Exhibit No.:	
Issues:	*Depreciation; Cost of Removal; Production Plant Retirement Dates; and Accumulated Depreciation Reserve Imbalances*
Witness:	*Rosella L. Schad, PE*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Rebuttal Testimony*
Case Nos.:	*ER-2004-0034 and HR-2004-0024 (Consolidated)*
Date Testimony Prepared:	*January 26, 2004*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

REBUTTAL TESTIMONY

OF

ROSELLA L. SCHAD, PE

AQUILA, INC.
d/b/a AQUILA NETWORKS-MPS (Electric)
and AQUILA NETWORKS-L&P (Electric & Steam)

CASE NOS. ER-2004-0034 and HR-2004-0024
(Consolidated)

Jefferson City, Missouri
January 2004

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Aquila, Inc. d/b/a Aquila Networks L&P and Aquila Networks MPS to implement a general rate increase in electricity.	)))	Case No. ER-2004-0034
In the matter of Aquila, Inc. d/b/a Aquila Networks L&P to implement a general rate increase in Steam Rates.	)))	Case No. HR-2004-0024

AFFIDAVIT OF ROSELLA L. SCHAD, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Rosella L. Schad, PE, of lawful age, on her oath states: that she has participated in the preparation of the following rebuttal testimony in question and answer form, consisting of 24 pages to be presented in the above case; that the answers in the following rebuttal testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of her knowledge and belief.

Rosella L. Schad, PE
Rosella L. Schad, PE

Subscribed and sworn to before me this 23rd day of January 2004.

Toni M. Charlton
Notary Public

TONI M. CHARLTON NOTARY SEAL NOTARY PUBLIC STATE OF MISSOURI

TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004

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CASE NOS. ER-2004-0034 and HR-2004-0024 (Consolidated)

Q. Please state your name and business address.

A. Rosella L. Schad, P. O. Box 360, Jefferson City, MO 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (Commission) as an Engineer in the Engineering and Management Services Department.

Q. Are you the same Rosella L. Schad who has previously filed direct testimony on behalf of the Staff of the Missouri Public Service Commission in this case?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. I will respond to the Company's position on depreciation and cost of removal. Specifically, I will respond to the direct testimonies of Ronald E. White, the Company's depreciation consultant and Company witnesses, Keith G. Stamm and H. Davis Rooney.

Q. What are the issues in depreciation and cost of removal that you will address?

A. I will address:

- Final Cost of Removal of Life Span Plant
- Interim Costs of Removal Amounts

- Where to Book Cost of Removal and Salvage
- Steam Production and "Other Production" Plant Retirement Dates
- Broad-group Procedure v. Vintage-group Procedure and Whole Life Technique v. Remaining-life technique
- Accumulated Depreciation Reserve Imbalances
- Corporate Plant Average Service Lives

Q. Why are these issues that need addressing?

A. These issues need addressing because they increase depreciation expense and increase the Company's revenue requirement without proper cost causation.

FINAL COST OF REMOVAL OF LIFE SPAN PLANT

Q. What is cost of removal and salvage?

A. Cost of removal is incurred when utility property is retired and removed from service. Generally, removing property from service causes the utility to incur costs to abandon, physically dismantle, tear down or otherwise remove the property from its site.

Salvage is the proceeds received from the residual value or scrap that some property has when it is dismantled and removed from utility service. After a piece of property is dismantled or removed from service, utilities can in some instances sell or receive some value for the displaced properties. Utilities track the removal costs and salvage value on an ongoing annual basis.

Typically, removal costs exceed salvage value, resulting in a net expense to the utility. The net effect of cost of removal and salvage was included in Staff's determination of the overall revenue requirement for the Company.

Q. What is final cost of removal of life span plant?

A. Staff refers to final cost of removal of life span plant for those expenses incurred when a large unit, such as an electric generating facility or water treatment plant, retires as a single event. When this happens there will be some components that were placed in service many years ago and some placed only recently.

Other removal costs are interim costs of removal. This includes final removal of mass property, i.e., poles or meters, and interim removal of components of life span plant, i.e. boiler tubes or water filtration beds.

