1   be retired and removed.

2   Q.   But my example is a component of the plant say --

3   are there boilers in a nuclear plants? Let's say there is a

4   boiler in a nuclear plant, and after 30 years into the life

5   of that nuclear plant, you replace the boiler.

6   The way I look at it, the life of that new boiler

7   is only -- should only be 10 years, because that's the end

8   of the life of the nuclear plant. Is that how you treat it,

9   that boiler or something similar, when you did your

10   depreciation study?

11   A.   Well, depending on -- for a nuclear plant, if the

12   license was renewed for another 40 year, then it would have

13   a 40 year life.

14   Q.   Okay. So the answer is you didn't -- you

15   didn't -- when the components are changed out of those -- of

16   the nuclear plant or the fossil plant, you didn't stop the

17   depreciation of those components at the end of the estimated

18   service life of the plant; is that true?

19   A.   No. We would use updated data to analyze data

20   associated with that particular account and come up with the

21   best average service life for that account.

22   Q.   Okay. And that's -- and again, maybe this reveals

23   my ignorance, but that's not the life span approach, right?

24   A.   Well, you are doing -- my analysis of average

25   service life is independent of -- I guess I am having a hard

1   time explaining the life span approach.

2   Q.   Let me ask it this way. Is it true that you

3   didn't use the life span approach on our fossil fuel plant

4   and nuclear plant?

5   A.   I didn't use the life span method in that I didn't

6   estimate a final retirement date.

7   Q.   Okay. And so the example I have been beating on,

8   the interim retirements and interim replacements of the

9   components of that plant under a true life span treatment,

10   they would -- the investment in those components would

11   terminate on the termination date of the plant; is that

12   right?

13   A.   Yes, they would.

14   Q.   But under your approach, they didn't because --

15   and that's a difference in your approach from the life span

16   approach; is that right?

17   A.   No. Our analysis that we did account -- that I

18   did account by account, I did not estimate a final

19   retirement date in looking at those accounts that are life

20   span accounts.

21   Q.   But I -- sorry. Go ahead.

22   A.   I strictly did an analysis using the data showing

23   retirement activity. I came up with the appropriate average

24   service life for each account.

25   Q.   But doesn't the life span approach require that

1 you have a termination date so that all the components of

2 the plant can be depreciated up until that termination date

3 of the plant and no longer? Isn't that a characteristic of

4 a life span approach?

5   A.   Could you repeat that?

6   Q.   I doubt it. Isn't it a characteristic of the life

7 span approach that you have to have a termination date for

8 the plant so that all the components of the plant,

9 regardless of what the lives of those components might be in

10 a vacuum, so that all the lives of those components end on

11 the date that that plant is torn down?

12   So that if you have a roof that lasts ten years,

13 but you put it in two years before the building is about to

14 be torn down, that roof is only depreciated over two years

15 and not ten years because the building will be torn down.

16 Isn't that what the life span approach means?

17   A.   The life span method means that all plant will be

18 subject to final retirement, but it does not mean that you

19 have to select a final retirement date. It is a hard

20 estimation to make.

21   Q.   Well, do you think anybody could -- say in the

22 case of electric power plant. Do you think anybody could

23 say with certainty early in the life of an electric power

24 plant what the termination date would be?

25   A.   I mean, you can estimate, but no, because so many

1   improvements and additions are made to the plant throughout

2   the years to keep it going.

3   Q.   How about in the case of a nuclear power plant

4   where you have a license expiration? Can you estimate that

5   with more certainty?

6   A.   Well, you can if you know that at the end of that

7   license life that they plan on decommissioning that plant.

8   Q.   Have you recommended the life span approach for

9   any plant in previous testimony?

10   A.   I don't think so.

11   (Wherein, a lunch recess was taken, and Ms. Kelly

12   did not return to the deposition.)

13   Q.   (By Mr. Byrne) I was wanting to go back to one

14   thing we were talking about earlier, and that is this graph

15   or the schedule 3.1 attached to your testimony, which is the

16   survivor curve that you selected for account 365, which

17   was -- what was in that account if you remember again? You

18   told me before.

19   A.   Overhead conductors.

20   Q.   Okay. And that's, like, wires; is that right?

21   A.   Yes.

22   Q.   Okay. One thing I was noticing about the curve

23   that you selected is that it seems like it suggests that

24   those overhead conductors are awfully long lived. For

25   example, if you go down to the tail end of the curve, which

1   it looks like when it goes off the graph on the right side

2   of the graph then it comes back on, I think, on the left

3   side. Do you see that?

4   A.   Yes.

5   Q.   It looks like it is going out to about -- well, it

6   is going out to it looks like in excess of 100 and -- well,

7   it would be 120 plus 30. It looks like it is going out in

8   excess of 150 years; is that correct?

9   A.   The survivor curve is. Yes.

10   Q.   So it would suggest that there is still some of

11   these items, although very few, but some of these items

12   would last more than 150 years.

13   A.   No. I don't think that's what that suggests.

14   Q.   Okay. What does it suggest?

15   A.   When we determine the best fit of a curve, we are

16   normally talking about between 80 and 20 percent surviving.

