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Witness: David P. Broadwater
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Case Nos.: EO-2000-210

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

**TESTIMONY IN SUPPORT OF
UNANIMOUS STIPULATION AND AGREEMENT**

DAVID P. BROADWATER

KANSAS CITY POWER & LIGHT COMPANY

CASE NO. EO-2000-210

*Jefferson City, Missouri
December 1999*

Testimony of David P. Broadwater
In Support Of Unanimous Stipulation And Agreement

1 Q. Were you previously employed before you joined the Commission's staff
2 (Staff)?

3 A. Yes, I was employed by Cullum & Brown Inc. from July, 1991, through
4 November, 1993, in a sales and sales support capacity.

5 Q. What is your educational background?

6 A. In 1991, I earned a Bachelor of Science degree in Business Finance from
7 Northwest Missouri State University. In 1995, I earned a Master of Business
8 Administration degree with an emphasis in Finance from the University of Missouri at
9 Kansas City.

10 Q. Are you a member of any professional associations?

11 A. Yes. I am a member of the Society of Utility and Regulatory Financial
12 Analysts (SURFA), formerly the National Society of Rate of Return Analysts.

13 Q. Do you hold any professional designations?

14 A. Yes. On May 13, 1997, I was awarded the professional designation of
15 "Certified Rate of Return Analyst" (CRRRA) by the Society of Utility and Regulatory
16 Financial Analysts. This designation is based upon education, experience and the
17 successful completion of a comprehensive examination.

18 Q. What is the purpose of this testimony?

19 A. My testimony is to provide (1) a historical perspective and (2) support for
20 maintaining Kansas City Power & Light Company's (KCPL) current decommissioning
21 funding level respecting the Wolf Creek Nuclear Generating Station (Wolf Creek) as
22 detailed in the Unanimous Stipulation And Agreement filed in Case No. EO-2000-210.

1 My testimony is in large part based upon my review of KCPL's present filing and KCPL's
2 prior decommissioning cases.

3 Q. What is decommissioning?

4 A. The United States Nuclear Regulatory Commission (NRC) defines
5 "decommissioning" as follows at 10 C.F.R. §50.2 and limits decommissioning to the
6 radiological part of the facility:

7 *Decommission* means to remove (as a facility) safely from
8 service and reduce residual radioactivity to a level that
9 permits release of the property for unstructured use and
10 termination of license.

11 This Commission defines "decommissioning" and "decommissioning costs" as
12 follows at 4 CSR 240-20.070:

13
14 (1) As used in this rule, decommissioning means those
15 activities undertaken in connection with a nuclear
16 generating unit's retirement from service to ensure that the
17 final removal, disposal, entombment or other disposition of
18 the unit and of any radioactive components and materials
19 associated with the unit, are accomplished in compliance
20 with all applicable laws, and to ensure that the final
21 disposition does not pose any undue threat to the public
22 health and safety. Decommissioning includes the removal
23 and disposal of the structures, systems and components of a
24 nuclear generating unit at the time of decommissioning.

25
26 (2) As used in this rule, decommissioning costs means
27 all reasonable costs and expenses incurred in connection
28 with decommissioning, including all expenses to be
29 incurred in connection with the preparation for
30 decommissioning, including, but not limited to, engineering
31 and other planning expenses; and to be incurred after the
32 actual decommissioning occurs, including, but not limited
33 to, physical security and radiation monitoring expenses,
34 less proceeds of insurance, salvage or resale of machinery,
35 construction equipment or apparatus the cost of which was
36 charged as a decommissioning expense.

37

1 Q. Please provide a short history of the preceding KCPL decommissioning
2 cases.

3 A. In reviewing the proceeding decommissioning cases, I will start with the
4 Wolf Creek rate case itself. Wolf Creek's current operating license runs through March,
5 2025. The first phase of the Wolf Creek rate case filed by KCPL before this Commission
6 in 1984 was for the purpose of establishing criteria to be used by the Commission for
7 determining when the Wolf Creek plant was "in service" for ratemaking purposes. Once
8 the plant was determined to be "in service," it would be eligible for inclusion in rate base
9 pursuant to Section 393.135 RSMo., which provides that before an electrical corporation
10 may collect in rates any costs associated with electrical facilities, those facilities must be
11 "fully operational and used for service."