Q. In Mr. White's current depreciation study, are there substantial changes in methodology for estimating removal costs, which result in the Company's recovering increased depreciation expenses from current levels?

A. Yes. The Company, in its depreciation estimates, has included estimated future (prospective) interim costs of removal and estimated future final (terminal) costs of removal for fossil-fueled plants.

Q. Do you agree with Company's position regarding estimated future interim costs of removal?

A. No. The Company did not provide support for its level of estimated future interim costs of removal. Staff is opposed to the inclusion in rates of amounts that are not known and measurable, but rather, rely on estimated retirements and estimated cost of removal rates for those retirements.

Q. Why are estimated future final costs of removal for fossil-fueled plants an issue?

A. Estimated future final costs of removal for fossil-fueled plants are an issue because these costs are not known and measurable at this time. These costs are speculative

as to both the time dismantling will occur, or if dismantling will ever occur, and the dollar amount that will be incurred. Given this uncertainty, current customers should not pay an estimated expense of removal. There is a high probability that the costs that customers will be charged will not match the actual costs the Company will incur in the future.

Q. Do you agree with Mr. White's position on page 20, lines 4-9 and lines 18-21 of his direct testimony, where he states,

> Consideration was also given in the 2002 MPS depreciation study to the cost of dismantling the Sibley Generating Station and the Jeffery Energy Center. The projected cost of dismantling these facilities was derived from an estimated cost of $50 per kW, denominated in 2001 dollars. This cost estimate is intended to serve as a placeholder pending authorization of the Commission to include removal expense in the accrual for depreciation and completion of a detailed dismantling cost study…An interim net salvage rate of –10 percent applied to estimated interim retirements was added to the estimated dismantlement cost to obtain the total future net salvage associated with each generating station.

A. No. I do not agree with his testimony on final costs of removal.

Q. Did Mr. White provide a similar testimony regarding his analysis for other life span plants?

A. Yes. On page 18, lines 10-11, he states, "Consideration was also given in the 2002 SJLP depreciation study to the cost of dismantling the Lake Road and Iatan generating facilities."

Q. Has the Company provided any reliable testimony regarding actual costs incurred to dismantle units of similar vintage and capacity of any of Aquila's generating facilities?

A. No.

Q. Does Mr. White list any Missouri fossil-fueled plants, which have been dismantled?

A. No. However, he indicates that the $50 per kW dismantling cost is also consistent with costs incurred by Aquila in dismantling other generating facilities. Mr. White does not specifically identify what "other generating facilities of Aquila" he is referring to in his testimony, nor did he provide workpapers that calculated this figure.

Q. Has The Company presented any plans to the Staff for the new generation plants that will be needed in the event that these generating facilities were actually retired?

A. No. In fact, this issue would be more appropriate to review at that time since the Company would be forced to perform detailed analyses to support such a decision. Those analyses would include a definitive estimate of cost of removal as a hurdle that the economics for the new generating facility would need to overcome before any such costs would be incurred.

Q. Has Mr. White or any other Company witness addressed in their direct testimonies other economic alternatives the Company may have available regarding dismantlement?

A. No. Other options such as sale of the site as-is was not analyzed.

Q. Is Staff aware of other fossil-fuel units owned by Missouri regulated electric utilities that have been retired but not dismantled?

A. Yes. Kansas City Power & Light has units at its Hawthorn Plant site, which were retired but not dismantled. And AmerenUE's Venice plant is retired but not dismantled. Aquila has equipment and structures from a once-operating unit that has been retired, although not removed, at its current Ralph Green generating facility.

Q. Can utilities incur less removal costs by retiring but not dismantling generating facilities?

A. Yes. However, this is an option that would need to be studied before the prudent course of action would be known.

Q. Has the Commission previously addressed final costs of removal of fossil-fueled plants?

A. Yes, in two separate Report and Orders. In Aquila's cases, Case Nos. ER-88-167 and ER-90-101, the Commission stated, "The Commission determines that the decommissioning costs of fossil fuel plants should not be included in depreciation rates." Subsequently, in another Aquila case, Case No. ER-97-394, the Commission stated, "The Commission finds that terminal net salvage costs are speculative and not known and measurable and therefore may not be included in current rates."