17   So you are looking at -- can you see where the 80 and 20

18   percent is? That's how we determine what is the best fit

19   for a curve is between the 80 and the 20 percent.

20   Q.   Okay. And when you say 80 and 20 percent, that is

21   on the --

22   A.   Percent surviving.

23   Q.   -- percent surviving axis of the curve. Okay.

24   And so on this particular curve, when it got down to 20

25   percent surviving, that's like 70 -- late 70s of years.

1   A.   Yes.

2   Q.   And it's that last 20 percent which extends all

3 the way out to 150 years, but you are saying you really

4 don't consider that piece of --

5   A.   Well, if it extended all the way out to the curve,

6 then the account would be fully retired. So it's always

7 going to be -- as long as the curve is not fully retired,

8 you are going to have somewhat of a stub curve.

9   Q.   Sure. I understand it doesn't -- as long as there

10 are items that aren't fully retired, you haven't gone

11 through the whole curve, but doesn't this curve represent --

12 if this was the appropriate survivor curve for this account,

13 wouldn't it suggest that some few individual units in that

14 account could be expected to last more than 150 years in

15 service if this is the right survivor curve for that

16 account?

17   A.   No. Because, again, you are fitting between 80

18 and 20 percent survivor.

19   Q.   Okay. Gotcha. So you would say -- what it is

20 really saying is, you know, that when there is 20 percent

21 left, it will be, like, 76 or 77 years, but it is not

22 saying -- you are not using it for anything beyond that; is

23 that fair?

24   A.   You could say that. Yes.

25   Q.   Okay. Are you using this curve, the 51L0, to

1   calculate the theoretical reserve for this account?

2   A.   Yes. In the software that we use, it asks for an

3   input of life and the type of curve, and those are the --

4   that's what I input into the program in order to get the

5   theoretical reserve.

6   Q.   And then when it uses this curve to calculate the

7   theoretical reserve, doesn't it use the whole curve, the

8   part that's beyond the 80 and 20 percent?

9   A.   I don't know.

10   Q.   Okay. But if it does -- if it does use the whole

11   curve, isn't it using information that would suggest that

12   some of these items would last more than 150 years?

13   A.   I don't know.

14   Q.   Well, let me ask you this. Do you think it is

15   reasonable to think that some of these -- what are they

16   called again?

17   A.   Survivor curves.

18   Q.   No. The account. Overhead --

19   A.   Overhead conductors.

20   Q.   Do you think it is reasonable to think that some

21   of these overhead conductors would last more than 150 years

22   in service?

23   A.   More than 150 years?

24   Q.   I mean, that would be like if they were installed

25   in 1851, they would still -- they would be retired now.

1 That would be 150 years.

2   A.   No.

3   Q.   Do you think -- and again, it looks like the

4 survivor curve suggests that there is -- 10 percent of these

5 would still be in service more than 95 years after they were

6 installed.

7   Do you think that's a reasonable thing for

8 these -- for this account? Do you think that's a reasonable

9 judgment for this account?

10   A.   Again, I would have to say I am just fitting the

11 data between 80 and 20 percent surviving.

12   Q.   Okay. I understand that, but notwithstanding

13 that, is it reasonable -- I just want to know if you have an

14 opinion as to whether it is reasonable that 10 percent of

15 the items in this account would survive 95 plus years after

16 they were installed.

17   I know you are not -- you say you are not using

18 that, but is that reasonable, because that's what is

19 reflected on the survivor curve?

20   A.   I guess what I am saying is with the survivor

21 curve, even though it may be at 10 percent, it may be

22 plotted to be 95 year. I am actually using the data that's

23 plotted as percent surviving in looking at between 80 and 20

24 percent.

25   Q.   Okay. I understand that's what you are looking

1   at, but the curve itself shows that 10 percent are left more

2   than 95 years after installation, right, and I am asking --

3   I mean, is that right? Is that what the curve shows, even

4   though you are not --

5   A.   Well, if you had a perfect fit and there was data

6   that extended that far.

7   Q.   No. I am just saying doesn't the curve show --

8   there isn't any down that far, but doesn't that curve on

9   that piece of paper show that 90 -- after 95 years, you

10 still have 10 percent of the items in the account in

11 service?

12   A.   I guess this curve does not show that.

13   Q.   This curve doesn't show that. The curve that --

14   A.   I mean, the curve shows -- the data under the

15 curve does not show that.

16   Q.   I agree the data does not show it.

17   A.   Right.

18   Q.   But using that data, the computer model has

19 selected a curve that's not exactly like the data. It just

20 selects the best fitting curve is my understanding, right?

21   A.   Yes, between 80 and 20 percent.

22   Q.   Well, it doesn't select between 80 and 20. It

23 selects a curve that goes all the way from 100 to 0, right,

24 and then you just use between 80 and 20 percent; is that

25 right?

1   A.   That's what it says in the depreciation systems

2   book to do.

3   Q.   No.   I am just saying the computer model selects a

4   curve that runs from 100 percent all the way down to 0,

5   doesn't it, and then you use the part of that curve that's

6   between 80 and 20; is that correct?

7   A.   In determining the appropriate average service

8   life, yes.

