

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

FILED

MAR 11 1999

Missouri Public
Service Commission

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

A F F I D A V I T

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

Richard A. Kottemann, Jr., of lawful age, being first duly sworn, deposes and states:

1. My name is Richard A. Kottemann, Jr. My business address is 3950 Forest Park Avenue, St. Louis, Missouri 63108; and I am Superintendent of Environmental and Design Engineering of Laclede Gas Company.

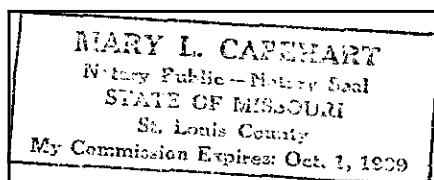
2. Attached hereto and made a part hereof for all purposes is my direct testimony, consisting of pages 1 to 27 and two schedules, inclusive; Section D - Schedule 1; and Section E - Schedule 1.

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

Richard A. Kottemann, Jr.

Richard A. Kottemann, Jr.

Subscribed and sworn to before me this 10th day of March, 1999.



Mary L. Capehart



Exhibit No.:

Issue:

Depreciation Rates
and Trended Cost

Witness:

Richard A. Kottemann, Jr.

Type of Exhibit:

Direct Testimony

Sponsoring Party:

Laclede Gas Company

Case No.:

GR-99-315

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LACLEDE GAS COMPANY

GR-99-315

DIRECT TESTIMONY

OF

RICHARD A. KOTTEMANN, JR.



Direct Testimony of Richard A. Kottemann, Jr.

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DIRECT TESTIMONY OF RICHARD A. KOTTEMANN, JR.

1 General Information/Qualifications

2 Q. Please state your name and business address.

3 A. My name is Richard A. Kottemann, Jr., and my business
4 address is 3950 Forest Park Avenue, St. Louis, Missouri,
5 63108.

6 Q. What is your present position at Laclede?

7 A. I am Superintendent of Environmental and Design
8 Engineering.

9 Q. How long have you held this position and would you briefly
10 describe your duties?

11 A. I was promoted to my present position in July, 1998. In
12 this capacity, I am responsible for managing Laclede's
13 environmental compliance program. This includes a role in
14 directing the Company's former manufactured gas plant
15 (FMGP) site remediation efforts. In addition, I have
16 responsibility for Distribution Design Engineering and the
17 Laclede Chemical Laboratory.

18 Q. What is your educational background?

19 A. I graduated from the University of Missouri - Rolla in
20 1982 with a Bachelor's Degree in Geological Engineering.

21 Q. Please describe your experience with Laclede Gas Company.

1 A. I have been continuously employed by Laclede since June,
2 1982. Much of my early experience was in the area of
3 distribution system design and network analysis. At
4 various intervals, I have also been assigned to Laclede's
5 Construction and Maintenance Department, the Underground
6 Storage Field, and System Control Department. From 1991
7 to 1993 I was Superintendent of Distribution Design, which
8 included responsibility as project engineer over Laclede's
9 Franklin County expansion. I held the position of
10 Superintendent of Engineering Records and Load Approval
11 from July, 1993, until assuming my present
12 responsibilities.

13 Q. What is the purpose of your testimony?

14 A. I am sponsoring Schedules of Depreciation Rates and
15 Trended Cost - Unrecovered Value.

16 Q. What is your experience in these subjects?

17 A. I have assisted with or was directly responsible for the
18 depreciation-related study and testimony submitted by
19 Laclede in its last three general rate cases and in Case
20 No. GO-97-79. I likewise submitted previous direct
21 testimony concerning Trended Cost - Unrecovered Value. In
22 addition, I have attended several of the depreciation

1 theory courses offered by Depreciation Programs, Inc. at
2 Grand Rapids, Michigan.

3 Q. Are you familiar with the property of Laclede?

4 A. Yes, I am. My experience with the Company has enabled me
5 to gain not only a knowledge of the Company's physical
6 property but also a knowledge of the design, operation and
7 maintenance procedures underlying the functional use of
8 this property.

