 15-L0.5 life and curve and an implicit average service life of 17.1 years and average net salvage of negative 13 percent.

The proposed depreciation rate for Account 311.20—Electric Pumping Equipment was decreased from 5.84 percent to 3.18 percent. The drivers underlying the proposed depreciation rate is an Iowa 26-R0.5 life and curve and an estimated net salvage of negative 10 percent, while the underlying depreciation parameter basis for the present depreciation rate is identified as an Iowa 15-L0.5 life and curve and an implicit average service life of 17.1 years and average net salvage of negative 13 percent.

The proposed depreciation rate for Account 331.40—Mains, increased from 0.93 percent to 1.85 percent. The proposed depreciation rate is the result of combined changes of both the average service life and net salvage parameters. The average service life was changed in accordance with the life indication developed through an analysis of Monarch's historical data and consideration of future expectations.

Monarch's Mains investment is related to relatively small diameter Mains of PVC pipe. For example, more than 59 percent of the Mains footages are 3 Inch and smaller diameter, and more than 81 percent of the Mains are of 4 Inch or smaller

diameter. As increased demands are place on the systems, as well as fire flow requirements, there is an increased probability of the recent property changes continuing and even increasing to higher levels. Furthermore many, if not most, of the Mains are PVC Class 200 pipe as opposed to HDPE pipe that has a higher degree of long term and higher service demand capabilities.

The proposed average service life decreased from an implicit 107.8 years to a life based upon an Iowa 70-R3 life, and the future negative net salvage for the property group decreased from negative 40 percent to negative 30 percent.

The proposed depreciation rate for Account 341.50—Transportation Equipment, was decreased from 20.64 percent to 7.44 percent. The drivers underlying the proposed depreciation rate is an Iowa 8-R3 life and curve and estimated net salvage of 15 percent. The underlying depreciation parameter basis for the present depreciation rate is an implicit 4.8 year average service life and zero percent net salvage.

Q. WHAT IS THE BASIS FOR MONARCH'S CURRENTLY APPROVED WASTEWATER PLANT DEPRECIATION RATES?

A. As shown in Schedule II-E-1.4(S), Table 1, page 2-1 of the Wastewater Depreciation Study, the prior depreciation rates for the plant were based upon depreciation parameters set forth in a study completed using Monarch's plant investment data through December 31, 2006. The current account level depreciation rates composite to an annual depreciation rate of 2.58 percent when applied to each of the December 31, 2014, plant in service account balances.

Q. WHAT ARE THE MOST NOTABLE CHANGES IN ANNUAL DEPRECIATION RATES AND EXPENSE BETWEEN THE PRESENT AND PROPOSED DEPRECIATION RATES AS SET FORTH IN SECTION 2 OF THE MONARCH'S WASTEWATER DEPRECIATION STUDY?

A. With regard to plant in service, several of the proposed rates reflect changes (as outlined in Section 4 of the study) from the current depreciation rates.

The most notable depreciation/amortization change occurred relative to Account 392.20—Transportation Equipment—Cars & Trucks.

The depreciation rate relative to Account 392.20—Transportation Equipment —Cars & Trucks increased from 4.11 percent to 6.65 percent. Contributing to the depreciation expense increase is the change in the estimated average service life from seven to nine years while the future net salvage estimate remained at 20%. However, the more significant driver of the depreciation rate increase is the fact that the current book depreciation reserve is currently lower than required in comparison to the current age of the property group's investment.

X. NET CHANGE FROM 12-31-06 BOOK DEPRECIATION RATES TO PROPOSED DEPRECIATION

Q. WHAT IS THE NET CHANGE TO THE COMPOSITE WATER DEPRECIATION RATE UNDER THE PROPOSED DEPRECIATION RATES AS APPLIED TO THE DECEMBER 31, 2014, PLANT IN SERVICE IN COMPARISON TO THE APPLICATION OF THE PRESENT DEPRECIATION RATES?

A. Application of the proposed account level depreciation rates to Monarch's plant in service as of December 31, 2014, produces a composite depreciation rate of 2.57

percent. By comparison, the application of the December 31, 2014, plant in service to the present account level depreciation rates to Monarch's plant in service as of December 31, 2014, produces a composite depreciation rate of 2.55 percent.

Q. WHAT IS THE NET CHANGE IN WATER ANNUAL DEPRECIATION EXPENSE UNDER THE PROPOSED DEPRECIATION RATES IN COMPARISON TO THE PRESENT DEPRECIATION RATES?