9   Q.   Okay.   Okay.   Now, in deciding which curve is the

10 most appropriate to use, shouldn't you look at the whole

11 curve, or are you saying you would only look at the portion

12 of the curve between 80 and 20 percent to decide which curve

13 is the most appropriate to use?

14   A.   You are never going to have an account that is

15 going to have data to extend all the way to the end of the

16 curve unless it is fully retired.   I mean, in every

17 situation in every account, you know, you are going to

18 have -- you know, you are going to have a stub curve where

19 the data ends at a certain point.

20   Q.   Sure.   Of course.   But I guess what I am getting

21 to is can you exercise judgment in looking at the portions

22 of the curve where there are no data points in the out

23 years?   Can you exercise judgment in deciding what is a

24 reasonable curve and what is not a reasonable curve even if

25 you don't have data points?

1   A.   I guess in this particular account I did not.

2   Q.   Okay. But if you did try to exercise judgment and

3   thought about -- thought for a minute about the areas of the

4   curve beyond where you have data points, and if you saw that

5   it says more than 95 -- or more than 10 percent of the

6   overhead, whatever they are, the wires, would be in service

7   95 plus years after they were installed and if it said some

8   of the wires would be in service 150 years after they were

9   installed, might you not come to the conclusion that this

10   isn't the best curve for that account based on judgment

11   rather than data points?

12   A.   I don't know.

13   Q.   I will -- going back to what we were talking about

14   right before we went to lunch, we were talking about life

15   span -- the life span approach to depreciation. Do you

16   remember that?

17   A.   Yes.

18   Q.   And I am embarrassed to say that I forget one of

19   the basic questions, and that is did you use -- I think you

20   answered this, but I just forget the answer. Did you use

21   the life span approach in dealing with our fossil plants and

22   our nuclear plant?

23   A.   I would have to say no in the respect that we did

24   not have an estimated final retirement date.

25   Q.   Okay. If you would have had an estimated final

1   retirement date, would you have used the life span approach?

2   A.   I don't know.

3   Q.   What would it take to have -- well, let me finish

4   the question. Let me actually start over on the question.

5   Why can't you estimate a final retirement date

6   based on the same methods that you used to estimate the life

7   of the plan for purposes of depreciating the original cost?

8   A.   Because it's something that's -- I mean, you can

9   project a retirement date, but like I said before, when we

10   go out and talk to plant personnel and ask them, well, when

11   do you think this is going to retire, and they say, well,

12   you know, we want to keep it running forever. No one ever

13   really has an estimated retirement date.

14   Q.   Which personnel did you talk to that said that?

15   A.   I don't have a specific name. I am talking in

16   general, not just Ameren UE, but just plants in general in

17   the State of Missouri.

18   Q.   So in your mind, nobody with a plant in the State

19   of Missouri has ever been able to satisfactorily estimate a

20   final retirement date sufficiently so that you could, in

21   your mind, use the life span approach to their plant; is

22   that true?

23   A.   That's true.

24   Q.   Okay. What would it take? I guess you are saying

25   industry averages aren't satisfactory to you; is that right?

1   A.   That's right.

2   Q.   What kind of certainty would you have to have

3 about a -- what kind of evidence would you have to have of a

4 specific retirement date that would satisfy you sufficiently

5 so that you could use the life span approach for these

6 plants?

7   A.   I don't know of one.

8   Q.   Okay. So when you say in your testimony that life

9 span approach should be used for electric plants, maybe in

10 theory it should, but as a practical matter, there is no way

11 to do it; is that correct?

12   A.   That's true.

13   Q.   Okay. And I was trying to -- working on an

14 example to try to illustrate what I am talking about on

15 these interim retirements and additions, and I think I have

16 one.

17   If you could look on your schedule 2.1, and there

18 is a category of accounts called nuclear production plant.

19 Do you see that category of accounts?

20   A.   Yes.

21   Q.   Okay. And as I understand it, generally, these

22 accounts are a lot of the stuff on the Callaway Nuclear

23 Power Plant; is that true?

24   A.   Yes.

25   Q.   Okay. And if you go over and there is a whole

1   bunch of separate accounts, account 321, 322, 323, 324 and

2   325, and if you go over to staff's proposed depreciation

3   rate, which is seven columns over, your proposed

4   depreciation rate for all those accounts is 2.50 percent; is

5   that right?

6   A.   That's correct.

7   Q.   And I think the reason that the depreciation rate

8   is 2.50 percent for all those accounts is because the

9   Callaway plant has a 40 year life; is that right?

10   A.   Yes.

11   Q.   And if you divide 40 into 100, you get 2.50,

12 right?

13   A.   Right.

14   Q.   And do you know when the Callaway plant was put in

15 service?

16   A.   I don't recall.

17   Q.   Okay. But the 40 years, as I understand it, comes

18 from the fact that it has a 40 year license; is that right?

19   A.   Yes.

20   Q.   And I think -- well, my understanding is the

21 Callaway plant went into service in the mid '80s. Does that

22 sound right to you?

23   A.   Sounds like it, but I am not sure.

24   Q.   And again, my understanding is the license expires

25 in like 2024 or 2025, in that ballpark. Does that sound

1   right to you?

