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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-99-315

SUPPLEMENTAL REBUTTAL TESTIMONY

OF

WILLIAM M. STOUT, P.E.

ON

BEHALF OF

LACLEDE GAS COMPANY AND UNION ELECTRIC COMPANY d/b/a AmerenUE

St. Louis, Missouri September, 2004

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1		SUPPLEMENTAL REBUTTAL TESTIMONY
2		OF
3		WILLIAM M. STOUT, P.E.
4		CASE NO. GR-99-315
5		I. INTRODUCTION
6	Q.	Please state your name and business address.
7	А.	My name is William M. Stout. My business address is 207 Senate
8	Avenue, Cam	p Hill, Pennsylvania.
9	Q.	Have you previously submitted testimony in this proceeding?
10	А.	Yes, my Supplemental Direct Testimony in this proceeding was submitted
11	on August 20	, 2004.
12	Q.	What is the purpose of your Supplemental Rebuttal Testimony?
13	А.	The purpose of my Supplemental Rebuttal Testimony is to address the
14	very few issu	es discussed in the Supplemental Direct Testimony of Rosella L. Schad; the
15	greater numb	er of issues that she failed to raise in her Supplemental Direct Testimony but
16	subsequently	raised in her September 3, 2004, deposition; and portions of the Direct,
17	Rebuttal and	Surrebuttal Testimonies of Paul W. Adam, as adopted by Mrs. Schad.
18	Q.	What are the subjects of your Supplemental Rebuttal Testimony?
19	А.	The subjects of my Supplemental Rebuttal Testimony are (1) the proper
20	issue in this c	ase; that is, addressing the future net salvage for the property that is in
21	service, inclu	ding the reasonableness of the estimates that have long been used to
22	determine that	t future net salvage, (2) the several and inconsistent positions related to
23	accruals for n	et salvage that have been taken by the Missouri Public Service Commission

1	(the "Commission") and its Staff (the "Staff") during the past 14 years, (3) my survey of		
2	experts in the field relating to their position on accruals for net salvage, (4) the core		
3	concerns of Staff and the manner in which the overall regulatory model addresses these		
4	concerns, and (5) the difference between operating and capital costs and the manner in		
5	which they should be recognized in the cost of service.		
6			
7	II. THE ISSUE IN THIS CASE/ESTIMATES OF NET SALVAGE		
8	Q. On page 2, lines 19 through 21 of her Supplemental Direct Testimony,		
9	Mrs. Schad states "The issue that remains in this case is the appropriate cost to		
10	remove retired property, one that is known and measurable to a sufficient degree to		
11	be included in the rates charged to Laclede's customers." Do you agree that the		
12	issue in this case relates to the cost to remove retired property?		
13	A. No, I do not. In my view, the issue is not the cost to remove <i>retired</i>		
14	property; rather, the issue is the cost to remove the property in service. This is a case		
15	about depreciation, the loss in service value not restored by current maintenance of		
16	property in service. Part of that service value that is lost during each year of service is		
17	that year's share of the negative net salvage related to the property in service. That is, the		
18	net salvage that will be incurred or realized at the end of the life of the property in		
19	service.		
20	The original proposal by Mr. Adam, as adopted by Mrs. Schad, establishes an		
21	allowance for net salvage that represents an average of the past net salvage costs for		
22	retired property costs that were incurred to remove or retire property that is no longer		
23	rendering service to customers. Such costs should already have been recovered from the		

1 customers who received service from that retired property and, as an absolute dollar 2 amount, represent a very poor proxy for the amounts that should be recovered from 3 today's customers. The costs that should be recovered from today's customers are the 4 costs related to today's *property in service*, property that is now providing service to 5 these customers. The service lives that are estimated for depreciation purposes must be 6 applicable to the *property in service*. So too, the net salvage that is estimated for 7 depreciation purposes must be applicable to the *property in service*. Thus, it is the cost of 8 retiring the *property in service* that is the issue in this proceeding.

9

10

Q. Is the cost of retiring the property in service "known and measurable to a sufficient degree to be included in rates..."?

11 As discussed later in this testimony, Mrs. Schad has misapplied the A. 12 "known and measurable" concept in this context. Nevertheless, to the extent it has 13 relevance to this issue, net salvage estimates are based on the same kind of known and 14 measurable data as other estimates used by Staff, including those used to establish service 15 lives that result in the allocation of known capital expenditures over a period of many 16 years. Specifically, we do know that property will be retired. We know this, in part, 17 because we can see, in Laclede's books and records (as well as the books and records of 18 the dozens of other utilities with whom I have experience) regular and repeated instances 19 of retirements of property such as gas mains, service lines, poles, wires, etc. We know 20 that costs will be incurred related to retirement of this property – again because we have 21 seen that consistent history for utilities, including Laclede. Further, we know that the 22 property will not live forever. It will be retired someday. And, as stated above, the 23 amount of net salvage that will be incurred or realized when it is retired can be measured

1 with a degree of accuracy no different than the accuracy of the estimates of service life,

2 estimates which Staff has no trouble using.

3 Estimates of net salvage are based on informed judgment incorporating the results 4 of statistical analyses in the same manner that estimates of service life are based on 5 informed judgment incorporating the results of statistical analyses. Under the standard 6 approach that I and virtually all experts and authoritative texts in the field of depreciation 7 recommend, the analyses of net salvage relate the historical costs of retiring property to 8 the original cost of that property. These are the same retirements that are used in the 9 analyses of service life. The net salvage analyses provide averages of the percent of the 10 original cost that *has been* required to retire property as an indication of the percent of the 11 original cost that *will be* required to retire the property in service. Such indications are 12 then considered along with other factors in arriving at an estimate of the net salvage 13 related to the property in service.