A. Schedule II-E-1.4(W), Section 2, Table 1, pages 2-1 to 2-2 produces a net increase in annualized depreciation expense of $30,747 when applying the proposed depreciation rates to Monarch's plant in service investment as of December 31, 2014, in comparison to the depreciation expense produced by applying the current depreciation rates.

Q. HAVE YOU PREPARED A COMPARISON OF THE COMPOSITE DEPRECIATION RATES PRODUCED WHEN APPLYING THE PROPOSED ACCOUNT LEVEL DEPRECATION RATES TO MONARCH'S DECEMBER 31, 2014, WASTEWATER PLANT IN SERVICE BALANCES AS COMPARED TO APPLYING TO THE PRESENT DEPRECIATION RATES?

A. Yes, that information is contained in Schedule II-E-1.4(S), page 2-1 of the Wastewater Depreciation Study, which shows the application of the proposed depreciation study account level depreciation rates to Monarch's December 31, 2014 Wastewater Plant in Service produces a composite depreciation rate of 2.76%, as compared to the application of the present account level depreciation rates that produces a composite depreciation rate of 2.58%.

Q. WHAT IS THE NET CHANGE TO MONARCH'S WASTEWATER DEPRECIATION EXPENSE WHEN APPLYING THE PROPOSED DEPRECIATION RATES TO THE DECEMBER 31, 2014, PLANT IN SERVICE IN COMPARISON TO THE ANNUAL DEPRECIATION EXPENSE WHEN APPLYING THE PRESENT DEPRECIATION RATES?

A. Schedule II-E-1.4(S) shows the application of the proposed December 31, 2014, depreciation study account level depreciation rates to Monarch's Wastewater plant in service as of December 31, 2014, which, as shown on page 2-1 of the Wastewater Depreciation Study, produces a net increase of annual depreciation expense of $40,909 as compared to that produced by applying the present depreciation rates.

Q. IS THERE ANY OTHER ITEM RELATED TO MONARCH PROPERTY OTHER THAN THE WATER AND WASTEWATER PLANT IN SERVICE AND HOW WAS IT INCORPORATED?

A. Yes, while my testimony is related to the preparation of the December 31, 2014, comprehensive depreciation studies for Monarch's water and wastewater properties, there are investments for property subsequent to the depreciation study date and prior to the test year. Furthermore, there are limited amounts of property that are used by both classes of entities—those properties are listed as Shared Equipment in the course of Monarch current rate case.

The previously discussed comprehensive depreciation studies were performed based upon using the typical end of fiscal/calendar year plant in service and historical accounting activity. The use of such a study period is required for the completion of

any available/applicable actuarial or other depreciation life study analysis segment of a depreciation study.

Conversely, the depreciation rate development or application segment of a depreciation study can be performed at any point throughout the year. Given that Monarch current rate case is based upon the June 30, 2015, test year date, an additional set of depreciation rates schedules, beyond those of December 31, 2014, included in Section 2 of the depreciation study reports, were prepared, with Table 1 (present and proposed depreciation rates) of the calculations being included at the end Section (1) of each of the depreciation study reports.

The June 30, 2015, depreciation rates development were prepared using the same process used to prepare the December 31, 2014, depreciation rates set forth in Section 2 of the depreciation study reports. The driver behind the variance between the two different sets of depreciation rates results from the inclusion of additional plant in service and depreciation reserve activity that occurred between the December 31, 2014, and June 30, 2015 time periods.

In conjunction, with the preparation of the various rate case exhibits, it was determined that there are a select group of assets that are used for both the Water and Wastewater operations, as opposed to being used entirely for one of the two individual groups of operating systems. Accordingly, in the development of the June 30, 2015, depreciation rate schedules, those related asset investments were categorized as "Monarch Shared Equipment" and a separate depreciation rate schedule was prepared for the applicable property groups. A copy of the "Monarch Shared Equipment" June 30, 2015, depreciation rate schedule is included in both the

Water Districts and Wastewater Districts depreciation report volumes. (See Section 1 of each report volume).

Lastly, subsequent to the time when the December 31, 2014, plant in service and book depreciation reserve balances were developed for the depreciation study several items of plant were identified as no longer being in service (relatively minor investment amounts), and accordingly, will subsequently be retired from Monarch's books and records (pending retirement items).

Q. DID YOU PREPARE A THEORETICAL DEPRECIATION RESERVE STUDY IN CONJUNCTION WITH THE JUNE 30, 2015, PROPOSED DEPRECIATION RATES?