9 Depreciation Rates

10 Q. What do you believe is the function of depreciation rates?

11 A. The National Association of Regulatory Utility
12 Commissioners (NARUC) defines depreciation accounting as
13 " the mechanism through which the capital invested in
14 depreciable plant is recovered. It is the process used to
15 allocate that capital investment to the accounting periods
16 during which the depreciable plant is in service. A
17 system of accounting which allocates the cost adjusted for
18 salvage over the estimated useful life of a property unit
19 or group of assets in a systematic and rational manner."
20 The primary function of depreciation, therefore, is to
21 charge the costs of utility property investments -
22 including the original cost and any net salvage - to
23 operating expenses over the service life of the property,

1 and thereby return that investment to the investors. This
2 is a return of that investment, that is, a recovery of
3 capital, and not a return on investment.

4 Q. Are proper depreciation accrual rates especially important
5 to a gas utility?

6 A. Yes. Depreciation rates involve the recovery or return of
7 capital. Return allowances on investment within the
8 utility industry generally do not provide for the
9 substantial risk that would be involved if the original
10 investment in utility plant was not recovered.

11 Q. Please describe the depreciation system normally employed
12 by Laclede Gas Company.

13 A. Laclede historically utilized the straight line - average
14 life - amortization system of depreciation (SL-AL-AM).
15 Under this system, the accrual rate is calculated by the
16 formula:

$$\begin{array}{lcl} 17 & \text{Depreciation Rate} & = & \frac{100\% - \% \text{ Net Salvage}}{\text{Average Service Life (years)}} \\ 18 & & & \end{array}$$

19 where net salvage equals gross salvage minus cost of
20 removal. The net salvage percentage equals net salvage
21 for a period, divided by retirement value for that same
22 period.

1 Q. Can you provide an example of a properly derived
2 depreciation rate using this method?

3 A. Certainly. A car provides a good example. When a person
4 or company purchases a new car, what is known for certain
5 is the cost (the purchase price and sales taxes). To
6 calculate the depreciation rate, an estimate must be made
7 of the service life and the net salvage. Assuming a cost
8 of \$20,000 with the intention to keep the car for five
9 years, straight line depreciation excluding net salvage
10 could be easily figured at \$4,000 per year (\$20,000
11 divided by five years). Further assuming that the car
12 will be sold (or "traded in") at the end of five years
13 for \$5,000, we can now easily figure straight line
14 depreciation at \$3,000 (the result of \$20,000 minus
15 \$5,000, divided by five years).

16 Now turning to the formula, the net salvage would equal
17 25% (\$5,000 divided by \$20,000). The formula for
18 determining the depreciation rate is now expressed as:

$$\frac{100\%-25\%}{5} \text{ or } \frac{75\%}{5} \text{ or } 15\%.$$

21
22 Then using the 15% per year depreciation rate, we could
23 multiply times \$20,000 to produce an annual accrual of
24 \$3,000 (15% times \$20,000). Note that properly including

the net salvage in the computation is critical, since omitting salvage would overstate annual depreciation by 33%, comparing \$4,000 to the correct \$3,000.

Q. Regarding the net salvage, your example assumes you determined the disposition price for this car, but this discrete estimation process might be impractical for a large number of units. How might this be handled?

A. We can use recent sales of old cars to derive a reasonable net salvage. Assume the following history:

Year of Disposition	Vintage of Car	Original Cost	Disposition Price
1994	1989	\$10,000	\$ 2,700
1995	1990	\$12,000	\$ 2,900
1996	1991	\$13,000	\$ 3,000
1997	1992	\$14,000	\$ 3,400
1998	1993	\$15,000	\$ 4,000
		\$64,000	\$16,000

$$\text{Net Salvage} = \frac{16,000}{64,000} = 0.25 = 25\%$$

As you can see, the old cars maintained an average resale value of approximately 25% of original cost. This, then, yields a reasonable rate to use in the formula, without the need for performing a specific estimate of what the resale value of a brand new car will be five years from now.