Q. Has the Company taken a position in this case that conflicts with the prior Commission orders on this issue?

A. Yes. The Company witness on Policy, Keith G. Stamm, Aquila's Chief Operating Officer, states on pages 20-21 of his direct testimony,

> Q. Have there been any changes in Missouri regulatory policy in recent years, which you question?
>
> A. Yes. Policy changes have resulted in depreciation rates that are not reflective of proper cost causation and place the Company at risk of non-recovery of a major and necessary cost element?
>
> Q. Please explain.
>
> A. Traditionally, depreciation rates were established using not only estimated lives, but also estimates for the net salvage of an asset once it was retired. This approach was sensible because the customers who were currently using an asset were charged rates that reflected the ultimate net salvage of that asset. Moreover, since this generally resulted in higher accumulated depreciation, the Company's rate base was reduced. In recent rate proceedings, however, Missouri regulatory policy has deferred recovery until that time that the asset is actually retired. With long-lived assets, this means that customers who may

never receive any benefit from a plant asset are required to pay for its removal in lieu of those customers who did benefit.

Contrary to the argument Aquila's policy witness is presenting, the Missouri Commission has consistently refused to put final cost of removal of life span plant in rates long before such costs are incurred. There has been no showing by any utility in the state of Missouri of negative consequences that Mr. Stamm alleges.

Q. Please illustrate the Company's remaining life depreciation rate.

A. The Company's formulation of a remaining life depreciation rate is:

Accrual Rate = [(1.0-Reserve Ratio-Future Net Salvage Rate) / (Remaining Life)]

Q. Why does Staff find it not appropriate to allow final cost of removal of life span plant in rates?

A. Final cost of removal of life span plant is not a known and measurable cost. Staff finds that costs, which are "known" or certain to occur and that can be quantified or measured, meet the criteria to be included in customer rates. The Commission has used the concept of known and measurable in determining rates that are included in the rate structure of utilities operating in the state of Missouri.

Q. How does the Staff's position minimize the effects of intergenerational in-equity?

A. Because Staff's methodology recovers those costs that are known and measurable, the effects of intergenerational inequity are minimized. Staff's methodology assures that proper actual costs of original investments are charged over the life of the investments to the customers benefiting from those investments. Staff does not estimate future interim costs of removal of mass property because of the speculative nature of such estimates. Such estimates can be quite excessive as demonstrated in the current case, rather

than tied to a known and measurable amount. The intergenerational concept only works in practice for items that are known and measurable while not subject to changing circumstances. The same is true of the maintenance and removal costs of these assets.

Current net costs of removal of property are identified by Staff and recovered as an expense item in current rates, as are maintenance costs. As with any other expense item that substantially changes in providing service over time, removal costs will be reassessed in future rate cases. Changes are made as new information indicates the need to do so. And, with regard to final costs of removal of life span plant, the Commission has maintained that until these costs are known and measurable they are not allowed in rates.

Staff's method provides a recovery mechanism for customers to provide the Company monies commensurate with the assets' removal costs. The Company proposes a method to force customers to pay more than the Company's current expenditures for cost of removal with no certainty that this situation will ever be reversed or that the funds will be available in the unlikely event that the need to spend these monies actually occur. Aquila will spend these excess funds for other purposes, possibly non-regulated activities. The certainty that the funds will be available is totally dependent on the Company's financial condition, which can be substantially weakened by Company activities outside the purview of the Commission.

Q. How does the Company's position on the effects of intergenerational inequity differ from Staff?

A. The Company's position has two aspects with which Staff takes exception. The first aspect is in regard to what components are being included in the Company's depreciation rates, identified by the formula previously shown on page 7. Company witness,

H. Davis Rooney, Director of Financial Management, addresses the Company's position on net salvage at pages 2-3 of his direct testimony. Mr. Rooney states,

> Q. How has salvage and net salvage been included in depreciation rates?
>
> A. Company witness Ron E. White addresses the process of how net salvage has been included in depreciation rates. He has included in depreciation rates amounts to allocate the benefits of salvage and the costs of removal over the life of the assets.