A. Yes, the theoretical depreciation reserve study is contained in a separate volume entitled "Monarch Utilities, I, LP—All Water Systems, All Wastewater Systems, All Shared Equipment—Theoretical Depreciation Reserve Studies as of June 30, 2015," which is included as Sch. II-B-3(5).

Q PLEASE BRIEFLY EXPLAIN THE CONTENTS OF THE STUDY REPORT.

A. The study volume is comprised of 6 sections plus the letter of transmittal at the beginning of the report. Section 1 is an Executive Summary; Section 2 contains the summary results of the theoretical depreciation calculations for each of the Water, and Wastewater Systems as well as the Shared Equipment; Section 3 is a narrative section that explains the methods and procedures used in preparing the theoretical depreciation calculations; and Sections 4, 5, and 6 are the detailed supporting calculations of the theoretical depreciation amounts for each property group within the Water and Wastewater Systems plus the Shared Equipment, respectively.

Q. WERE THE JUNE 30, 2015, THEORETICAL DEPRECIATION RESERVE CALCULATIONS BASED UPON THE SAME UNDERLYING PROPOSED DEPRECIATION PARAMETERS AS DEVELOPED IN THE COMPREHENSIVE DECEMBER 31, 2014, DEPRECIATION STUDIES AND USED IN THE JUNE 30, 2015, DEPRECIATION RATE CALCULATIONS?

A. Yes. The same estimated depreciation parameters, from the December 31, 2014, comprehensive depreciation studies, were used to prepare the June 30, 2015, theoretical depreciation reserve amounts.

Q. WHAT ARE THE RESULTS OF THE THEORETICAL DEPRECIATION RESERVE STUDY CALCULATIONS?

A. For Monarch's "All Water Systems," the aggregate June 30, 2015, theoretical depreciation reserve is $38,169,178, as compared to its book depreciation reserve of $43,508,636, for a variance of $5,339,457 or 13.99% over the theoretical depreciation reserve. Next, for Monarch's "All Wastewater Systems," the aggregate June 30, 2015, theoretical depreciation reserve is $6,503,617, as compared to its book depreciation reserve of $7,163,150, for a variance of $659,150 or 10.14% over the theoretical depreciation reserve. For Monarch's "Shared Equipment," the aggregate June 30, 2015, theoretical depreciation reserve is $138,221, as compared to its book depreciation reserve of $197,731, for a variance of $59,510 or 43.05% over the theoretical depreciation reserve.

XI. RECOMMENDATION

Q. WHAT IS YOUR RECOMMENDATION IN THIS PROCEEDING?

A. I recommend that the proposed depreciation rates set forth in the comprehensive depreciation study reports be uniformly and prospectively adopted by the Commission for regulatory purposes as well as by Monarch for accounting purposes.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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. 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 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 the past twenty (20) plus year period.

He is also responsible for developing and publishing the firm's AUS Telephone Plant Index

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(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, Corddry & 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, Nevada, 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.

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

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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
Public Service Electric & Gas Company
Rochester Gas and Electric Corporation
The United Illuminating Company
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
Cascade Natural Gas Corporation
Citizens Gas & Coke Utility
Columbia Gas of Pennsylvania, Inc.
Connecticut Natural Gas Corporation
Consolidated Edison Co of New York
East Ohio Gas
Elkton Gas Service
Granite State Gas Transmission, Inc.
Great Plains Natural Gas Co.
Kansas Gas Service
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
Valley Cities Division
Waverly Division
Pipeline Industry Group
Providence Gas Company
Public Service Electric & Gas Co
Public Service Company of New Mexico
Roanoke Gas Company

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Louisville Gas & Electric Co. - Gas Division
Montana Dakota Utilities - Gas Division
National Fuel Gas Distr. Corp., NY
National Fuel Gas Supply
New York State Electric & Gas Corp
NICOR Gas Company
Northeast Heat & Light Company
Rochester Gas and Electric Corporation
Saxonburg Heat & Light Company
Sierra Pacific Power Co/NV Energy
Southern Connecticut Gas Company
Southwest Gas Corporation
T.W. Phillips Gas & Oil Company
Williams Companies

GENERAL CLIENTS

Arthur Andersen
Pricewaterhouse Coopers
Electric Utility Consultants, Inc.
Ernst & Young
Standard & Poors

REGULATORY AND GOVERNMENTAL

Regulatory Commission of Alaska
- Alaska Electric Light & Power Company
- Interior Telephone Company, Inc
- Fairbanks Water & Wastewater
- Mukluk Telephone Company, Inc
- TDX North Slope Generating
- United KUC, Inc
- United Utilities, Inc.