2   A.   Yes.

3   Q.   Okay. And it is also my understanding that there

4   are additions to these accounts that are added every year;

5   is that correct?

6   A.   Yes.

7   Q.   And it's to the tune of millions of dollars is my

8   understanding --

9   A.   Yes.

10   Q.   -- sometimes at least. I am sorry. I interrupted

11   you, but was that a yes to it is millions of dollars, or it

12   can be millions of dollars added to these accounts in a

13   given year?

14   A.   It can be.

15   Q.   Okay. But instead of taking into account that

16   there are now less than 40 years left on the Callaway

17   license, with these 2.5 percent depreciation rates, you're

18   giving a 40 year life to all of the additions; is that

19   correct?

20   A.   If the estimated retirement date, if it actually

21   is decommissioned at 2025, then those accounts -- that curve

22   would be truncated and those lives would be shorter, and it

23   would make the overall average service life shorter if you

24   knew for a fact that it was being retired in 2025.

25   Q.   But the problem I have is you are assuming it is

1   going to be retired in 2025 for purposes of depreciating the

2   organizational cost of the plant; isn't that right?

3   A.   Well, I am assuming that because the license of

4   the 40 years.

5   Q.   Okay.

6   A.   And they may not renew it, but I don't know for

7   sure.

8   Q.   But then you are not assuming it for purposes of

9   depreciating the additions to those accounts; is that right,

10   because you keep using the two and a half percent without

11   distinguishing between the vintages of the plant investment;

12   is that right?

13   A.   Could you restate that?

14   Q.   Probably not. I guess the first -- okay. I think

15   you agreed that you are using a 40 year life for the plant

16   to depreciate the original cost of the plant; is that right?

17   A.   That's right.

18   Q.   Okay. But when additions are added to that plant,

19   like, say, in the year 2000, 2 million dollars of plant

20   investment is added to account 321, structures and

21   improvements.

22   For purposes of depreciating that investment in

23   the Callaway nuclear plant, you are not assuming a life of

24   the plant of 40 years; is that right?

25   A.   That's correct for those.

1   Q.   You are assuming -- because you are using a 2.5

2   percent depreciation rate without distinguishing between

3   vintages of investment, you are assuming each vintage of

4   investment will last 40 years from the date the investment

5   is made; is that right?

6   A.   No. If you have a final retirement date, then --

7   if it's added in between -- if it's added ten years before

8   that final date, then it would be given -- it would be

9   truncated, and that would make the overall average service

10 life shorter. Then any unrecovered part of that would be

11 amortized.

12   Q.   Okay. I see what you are saying. In the end it

13 will be sort of trued up and amortized.

14   A.   Right.

15   Q.   But for now, for purposes of setting rates right

16 now, you are assuming that every dollar of investment -- you

17 are depreciating every dollar investment over a 40 year life

18 without distinguishing between the vintages, right?

19   A.   Any plant that is not given -- I just lost my

20 train of thought.

21   Q.   Please don't ask me to repeat the question.

22   A.   Any plant that is added would be given a 40 year

23 life.

24   Q.   Okay. Not withstanding the expiration of the

25 license for Callaway in 2025 or whenever it is.

1   A.   If I was using the final retirement date of 2025,

2   then it would not be given a 40 year life.

3   Q.   But you are not doing that in this case.

4   A.   Right.

5   Q.   Okay. I think we have beaten that horse to death.

6   Okay. Let's talk about decommission costs. On page 12 of

7   your testimony, beginning on line 7, you have a sentence

8   that says the final retirement of a life span property

9   frequently includes a major demolition project and a

10   rehabilitation of the site where the plant was located, and

11   then in parentheses green fielding.

12   A.   Yes.

13   Q.   These projects do not occur frequently and are

14   normally after a long "end service." And then on lines 12

15   to 14 you say the responsibility to determine this type of

16   net salvage cost (life span "final retirement cost") would

17   remain with the depreciation engineers due to the need to

18   evaluate demolition and "green fielding" projects.

19   A.   Yes.

20   Q.   Have you made such a determination for Ameren UE's

21   power plants, and I guess I would -- here I would talk about

22   when I talk about decommissioning, I am talking about the

23   coal fired plants, not the nuclear, because as I understand

24   it, the nuclear has its own decommissioning fund; is that

25   true?

1   A.   Yes.

2   Q.   Okay. So with regard to the coal -- Ameren UE's

3 coal fire plants, have you made such a determination as

4 you're talking about on page 12, line 7 through 14 of your

5 testimony?

6   A.   No, because there hasn't been a final retirement.

7   Q.   Okay. So once again, like the general situation

8 of treating these plants under the life span approach,

9 because there is not sufficient certainty in your mind as to

10 the retirement date of those plants, you can't make that

11 determination; is that right?

12   A.   Correct.

13   Q.   And I assume, once again, you can't tell me how a

14 retirement -- final retirement date can be presented with

15 sufficient certainty to allow you to do that, short of

16 tearing down the plant.

17   A.   No.

18   Q.   Have you ever in previous testimony estimated the

19 final net salvage cost related to a coal fired power plant?