12 KCPL and the Staff submitted a joint recommendation to the Commission
13 concerning the appropriate in-service criteria and the Commission adopted the joint
14 recommendation. On September 5, 1985, KCPL filed with the Commission notice,
15 which asserted that Wolf Creek had satisfied the in-service criteria at 1:15 a.m.,
16 September 3, 1985. The Staff concluded that Wolf Creek had complied with the
17 Commission's in-service criteria.

18 The Commission in its April 23, 1986 Report And Order in Case Nos. EO-85-185
19 and EO-85-224 found that Wolf Creek met the in-service criteria and was fully
20 operational, in accordance with Section 393.135, as of 1:15 a.m., September 3, 1985. In
21 addition, the Commission directed KCPL to establish an external fund for the
22 decommissioning monies collected over the life of that plant, and to hire a trustee to
23 administer the trust. As noted in the Unanimous Stipulation And Agreement, in KCPL's

1 1985-1986 Wolf Creek rate case (Case Nos. EO-85-185 and EO-85-224), KCPL and the
2 Staff stipulated that the decommissioning cost of Wolf Creek was \$103 million in 1985
3 dollars, and the Commission set KCPL's Missouri jurisdictional annual trust fund (trust
4 fund or fund) requirement at \$803,000.

5 The Staff proposed an external trust fund for the decommissioning monies
6 collected over the life of the plant, which would require the hiring of a trustee. KCPL
7 proposed a negative net salvage approach, which would have resulted in KCPL collecting
8 the funds in a manner similar to depreciation and would have allowed KCPL the use of
9 the funds internally. Under KCPL's proposal, KCPL would borrow the necessary funds
10 required for decommissioning at the end of the service life of the plant. The Commission
11 adopted the Staff's proposal, noting in its 1985 Report And Order that "[w]hile it is true
12 that Company's proposal would cost less than Staff's, the Commission believes the
13 overwhelming concern is that of financial assurance." Re: Kansas City Power & Light
14 Co., Case Nos. EO-85-185 and EO-85-224, 28 Mo. P.S.C. (N.S.) 228, 277 (1986).

15 KCPL owns 47 percent of the Wolf Creek Nuclear Generating Station, while the
16 Kansas Gas and Electric Company (KGE) subsidiary of Western Resources, Inc. (WRI)
17 also owns 47 percent of Wolf Creek. The final 6 percent of Wolf Creek is owned by
18 Kansas Electric Power Cooperative (KEPCO). The Commission issued a September 2,
19 1999 Report And Order, in Case No. EM-97-515, authorizing WRI and KCPL to merge.
20 Upon the successful completion of the merger, WRI on a consolidated basis will own 94
21 percent of Wolf Creek.

22 KCPL's electric operations involve three jurisdictions to which KCPL's
23 decommissioning costs are allocated: (1) Missouri retail (state jurisdiction), (2) Kansas

1 retail (state jurisdiction) and (3) Missouri and Kansas wholesale (federal jurisdiction).
2 Missouri retail constitutes 57.66 percent of KCPL on the basis of demand.

3 On September 4, 1990, KCPL filed its first decommissioning cost study since the
4 Wolf Creek rate case (Case Nos. EO-85-185 and EO-85-224). This filing, docketed as
5 Case No. EO-91-84 showed a decommissioning cost estimate for Wolf Creek of
6 \$250 million, total plant, in 1988 dollars. The KCPL study was actually a study
7 developed in 1989 for filing that year with the Kansas Corporation Commission (KCC).
8 On March 29, 1991, docketed as Case No. EO-91-300, Union Electric Company (UE)
9 filed its first decommissioning cost study since the Callaway rate case. UE's filing in
10 March, 1991, six months after KCPL's September, 1990 filing, showed a
11 decommissioning cost estimate for Callaway of \$336 million, total plant, in 1990 dollars.
12 Although Wolf Creek and Callaway are similar, but not completely identical units, the
13 KCPL and UE decommissioning cost studies performed by the same consultant hired by
14 the respective utilities arrived at very different cost estimates, in large part, because of the
15 difference in dates when the two cost studies were performed. Even though KCPL filed
16 its decommissioning cost study in September 1990, the KCPL study was actually a 1989
17 study filed in 1989 with the KCC.