14

In your experience, how well have estimates of future net salvage costs **O**. 15 predicted actual net salvage costs?

16 A. It has been my experience, gained over more than 30 years of working as a 17 depreciation professional in the utility industry, that net salvage as a percent of the 18 original cost retired has become more and more negative during the past 50 years. As a 19 result, estimates that are based largely on the historical indications of net salvage, as a 20 percent of the original cost retired, tend to understate the future net salvage costs. That 21 is, the use of such estimates tends to result in under-recovery or under-charges to 22 customers, not over-recovery or over-charges as suggested by Staff. Significant 23 adjustments to these historical indications for the greater age of future retirements are

1	required, but not often done, in order to approach the more likely level of future net
2	salvage costs. Thus, the use of net salvage estimates, in accordance with the standard
3	approach recommended by me and virtually all of the authoritative experts and texts in
4	the field of depreciation, that are predicated largely on the historical indications of net
5	salvage, as a percent of the original cost retired, provide a very conservative and
6	reasonable measure of the future net salvage. I would add that, while my experience has
7	been that net salvage estimates under the standard approach have conservatively
8	understated actual net salvage, the Staff's approach would without doubt severely
9	understate actual net salvage costs incurred to retire plant currently in service.
10	Q. Please illustrate your contention that the standard approach produces
11	conservative estimates of net salvage percents?
12	A. I will use Account 380, Services, for Laclede Gas Company to illustrate
13	the conservative nature of these estimates. This account is segregated into two groups:
14	(1) Account 380.10 Steel Services and (2) Account 380.20, Copper and Plastic Services.
15	The traditional analyses that are used in support of the standard approach are presented in
16	the workpapers of Mr. Adam. For steel services, the net salvage as a percent of original
17	cost retired averaged negative 112 percent during the period 1987 to 1996 and negative
18	117 percent during the period 1992 to 1996. For copper and plastic services, the net
19	salvage as a percent of original cost retired averaged negative 93 percent during the
20	period 1987 to 1996 and negative 98 percent during the period 1992 to 1996. Typically,
21	these percents would serve as a basis for the forecast of future net salvage as a percent of
22	the original cost of plant in service. Thus, under the standard approach, net salvage
23	estimates for these two groups might be negative 115 percent for steel services and

1 negative 95 percent for copper and plastic.

2 In order to demonstrate the conservative nature of such estimates, I have 3 prepared Schedule WMS-7. Schedule WMS-7 presents the net salvage amounts during 4 the period 1990 through 2000 for these same two groups of services: (1) steel and (2) 5 copper and plastic. Also shown are the numbers of feet of service line retired in each 6 year for these two groups as well as the average cost per foot to retire services. The 7 average cost to retire a steel service during the period 1990-2000 was \$4.20 per foot as 8 shown in column 4 on line 13. Application of this historical average to the number of 9 feet of steel services presently in service, 10,649,294 feet, indicates future net salvage 10 will be \$44,687,761, or 118 percent of the original cost. This amount assumes that there 11 will be no inflation of the average cost per foot to retire a service and yet it is more 12 negative than the historical indication of negative 115 percent for this group as discussed 13 above. That is, if there is no future inflation in the cost of retiring services, the future net 14 salvage to retire the 10,649,294 feet of steel services will be 118 percent of the original 15 cost of these services. Thus, an estimate based on the historical indications of negative 16 115 percent would actually assume that there would be a reduction in the average cost per 17 foot to retire steel services.

Assuming that this group of services has a remaining life of 10 years and that in fact there will be inflation during that period that averages 3 percent per year, the amount of future net salvage would increase by a factor of 1.34 ((1.03)^10) to negative 158 percent (118 percent x 1.34), far greater than the historical indication of negative 115 percent shown in the workpapers of Mr. Adam, Exhibit No. 124. Also note, that the net salvage percent recommended by Mr. Adam and adopted by Mrs. Schad is only negative

1 60 percent and, as discussed below, only provides for the recently observed absolute2 amounts of net salvage costs.

3 With respect to the copper and plastic services, the average cost to retire such 4 services during the period 1990-2000 was \$5.72 per foot. Application of this historical 5 average to the number of feet of copper and plastic services presently in service, 6 27,199,888 feet, indicates future net salvage will be \$155,610,435, or 66 percent of the 7 original cost. Assuming that this younger group of services has a remaining life of 20 8 years and inflation during that period averages 3 percent, the amount of future net salvage 9 would increase by a factor of 1.81 ((1.03)²0) to negative 119 percent (66 percent x 10 1.81), far greater than the historical indications of negative 95 percent shown in the 11 workpapers of Mr. Adam, Exhibit No. 124. If future inflation is only 1.8 percent per 12 year, the current cost per foot will increase to the point of producing net salvage costs of 13 equal to 95 percent of the original cost of these services. $(((1.018)^{20}) \times 66 = 94)$. Also 14 note that the net salvage percent recommended by Mr. Adam and adopted by Mrs. Schad 15 is only negative 15 percent and, as discussed below, only provides for the recently 16 observed absolute amounts of net salvage costs. 17 In summary, for steel services, Staff has recommended a net salvage

percent of negative 60 percent, the standard method yields negative 118 percent, and based on the trend of increasing costs of retirement, a 3 percent average inflation per year will yield a net salvage percent of negative 158 percent. For copper and plastic services, Staff has recommended a net salvage percent of 15 percent, while the standard method calculates net salvage at negative 66 percent, and with 3 percent inflation, the net salvage percent would be negative 119 percent. These examples illustrate that net salvage

estimates under the standard approach, predicated largely on the historical indications of
net salvage as a percent of the original cost retired, tend to understate the probable
amount of future net salvage. As a result, the use of such estimates results in a
conservative measure of future net salvage and does not lead to over-recovery or overcharges to customers. Comparatively, the Staff's method severely undercollects any
rational estimate of future net salvage.