1 Q. Is this the system used to arrive at the depreciation
2 rates which are now in effect for Laclede?

3 A. While the authorized rates for certain accounts were
4 determined based on this method, all of the larger plant
5 accounts carry an annual depreciation rate recommended by
6 Staff witness Paul Adam in Laclede's last general rate
7 Case No. GR-98-374. The method used by Mr. Adam to
8 produce such rates departed substantially from this method
9 in that it fails to make adequate provision for future
10 salvage costs. The Stipulation and Agreement in
11 settlement of that case, nonetheless, instituted Staff's
12 rates, with the clear understanding that no party to the
13 case was endorsing or agreeing to be bound to the method
14 by which such rates were derived.

15 Q. Are you satisfied with the rates currently in place?

16 A. No. I am requesting Commission authority to change
17 annual depreciation rates on Gas Holders, Steel Mains,
18 Plastic Mains, Steel Services, and Plastic & Copper
19 Services. The rates I am recommending for these accounts
20 are shown in Section D, Schedule 1, along with the rates
21 in effect currently. Applying my proposed rates to year-
22 end balances for Fiscal 1998 will produce a net increase
23 in annual depreciation accruals of \$2,309,799.

1 Q. Are your rates supported by a depreciation study?

2 A. Yes. Pursuant to the filing requirements set out in 4 CSR

3 240-40.040(5)(B), my proposed rates are supported by the

4 study which I prepared in connection with Case No. GR-98-

5 374. In addition, my recommendations take into account my

6 review of Staff testimony and work papers from Case No.

7 GR-98-374.

8 Q. What procedure did you use to arrive at your estimated

9 average service life?

10 A. Actuarial techniques were used to develop survivor curves

11 for most plant accounts. These curves express the

12 relationship of the percentage of the property which

13 survives in service at ages zero to maximum life. The

14 curves developed from these data were then compared to

15 published Iowa-type curves and an average service life was

16 determined.

17 Q. Please explain the Iowa-type curves.

18 A. The Iowa curves, so named because they were first set out

19 in the 1935 publication Statistical Analysis of Industrial

20 Property Retirements, Bulletin 125 by the Iowa Engineering

21 Experiment Station of Iowa State College, resulted from a

22 study of some 176 groups of industrial and utility

23 properties. The curves and corresponding tables were

1 empirically derived from actual experience, and their
2 widespread acceptance for over 60 years has proven their
3 validity. Experience has shown that the service lives of
4 gas utility properties follow survivor curve relationships
5 which, in general, closely overlay the shapes of the Iowa
6 curves. These curves can be divided into families, the
7 most common of which are the left-modal (L), the
8 symmetrical (S), and the right-modal (R) curves. The
9 primary use of Iowa curves is as a device for smoothing
10 the survivor curves and extending stub curves to obtain an
11 estimate of the probable average service life of the
12 property.

13 Q. How did you arrive at the net salvage figures used in your
14 depreciation rate computations?

15 A. I reviewed cost of removal and salvage histories of each
16 account, or account group, for the 15-year period spanning
17 1982 through 1996. When the cost of removal exceeds gross
18 salvage value, the net salvage becomes a negative
19 percentage, thereby increasing the accrual requirement.

20 Q. Are the existing rates based on a similar analysis?

21 A. In developing the rates which were used in the last case,
22 Mr. Adam appears to have employed a study methodology that
23 was similar to mine up to a point. However, his testimony

1 and recommended rates include an unconventional
2 methodology with respect to net salvage.

3 Q. Can you describe in what way the methodology for
4 determining net salvage was unconventional?

5 A. Under Mr. Adam's approach, the net salvage component of
6 the SL-AL-AM depreciation formula was computed differently
7 from the conventional method I described above. Rather
8 than simply computing net salvage as a percent of
9 retirement value, Mr. Adam adjusted this figure by
10 multiplying it times the ratio of the average service life
11 to what he terms the "implied service life." As
12 described in Mr. Adam's testimony in Case No. GR-98-374,
13 this adjustment was supposedly designed to limit the
14 Company's recovery for cost of removal to only a level
15 representative of the current retirement rate of the
16 account.