18 The Staff retained a consultant in 1990 to review both KCPL's and UE's
19 decommissioning cost studies that were to be filed with the Commission that year. The
20 cost of the contract with the consultant was approximately \$145,000. The consultant had
21 previously performed decommissioning, in-service criteria and other nuclear plant expert
22 witness assignments for the Staff in the Callaway and Wolf Creek rate cases in 1984 and
23 1985, respectively. It became clear in 1991, in the then pending decommissioning cost

1 cases, that the Staff would be able to reach agreement with KCPL and UE on: (1) the
2 cost to decommission Wolf Creek and Callaway, respectively, (2) the Missouri retail
3 jurisdiction annual trust fund accrual and payment requirements, and (3) the
4 methodologies by which funding at these levels was to be achieved, with no increase
5 being required in Missouri retail rates. The Staff asked the consultant to work with Staff,
6 KCPL and UE to specify the data necessary to attempt to reconcile, between the Wolf
7 Creek and Callaway plants, decommissioning quantities, dimensions, weights and levels
8 of radioactivity.

9 In 1992, the Staff was able to reach agreement with KCPL in Case No. EO-91-84
10 on the following items:

- 11 1. The cost to decommission Wolf Creek was \$347 million in 1990 dollars,
- 12 2. The Missouri retail jurisdiction annual trust fund accrual and payment
13 requirements would be \$2.3 million, and
- 14 3. The methodologies by which funding at these levels was to be achieved
15 with no increase being required in Missouri retail rates.

16
17
18
19 The Staff's consultant also worked with KCPL and UE to specify the data
20 necessary to attempt to reconcile decommissioning quantities, dimensions, weights and
21 radioactivities between Wolf Creek and Callaway. As part of the Nonunanimous
22 Stipulation And Agreements in Case Nos. EO-91-84 and EO-91-300, KCPL and UE
23 agreed to provide this information. The results of KCPL's and UE's efforts respecting
24 such reconciliation were received by the Staff from KCPL and UE in February 1993.
25 The Staff intended to address the reconciliation in the next decommissioning cost cases
26 of KCPL and UE.

1 KCPL filed its second decommissioning cost study in 1993 (Case No. EO-94-80).
2 KCPL's decommissioning cost study, utilizing an inflation rate of 4.50 percent and an
3 after-tax earnings rate of 7.66 percent, showed only a "modest" increase in the estimated
4 cost to decommission Wolf Creek of \$23 million, or a total cost of \$370 million in 1993
5 dollars. Based on the Stipulation And Agreement in Case No. EO-91-84 and utilizing the
6 5.00 percent inflation rate assumed in that Stipulation And Agreement, the estimated
7 increase in costs to decommission Wolf Creek would have been approximately \$55
8 million. The Staff and KCPL agreed in Case No. EO-94-80 to maintain the annual
9 accruals to the decommissioning trust fund at \$2,303,856 for the Missouri retail
10 jurisdictional in order to cover the Missouri retail jurisdictional portion of the \$370
11 million total plant cost to decommission Wolf Creek. The Staff took this approach due
12 to:

- 13 1. Changes in federal tax laws and this Commission's
14 decommissioning rule (4 CSR 240-20.070) that allow
15 decommissioning trust funds to achieve higher earnings. The
16 stringent "Black Lung" investment restrictions on
17 decommissioning trust funds, which prohibited investment in
18 equity securities, were lifted by Section 1917 of the Energy Policy
19 Act of 1992 (EPACT). The Commission amended its
20 decommissioning trust fund rule to permit a maximum investment
21 in equity securities of 65 percent of the decommissioning trust
22 fund's book value. It was anticipated that the KCPL trust funds
23 would experience greater earnings rates than they would if the
24 "Black Lung" restrictions were still in place. In addition,
25 Section 1917 of EPACT reduced the federal income tax rate on
26 certain investment earnings of decommissioning trusts from
27 35 percent to 22 percent for 1994 and 1995, and 20 percent
28 commencing for 1996.