Q. You used a future inflation rate of 3 percent in your example. How
does this inflation rate compare with the historical inflation of costs related to the
installation and retirement of services?

10 A. A future rate of inflation of 3 percent is less than the historical rate of 11 inflation related to the installation and retirement of services. Schedule WMS-8 presents 12 a graph of the change in price level of steel services over the period 1912 through 2003 as 13 well as the change in price level measured by the Consumer Price Index. The cost index 14 for steel services that I have used is the Handy-Whitman Index of Public Utility 15 Construction Costs for Steel Services in the North Central Region of the United States, 16 the region that includes Missouri. The average rate of inflation reflected in this price 17 index during the 91-year period was 4.76 percent.

Q. Since the use of 3 percent resulted in future net salvage costs greater than the historical indications as a percent of original cost, wouldn't the use of the historical rate of inflation for services of 4.76 percent result in future net salvage costs that are even greater?

- A. Yes, it would.
- 23 Q. What can be inferred about the use of net salvage *percents* based on

1	historical ind	lications from your example and the historical rate of inflation?
2	А.	The use of net salvage percents that are based on historical indications of
3	net salvage as	s a percent of the original cost retired assumes that the future rate of inflation
4	of the cost to	install and retire services will be substantially less than the rate of inflation
5	during the pe	riod 1912-2003.
6	Q.	You have used the term "cost of retiring". Is this term any different
7	than the terr	n "cost of removal"?
8	А.	The terms are most often used interchangeably. However, I prefer the
9	term "cost of	retiring" as it does not imply that the plant is physically removed from its
10	location at the	e end of its life in the way that "cost of removal" does.
11	Q.	If the plant is not removed, but is abandoned in place, what costs of
12	retiring are i	incurred?
13	А.	The cost of retiring abandoned plant includes the cost of isolating it from
14	the system to	which it was once attached and other activities required to leave it in a safe
15	condition suc	h as purging a gas line.
16	Q.	Do utilities have a legal obligation to incur these costs?
17	А.	Not always. However, in many cases, prudent operating practice and
18	safety consid	erations necessitate these activities and the related costs. In many cases,
19	such as electr	ic power distribution poles, utilities would also face customer complaints if
20	they consister	ntly abandoned retired poles without removing them. Thus, while a formal
21	legal obligati	on does not always exist to remove retired plant, a substantial and consistent
22	portion of ret	ired plant is removed simply to satisfy customer demands and comply with
23	good utility p	ractice.

1 Q. Is net salvage the only future amount for which an estimate is

2 required in rate regulation?

A. No, it is not. Estimates of the future amount of inflation, future growth in utility earnings, future pension costs, future earnings rates on pension funds, and future costs of decommissioning nuclear power plants are a few of the other future amounts that are routinely estimated in the course of a rate proceeding.

- Q. Do other state regulatory commissions find that the cost of net salvage
 associated with currently used plant is "known and measurable" with sufficient
- 9

precision to be included in rates?

10 Yes. The inclusion of net salvage in depreciation rates, using net salvage A. 11 percentages established as I describe in my Supplemental Direct Testimony and in this 12 testimony, is the standard ratemaking treatment of net salvage that is used by the 13 overwhelming majority of regulatory commissions throughout the country. Staff's 14 position that net salvage of currently used plant is not sufficiently "known and 15 measurable" is a position that is clearly and significantly out of the regulatory 16 mainstream. It is also contrary to all authoritative texts and recommendations of experts 17 in the field.

Q. In her Supplemental Direct Testimony, has Mrs. Schad correctly
applied the "known and measurable" concept to the net salvage issue?

A. In my opinion, no. I have been involved in rate proceedings involving utilities before numerous regulatory commissions over the course of my career. The "known and measurable" concept is typically applied in making adjustments to test year values (or some other historical data used in the ratemaking process) based on known and

- 1 measurable differences between the test year data and more recent data that came to light
- 2 during or after the test year. It is my understanding that this is precisely how the
- 3 Missouri Commission has applied the known and measurable concept. The
- 4 Commission's discussion of the known and measurable concept in its Order Setting Test
- 5 Year, Setting True-up, and Adopting Procedural Schedule in Case No. ER-2001-299 is
- 6 illustrative:

7 The test year is a central feature of a rate case such as the present. It is the starting point for the determination of the amount of additional revenue, if 8 9 any, required by a public utility: "The accepted way in which to establish 10 future rates is to select a test year upon the basis of which past costs and 11 revenues can be ascertained as a starting point for future projection." State ex rel. Southwestern Bell Tel. Co. v. Public Serv. Comm'n, 645 S.W.2d 12 44, 53 (Mo. App. 1982). A test year is a tool used to find the relationship 13 14 between investment, revenues, and expenses. Certain adjustments are 15 made to the test year figures; "normalization" adjustments used to 16 eliminate nonrecurring items of expenses or revenues and "annualization" adjustments used to reflect the end-of-period level of investment, expenses 17 and revenues. Adjustments are also made for events occurring outside the 18 19 test year. The criteria used to determine whether a post-year event should 20 be included in the analysis of the test year is whether the proposed adjustment is (1) "known and measurable," (2) promotes the proper 21 22 relationship of investment, revenues and expenses, and (3) is 23 representative of the conditions anticipated during the time the rates will 24 be in effect. State ex rel. GTE North, Inc. v. Missouri Public Service 25 Commission, 835 S.W.2d 356, 368 (Mo. App., W.D. 1992). The 26 adjustment of the test year figures for known and measurable events outside the test year is referred to as a "true-up." See State ex rel. Missouri 27 28 Public Service Commission v. Fraas, 627 S.W.2d 882, 888 (Mo. App., 29 W.D. 1981). 30

30 31

- Mrs. Schad's misapplication of the known and measurable concept in this context
- 33 appears to be nothing more than an effort to obscure the fact that future net salvage
- 34 estimates, like service life estimates and other estimates routinely used in the ratemaking
- 35 process are all projections that are based on known and measurable data as a starting
- 36 point. This attempt appears to be result-oriented; that is, in this one context, Staff now

refuses to acknowledge that estimates should be used and that the estimates are
 conservative in any event as explained above, and instead misuses the "known and
 measurable" concept by focusing only on costs associated with already retired plant.
 This misapplication of the "known and measurable" concept then enables Staff to support
 short-term rate reductions through artificially low depreciation rates.

6

Q. Please summarize your supplemental rebuttal related to the

7 estimation of net salvage.

8 A. The estimate of net salvage that is at issue in this proceeding is the net 9 salvage related to the property in service. Such property is the property that is rendering 10 service to current customers and is the property for which depreciation rates are to be 11 determined. The property that has already been retired is no longer providing service. 12 Estimates that are based on historical indications of net salvage as a percent of the 13 original cost retired represent very conservative and reasonable measures of future net 14 salvage costs. The use of historical absolute amounts of net salvage without adjustments 15 to reflect the property currently in service, as supported by Mrs. Schad, represents a very 16 poor estimate of the net salvage related to property in service that leads to a systematic 17 under-recovery of the retirement-related costs of assets that are currently used to serve 18 customers.

19 III. HISTORICAL TREATMENT OF NET SALVAGE IN MISSOURI 20 Q. On page 3 of her Supplemental Direct Testimony, Mrs. Schad

indicates that the Staff's approach to net salvage was not first introduced in this
proceeding, but rather was proposed as early as 1990 for Missouri Public Service
Company. Have the Commission and the Staff consistently used Staff's approach

1 since 1990?

2	A. No, they have not. Although there have been many cases that resulted in
3	stipulations, there have been only a few cases in which the issue has been litigated and a
4	determination was made by the Commission. In the very case that was cited by Mrs.
5	Schad, the Commission, although ultimately agreeing with Staff's position, stated in its
6	order:
7 8 9 10 11 12 13 14 15	"The primary purpose of establishing depreciation rates is the recovery over the life of the asset of the cost to the Company of acquiring the asset by recording on the Company's books some percentage of that cost each year. It is also <i>customary</i> to recover through the depreciation rates the estimated cost of ultimately removing the asset offset by the projected amount to be realized from its salvage price." <i>Re: Missouri Public</i> <i>Service</i> , Case No. ER-90-101, 1990 Mo. PSC Lexis 34, 61-62 (1990) (Emphasis added).
16	In a subsequent UtiliCorp (Missouri Public Service) proceeding, Case No. ER-97-
17	394, both Staff and the Commission again used the standard approach for mass property.
18	The Staff witness was Guy Gilbert, P.E., P.G. In his direct testimony, Mr. Gilbert stated,
19	in response to a question regarding differences in his methods and assumptions as
20	compared to the prior study:
21 22 23 24 25 26	"The single largest difference is that interim net salvage has a greater cost of removal component than was previously recognized. This results from the method and assumptions used in determining the net salvage estimates." It is clear that in referring to interim retirements Mr. Gilbert is referring to both
27	the interim retirements that occur at an electric generating station and the retirements of
28	mass property accounts. It is clear from reviewing the changes in the net salvage
29	estimates for such mass property groups. For example, the net salvage estimate for
30	Account 364, Poles, Towers and Fixtures, was revised from negative 19 to negative 73

1 percent.