20   A.   No.

21   Q.   Are you aware of anyone else at the Commission

22 staff who has ever estimated the final net salvage cost for

23 a coal fired power plant?

24   A.   No.

25   Q.   So I guess, just to see if I understand, in this

1   case you are recommending that nothing be included in rates

2   for the final retirement of these coal plants.

3   A.   That's correct.

4   Q.   Do you know how much it will cost to retire the

5   company's coal fire plants?

6   A.   I have no idea.

7   Q.   Didn't investigate that.

8   A.   That is kind of hard to investigate.

9   Q.   Okay. Okay. Under your approach, when would the

10 customer -- I'm sorry -- when would the company start

11 recovering the cost necessary to decommission these coal

12 fired plants, if ever?

13   A.   At the time of retirement you could start with an

14 amortization.

15   Q.   Okay. And do you have an idea over what period

16 that retirement cost should be amortized?

17   A.   No, I wouldn't. It would depend on how much money

18 it was. There is no way to --

19   Q.   Do you have any idea, even the order of magnitude,

20 of the costs it would take to decommission a coal fired

21 plant?

22   A.   No.

23   Q.   I mean, would you be surprised if I said it would

24 cost 100 million dollars or several hundred million dollars?

25 Does that seem plausible to you based on what you know?

1   A.   I don't know.

2   Q.   Let me ask you this. If it did cost several

3 hundred million dollars, isn't there -- wouldn't there be a

4 possibility of a rate shock on customers who had to pay

5 those costs at the time of retirement?

6   A.   Not if you amortized it.

7   Q.   And I guess the bigger the dollar amount got, you

8 could just amortize it over more years until it didn't cause

9 a rate shock.

10   A.   That's something that would have to be decided for

11 that particular case and whoever is working on that case.

12   Q.   And would it be fair to say that if you amortize

13 those retirement costs, the customers who would pay those

14 retirement costs through that amortization -- would it be

15 fair to say that the plant was never used to serve those

16 generations of customers?

17   A.   No.

18   Q.   Why not?

19   A.   I mean, depends on, I mean, how many years you are

20 talking about.

21   Q.   Well, if the plant is already out of service and

22 it is already being decommissioned by the time the

23 amortization -- by the time the company starts recovering

24 the amortization through rates. Okay. Is that true under

25 your approach?

1   A.   Is what true under my approach?

2   Q.   That the plant would already be out of service and

3 being demolished or already demolished before the company

4 started recovering the amortization. Is that the case under

5 your approach?

6   A.   I guess I didn't hear the first part of your

7 question.

8   Q.   Okay. Let me try again. Is it true that under

9 your approach where the decommissioning or demolition costs

10 are amortized, the company wouldn't start collecting the

11 amortization until after the plant was already out of

12 service?

13   A.   I think so.

14   Q.   Okay. Do you want to -- are you sure or I mean --

15 I think that is true too, but think about it if you are not

16 sure.

17   A.   It would have to be after the plant was retired.

18   Q.   Okay. So isn't it true that the generations of

19 customers that would pay that amortization through their

20 rates would not be getting service from that plant?

21   A.   That's true.

22   Q.   Okay. Do you think that's fair?

23   A.   I don't know.

24   Q.   Do you know how decommissioning costs for nuclear

25 plants are handled?

1   A.   No, I don't.

2   Q.   Do you know whether a decommissioning fund is

3   accumulated over the life of the nuclear plant to pay for

4   decommissioning costs?

5   A.   I don't know.

6   Q.   Are you aware of any coal plants that have been

7   retired and dismantled?

8   A.   No.

9   Q.   Did you look to see if there were any?

10   A.   Well, any time I took a plant tour.

11   Q.   I don't mean for just Ameren UE. I mean in the

12   country. Did you look at the -- did you look at other

13   examples of coal plant retirements in other places in the

14   country?

15   A.   No.

16   Q.   Okay. Okay. Another topic, which is the

17   amortization of the difference between actual and

18   theoretical reserve. Can you tell me what the theoretical

19   reserve is?

20   A.   The theoretical reserve is where the accumulated

21   amount for depreciation should be using my recommended

22   lives.

23   Q.   Okay. And then what is the actual reserve?

24   A.   Is the actual reserve accumulated -- that has been

25   accumulated since the inception of the plant.

1   Q.   Okay.   And those are different in this case; is

2   that right?

3   A.   Yes.

4   Q.   And are they almost always, to some degree,

5   different?

6   A.   You are never going to be right on.

7   Q.   Okay.   And my understanding is you're proposing to

8   amortize this difference; is that correct?

9   A.   Yes.

10   Q.   Why are you proposing to amortize the difference?

11   A.   Because it would create too much of a rate shock

12   to do it in one year.

13   Q.   Okay.   But the -- okay.   I understand that, but

14   why do you have to correct for the difference at all?   Can

15   you explain why it is important to bridge that gap?

16   A.   Because it is 470 million dollars, and it is a lot

17   of money, and you don't want to treat that large amount in

18   one time.   You kind of want to spread the cost over a

19   certain amount of years so that customers can pay their fair

20   share.