Arizona Corporation Commission
- Mountain States Telephone & Telegraph
- Southwest Gas Corporation

Baltimore County, MD
Bensalem Township - Water
Bethlehem Authority - Water
Borough of Butler, NJ
Borough of Media Water Works
City of New Orleans, LA
Delaware Public Service Commission
Delaware River Port Authority
Diamond State Telephone Company
Kansas Corporation Commission
- Southwest Bell

Public Service Comm. of Nevada
- Nevada Bell

Town of Waterford, CT
- Northeast Utilities

Washington, D.C. - PSC
- C&P Telephone Company
- Potomac Electric Power Company

TELECOMMUNICATIONS

Ace Telephone Association - IA & MN
Air Touch Communications
ALLTEL Pennsylvania, Inc.
AT&T-Advance Solutions, Inc-CA
BellSouth Telecommunications
Buffalo Valley Telephone Company
Paging Industry Study Group
- AirTouch Paging
- Mobile Comm

Paging Network, Inc.
- Skytel
- USA Mobile Communications

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Cellular Industry Study Group
AT&T Wireless
BellSouth Communications
GTE Mobilnet
Brighthouse Networks-Citrus County
Cable & Wireless
Chenango & Unadilla Telephone Company
Cingular Wireless
Cingular Wireless – California
Cingular Wireless – Houston
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
Quaker State Telephone Company
Qwest Communications Corporation
Qwest – Arizona
Qwest – Iowa
Qwest -- Montana
Qwest -- Washington
RCA Global Communications, Inc.
SBC Ameritech Corporation
SBC -- Arkansas
SBC -- Kansas
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.

<u>WATER</u>

Arizona Water Company
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
Monarch Utilities I, L.P.
Monmouth Consolidated Water Company
New Haven Water Company
New Jersey 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 & Water Company
Pennsylvania Water Company
Erie & Sayre Divisions
Philadelphia Suburban Water Company

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Hackensack Water Company
Hawaii Water Service
  Ka'anapali Water
  Kona Water
  Waikoloa Village Water
  Waikoloa Resort Water
  Waikoloa Resort Irrigation
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
Monarch Utilities I, L.P.
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
Spring Valley Water Company
Tidewater Utilities, Inc.
United Water - Delaware
United Water - Toms River
United Water - New Jersey
United Water - Pennsylvania
United Water - Virginia
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
Hawaii Water Service Company-Wastewater
  Kona Wastewater
  Pukalani Wastewater Company
  Wailoloa Resort Wastewater
Illinois-American Company – Wastewater
Monarch Utilities I, L.P.
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

PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS

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 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

PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS

"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

"An Alternative to IFRS Unit Depreciation", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Baltimore, Maryland – May 18, 2009

"Alternative to IFRS Unit Depreciation", Society of Depreciation Professionals, Albuquerque, New Mexico, – October 5, 2009

"Depreciation Training", Regulatory Commission of Alaska (RCA), Anchorage, Alaska, October 26 & 28, 2010

"Physical Depreciation – The Uses and Abuses of Iowa Curves and Other Errors", IPT Property Tax Symposium, Austin, Texas, November 2, 2010

"Preparing To Be A Depreciation Witness", AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, New Orleans, Louisiana – May 19, 2011

"Depreciation – The Last 25 Years & More", Society of Depreciation Professionals, Atlanta, Georgia, – September 20, 2011

"A Roadmap to Replacement Cost", 42nd Annual Wichita Program - Appraisal for Ad Valorem Taxation of Communications, Energy, and Transportation Program, Wichita State University - July 29-August 2, 2012

DEPRECIATION TRAINING INSTRUCTOR-CLASSES

Regulatory Commission of Alaska, Anchorage, AK, Oct 2012

EUCI Depreciation Training, Houston, TX, Nov 8-9, 2012

EUCI Depreciation Training, Denver, CO, May 6-7, 2013

EUCI Depreciation Training, Chicago, IL, Nov 14-15, 2013

EUCI Depreciation Training, Pasadena, CA, Apr 22-23, 2014

EUCI Depreciation Training, Newport Beach, CA, Dec 16-17, 2014

EUCI Depreciation Training, Denver, CO, Jun 24-25, 2015

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

PROFESSIONAL QUALIFICATIONS
OF
EARL M. ROBINSON, CDP
AUS CONSULTANTS

Jurisdiction	Client	Docket/Application	Subject
Alberta	Canadian Western Natural Gas Company Limited	980413	Depreciation
	ATCO Pipelines	1292783	Depreciation
		Appl. 1527976, Proc ID 13	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
	SBC-California	Declaration January 31, 2005	Property Tax Valuation
		Declaration	
	Southern California Water Company	ABJ-4	Depreciation
Connecticut	Connecticut Natural Gas Corp	08-12-06	Depreciation
		13-06-08	Depreciation
	Southern Connecticut Gas Co.	89-09-06	P.I.S. Measures of Value and Depreciation
		08-12-07	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
Jurisdiction	Client	Docket/Application	Subject