1	percent.	
2	When asked to describe how he arrived at his estimates of net salvage, Mr. Gilber	
3	responded:	
4 5 6 7 8	"I analyzed past retirements and net salvage dollars recorded on the books of the utility and computed the percentage of net salvage by calculating the ratio of the net salvage dollars to dollars retired. I used these percentages in the calculation of depreciation rates which are applied to the surviving plant investment contained on the Company's books."	
9 10	This is exactly the approach that I have described. This is the approach that is	
11	used by nearly all regulatory bodies in the United States. This is the standard approach.	
12	Mr. Gilbert correctly reversed the position taken by Staff in the 1990 and 1993 cases for	
13	this utility. He recognized the change he was making when he stated:	
14 15 16 17 18 19	"Previously, in Case No. ER-93-37, Staff had calculated the ratio of net salvage dollars to total plant-in-service dollars, by account, to derive a percentage of net salvage for inclusion in a depreciation rate calculation. This did not reflect net salvage properly as the ratio of net salvage to the book value of plant retired."	
20	I couldn't agree more.	
21	Q. How did the Commission rule on this issue in Case No. ER-97-394?	
22	A. The Commission did not specifically rule on this issue because it	
23	apparently was not an issue in the proceeding given Mr. Gilbert's use of the standard	
24	approach for mass property. That is, the use of the standard approach for mass property	
25	was apparently acceptable. However, there are several statements made by the	
26	Commission in its discussion of depreciation that are important. First, the Commission	
27	affirmed what depreciation is:	
28 29 30 31	"Depreciation is a system of accounting that aims to distribute the cost or other basic value of tangible capital assets, less salvage, over the estimated useful life of the unit (which may be a group of assets)The matching concept is also an essential element of the basic regulatory philosophy of	

- 1 intergenerational customer equity." 2 3 Second, in discussing Terminal Net Salvage for electric generating units or 4 production units, the Commission stated: 5 "UtiliCorp states that terminal net salvage refers to the net demolition cost 6 of a plant or unit at final retirement. UtiliCorp maintains that these costs 7 will be incurred and should be recognized in current rates. UtiliCorp 8 points out the difference between interim net salvage (removal and salvage 9 associated with interim retirements) and terminal net salvage (relating to 10 ultimate retirement) and notes that the Staff has already recognized, to some extent, interim net salvage as being properly included in 11 12 depreciation rates. UtiliCorp notes several other states in which similar 13 approaches have been used. 14 15 Both the Staff and OPC point out that this Commission has rejected the 16 inclusion of terminal net salvage in rates in past cases based on the fact 17 that terminal costs of removal are speculative and not known and 18 measurable. The Commission has also found interim costs to be 19 sufficient for purposes of recovery." (Emphasis added) 20 These statements by the Commission, coupled with the testimony of Mr. Gilbert, 21 lead me to conclude that both the Commission and the Staff equated retirements of mass
- 22 property with the interim retirements of production units and found that the removal costs
- associated with such retirements were "sufficient for purposes of recovery." It was only
- 24 the terminal net salvage related to production plants that was considered speculative and
- 25 not known and measurable by the Commission.
- 26

Q. Are there other cases in which the Commission recently adopted the

- 27 standard approach for accruing the net salvage related to the property in service?
- A. Yes, as I have already cited in my Supplemental Direct Testimony, in the
- 29 2001 case involving St. Louis County Water Company, the Commission preferred the
- 30 standard approach to net salvage that I proposed in that proceeding rather than Staff's
- 31 approach.
- 32 Q. Please summarize your supplemental rebuttal testimony related to the

1 Commission and Staff positions on net salvage.

2	A. During the past 14 years the Commission and Staff have supported both
3	what I now refer to as the Staff approach and the standard approach to net salvage. The
4	Commission recognized in its 1990 order involving Missouri Public Service that it is
5	"customary" to use the standard approach. It appears from the 1998 order related to
6	UtiliCorp that it was only terminal net salvage for production units (not net salvage
7	related to interim retirements and mass property retirements) that troubled the
8	Commission in the application of the standard approach. In fact, it found that the
9	standard approach was sufficient for interim retirements and, by logical extension,
10	sufficient for mass plant retirements. The only conclusion that can be drawn from this
11	regulatory history is that, prior to 1999, with the one exception, the Commission favored
12	the standard method, and that since 1999, a consistent policy has not been established.
13	
14	IV. NET SALVAGE POLICY ENDORSED BY EXPERTS
15	Q. Mr. Adam's hearing testimony, which was read by Mrs. Schad in
16	preparing her Supplemental Direct Testimony, referred to the text Depreciation
17	Systems by Frank Wolf and Chet Fitch and to contacts made by Mr. Adam with Dr.
18	Wolf. Are you familiar with this text and Drs. Wolf and Fitch?
19	A. Yes, I am.
20	Q. What did their text have to do with this case?
21	A. Mr. Adam, in response to data requests (Exhibit 122 in this case) indicated
22	that his approach was consistent with texts on depreciation. At the hearing, the only such
23	text he could identify was Depreciation Systems by Frank Wolf and Chet Fitch. He

1	testified that	Depreciation Systems was an authoritative text and that Frank Wolf was an
2	expert in the	area of depreciation (Tr. at p. 878, l. 18 – 25 to page 879, l. 1). Mr. Adam
3	also clarified	during cross-examination, however, that he never discussed his proposed
4	treatment of	net salvage with Dr. Wolf and that Dr. Wolf did not endorse it (Tr. at p. 919,
5	l. 5 to p. 920	, l. 18).
6	Q.	Do you consider <u>Depreciation Systems</u> to be authoritative on the
7	subject of de	epreciation?
8	А.	Yes, I do.
9	Q.	What approach to net salvage is presented in this text?
10	А.	The text Depreciation Systems presents the standard approach to net
11	salvage as de	escribed in my Supplemental Direct Testimony. It does not even mention
12	Mr. Adam's	approach, much less support it.
13	Q.	The text was published in 1994. Do the authors continue to support
14	the standard	l approach?
15	А.	Yes, they do.
16	Q.	How do you know?
17	А.	After reading Mr. Adam's discussion of Depreciation Systems and his
18	contacts with	Dr. Wolf, it occurred to me that I should survey depreciation experts with
19	whom I am f	amiliar across the country to determine if I could continue to accurately state
20	that the most	authoritative texts and experts continue to endorse the standard approach. I
21	conducted th	at survey over the last few weeks by contacting Dr. Frank Wolf, Dr, Chester
22	Fitch, Dr. Bo	b White, and Mr. Harold Waddington. I reviewed the issue in this case with
23	them, describ	bing both the Staff approach and the standard approach that I support. Each

and every one of them, including Drs. Wolf and Fitch, continue to support the standard
 approach.