21   Q.   And your -- my understanding of your testimony is

22   you're saying we're overaccrued; is that right?

23   A.   That's correct.

24   Q.   In other words, we have -- based on your analysis,

25   we have collected more in actual depreciation rates than we

1   theoretically should have based on your depreciation study;

2   is that right?

3   A.   Yes.

4   Q.   And let me ask you -- there is two types of

5   accounts as I understand it. One way of looking at it is

6   there is two types of accounts. There is a type of account

7   that the Gannett-Fleming computer model could fit with an

8   acceptable Iowa curve, and then there are those accounts

9   that it couldn't fit with an acceptable Iowa curve where you

10   use the 1983 rate case lives; is that right? Are those the

11   two different kinds of accounts that we have here?

12   A.   That's correct.

13   Q.   Okay. Tell me, if you will, how you calculated

14   the theoretical reserve for the accounts that could -- that

15   did have an Iowa curve that fit them.

16   A.   I took the average service life, and I input a

17   zero salvage amount into a program we call Deprate which

18   prints an output of the theoretical reserve.

19   Q.   And is that part the Gannett-Fleming computer

20   model or whatever?

21   A.   Yes.

22   Q.   Okay. And do those calculations of the

23   theoretical reserve for those accounts appear on, I guess,

24   schedule 2.1 or 2-1 and 2-2 attached to your testimony?

25   A.   Yes.

1   Q.   And is it in that third column from the right --

2   is that the column that has the theoretical reserve

3   calculation you were just talking about?

4   A.   Yes.

5   Q.   And once again, on schedule 2-1, there is only two

6   accounts that had Iowa curves that had an adequate fit. So

7   there is two numbers there that are the theoretical reserve

8   for those two accounts; is that right?

9   A.   Yes.

10   Q.   And then on the next page there are theoretical

11   reserve numbers for all the accounts except, I think, one,

12   because again, all those accounts have Iowa curves with an

13   adequate fit; is that right?

14   A.   Yes.

15   Q.   And in general, those on schedule 2-2 are

16   distribution plant accounts and general plant accounts; is

17   that correct?

18   A.   Yes.

19   Q.   Whereas on schedule 2-1, you have steam production

20   plant, nuclear production plant, hydraulic production plant,

21   other production plant and transmission plant. Okay. Is

22   that right, if I read it right?

23   A.   I mean, you were stating the different production

24   plants and transmission. Were you asking me --

25   Q.   Are those on schedule 2.1?

1   A.   Yes.

2   Q.   And those are the ones that don't have -- they

3 have -- only two of the accounts have a theoretical reserve

4 calculation by them.

5   A.   Yes. That's correct.

6   Q.   What about the accounts that didn't have an Iowa

7 curve? How do those play into the theoretical reserve

8 calculation?

9   A.   I do not have a theoretical reserve calculation

10 for those.

11   Q.   Okay. So those -- would it be fair to say sort of

12 the implicit assumption is that the theoretical reserve and

13 the actual reserve for those accounts were the same?

14   A.   No. I just didn't have -- I did not have a

15 theoretical reserve for those accounts.

16   Q.   Okay. And if you did have a theoretical reserve,

17 I guess, would it be fair to say it could have been -- you

18 don't know what it would be. It could have gone either way

19 on those accounts.

20   A.   Correct.

21   Q.   On page 8 of your testimony, you are talking about

22 account 364, which is wooden and steel poles and steel

23 towers. Do you see that?

24   A.   Yes.

25   Q.   And it says in there that you use two sets of

1   data. Well, it says you use the survivor curve method on

2   two sets -- against two sets of data.

3   A.   Yes.

4   Q.   Do you see that? Can you explain what you did

5   there and why you did it?

6   A.   I chose two different experience bands, one from

7   1908 to 1995, to give me an overall view of what the plant

8   was doing from beginning to end, and then I used a more

9   recent experience band of 1956 to 1995, which would give me

10   an idea of most recent activity within the account.

11   Q.   And why did you do that, those two sets of

12   calculations?

13   A.   Sometimes I normally -- I normally, for all

14   accounts, do a large band that includes all data, because

15   sometimes you cannot -- the shorter amount of years of data

16   you have, it is harder to get a curve fit.

17   So I normally initially do a long experience band

18   from beginning to end and then looking at a more recent

19   technology in the later years.

20   Q.   So were you trying to see what effect more recent

21   technology might have had on the survival rates of that

22   account.

23   A.   Yes.

24   Q.   Okay. Can you tell me what an experience band is?

25   A.   Experience band is a set of years of data that

1   looks at the experience of the placements of that account,

2   whereas a placement band may look at particular vintages.

3   Like you would have 1920 to 1960, just want to

4   look at those -- okay. Let me start over.

5   From a placement band you would choose -- say,

6   from 1920 do 1960 you just want to look at the placements

7   for those years.

8   Q.   So the property that was placed in service during

9   those years.

10   A.   Right. Then you want to look at that property

11   from an experience of 1908 to 1995. What happened with

12   those placements in those years.

13   Q.   So that would be like the retirement experience

14   from 1908 to 1995.