PROFESSIONAL QUALIFICATIONS
OF
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Jurisdiction	Client	Docket/Application	Subject
	Tidewater Utilities, Inc/ Public Water and Supply, Inc	99-466	Depreciation
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
	Public Service Company of NM	ER-11-1915-000	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 Progress Energy – Florida	050078-EI 090079-EI	Depreciation 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

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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 DTE 05-27	Depreciation Depreciation
Montana	Montana-Dakota Utilities Co-Gas	Docket #2012.9.100	Depreciation
	Montana-Dakota Utilities Co-Elec	Docket # 2007.7.79 Docket # 2010.8.82	Depreciation 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
	United Water Resources	8506-663	Depreciation

PROFESSIONAL QUALIFICATIONS
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Jurisdiction	Client	Docket/Application	Subject
	(formerly Hackensack Water Co.)	WR90080792J WR95070303	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
	Public Service Company of NM	08-00273-UT 10-00086-UT	Depreciation Depreciation
New York	New York-American Water Co.	28911	Depreciation
	New York State Elec. & Gas Corp. Electric Business & Common Plant	05-E-1222	Depreciation
	New York State Elec. & Gas Corp-Elec.	09-E-0715	Depreciation
	New York State Elec. & Gas Corp-Gas	09-G-0716	Depreciation
	Rochester Gas and Elec. Corp-Elec.	09-E-0717	Depreciation
	Rochester Gas and Elec. Corp-Gas	09-G-0718	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

PROFESSIONAL QUALIFICATIONS
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Jurisdiction	Client	Docket/Application	Subject
	Penna. Gas & Water Co. - Gas Division	R-821961	Depreciation
		R-832475	Depreciation
	Penna. Gas & Water Co. - Water Division	R-822102	Depreciation
		R-850178	Capital Recovery/Depreciation
		R-870853	Capital Recovery/Depreciation
	Penna. Gas & Water Co. - Scranton Division	R-901726	PIS Meas. of Value/Depreciation
		R-922482	Depreciation
	Penna. Gas & Water Co. - Spring Brook Division Nesbitt Service Area Crystal Lake Service Area	R-911966	PIS Meas. of Value/Depreciation
		R-922404	PIS Meas. of Value/Depreciation
	Cease town/Watres Service Area	R-93266	Depreciation
	Penna. Power Company	R-811510	PIS Meas. of Value/Depreciation
		R-821918	PIS Meas. of Value/Depreciation
		R-832409	PIS Meas. of Value/Depreciation
		R-842740	PIS Meas. of Value/Depreciation
		R-850267	PIS Meas. of Value/Depreciation
		R-870732	PIS Meas. of Value/Depreciation
	Pennsylvania & Southern Gas Company	R-870686	Depreciation
	PG Energy Inc.	R-963612	PIS Meas. Of Value/Depr
		R-984280	PIS Meas. Of Value/Depr
		R-00061365	PIS Meas. OFValue/Depr
	Philadelphia Suburban Water Company	R-911892	Depreciation
		R-922476	PIS Meas. of Value/Depreciation
		R-932868	PIS Meas. of Value/Depreciation
	Riverton Consolidated Water Co.	R-842675	Capital Recovery/Depreciation
	United Water - Pennsylvania Western Pennsylvania Water Company	R-00973947	Depreciation
		R-842621	Capital Recovery/Depreciation
		R-842622	Capital Recovery/Depreciation

PROFESSIONAL QUALIFICATIONS
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Jurisdiction	Client	Docket/Application	Subject
		R-842623	Capital Recovery/Depreciation
		R-842624	Capital Recovery/Depreciation
		R-842625	Capital Recovery/Depreciation
	Wellsboro Electric Company	R-00016356	Depreciation
Rhode Island	Providence Gas Company	1914	Depreciation
		2286	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	Depreciation
		314	Depreciation
		316	Depreciation

Reproduction Cost New/Reproduction Cost New Depreciated.