29
30 The Engineering Section of the Commission's Energy Department-
31 Utility Operations Division performed a review and comparison of
32 the material quantities and radioactivities shown in the KCPL and
33 UE filings. The parameters of the KCPL and UE filings in Case
34 Nos. EO-94-80 and EO-94-81, respectively, appeared to be the

1 same except for those systems where the two companies utilized
2 different concepts, e.g., Wolf Creek's cooling lake and Callaway's
3 cooling tower. An abbreviated comparison of the filings in Case
4 Nos. EO-94-80 and EO-94-81, with the results of the reconciliation
5 submitted to the Staff in February 1993, indicated that the other
6 parameters were the same;

7
8 2. Based on the analysis of the Staff, the decommissioning cost study
9 provided by KCPL in Case No. EO-94-80 was essentially the same
10 as the study done in Case No. EO-91-84 and agreed to by the Staff;
11 and

12
13 3. The Staff had initially intended in Case Nos. EO-94-80 and
14 EO-94-81 to retain a consultant to (a) verify KCPL's and UE's then
15 current decommissioning cost estimates, and (b) assist the Staff in
16 performing the analysis regarding the installed quantities and
17 levels of radioactivity in the Wolf Creek and Callaway systems.
18 When it became clear from KCPL's and UE's filings that a
19 settlement on then existing rates and funding levels was likely, the
20 Staff's focus respecting KCPL's and UE's filings centered on the
21 retention of a consultant to perform a reconciliation of Wolf Creek
22 and Callaway installed quantities and levels of radioactivity. Only
23 two proposals were received in response to the Request For
24 Proposals issued on behalf of the Staff by the Division of
25 Purchasing and Materials Management, Missouri Office of
26 Administration. The bids in the two proposals were \$312,000 and
27 \$385,000, which were more than double the cost of the 1990
28 contract of \$145,000. The Staff determined that (a) it was
29 unacceptable to award a contract and (b) a postponement of the
30 Staff's effort to reach agreement with KCPL and UE on installed
31 quantities and levels of radioactivity of Wolf Creek and Callaway
32 systems would not adversely affect such an effort at a later date.

33
34 KCPL filed its third decommissioning case (Case No. EO-97-84) on September 3,
35 1996, and in its application KCPL stated the following:

36 The 1996 Study shows the current decommissioning cost estimate
37 to be \$408,887,000 in 1996 dollars. This amount is reasonably
38 close to the 1996 decommissioning cost projection in the 1993
39 Accrual Schedule. Thus, KCPL believes that it is reasonable and
40 prudent to continue the annual accruals at the current level of
41 \$2,303,856. KCPL therefore asks the Commission to approve the
42 continuation of the annual accrual at the current level.
43

1 The Staff and KCPL agreed to an amount of decommissioning expense for Wolf
2 Creek of approximately \$409 million total plant in 1996 dollars. The Staff and KCPL
3 also agreed that the annual accrual level of \$2,303,856, with quarterly payments, should
4 be maintained. This was based on the analysis the Company did concerning the amount
5 of the cost of decommissioning Wolf Creek and the Staff's analysis of KCPL's
6 decommissioning trust fund. The Company's analysis of the cost to decommission Wolf
7 Creek was simply an update of the study the Company performed in 1993, which the
8 Staff agreed to in Case No. EO-94-80. The Staff accepted KCPL's analysis in that and
9 the immediately preceding decommissioning case (Case Nos. EO-97-84 and EO-94-80)
10 without having an outside consultant perform a study because the Staff believed it was
11 reasonable to proceed in that manner.

12 Q. Please explain the status of KCPL's current decommissioning case.

13 A. KCPL filed its current decommissioning case, Case No. EO-2000-210, on
14 September 1, 1999. In its application on page 2, KCPL states the following:

15 The current approved decommissioning cost estimate for Wolf
16 Creek, as established in Case No. EO-97-84, is approximately
17 \$409 million in 1996 dollars. The current approved annual
18 decommissioning trust fund accrual, as established in the
19 aforementioned case, is \$2,303,856 (Missouri jurisdictional
20 amount). The accrual schedule in Case No. EO-94-80
21 ("1993 Accrual Schedule") projected that the \$370 million
22 decommissioning cost would escalate to approximately
23 \$482 million in 1999 dollars.

24
25 The 1999 Study shows the current decommissioning cost estimate
26 to be \$470 million in 1999 dollars. This amount is reasonably
27 close to the 1999 decommissioning cost projection in the 1993
28 Accrual Schedule. Thus, KCPL believes that it is reasonable and
29 prudent to continue the annual accruals at the current level of
30 \$2,303,856. KCPL therefore asks the Commission to approve the
31 continuation of the annual accrual at the current level.
32

1 The Staff and KCPL have agreed to an amount of decommissioning expense for
2 Wolf Creek of approximately \$470 million in 1999 dollars. The Staff and KCPL have
3 also agreed that the current annual accrual level of \$2,303,856, with quarterly payments,
4 should be maintained.