As already noted, Mr. White's depreciation rates for production plant includes a future net salvage rate. Mr. White's future net salvage rate for production plant is the aggregate of three distinct components. It is the average of estimated final costs of removal ($50 per kW coupled with a –10 % interim cost of removal rate) and estimated future interim costs of removal. The former component representing a revenue collection for an issue that the Commission has specifically not allowed, and the latter component representing a revenue collection at an estimated and arbitrary level, not reflective of a known and measurable amount. This hardly constitutes "benefits" as Mr. Rooney declares.

The second aspect is in regard to stability of rates. Again, Mr. Rooney addresses this in his direct testimony on page 3, lines 10-12, stating, "This process promotes both stability of rates and intergenerational equity by spreading the net salvage to the customers that benefit from that property." Formulating the net salvage percentage in the depreciation rate formula has been based on different hypotheses in recent years, depending on the depreciation analyst. Each approach has quantified the net salvage percentage in a different manner. Each approach generates a widely varying amount for recovery of interim costs of removal. One approach looked at recent interim costs of removal and compared this to the associated retirement dollars; another approach looked at recent interim costs of removal and compared this to surviving dollars; yet another approach looked at estimated future additions

and applied an estimated future cost of removal rate against those additions. It is possible to combine any of these hypotheses to project a net salvage percentage to be incorporated in the depreciation formula. This hardly promotes "stability of rates" as Mr. Rooney declares.

Contradictory to Mr. Rooney's declaration, the Company does not provide benefits to the ratepayers with their proposed depreciation rates, nor have they provided stability of rates. Absent the benefits and stability of rates, the effects of intergenerational inequity are actually exacerbated by the Company's position on depreciation rates.

A benefit that results from the Company's proposal is that it reduces rate base by the excess amounts that it charges its customers for cost of removal. If consideration should be granted for consumers to pay the Company's rate base on an accelerated schedule, then this matter should be addressed separately. The accelerated payment of rate base should not be accomplished by accepting a ratemaking methodology that overcharges consumers and uses those overcharges to pay-down rate base.

Q. What is the effect of the Company's proposal for including estimated final costs of removal in depreciation rates for steam production and "other production" plant?

A. The effect of including estimated final costs of removal in depreciation rates for steam production and "other production" plant is to increase depreciation expense to achieve increased revenue requirements.

Q. What is Staff's recommendation in this case regarding estimated final removal costs in current depreciation rates?

A. Staff recommends that estimated final costs of removal not be included in current depreciation rates because they are speculative and not known and measurable.

INTERIM COST OF REMOVAL AMOUNTS

Q. Is there a reasonable certainty that the dollars a regulated electric utility has collected in the depreciation reserve for future costs of removal will be available years from now if and when the Company's steam production and "other production" plants retire?

A. No. Aquila only proposes that future costs of removal be collected from its existing customers. The only fund that is guaranteed to exist when the electric generating plant, or any life span plant, actually retires is the decommissioning fund for nuclear generation facilities, which is not an issue in this case. The amounts for decommissioning of nuclear generation facilities are retained in a trust fund and are specifically identified for only the decommissioning of those units. However, the cost of removal dollars a regulated utility has collected in the depreciation reserve for steam production and "other production" plant cannot be guaranteed to be available even five years from now, much less many years or decades into the future. Not only are the dollar amounts commingled in the depreciation reserve resulting in an inability to even identify how much revenue for costs of removal have been collected from customers, there is no assurance the cash needed for removal when the property is retired will be available.

Aquila's current cost of removal expenditures are the only basis that provide Aquila's customers with a reasonable assurance that the Company will actually spend these monies on cost of removal.

Q. Do the Company's proposed depreciation rates provide for interim costs of removal as a separate component?

A. No. As shown on Statements D, E, and F of both depreciation studies for Aquila Networks-MPS and L&P-(Electric and Common), Mr. White averages dismantling costs with estimated future interim costs of removal to arrive at an "Average Net Salvage

Rate". This blending of two future estimated levels for both final and interim costs of removal is incorporated into the depreciation rates the Company is proposing for steam production and "other production" life span plant. Thus, the increase in annual depreciation expense for these assets, based on September 30, 2003, plant balances, is due to Company's commingling of future final costs of removal for steam production and "other production" plant with future estimated interim costs of removal amounts. The Company's proposed depreciation rates for plant assets other than production plant provide for interim costs of removal as a separate component; however, these interim costs of removal are on an estimated future basis.