17 Q. Why do you object to this treatment of net salvage?

18 A. There is nothing in my experience, or in the experience of
19 other depreciation professionals I have spoken with, that
20 would lend support to Mr. Adam's methodology. I
21 understand that the treatment violates generally accepted
22 depreciation accounting principles by shifting expense
23 recognition and rate recovery to uncertain future periods.

1 It cannot result in " straight line " rates (except by
2 extraordinary coincidence) for long-lived property with
3 significant positive or negative net salvage.

4 Q. Which accounts do you propose be revised in this
5 proceeding to exclude the effects of this unconventional
6 methodology?

7 A. Mains and services. I am also recommending new rates for
8 Gas Holders, but for another reason I will discuss later
9 in my testimony.

10 Q. How do you propose to modify rates on mains and services?

11 A. I have prepared Schedule 1 to illustrate my recommended
12 rates.

13 Q. Please describe Schedule 1.

14 A. Schedule 1 compares respective depreciation rates for
15 mains and services calculated in three different ways.
16 First are listed the rates recommended by Mr. Adam using
17 his adjusted net salvage methodology (the Current Rate).
18 Next are shown rates which I arrived at using information
19 I extracted from Mr. Adam's work papers in Case No. GR-98-
20 374. The difference is attributable entirely to the net
21 salvage adjustment. Lastly, I show Laclede's proposed
22 depreciation rate which is calculated by adding one third
23 of the rate deficiency to the existing rate.

1 Q. Why was only one third of the difference specified?

2 A. The Company believes it is reasonable in this case to
3 implement a gradual phase-in of depreciation rates that
4 are properly calibrated to the traditional SL-AL-AM
5 system. Such a change could be completed incrementally
6 over an agreed upon time period.

7 Q. Were other accounts similarly subjected to Staff's net
8 salvage adjustment?

9 A. Yes, but mains and services incurred the greatest adverse
10 impact from the change, and our focus at this time is on
11 rectifying rates for these accounts.

12 Q. Are you agreeing with the methodology and resultant
13 depreciation rates for accounts other than mains and
14 services?

15 A. No, not at all. Laclede is not requesting a change for
16 other accounts at this time, but we should adjust those
17 rates at some future time.

18 Q. Please explain your proposed depreciation rate for the Gas
19 Holders account.

20 A. The rate I am proposing for Account 362 is supported by my
21 Schedule 2. The higher rate is required to provide for
22 the anticipated cost of removal associated with
23 decommissioning the holders. The historical background of

1 Laclede's holder stations is explained in more detail in
2 the testimony of Company witness Craig R. Hoeferlin. The
3 four remaining holder structures are remnants of the
4 extensive manufactured gas system that Laclede operated to
5 serve its St. Louis customers prior to widespread
6 conversion to natural gas in the late 1940's. The
7 environmental costs discussed in Mr. Hoeferlin's testimony
8 stem from remediation of former manufactured gas plant
9 (MGP) sites. Manufactured gas production was discontinued
10 by the Company many years ago. The four gas holders and
11 ancillary equipment in Account 362, by contrast, are items
12 of plant that are still in service, now functioning as
13 peaking facilities. The role of the holders
14 unquestionably has diminished, and at some point, these
15 structures will be retired from service and demolished.
16 Laclede is particularly aware of the costs related to
17 demolition of old gas holders under present day
18 environmental regulations, and we believe it is prudent to
19 develop an appropriate level of depreciation reserve for
20 this purpose.

21 Q. How did Laclede determine the estimated cost of removal
22 for gas holders?

23 A. Laclede has performed a number of estimates in recent

1 years. In Case No. GR-96-193, Staff recognized certain
2 verifiable removal costs for the holders and ancillary
3 structures, which costs Laclede was able to estimate using
4 internal engineering resources. An issue left unresolved,
5 however, concerned the quantity of and removal cost of
6 certain sludge materials believed to exist within the
7 holders. Because it is potentially the most costly aspect
8 of the demolition, Staff desired a more precise estimate
9 to dispose of this material in an environmentally
10 responsible manner.