3 How do the results of your survey impact your opinions? 0. 4 They confirm my opinions. That is, they confirm my opinions that sound A. 5 regulatory policy and the goals of depreciation are best served by continuing to follow the 6 standard approach. 7 V. **STAFF'S CORE CONCERNS** 8 9 **Q**. Based on your review of the Staff testimony in this and other 10 proceedings, what are the core concerns that have led to the radical change in the 11 customary or standard approach to net salvage that has been proposed by Staff 12 periodically during the past 14 years? 13 In my opinion, Staff has three core concerns regarding the standard A. 14 approach: (1) the net salvage accruals that result from the standard approach are greater 15 than the current level of net salvage costs, (2) if the Company is permitted to recover net 16 salvage accruals determined using the standard approach, the funds may not be available 17 when the property is retired, and (3) future net salvage is not known and measurable. 18 **Q**. Is the fact that net salvage accruals, determined using the standard 19 approach, are greater than current net salvage costs an appropriate concern? 20 A. No, it is not. I can understand that someone not familiar with the impacts 21 of plant growth and maturity might assume that the current net salvage accruals should 22 approximate the current net salvage costs. However, that same person should then be 23 concerned that current accruals of original cost are less than the current level of plant

additions. Staff does not seem to have this second concern and yet it is the same growth
 in plant and price levels that creates both situations.

3 As I explained on pages 19 through 22 of my Supplemental Direct Testimony, the 4 net salvage accrual exceeds the current net salvage costs because of system growth and 5 maturity. The Company is serving a greater number of customers with a much larger 6 utility plant than it was when the plant being retired was placed in service. Further, the 7 amount being accrued today must be sufficient to offset costs of retiring that will occur 5, 8 10, 25, 50 or even 100 years from now. Although it may not seem fair to collect these 9 future costs based on a price level that is greater than today's, it is no less fair than 10 returning to the Company its original cost in dollars that are 5, 10, 25, 50 or even 100 11 years subsequent to when the amounts were expended. Both the customer and the 12 Company are compensated for the use of their money through the return on rate base, i.e., 13 original cost (Company) less accumulated depreciation (customer). Intergenerational 14 equity requires that the future amounts of net salvage be recovered ratably as the related 15 property renders service. Inasmuch as this property represents a larger amount of plant 16 and serves a larger number of customers than the plant being retired served during its life 17 and inflation is a fact of life, as illustrated in Schedule WMS-8, current net salvage 18 accruals must be greater than the current net salvage costs.

Q. Do net salvage accruals based on the standard approach fully reflect
the level of future inflation that will occur between now and the ultimate retirement
of plant?

A. No, they do not. As discussed earlier in this testimony, for Account 380,
Services, use of current price levels would produce amounts of future net salvage that

nearly equal the amounts determined using the standard approach. Only a limited amount
 of future inflation is actually incorporated in the estimates based on the standard
 approach.

Q. Are there safeguards that insure the fair treatment of customers in
the event the Company should seek to recover excessive amounts or endeavor to
recover amounts for a second time?

7 A. Yes, there are. As discussed extensively in the testimonies of Mr. Martin 8 J. Lyons, Jr. and Mr. Warner L. Baxter of AmerenUE, and Mr. R. Lawrence Sherwin of 9 Laclede, there are several safeguards in place. First, the depreciation reserve account 10 tracks the accumulated amount of depreciation. Comparison of this accumulated amount 11 with calculations of the theoretical level or calculated accrued depreciation provides a test 12 of the adequacy of past and current depreciation policies and parameters. This 13 comparison acts as a thermometer on the current depreciation rates, indicating if they are 14 too high or too low. Should such variances occur, it is an indication that the parameters, 15 the service life and net salvage percent, should be reviewed and updated. Monitoring of 16 the accumulated depreciation account insures that the accruals recorded, in accordance 17 with Commission-ordered depreciation rates, equal the original cost plus the net salvage 18 cost, no more, no less.

Second, the accumulated depreciation account is deducted from the original cost in the determination of rate base. This deduction insures that, if past accruals have been greater than those required, the customer would be provided with an effective return on such amounts until lower rates correct the imbalance. Likewise, the Company receives a return to the extent that such amounts were less than required.