Q. Does Staff have concerns with Mr. White's future estimated interim costs of removal amounts?

A. Yes. Estimated future interim costs of removal amounts do not have any relation to the amounts the Company is currently incurring. On page 11, line 1-4, Mr. White states, "The average net salvage rate for an account was estimated using direct dollar weighting of historical retirements with the historical net salvage rate, and future retirements (i.e. surviving plant) with the estimated future net salvage rate."

The historical net salvage rate has been providing the Company a revenue level that exceeds the known and measurable costs by an excessive amount. As indicated in Staff witness Cary G. Featherstone's direct testimony, the average net amount, for the five years 1998-2002, spent annually for MPS-Electric's removal costs was approximately $1.5 million. However, the component of the depreciation rates for interim costs of removal multiplied times the plant balance for December 31, 2001, generated over $14.5 million annually for

removal costs. As a consequence, the Company was on average charging to its MPS-Electric customers annually over $13 million more than the amount actually spent.

The Company's use of the historical net salvage rate and estimated future net salvage rate are both inappropriate for determining the level of revenue to be recovered in rates for costs of removal because neither generates an amount of revenue that ties to the amount the Company is actually spending. In the Commission's Report and Order in Case No. ER-97-394, it was noted, "The Commission has also found interim costs to be sufficient for purposes of recovery." The level of interim costs that should be recovered needs to reflect the current level of removal costs that the Company is incurring.

Q. What is the effect of the Company's proposal for including estimated interim costs of removal in depreciation rates?

A. The effect of including estimated interim costs of removal in depreciation rates is to increase depreciation expense to achieve increased revenue requirements.

Q. What is Staff's recommendation in this case regarding estimated interim costs of removal in current depreciation rates?

A. Staff recommends that estimated interim costs of removal not be included in current depreciation rates because they are speculative and not known and measurable.

WHERE TO BOOK COST OF REMOVAL AND SALVAGE

Q. What other concerns does Staff have with the costs of removal estimates built into Mr. White's depreciation rates?

A. These final costs of removal percentage estimates will generate an ever-increasing depreciation expense as plant balances grow, not a defined level identified in Mr. White's depreciation study.

Q. What is the benefit to the Company of large prospective "negative net cost of removal percentages" in the depreciation rates?

A. The benefit to the Company is that they have more cash to spend in any manner they wish. Large prospective "negative net cost of removal percentages" in the depreciation rates results in the Company collecting more money each year from customers than it spends for that purpose.

Q. Is this the first time that Staff has noted concerns regarding the level of costs of removal and salvage that is being accrued through depreciation rates relative to the actual amounts that are booked?

A. No. Staff has addressed concerns regarding this in previous Aquila cases. On page 13, lines 23-26 in Staff witness Melvin T. Love's direct testimony in Case No. ER-93-37, he states, "If comparisons are made to the amounts of salvage and costs of removal booked in a particular year to the amounts which are accrued, the calculation is overstated." Staff has consistently reviewed the actual amounts booked and tried to insure that the Company is collecting for interim costs of removal at levels that are known and measurable.

Q. Has the Commission ordered depreciation rates that did not include a component for interim costs of removal, i.e. a net salvage percentage?

A. Yes. This methodology was incorporated in the depreciation rates ordered for The Empire District Electric Company in Case No. ER-2001-299 and for Northeast Missouri Rural Telephone Company in Case No. TR-2001-344.

Q. What is the effect of Staff's methodology of expensing interim costs of removal?

A. The effect of Staff's methodology of expensing interim costs of removal is that it allocates known and measurable costs to the appropriate recovery period and more accurately reflects the amount that the Customers should pay to the Company for removal of the Company's assets from service.