11 Q. Has Laclede now obtained such an estimate?

12 A. Yes. Laclede has been in contact with an environmental
13 contractor recommended by Staff. This firm, Creamer
14 Environmental, Inc., has extensive experience in
15 dismantling gas holders and safely disposing of associated
16 waste materials. We arranged for this firm to inspect the
17 holder stations and requested an independent estimate of
18 cost to remediate the sludge, including evaluation of
19 measurements of sludge levels Laclede obtained in advance.
20 Schedule 2 includes the results of Creamer's estimates.

21 Q. Please explain the information in Schedule 2.

22 A. Schedule 2 indicates those portions of estimated cost that
23 were previously recognized by Staff and, consequently,

1 factored into the existing depreciation rate on Account
2 362. The additional costs for sludge remediation and
3 perimeter air monitoring, estimated with the assistance of
4 Creamer, are shown added into the total estimated cost,
5 resulting in a revised remaining life depreciation.

6 Q. Why is your proposed depreciation rate calculated using
7 remaining life?

8 A. Unlike a mass property account that is perpetuated by
9 additions and replacements of retired plant, the holder
10 assets that are in place will not be added to or replaced.
11 Because the SL-AL-AM system of depreciation does not
12 provide an adequate rate of recovery in consideration of
13 the limited timeframe that holders will survive as a
14 depreciable base, I propose to recover this significant
15 estimated cost of removal using a remaining life system of
16 calculated accrual. In Case No. GR-96-193, Staff agreed
17 with the appropriateness of using remaining life to
18 recover such extraordinary removal costs. Under the
19 remaining life system, the reserve balance, as a percent
20 of plant in service, is deducted from the estimated net
21 salvage, as a percent of plant in service. The accrual
22 rate is then adjusted, on a straight line basis, for the
23 probable number of future years that a given item of plant

1 or plant account is expected to remain in service. Thus,
2 a targeted accumulation for depreciation may be built, in
3 an accelerated manner, if the reserve is deficient, or the
4 accrual rate may be reduced if the reserve would otherwise
5 exceed requirements. With this system, the accrual rate
6 is calculated by the formula:

$$\begin{array}{l} 7 \quad \text{Depreciation Rate} = \frac{100\% - \% \text{ Net Salvage} - \% \text{ Reserve}}{8 \quad \text{Remaining Life (years)}} \end{array}$$

9 and it is denoted as the straight line - average life -
10 remaining life (SL-AL-RL) system.

11 Q. How was the remaining life of Gas Holders determined?

12 A. I have utilized a remaining life of ten years.

13 Q. On what basis do you consider this to be a reasonable
14 assumption?

15 A. At present, the holders are perfectly serviceable and are
16 expected to continue so, barring any major component
17 failures. Over the years, our reliance on the holders for
18 periodic peak shaving has been reduced, and this trend
19 will continue. It is my opinion that the holders have a
20 remaining life of 7 - 10 years based on existing
21 information. The Company is seeking continued authority
22 to use an assumed life of 10 years.

23 Q. Could it be longer than 10 years?

1 A. All current operations point to an assumed life of 10
2 years or less. It is possible that one or more of the
3 holders would still be in service after 10 years. But in
4 my judgement, it is more likely that the first holder
5 retirements will start prior to the end of the 10 year
6 period.

7 Q. Please explain.

8 A. The Company continually reviews the design of its
9 distribution system. Former design methodologies dictated
10 that the distribution system was operated in such a way as
11 to minimize distribution system pressures. As older mains
12 are replaced with newer materials, the Company has shifted
13 its focus toward installing smaller mains where possible
14 and operating the system at higher pressures. This change
15 in design philosophy has been implemented to reduce system
16 replacement and reinforcement costs. The result is a more
17 efficient distribution system. The increased distribution
18 system pressures, however, tend to decrease the
19 effectiveness of the holders since the existing outlet
20 compressors were designed for lower distribution system
21 pressures. This trend will eventually eliminate Laclede's
22 ability to effectively use the holders at times of peak
23 demand.