15   A.   Yes.

16   Q.   Okay. How come -- okay. If you wanted to measure

17   the effect of changes in technology, shouldn't you have

18   limited the placement band as well as the experience band?

19   A.   And I do that also. I might not have included it

20   here. I was just talking about the experience bands that

21   you have to have a placement band when you have an

22   experience band.

23   Q.   I mean, wouldn't the impact of technology or

24   technological improvements, if any, be detectable if you

25   looked at more recent placements --

1   A.   Yes.

2   Q.   -- rather than more recent retirement experience?

3   A.   Yes.

4   Q.   Because if your -- you know, in an experience

5   band, you can be retiring the plant from 100 years ago or,

6   you know, however much data you have; isn't that right?

7   A.   What was the last part of that?

8   Q.   Because in any experience band, you could be

9   retiring plant from 75 or 100 years that it had been placed

10 in service even 75 or 100 years before, couldn't you?

11   A.   Yes.

12   Q.   So that experience band doesn't tell you much

13 about how technology has changed necessarily, does it?

14   A.   Well, it can because a lot of those early

15 replacements would have been retired in the later years.

16   Q.   Okay. But let me ask you this. Would you agree

17 with me it would be a better measure of technological

18 improvement if you looked at an old placement band versus a

19 new placement band?

20   A.   I guess I am -- in this I am not saying that I

21 didn't look at -- I didn't discuss placement bands in here,

22 and I should have, but in every account, I do look at

23 placement bands to compare technology.

24   Q.   Okay. So you just probably should have put it in

25 here.

1   A.   Right.

2   Q.   Okay. Let me ask you this. When you estimate

3   service -- the average service life for an account, you

4   don't know exactly when the individual items of property in

5   that account will be retired, do you, at the time you make

6   that estimate?

7   A.   No, I do not.

8   Q.   So if an average service life for an account is 40

9   years, some of that property -- you know, that property

10   could be retired in two years; isn't that right, some of it

11   could?

12   A.   That is correct.

13   Q.   Some of it could last 100 years; isn't that right?

14   A.   More not than often, but yes.

15   Q.   Okay. Or 70 years, some longer period than the

16   life that's been estimated as the average service life; is

17   that true?

18   A.   That would be more the exception than the rule,

19   because it is more the property would be more similar to --

20   did you say 40 years?

21   Q.   Yeah. I said if you had an average service life

22   of 40 years, some of it could be retired much earlier than

23   that, and some of it could be retired much later than that,

24   right?

25   A.   Yes.

1   Q.   But in some of these accounts the average service

2   lives are pretty long, aren't they? Like what are some long

3   average service lives? Is 40 years an average service life

4   for some of these accounts or 50 years?

5   A.   Yes. There may be even some as much as over 60 I

6   think.

7   Q.   Okay. But I guess would it be fair to say that

8   the reason that we estimate lives for assets like that is

9   that we can do a reasonably good job of estimating the

10   average service life, and you have to estimate the average

11   service life if you are going to spread the cost of the item

12   over the years of service and develop a depreciation rate.

13   Is that fair to say?

14   A.   Yes.

15   Q.   And even though it is a long period of time, we

16   can do a reasonably good job of estimating the service

17   lives; is that true?

18   A.   That's true.

19   Q.   An if you can estimate service lives far into the

20   future, is there any reason that you can think of that you

21   couldn't estimate net salvage cost into the future if you

22   chose to do that?

23   Let me put it to you this way. I understand

24   that's not the staff's position in this case, but is there

25   any reason that you couldn't do it if you thought that was

1   the appropriate way to handle net salvage?

2   A.   I guess if you are trying to compare the two, when

3   you estimate average service life, you are using historical

4   data that is known to come up with the best estimate of the

5   life of the property. Whereas, with net salvage you don't

6   know, due to inflation and due to environmental causes or --

7   you don't know what the market value of a certain plant is

8   going to be in the future, so it is kind of hard to compare

9   the two.

10   Q.   Okay. So you are saying you could not estimate

11   net salvage, so all -- and for example, you know, for years

12   the staff, when it thought that was the appropriate

13   approach, did provide estimates of net salvage.

14   I mean, what I am getting at is couldn't you

15   provide a reasonably good estimate of net salvage if you

16   needed to, if you were ordered to by the Commission?

17   A.   The best estimate we could do would be to look at

18   trends and look at the past three years or the past five

19   years and see what net salvage was doing for that particular

20   account and try to predict, over the next three to five

21   years, what it is going to do, and we have, you know -- the

22   computer prints out a graph that will show us the trend, and

23   if it is going up, we may select a number that -- it is

24   still something that is hard to measure.

25   Q.   Okay. Let me ask you this. Did you talk to

1   anybody else on the staff about the content of your

2   testimony prior to drafting it?

3   A.   Yes.

4   Q.   Who did you talk to?

5   A.   Outside of my staff and my boss?

6   Q.   No.   Including your staff and your boss.

7   A.   Okay.   I think Greg Meyer saw it and Tim Schwarz

8   saw it, and Steve Dottheim saw it.