Q. What is Staff's recommendation to maintain recovery of interim costs of removal at known and measurable amounts?

A. Staff's recommendation is to expense interim costs of removal at levels the Company is currently experiencing as recommended by Staff witness Cary Featherstone in his direct testimony.

PRODUCTION PLANT RETIREMENT DATES

Q. Are the Company's "average year of final retirement" (AYFR) dates for steam production and "other production" plant an issue?

A. Yes. These average retirement dates for production plant are an issue because Aquila is projecting the date certain that generation plant will be retired and then using these dates as the basis for shortening average service lives (ASLs) and increasing the depreciation rates for its generation plant. Shortening ASLs is one way to increase depreciation expense to achieve increased revenue requirements.

Q. Has the Commission recently addressed proposed truncation of the ASL curve for life span plant for other electric utilities in Missouri?

A. Yes. Truncation of ASLs for electric generating plant was addressed in The Empire District Electric Company's Case No. ER-2001-299.

Q. Are truncated ASLs for electric generating plant currently ordered for The Empire District Electric Company (Empire)?

A. No. The Commission's Report and Order stated, "It is therefore ordered: 1. That the Commission adopts the average service lives that are attached as Appendix A to the Report and Order." The average service lives provided in the Appendix A to the Report and Order from Empire's Case No. ER-2001-299 were Staff's recommended average service lives, estimated from non-truncated ASL curves.

Q. What is Staff's position concerning the useful life of an electric generating facility?

A. Staff asserts that a determination of the exact timing of the retirement of a particular facility can only be made relatively close to the time of its anticipated retirement date. Many variables such as power supply replacement, technology improvements, market conditions, and regulatory requirements change over time. Because retirement is a function of many variables that change over time, even an average final retirement year is uncertain. Generating units will continue to remain in operation as long as it is economical and feasible to do so and it is inappropriate to truncate the survivor curve at this time.

Q. Has the Company indicated to Staff any management decision to retire any of the electric generating facilities and a plan for replacement power?

A. No. In fact, as operating personnel and management discussed plant operations with Staff on recent plant tours, planned upgrades were occurring at several of Aquila's electric generating facilities.

Q. Given the estimates for ASLs for production plant assets twenty years ago, why would electric utilities continue to operate fossil fuel plants beyond original estimates?

A. Economic analysis generally dictates when a generating facility will be retired, not the plant's original estimated plant life. These analyses include the electric

utility's comparison of the cost of the new generating power source with the cost of continuing to operate and maintain the existing generating units. The increasing costs of finding and acquiring new generating sites in conjunction with the difficulty of obtaining the necessary permits and licenses for construction and operation are significant economic and legal obstacles that support the continued operation of existing facilities. Rather than retiring older units from service and initializing reclamation of the site, existing units such as Greenwood's four combustion turbine units that were place in service in the 1970's, are retrofitted with Continuous Emissions Monitoring Systems. These sites are too valuable to be disregarded with a subsequent attempt to open new sites, as the Company's proposal would require. Such a course of action would be imprudent in today's market and customers should not be charged to support these unreasonable options.

Q. Do you believe Mr. White's retirement dates of Aquila's current generating assets are ones that have been committed to by Company's management?

A. No. I believe the future retirement dates of Aquila's current generating assets are unknown.

Q. What is the effect of the Company's proposal to truncate steam production and "other production" plant ASLs based on estimated "average year of final retirement"?

A. The effect of the Company's proposal to truncate steam production and "other production" plant ASLs based on estimated "average year of final retirement" is to increase depreciation expense to achieve increased revenue requirements.

Q. What is Staff's recommendation for ASLs for steam production and "other production" plant?

A. Staff's recommendation is to not truncate ASLs for steam production and "other production" plant based on estimated retirement dates.

BROAD-GROUP PROCEDURE VS. VINTAGE-GROUP PROCEDURE AND WHOLE LIFE TECHNIQUE VS. REMAINING-LIFE TECHNIQUE

Q. Would you please describe the depreciation system currently approved by the Commission for both Aquila-Networks-MPS and L&P-Electric?

A. Yes. Both divisions of Aquila are presently using a depreciation system composed of the straight-line method, broad-group procedure, whole-life technique.