1 Q. Are there other factors involved in judging remaining
2 life?

3 A. Yes. For example, any major component failure in a holder
4 or appurtenant equipment could result in the loss of its
5 use until repaired. In most situations it would not be
6 economically feasible to repair the component and the
7 holder and appurtenances would be retired at that point.
8 Although it is impossible to determine when such failures
9 might occur, this possibility needs to be considered in
10 determining probable remaining life.

11 Q. Does this conclude your testimony with regard to
12 Depreciation Rates?

13 A. Yes, it does.

14 Trended Cost - Unrecovered Value

15 Q. Turning now to the subject of Trended Cost; did you
16 conduct such a study in preparation for this case?

17 A. Yes. Under my supervision, a study was prepared directed
18 toward the determination of Trended Cost - Unrecovered
19 Value of utility plant. The objective of this study was
20 to determine the value, at current cost levels, of the
21 Company's outstanding investment in utility plant. The
22 use of this study to determine a fair value rate base for

1 the Company is covered in the testimony of Company witness
2 Glenn W. Buck.

3 Q. Would you please describe how you went about conducting
4 this study?

5 A. The Trended Cost - Unrecovered Value Study is an
6 investment-oriented study directed toward the
7 determination of the present value of the Company's
8 investment in utility plant. In this study, I have
9 deducted from the Trended Cost of utility plant an amount
10 based on the value of the actual accrued reserve for
11 depreciation. Thus, this determination reduced the
12 current property value without deduction for depreciation,
13 by the current value of the amount liquidated by Laclede's
14 customers through depreciation accruals, regardless of
15 whether such depreciation is more or less than the
16 physical depreciation founded on consumed usefulness.
17 This will be further clarified in my subsequent testimony
18 which describes the specific methodology which was
19 employed.

20 Q. Have you prepared an exhibit showing the results of this
21 study?

1 A. Yes. Company's Section E, Schedule 1, shows the results
2 of the study of the Trended Cost - Unrecovered Value of
3 the Company's utility plant.

4 Q. Would you please explain the term Trended Cost as it is
5 used in your study?

6 A. Trended Cost represents a determination of the present
7 value of original investment in property. It is a
8 restatement of recorded original cost in terms of today's
9 dollars (present cost). This is accomplished through the
10 use of widely-accepted index numbers which follow the
11 trends of cost changes from year-to-year among various
12 classes of property. A unique trending factor is
13 calculated for each vintage year, by plant account number,
14 using ratios between the index number applicable to the
15 present time (valuation date) and those applicable to
16 prior years. By applying these factors to the original
17 cost of plant constructed in prior years, the value of
18 such plant can be trended so as to express original
19 investment in terms of present cost values; i.e., Trended
20 Cost.

21 Q. How were the appropriate index numbers determined?

22 A. In general, I have used the index numbers known as the
23 "Handy-Whitman Index of Public Utility Construction Costs"

1 in these determinations. For trending the value of the
2 Company's buildings, I have used what is known as
3 "Boeckh's Building Cost Index Numbers".

4 Q. Would you please explain how these index numbers are used
5 to arrive at Trended Cost?

6 A. The first step is to record the original cost of plant in
7 service as of the date of valuation by year of
8 installation and property class. In this instance, the
9 valuation date is September 30, 1996. The next step is to
10 develop the trending factors previously mentioned that
11 will translate the original cost of each historic year's
12 installations to present cost levels. The exact procedure
13 followed to determine these factors will vary slightly for
14 several reasons, as I will illustrate. For property
15 installed prior to 1974, one Handy-Whitman Index number is
16 currently published for each year; whereas from 1974
17 through the present, two index numbers are available
18 representing the cost levels existing at January 1 and
19 July 1 of each year. Laclede property installed from 1974
20 through the present carries vintage data based on the
21 fiscal year of October through September, the midpoint of
22 which is April 1. Accordingly, for these vintages, it is
23 appropriate to use an average of the January and July

indices as the vintage year index. After determining the appropriate vintage year index as I have set out above, the trending factor is arrived at by dividing the index number of the valuation date by the index number of the vintage year. Finally, the original cost of the various property units is multiplied by the corresponding trending factor to arrive at Trended Cost, or a restatement of property costs in terms of present cost levels.