9   Q.   Anybody else?

10   A.   I think that covers everybody.

11   Q.   Bob Schallenburg maybe?

12   A.   Yeah.   Bob Schallenburg too.

13   Q.   And did you get any substantive direction from any

14 of them?   Anything that is a privileged attorney/client

15 communication you can exclude from this question, but other

16 than that, did you get any substantive direction from any of

17 them about what your testimony should say?

18   A.   Maybe including a court case.

19   Q.   That Penn Sheridan court case.

20   A.   Yes.

21   Q.   Do you remember who recommended that?

22   A.   I think it was Tim.

23   Q.   Okay.   Did you ever consider deviating from the

24 staff's position on net salvage in this case?

25   A.   No.

1   Q.   I think earlier today you said you worked on your

2   testimony for maybe seven months before it was filed; is

3   that correct?

4   A.   Yes.

5   Q.   Am I remembering that right? But at the same time

6   you were doing other things.

7   A.   Yes.

8   Q.   And so you couldn't focus all your attention on

9   this case during that period.

10   A.   Correct. If need be, I could finish it in two to

11 three months.

12   Q.   Okay. And my understanding is the staff made a

13 determination that it was going to file its complaint and

14 file its testimony on July 2 of 2001; is that right?

15   A.   Yes.

16   Q.   And so that was your deadline to finalize your

17 testimony.

18   A.   Yes.

19   Q.   Who imposed that deadline? Do you know?

20   A.   I don't know.

21   Q.   Okay. Who told you about it? Do you know or

22 remember?

23   A.   It was just in a staff meeting. I don't remember

24 exactly.

25   Q.   And did you have any difficulty in meeting that

1   deadline, I guess, in completing your work on this case in

2   time to meet that deadline?

3   A.   No.   The only difficulty I had was in getting the

4   updated data that I wanted to get to do a study.

5   Q.   Okay.   But other than that, you didn't have -- let

6   me put it this way.   Your work wasn't compromised by time

7   pressure.

8   A.   No.

9   MR. BYRNE: Okay.   I think that's all I have.   Can

10   I just take a minute?

11   (Wherein, a brief recess was taken.)

12   Q.   (By Mr. Byrne) Do you remember earlier today when

13   we were talking about when the Gannett-Fleming computer

14   program gives you a curve that has an adequate fit?

15   Sometimes you would modify the curve -- or maybe that's not

16   the right thing.   Sometimes you would modify the life.   Do

17   you remember that?

18   A.   Yes.

19   Q.   And I think you said you wouldn't modify the

20   curve; is that right, but sometimes you would modify the

21   life.

22   A.   I do experiment with different curves also, like

23   maybe if it picks an LO, I may try L1 or L2.

24   Q.   Okay.   Well, what factors did you take into

25   account when you modify either the curves or the lives when

1   the computer model spits out?

2   A.   Not only do I look for low residual measure, but I

3   also look at other electric utilities across the state. I

4   also, for some accounts, talking with the plant personnel,

5   what feeling I get after talking with them about particular

6   lives of accounts.

7   Q.   Do you know how many times you modified an

8   account -- the curve or life for an account based on

9   conversations with plant personnel?

10   A.   No, I don't.

11   Q.   Was it not very many times?

12   A.   Not very many.

13   Q.   Like less than five?

14   A.   I don't have an exact number. I don't know.

15   MR. BYRNE: Okay. That's all I have. Thanks.

16   **CROSS-EXAMINATION**

17   **QUESTIONS BY MR. SCHWARZ:**

18   Q.   I only have one little item. Back about 8:45 this

19   morning you were asked the value of the net salvage issue,

20   and I think you indicated by reference to your schedule it

21   was about 30 million dollars.

22   A.   Yes.

23   Q.   That does not include the consideration for the

24   expense for cost of removal that the accountants have put in

25   the case, does it?

1   A.   No, it does not.

2   Q.   So that overall -- from an overall case

3   perspective, it would be something less than the 30 million

4   dollars.

5   A.   Yes.

6   MR. SCHWARZ: Okay.   That's all that I have.   I

7   want to sign.

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NOTARIAL CERTIFICATE

1

2

3   I, DEANNE M. LAKE, a Notary Public, Registered
Professional Reporter and Certified Shorthand Reporter, do
4   hereby certify that there came before me at the office of
200 Madison, Suite 810, Jefferson City, Missouri,

5

JOLIE MATHIS,

6

who was by me first duly sworn to testify to the truth and
7   nothing but the truth of all knowledge touching and
concerning the matters in controversy in this cause; that
8   the witness was thereupon carefully examined under oath and
said examination was reduced to writing by me; and that this
9   deposition is a true and correct record of the testimony
given by the witness.

10

      I further certify that I am neither attorney nor
11 counsel for, nor related, nor employed by any of the parties
to the action in which this deposition is taken; further,
12 that I am not a relative or employee of any attorney or
counsel employed by the parties hereto or financially
13 interested in this action.

14   IN WITNESS WHEREOF, I have hereunto set my hand
and seal this 3rd   day of December, 2001.

15

16

17   DeAnne M. Lake
                             CSR #084-004441

18

19

20   DeANNE M. LAKE
     Notary Public – Notary Seal
21   State of Missouri
        County of St. Louis
     My Commission Expires 05/31/2004

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23

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