Q. What is the basis for the Company's proposal to alter a long-standing Commission policy?

A. Mr. White provides the basis for the Company's proposal to alter a long-standing Commission policy on page 13, lines 13-15 of his direct testimony, "It is the opinion of Foster Associates that the objectives of depreciation accounting can be more nearly achieved using the vintage-group procedure combined with the remaining-life technique."

Q. What do the terms vintage-group procedure and remaining-life technique describe?

A. Vintage-group procedure describes a process of using a unique survivor curve for each vintage of plant in an account for retirement analysis and is highly dependent on the accuracy of the continuing property records. Remaining-life technique describes a process of incorporating an amortization (positive or negative) of the variation between the theoretical reserve and the accumulated depreciation reserve automatically over the calculated remaining

life of the current plant in service. As described earlier, the Company's remaining life depreciation rate also incorporates recovery of an estimated future cost of removal amount.

Q. What are the problems with the Company's proposal to change from a broad-group procedure, whole life technique?

A. The problems include the absence of verifiable justification for making a change to the vintage-group procedure and remaining-life technique. The Company's position, that the objectives of depreciation accounting can be more nearly achieved using the vintage-group procedure combined with the remaining-life technique, has not been supported with substantive evidence. The Company has not shown how the Commission's long-standing use of the straight-line method, broad-group procedure, whole-life technique has failed to achieve the objectives of depreciation accounting.

The present depreciation system, straight-line method, broad-group procedure, whole-life technique develops depreciation rates that are the same for all future years, until a re-evaluation is performed. The vintage-group procedure, remaining-life technique develops a series of depreciation rates that are highest in the current year and are less in subsequent years. There is not a mechanism to address this in ratemaking proceedings.

By using only the highest number in a series of depreciation rates, determined by the vintage-group procedure, remaining-life technique, for all future years, depreciation expense is higher than if the average depreciation rate, determined by the broad-group procedure, whole-life technique, was used. Mr. White's use of vintage-group procedure, whole-life technique increases the Company's revenue requirement.

Also, because the remaining life calculation is for plant currently in service, its applicability to new plant placed in service tomorrow is significantly limited. For example,

the L&P's four steam production accounts: Account 311-Structures and Improvements, Account 312-Boiler Plant Equipment, Account 314-Turbogenerator Units and Account 315-Accessory Electric Equipment, all have remaining lives of less than 9 years proposed in Mr. White's depreciation study. Under the Company's proposal, new plant placed in service tomorrow is subjected to a remaining life calculation of less than 9 years until a new life analysis is performed and new depreciation rates adopted. The problem with the Company's use of the vintage-group procedure, remaining-life technique is that it accelerates depreciation expense.

Staff agrees that the remaining-life technique deals with the recovery of a theoretical reserve imbalance. However, as I noted in my direct testimony, the Company currently retains a large over-accrued reserve balance that should be addressed with other factors being given consideration. Staff concludes that a change to both of these depreciation parameters needs to identify shortcomings of the current method in Missouri.

Q. What is the effect of the Company's proposal to switch from the straight-line method, broad-group procedure, whole-life technique to straight-line method, vintage-group procedure, remaining-life technique.

A. The effect of the Company's proposal to switch from the straight-line method, broad-group procedure, whole-life technique to straight-line method, vintage-group procedure, remaining-life technique is that it is another way to increase depreciation expense to achieve an increased revenue.

Q. What is Staff's recommendation on the Company's proposal to switch from the straight-line method, broad-group procedure, whole-life technique to straight-line method, vintage-group procedure, remaining-life technique?

A. Staff's recommendation is that the Commission order the depreciation system currently approved, the straight-line method, broad-group procedure, whole-life technique.

ACCUMULATED DEPRECIATION RESERVE IMBALANCES

Q. For the Aquila-Networks-MPS-Electric & Common accumulated depreciation reserve imbalance noted by Mr. White in his direct testimony on page 15, lines 11-12, does Staff agree with the magnitude of the over-accrual?

A. No. Staff's determination of this over-accrual is approximately $168 million; Mr. White's determination of this over-accrual is approximately $36 million.