Q. Please explain the Company's Section E, Schedule 1.

A. This exhibit is captioned TRENDED COST - UNRECOVERED VALUE OF UTILITY PLANT IN SERVICE, March 31, 1999. Columns 1 and 2 show respectively the Recorded Original Cost, and the Trended Original Cost - New, of plant in service for each of the Company's basic property accounts. In column 3, a trended Deduction for Depreciation, applicable to each account is shown. Column 4 shows the Present Unrecovered Value of the plant which was determined by subtracting the depreciation amounts in column 3 from the Trended Original Cost shown in column 2. At this point, I would like to emphasize that the Recorded Original Cost shown for each account represents the plant in service at September 30, 1996. The values shown in columns 2, 3, and 4 are based on cost levels existing during the summer of

1 1996, except for certain types of property that were not
2 trended. At the bottom of this exhibit, the estimated net
3 additions to total plant from October 1, 1996 through
4 March 31, 1999, are shown which, when added to the plant
5 in service at September 30, 1996 results in the plant in
6 service at March 31, 1999. Therefore, while these
7 determinations do reflect plant additions after September
8 30, 1996, they do not take into account the continuing
9 modest inflationary trend that has existed since that
10 time.

11 Q. You mentioned that certain types of property were not
12 trended. Will you explain this?

13 A. Yes. In column 2 of Section E, Schedule 1, I have
14 included certain classes of plant at recorded original
15 cost. Specifically, I did not trend costs of franchises,
16 land and land rights, non-recoverable gas in storage and
17 subsidiary investment. However, the use of recorded
18 original cost as the trended cost for these items will
19 only tend to produce a conservative unrecovered value.

20 Q. Would you explain how you arrived at the Deduction for
21 Depreciation you have shown in column 3 of Section E,
22 Schedule 1?

1 A. I will do so by first restating the objective of this
2 study which is to determine the portion of the trended
3 cost of the Company's utility plant having not yet been
4 liquidated by Laclede's customers. With regard to
5 depreciation accruals, it is our position that the
6 liquidated investment, whether such is more or less than
7 the depreciation founded on consumed usefulness, is the
8 portion of the gross investment that requires no return
9 allowance. Because it is not feasible to trace the
10 original date of the dollars represented by all past
11 accounting practice depreciation reserve entries, I used
12 the Iowa Curve Tables to make this determination.

13 Q. Please explain how the Iowa Curve Tables are employed to
14 make this type of depreciation determination.

15 A. The basis and rationale of using Iowa-type curves to
16 determine proper depreciation rates was covered earlier in
17 my testimony. The corresponding Iowa Curve Tables are
18 utilized to determine a theoretical distribution, by
19 vintage, of Laclede's original cost reserve for
20 depreciation allocated to each property class. In other
21 words, the recorded original cost reserve can be
22 effectively dated and classified in a manner which permits
23 such amounts to be trended to present cost levels. To

1 obtain results which are compatible with the depreciation
2 accounting procedure of applying an average straight-line
3 accrual rate to the surviving plant, it is necessary to
4 utilize a method which is referred to as the "prospective
5 method" of determining depreciation reserve distribution.