5 Maintaining the annual accrual level of \$2,303,856 is based on the analysis the
6 Company performed concerning the cost to decommission Wolf Creek and on the Staff's
7 analysis of KCPL's decommissioning trust fund. The Company's analysis of the cost to
8 decommission Wolf Creek is an update of the study the Company performed in 1993.

9 Furthermore, there are currently two (2) Stipulation And Agreements in effect that
10 address the issue of the funding level for decommissioning KCPL's Wolf Creek nuclear
11 power plant. One of these Stipulation And Agreements specifically relates to KCPL's
12 instant filing. A Stipulation And Agreement among Staff, Office of the Public Counsel
13 (Public Counsel) and KCPL was filed in Case No. ER-99-313¹ on January 26, 1999, and
14 a Stipulation And Agreement among Staff, Public Counsel, KCPL and Western
15 Resources, Inc. was filed in Case No. EM-97-515² on July 19, 1999. The Case No.
16 ER-99-313 Stipulation And Agreement, which was approved by the Commission on
17 April 13, 1999, includes paragraphs 2, 3 and 5 which state as follows:

- 18 2. Signatories to this Stipulation And Agreement will not file any
19 case with the Commission, or encourage or assist in filing any case
20 with the Commission requesting, (i) a general increase or decrease
21 in KCPL's Missouri retail electric rates, or (ii) rate credits or rate
22 refunds respecting KCPL's Missouri retail electric rates, prior to
23 the earlier of September 1, 2001, or the closing of the Western

¹ In the Matter of the Stipulation And Agreement Reducing the Annual Missouri Retail Electric Revenues of Kansas City Power & Light Company.

² In the Matter of the Joint Application of Western Resources, Inc., and Kansas City Power & Light Company for Approval of the Merger of Kansas City Power & Light Company with Western Resources, Inc., and Other Related Relief.

1 Resources - KCPL merger, unless there is the occurrence of a
2 significant, unusual event, such as an act of God; a significant
3 change in federal or state tax law; a significant change in federal or
4 state utility law or regulation; or an extended outage or shutdown
5 of a major generating unit(s) which has a major effect on KCPL or
6 its successors.

7
8 3. Signatories to this Stipulation And Agreement will not request, or
9 encourage or assist in any request for, (i) a general increase or
10 decrease in KCPL's Missouri retail electric rates, or (ii) rate credits
11 or rate refunds respecting KCPL's Missouri retail electric rates that
12 would become effective for service rendered prior to March 1,
13 2002, or prior to one year after the closing of the Western
14 Resources-KCPL merger, whichever occurs first.

15
16 5. The specified period when the signatories to this Stipulation and
17 Agreement will not request, or encourage or assist in any request
18 for, a general increase or decrease in KCPL's Missouri electric
19 rates, rate credits or rate refunds respecting KCPL's Missouri
20 electric rates shall also apply to any filing with the Commission for
21 a change in KCPL's electric rates pursuant to Section 393.292
22 RSMo 1994 to reflect a change in the projected level or annual
23 accrual of funding for decommissioning the Wolf Creek nuclear
24 power plant. Signatories shall request that the Commission include
25 in KCPL's 1999 decommissioning Report and Order, language
26 substantially similar to that used in other such nuclear
27 decommissioning funding Report and Orders, that the Wolf Creek
28 decommissioning costs are included in KCPL's current cost of
29 service and are reflected in its current electric service rates for
30 ratemaking purposes.

31 The Stipulation And Agreement in the KCPL/Western Resources, Inc. merger
32 case, Case No. EM-97-515, includes substantially similar language to paragraph 5 above
33 except that the language refers to "Westar's" Missouri electric rates.³ However,

³ The language reads: "The specified period when the signatories to this Stipulation and Agreement will not request, or encourage or assist in any request for, a general increase or decrease in KCPL's Missouri electric rates, rate credits, or rate refunds respecting Westar's Missouri electric rates shall also apply to any filing with the Commission for a change in Westar's Missouri electric rates pursuant to Section 393.292 RSMo 1994 to reflect a change in the projected level or annual accrual of funding for decommissioning the Wolf Creek nuclear power plant. Signatories shall request that the Commission include in any Westar Wolf Creek decommissioning Report and Order, language substantially similar to that used in other nuclear decommissioning funding Report and Orders, that the Wolf Creek decommissioning costs are included in Westar's current cost of service and are reflected in its current electric service rates for ratemaking purposes."