1	Finally, periodic depreciation studies enable the depreciation expert to		
2	adjust the estimates of service life and net salvage to reflect additional information		
3	including more recent experience, the current outlook of management, and the estimate	tes	
4	of service life and net salvage used by other utilities.		
5	Q. In order to monitor the accumulated depreciation account, is it		
6	necessary to segregate the accumulated depreciation account between the portio	n	
7	related to original cost and the portion related to net salvage?		
8	A. No, it is not. The accumulated depreciation account can be monitored	in	
9	total. This will still insure that depreciation accruals equate to the original cost plus t	he	
10	net salvage costs, no more, no less. However, in the near future, in response to Order	No.	
11	631 of the Federal Energy Regulatory Commission, most electric and gas utilities will	l be	
12	segregating the accumulated depreciation account into these two components enablin	g	
13	separate monitoring of each.		
14	Q. When monitoring the accumulated depreciation, if there is a		
15	determination that a variance exists between the actual accumulated depreciation	n	
16	account and the theoretical amount, what is done to remedy the variance?		
17	A. There are several approaches used to remedy the variance between the		
18	actual and theoretical accumulated depreciation. The approach used in Missouri is to		
19	amortize the difference to the accumulated depreciation over a period of time. Such		
20	amortizations could result in an increase or decrease in total depreciation expense,		
21	depending on whether the actual accumulated depreciation account was less than or r	nore	
22	than it should be. These amortizations are often referred to as true-ups.		
23	Q. During her deposition on September 3, 2004, in response to a		

1 question related to monitoring the accumulated depreciation, Mrs. Schad stated 2 "Well, you can't true up if you don't have the same customers. So you can't really 3 in that sense true up. The approach that Staff is doing provides the customer and 4 the utility the best estimate of true-up." Do you agree with Mrs. Schad? 5 No, I do not. While it is true that a true-up of the accumulated A. 6 depreciation account by definition represents an amount that was previously over- or 7 under-recorded and is being righted at a later date, periodic studies of service life and net 8 salvage using the standard approach provide for the most appropriate true-up amounts. 9 Such amounts are closer in time to the period during which the over- or under-accrual 10 occurred than Staff's approach. The standard approach most likely makes such true-ups 11 while the property to which it relates is still providing service to customers. Staff's 12 approach waits until the property has been retired, realizes that an amount of net salvage 13 was not provided for during the life of the related property, and then provides a true-up in 14 the form of an expense amount when the property is no longer in service. This most 15 certainly is not the best estimate of true-up. 16 **O**. Do you have any further comments on Staff's concern regarding 17 whether future net salvage is known and measurable? 18 A. Yes, I do. I have discussed the process of estimating future net salvage in 19 my Supplemental Direct Testimony on pages 22 through 26 as well as earlier in this 20 statement. I have demonstrated, using one of the Company's largest accounts, that the 21 estimates of future net salvage developed under the standard approach represent a very 22 conservative measure of future net salvage, i.e., they understate the level of future net 23

22

salvage costs. Thus, the net salvage accruals that result are very reasonable, despite the

1 fact that they exceed the current level of net salvage costs.

2	Net salvage costs are not going away. The Company must replace aging
3	plant or retire and abandon plant no longer required. Both replacement and abandonment
4	require the Company to incur costs to retire the plant. That is a known. The Company
5	cannot simply walk away from such plant, whether it has a legal obligation to remove it
6	or not. Net salvage costs have been on an upward trend for many years. Developing an
7	allowance for future net salvage that looks back at absolute amounts rather than relating
8	such amounts to the original cost of the property being retired will always result in a poor
9	measurement of the amount that should be included in the cost of service. I recommend
10	that a conservative measure of future net salvage as determined using the standard
11	approach be adopted rather than the poor measurement of future net salvage that results
12	from Staff's approach.
13	Q. Does Staff's approach actually represent an attempt to estimate
13 14	Q. Does Staff's approach actually represent an attempt to estimate future net salvage?
13 14 15	 Q. Does Staff's approach actually represent an attempt to estimate future net salvage? A. Not really. Staff has given up on estimating future net salvage and
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contrast, are a one-time cost related to property that provides a benefit throughout its
 service life. Thus, they are capital costs. In order to match the recognition of net salvage
 costs with the benefit that the related property provides, capital costs must be recognized
 ratably during the life of the property.

5

Q. What treatment of net salvage is required by the Uniform System of

6 Accounts?

7 A. The Uniform System of Accounts (USOA) requires that net salvage, both 8 gross salvage and cost of removal, is recorded to Account 108, Accumulated Provision for 9 Depreciation. This is a balance sheet account, not an operating income account. Thus, the 10 USOA treats net salvage as capital. The USOA, as described in my Supplemental Direct 11 Testimony, defines depreciation as the loss in service value and defines service value as the 12 original cost less net salvage. Net salvage is a part of depreciation. The USOA also 13 requires accrual accounting. The service value or cost, including net salvage, must, 14 therefore, be accrued during the life of the assets, not expensed when the cost is incurred. 15 Q. Has Mrs. Schad recognized the need for adjusting the original cost to 16 reflect capital costs related to the asset that do not occur and are not known until the 17 end of the assets life? 18 Yes, she has. On page 49, lines 11 through 19, of her September 3, 2004, A. deposition, Mrs. Schad stated: 19 20 "Well, they had net salvage. That was to keep the overcollection from - -21 that was to keep so that if you - - if you had \$100 you need to recover from the customer, but there was going to be \$10 at the end. You didn't want to 22 23 collect \$100 from the customer. You wants to make sure that you only 24 collected the \$90 so that that would be the appropriate amount. So net 25 salvage would – its consumed depreciation. Depreciation is the original cost minus the service value." 26 27

1 It appears that there is no concern about treating gross salvage as capital and 2 adjusting the original cost for such salvage regardless of whether it is known and 3 measurable. It is only when the net salvage is negative that Staff has a problem. 4 On page 153, lines 5 and 6, Mrs. Schad, in discussing current **Q**. 5 cost of removal, refers to recovery of such costs as appropriate "because it's 6 keeping their service going". Do you agree that the nature of cost of removal is 7 that it keeps the system going? 8 A. No, I do not. Mrs. Schad is endeavoring to consider the entire

9 system as a unit of property. A unit of property is the smallest item of property of a 10 particular type that is capitalized, e.g. a service line or a meter. When units of 11 property are placed in service, they are capitalized. When units of property are no 12 longer in service, they are retired. Other costs related to this unit of property during 13 its life represent operating expenses, e.g. repair of a pinhole leak in a pipe. These 14 are the costs that keep the service of the unit of property going. The cost of 15 removing or retiring a unit does not keep its service going. In stark contrast, the 16 cost of removing or retiring a unit ends it service.