6 Q. Please describe this method.

7 A. This methodology is set out in the publication titled
8 Public Utility Depreciation Practices, compiled and edited
9 by the Depreciation Subcommittee of the National
10 Association of Regulatory Utility Commissioners (NARUC).
11 Under the prospective method, the estimated future
12 accruals to retirement are first determined based on
13 current depreciation rates and present surviving plant.
14 This is accomplished by using actuarial data from the Iowa
15 Curve Tables to establish remaining life expectancy and
16 then multiplying this life expectancy by the depreciation
17 accrual rate. Subtraction of such expected future
18 accruals from the gross depreciation base produces a
19 theoretical present reserve. Application of this
20 procedure to all depreciable property in service will
21 provide a total theoretical reserve and its distribution
22 to trendable plant subdivisions and vintages. Finally,
23 based on this calculated reserve distribution, the

1 recorded depreciation reserve balance allocated to each
2 property account is trended to present cost levels to
3 obtain the results shown in column 3.

4 Q. What are the results of the study you have summarized in
5 Section E, Schedule 1?

6 A. I have found the Unrecovered Present Value of Utility
7 Plant in Service as of March 31, 1999, to be
8 \$1,104,900,000.

9 Q. Were any further adjustments applied in determining the
10 Unrecovered Present Value?

11 A. Yes. Because this is an investment-oriented
12 determination, I have deducted customer advances for
13 construction. The Company, at times, collects deposits
14 from customers under the extension provisions of its
15 tariff which, if retained by the Company, are credited to
16 the plant accounts. The amounts I have deducted as
17 customer advances for construction represent the deposits
18 on hand which are still subject to refund and have not
19 been so credited to the plant accounts. These deposits
20 were trended and depreciated according to the class of
21 property for which each deposit was made. The deduction
22 of these advances is proper in that such amounts represent

1 recovered value which, as in the case of depreciation

2 accruals, require no return allowance.

3 Q. Does this conclude your testimony?

4 A. Yes, it does.

LACLEDE GAS COMPANY
Case No. GR-99-315

MODIFIED DEPRECIATION RATES

<u>ACCOUNT DESCRIPTION</u>	<u>ASL</u>	<u>Salv.</u>	<u>Depr. Rate</u>
<u>Steel Mains</u>			
Current Rate (adjusted net salvage)	83	-6	1.28%
*Unadjusted Staff Rate, GR-98-374	83	-43	1.72%
Recommended Rate $1.28 + \frac{1.72-1.28}{3}$			1.43%
<u>Plastic Mains</u>			
Current Rate (adjusted net salvage)	53	-1	1.91%
*Unadjusted Staff Rate, GR-98-374	53	-35	2.55%
Recommended Rate $1.91 + \frac{2.55-1.91}{3}$			2.12%
<u>Steel Services</u>			
Current Rate (adjusted net salvage)	45	-60	3.55%
*Unadjusted Staff Rate, GR-98-374	45	-110	4.67%
Recommended Rate $3.55 + \frac{4.67-3.55}{3}$			3.92%
<u>Plastic and Copper Services</u>			
Current Rate (adjusted net salvage)	44	-15	2.61%
*Unadjusted Staff Rate, GR-98-374	44	-93	4.39%
Recommended Rate $2.61 + \frac{4.39-2.61}{3}$			3.20%

*Per Staff work papers submitted during Case No. GR-98-374.

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PROPOSED DEPRECIATION RATE FOR GAS HOLDERS

<u>COST ITEM</u>	<u>ACCOUNT 362.00</u>
Holder Water Treatment	\$134,800
Holder Exterior-Lead Paint	430,800
Holder Exterior-Asphaltic Coating	335,200
Holder Interior-Tar Residue	211,100
Holder Interior-Timber Supports	384,000
Air Monitoring (1)	535,500
Holder Sludge Disposal (1)	2,236,200
Holder Demolition (2)	0
Sub Total:	<u>\$4,267,600</u>
12% Contingency:	512,100
	<u>\$4,779,700</u>
Total Decommissioning Cost:	<u>\$4,779,700</u>

REMAINING LIFE DEPRECIATION RATE CALCULATION:

Account 362.00 Gas Holders

$$\text{Rate} = \frac{1 + \frac{4,779,700}{1,839,135} - \frac{1,904,351}{1,839,135}}{10} = 25.63\%$$

- Notes:
1. Cost not previously recognized.
 2. Demolition cost is estimated to be offset by salvage value of steel super structure.