1 paragraph 11 of the Stipulation And Agreement extended the rate moratorium beyond the
2 time frame contained in paragraphs 2 and 3 in the Case No. ER-99-313 Stipulation and
3 Agreement. Paragraph 11 in the Case No. EM-97-515 Stipulation And Agreement states,
4 in part, as follows:

5 **11. RATE CASE MORATORIUM**
6

7 Signatories to this Stipulation and Agreement will not file any case
8 with the Commission, or encourage or assist in filing any case with
9 the Commission, requesting (i) a general increase or decrease in
10 Westar's Missouri retail electric rates, or (ii) rate credits or rate
11 refunds respecting Westar's Missouri retail electric rates, prior to
12 the earlier of September 30, 2002, or thirty (30) months after the
13 closing of the merger, unless there is the occurrence of a
14 significant, unusual event, such as: an act of God; a significant
15 change in federal or state tax law; a significant change in federal or
16 state utility law or regulation; or an extended outage or shutdown
17 of a major generating unit(s), other than any major generating
18 unit(s) shutdown due to an extended outage at the time of the filing
19 of this Stipulation and Agreement, which has a major effect on
20 Westar or its successors' Missouri jurisdictional operations.
21

22 Signatories to this Stipulation and Agreement will not request, or
23 encourage or assist in any request, for (i) a general increase or
24 decrease in Westar's Missouri retail electric rates, or (ii) rate
25 credits or rate refunds respecting Westar's Missouri retail electric
26 rates, that would become effective for service rendered prior to
27 March 31, 2003, or thirty-six (36) months after the closing of the
28 merger, whichever occurs first.
29

30 Based on the above conditions, the Staff believes the current level of
31 decommissioning funding should remain at \$2,393,856 per year, payable in quarterly
32 amounts. However, consistent with how the Staff has generally preceded at the
33 conclusion of a rate case/complaint case moratorium and the Southwestern Bell
34 Telephone Company Incentive Regulation Experiment, the Staff intends to review the
35 earnings of KCPL and/or any entity which includes KCPL, at the conclusion of the

1 aforementioned moratorium(s). As part of that review, the Staff will also review the level
2 of decommission funding to assure the Commission that the level of funding is still
3 appropriate.

4 Q. In the Staff's testimony filed in support of the Stipulation And Agreement
5 in Case No. EO-97-84 (KCPL's 1996 decommissioning filing), the Staff indicated that it
6 believed an outside consultant should be retained to perform or assist in the performance
7 of an analysis of the cost to decommission Wolf Creek and the reconciliation between
8 Wolf Creek and Callaway of decommissioning quantities, dimensions, weights and levels
9 of radioactivity. Has the Staff sought the assistance of an outside consultant for the
10 instant case?

11 A. No. Since KCPL's 1996 filing, the Staff has reconsidered this matter and
12 concluded that for purposes of KCPL's 1999 filing, the hiring of an outside consultant
13 was not justified. However, the Staff believes that an outside consultant should be
14 retained some time in the future when more actual data is available to address these areas.

15 Q. Throughout your discussion of the past and present decommissioning
16 cases, you mention on several occasions decommissioning costs in hundreds of millions
17 in 19xx dollars. Please explain the concept of 19xx dollars.

18 A. The concept of 19xx dollars, is that it would cost _____ millions of
19 dollars to fully decommission a nuclear generating unit if all the work were done in 19xx.
20 When the total cost of decommissioning is given in 19xx dollars, the time value of money
21 concept is not considered. For example, when it is stated that it will cost approximately
22 \$467 million in 1999 dollars to fully decommission Wolf Creek, that is assuming all the
23 work is done in 1999.

1 Q. Who is the trustee and investment manager for KCPL's nuclear
2 decommissioning trust fund?

3 A. Currently, as approved by the Commission, in Case No. EO-2000-2, Bank
4 of New York is the trustee of KCPL's Nuclear Decommissioning Trust Fund.

5 In Case No. EO-99-164, the Commission approved TradeStreet
6 Investment Associates, Inc. as the Interim Investment Manager of KCPL's Nuclear
7 Decommissioning Trust Fund.