Under the concept floated by Mrs. Schad, the cost of retiring a unit
of property is an operating expense because it keeps the system going. Presumably,
then, only the cost to retire the entire system would represent a capital cost.
However, the logical extension of her theory is that the cost of installing the
replacement unit of property is also just keeping the system going and also should
be expensed. Neither the cost to remove nor the replacement cost should be
expensed. Both are capital costs that should be ratably recognized during the life of

1 the property to which they relate.

2	Q. In this proceeding, Staff has proposed that a net salvage
3	allowance be recovered by adding an amount to the depreciation accrual rate.
4	Does Staff's proposal represent accrual accounting?
5	A. No, it does not. Staff developed the incremental rate for the net
6	salvage allowance by dividing the recent net salvage history by the plant balance.
7	Staff has readily admitted that it has backed into this rate in a fashion that results in
8	the expensing of net salvage. Simply because it incorporated this inadequate
9	allowance into the depreciation rate does not make it accrual accounting.
10	Q. Does this conclude your supplemental rebuttal testimony?
11	A. Yes, it does.

			Pa	nel A: Historic	al Data		
Line	Year	St	eel Services		Copper	Services	
		Net Salvage	Feet	Net Salvage	Net Salvage	Feet	Net Salvage
		Amount	Retired	Per Foot	Amount	Retired	Per Foot
	[1]	[2]	[3]	[4]=[2]/[3]	[5]	[6]	[7]=[5]/[6]
	1990	(317,836)	117,648	(2.70)	(440,213)	100,893	(4.36)
	1991	(491,463)	166,364	(2.95)	(486,196)	111,502	(4.36)
	1992	(561,093)	143,037	(3.92)	(772,232)	127,579	(6.05)
	1993	(521,377)	138,247	(3.77)	(862,437)	123,055	(7.01)
	1994	(581,534)	136,355	(4.26)	(905,140)	162,850	(5.56)
	1995	(501,079)	123,304	(4.06)	(834,227)	193,456	(4.31)
	1996	(583,353)	148,894	(3.92)	(1,020,865)	186,030	(5.49)
	1997	(617,144)	125,768	(4.91)	(1,153,761)	197,185	(5.85)
	1998	(581,911)	99,100	(5.87)	(1,667,287)	185,865	(8.97)
	1999	(662,020)	129,175	(5.12)	(2,270,682)	441,737	(5.14)
	2000	(665,041)	121,917	(5.45)	(3,005,223)	515,290	(5.83)
[a]	Total	(6,083,851)	1,449,809	(4.20)	(13,418,263)	2,345,442	(5.72)
			Panel B: Fi	uture Net Salva	ge Calculation		
Line	Category			Steel			Copper and
				Services			Plastic
							Services
				[8]			[9]
[b]	Feet in Service at 9/30/98			10,649,294			27,199,888
[c]	Future Net Salvage		(44,687,761)				(155,610,435)
[d]	Original Cost at 9/30/98		37,937,595				234,995,844
[e]	Future Net a % of Orig	t Salvage as ginal Cost		-118%			-66%
Source Panel J	es and Notes A data provi	s: ded by Laclede G	as.				

Schedule WMS-7 Calculation Of Future Net Salvage as a Percent of Surviving Original Cost as of September 30, 1998 Laclede Gas Company

[a]: Sum (1990 - 2000)

[b]: Laclede Gas. [c][8]: Calculated as [a][4] x [b][8]. [c][9]: Calculated as [a][7] x [b][9].

[d]: Laclede Gas. [e][8]: Calculated as [c][8] / [d][8]. [e][9]: Calculated as [c][9] / [d][9].

Schedule WMS - 8 Change in Construction Costs for Natural Gas Distribution - Steel Services North-Central United States



Source:

Handy - Whitman Index of Public Utility Construction Costs for Natural Gas Distribution Steel Services, North Central Region of the U.S. Account Number 380 in Uniform System of Accounts. Bureau of Labor Statistics.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's)	
Tariff to Revise Natural Gas Rate	-)	Case No. GR-99-315
Schedules.)	

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA)	
)	SS.
COUNTY OF CUMBERLAND)	

William M. Stout, of lawful age, being first duly sworn, deposes and states:

1. My name is William M. Stout. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania; and I am President of the Valuation and Rate Division of Gannett Fleming, Inc.

2. Attached hereto and made a part hereof for all purposes is my supplemental rebuttal testimony.

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

elliam M. Stout

William M. Stout

Subscribed and sworn to before me this 10th day of September, 2004.

Mary & Hoff



COMMONWEALTH OF PENNSYLVANIA Notarial Seal Mary O. Hoff, Notary Public East Pennsboro Twp., Cumberland County My Commission Expires June 2, 2007

Member, Pennsylvania Association Of Notaries