Q. What are the factors that create such a difference between the Company and Staff as to the level of accrued depreciation over-accrual?

A. First, these differences arise due to the different depreciation parameters utilized, as noted above. Staff's ASLs developed using the broad-group procedure and whole-life technique is considerably different that the Company's use of Remaining Life (RL) using the vintage-group procedure and remaining-life technique. The Company's shorter service lives cause the Company's level for theoretical, or computed reserve to be calculated higher than Staff's.

Second, the inclusion by the Company of estimated future interim and final removal costs in the depreciation rate increases the Company's theoretical reserve level as well. This approach masks a significant amount of the Missouri ratepayer depreciation overcharges identified in current analysis of this area.

Consequently, the Company's theoretical reserve determination is substantially higher than Staff's and, therefore, the amount of over-accrual stated by the Company in its analysis is significantly lower than Staff's.

Q. Please explain the term theoretical reserve.

A. Theoretical reserve can be viewed as the **difference** between the original booked cost of plant presently in service and the summation of annual depreciation expense collected between now and the date of final retirement of that plant, using the ASL and dispersion characteristics of the Iowa-type curve selected as the basis for the future depreciation rates. Theoretically, this **difference** is the amount that should be the current booked depreciation reserve.

Q. What is the effect of the Company's theoretical reserve determination that results in an over-accrual determination that is significantly less than Staff's?

A. The effect of the Company's theoretical reserve determination that results in an over-accrual determination that is significantly less than Staff' is that the depreciation expense is reduced less, achieving increased revenue requirements.

Q. Does Staff have a recommendation at this time to address Staff's determination of the over-accrued accumulated depreciation reserve?

A. Staff's recommendation is address the magnitude of the total reserve imbalance after another depreciation study is conducted and trends identified in the over-accrual.

CORPORATE PLANT AVERAGE SERVICE LIVES

Q. Have ASLs for Corporate Plant Accounts been specifically ordered in previous cases?

A. No.

Q. Does Staff have any concerns regarding the Company's formulation of ASLs for its Corporate Plant Accounts?

A. Yes. On page 25, lines 6-9 of Mr. White's testimony he states, "Absent meaningful indications from the analysis of historical retirement activity, the service life statistics recommended in this study were based largely on judgment and a consideration of the parameters approved for similar assets managed by other Aquila business units.

Q. Has the Company provided support for what those other business units are?

A. Yes. In Data Request No. 622, the Company identified these business units as entities in Michigan and Minnesota.

Q. Does Staff agree that parameters approved in other states represent the best indicators to use to assign depreciation rates for corporate assets in Missouri?

A. No. Staff's recommends its life analysis of the MPS' "General" plant accounts be utilized to set depreciation rates for the Company's "Corporate General" plant accounts because the historical retirement activity should be similar.

Q. What is the overall effect of basing ASLs for the Company's Corporate plant assets on other Aquila business units in other states?

A. The overall effect of basing ASLs for the Company's "Corporate General" plant assets on other Aquila business units in other states is increased depreciation expense to achieve increased revenue requirements.

Q. What is Staff's recommendation for ASLs for the Company's "Corporate General" plant assets?

A. Staff's recommendation for ASLs for the Company's "Corporate General" plant assets is that they should reflect average service lives of similar plant of the Company's regulated business units in Missouri.

Q. In summary, please provide Staff's recommendations.

A. Staff's recommendations are:

1) Depreciation rates should not include recovery of final costs of removal for production plant.

2) Recovery of interim costs of removal should tie to known and measurable amounts.

3) Estimated future retirement dates should not be used to truncate ASLs for production plant.

4) A depreciation system that incorporates the straight-line method, broad-group procedure, whole-life technique should continue to be used for Missouri regulated utilities.

5) The magnitude of the total reserve imbalance between the theoretical and booked accumulated depreciation reserve should be addressed after another depreciation study is conducted and trends identified in the over-accrual.

6) "Corporate General" plant ASLs should reflect average service lives of similar plant of the Company's regulated business units in Missouri.

Q. Does this conclude your rebuttal testimony?

A. Yes.