8 Q. Please summarize the options that KCPL has for decommissioning Wolf
9 Creek.

10 A. As noted in the Unanimous Stipulation And Agreement, three
11 decommissioning options were examined by KCPL: (1) DECON, (2) SAFSTOR and
12 (3) ENTOMB. All three alternatives are acceptable to the NRC. DECON assumes
13 decontamination and demolition immediately following conclusion of power operations
14 in 2025, when the 40 year operating license expires. All work is anticipated to be
15 completed by 2034. DECON consists of removal of fuel assemblies, source material,
16 radioactive fission and corrosion products, and other radioactive materials immediately
17 after cessation of power operations. DECON is the alternative upon which present
18 funding is based. The total DECON cost to decommission in 1999 dollars is
19 \$470,466,294.

20 SAFSTOR places the facility in protective storage once spent fuel and source
21 material are removed. Delayed decontamination and dismantling activities are initiated
22 such that decommissioning is completed within the 60 year time period set by the NRC.

1 All work is anticipated to be completed by 2087. The total SAFSTOR cost to
2 decommission in 1999 dollars is \$590,444,000.

3 ENTOMB places the facility in protective storage. Initial activities include:
4 removing contaminated components, systems and structures outside the designated
5 entombment boundary, and sealing the remaining radioactive items within the reactor
6 containment building. This process is restricted in overall duration to 60 years and is
7 anticipated to be completed by 2087. The total ENTOMB cost to decommission in 1999
8 dollars is \$671,044,000.

9 Staff's principal consideration respecting nuclear decommissioning is that
10 adequate funds be available to decontaminate and demolish the facilities using one of the
11 NRC authorized methodologies. The Staff believes that given present information and
12 assumptions, if adequate funds will be available to cover the cost of the DECON
13 alternative, adequate funds will be available to cover the cost of the SAFSTOR and
14 ENTOMB alternatives. This belief assumes that the funds will grow by accruing interest
15 during the years when the site is operationally inactive and the facility is in protective
16 storage under the SAFSTOR and ENTOMB alternatives.

17 Q. Please explain the status of KCPL's decommissioning trust fund.

18 A. As of June 30, 1999, KCPL's decommissioning trust fund for its Missouri
19 jurisdictional portion of the Wolf Creek Nuclear Generating Station had a market value
20 of approximately \$34.7 million. The trust fund has achieved an internal rate of return
21 (IRR) of 9.19 percent. The IRR is the annualized interest rate that equates the ending
22 market value with the historical stream of quarterly fund payments.

1 As previously noted, the total estimated cost to decommission Wolf Creek in
2 1999 dollars is approximately \$470 million; KCPL is responsible for 47 percent of those
3 costs or approximately \$221 million and the Missouri retail customers of KCPL will be
4 responsible for 57.66 percent of KCPL's costs, or approximately \$127 million.

5 The Staff's analysis of KCPL's decommissioning trust fund is based on a 5 percent
6 inflation factor, an after-tax 8.5 percent average return on the trust fund and the current
7 estimates of the cost to decommission Wolf Creek. The Staff believes that its estimates
8 of the real return on the trust fund of 3.5 percent annually is reasonable (after-tax
9 8.5 percent return on the trust fund minus 5 percent inflation factor). The fund is
10 currently outperforming the Staff's assumption (9.19 percent IRR and inflation is
11 currently 2.6 percent for the most recent 12-month period as measured by the consumer
12 price index - all urban consumers), but the Staff does not believe it is reasonable to
13 assume that the current conditions will exist for the remaining life of the fund. The Staff
14 is concerned with the reliability of estimates of the cost to decommission Wolf Creek,
15 Callaway or any nuclear power plant due to the lack of historical information in general
16 concerning the cost of decommissioning nuclear generating units. Therefore, the Staff
17 believes it is appropriate to keep the funding level of the decommissioning trust fund at
18 its current annual level of \$2,303,855.79, with payment made to the trust fund on a
19 quarterly basis.

20 Q. Does this conclude your testimony?

21 A. Yes, it does.

DAVID BROADWATER

<u>COMPANY</u>	<u>CASE NO.</u>
Empire District Electric	ER-95-279
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Empire District Electric	ER-97-81
Empire District Electric	ER-97-82
Kansas City Power & Light	EO-97-84
Union Electric	EO-97-86
Missouri-American Water Company	WR-97-237
St. Louis County Water	WR-97-382
Laclede Gas Company	GR-98-374
Laclede Gas Company	GR-99-315