Exhibit No.: Issues: Witness: Sponsoring Party: Type of Exhibit: Case No.: Date Testimony Prepared:

Depreciation Rosella L. Schad, P.E., C.P.A. MoPSC Staff Surrebuttal Testimony ER-2006-0314 October 6, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

SURREBUTTAL TESTIMONY

OF

ROSELLA L. SCHAD, P.E., C.P.A.

KANSAS CITY POWER AND LIGHT COMPANY

CASE NO. ER-2006-0314

Jefferson City, Missouri October 2006



Denotes Highly Confidential Information

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City) Power & Light Company for Approval to Make) Certain Changes in its Charges for Electric Service) to Begin the Implementation of Its Regulatory Plan.)

Case No. ER-2006-0314

AFFIDAVIT OF ROSELLA L. SCHAD

STATE OF MISSOURI)) ss. COUNTY OF COLE)

Rosella L. Schad, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Surrebuttal Testimony in question and answer form, consisting of 10^{-10} pages to be presented in the above case; that the answers in the foregoing Surrebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of her knowledge and belief.

sella P. Schad P.E. CPA. Rosella L. Schad, P.É.

Subscribed and sworn to before me this 4 day of October 2006.

My Commission Expires August 31, 2010 Cole County Commission #06898978

SURREBUTTAL TESTIMONY	
OF	
ROSELLA L. SCHAD, P.E., C.P.A.	
KANSAS CITY POWER AND LIGHT COMPANY	
CASE NO. ER-2006-0314	
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	SURREBUTTAL TESTIMONY OF ROSELLA L. SCHAD, P.E., C.P.A. KANSAS CITY POWER AND LIGHT COMPANY CASE NO. ER-2006-0314 EXECUTIVE SUMMARY

1		SURREBUTTAL TESTIMONY
2		OF
3		ROSELLA L. SCHAD, P.E., C.P.A.
4		KANSAS CITY POWER AND LIGHT COMPANY
5		CASE NO. ER-2006-0314
6	Q.	Please state your name and business address.
7	A.	Rosella L. Schad, P.O. Box 360, Jefferson City, Missouri, 65201
8	Q.	By whom are you employed and in what capacity?
9	A.	I am employed by the Missouri Public Service Commission (PSC or
10	Commission) as an Engineer in the Engineering and Management Services Department.
11	Q.	Are you the same Rosella L. Schad who has previously filed direct testimony
12	on behalf of	the Staff of the Missouri Public Service Commission (Staff) in this proceeding?
13	A.	Yes.
14	Q.	Please provide a summary of your surrebuttal testimony.
15	EXECUTIV	<u>E SUMMARY</u>
16	A.	I will respond to the rebuttal testimony of Kansas City Power & Light (KCPL
17	or Company)	witness Don A. Frerking. I will clarify statements Mr. Frerking made regarding
18	depreciation.	A summary of the concerns raised by his statements are:
19		1) The appropriateness of reviewing depreciation rates.
20		2) The treatment of generation assets as mass property accounts rather than
21		life span accounts.

Surrebuttal testimony of Rosella L. Schad, P.E., C.P.A. 1 3) The average service lives for Transmission, Distribution, and General 2 Accounts. 3 4) The level of net cost of removal, and 4 5) The level of interim retirements for the nuclear accounts. 5 THE APPROPRIATENESS OF REVIEWING DEPRECIATION RATES 6 Q. Mr. Frerking states on page 15, line 7, of his rebuttal testimony: 7 However, while review of depreciation rates is generally part of a rate proceeding, the Company does not believe it is appropriate in this case. 8 9 Do you agree with this statement? 10 A. No. As I stated on page 5, line 4, of my direct testimony, "The purpose of 11 depreciation in a regulatory setting is to recover the cost of capital assets allocated rationally 12 over the asset's useful lives." 13 In order to establish proper useful lives for the Company's plant assets, it is necessary 14 to perform a depreciation study. Thus, it is appropriate for Staff to perform a depreciation 15 study and set depreciation rates based on the results of that study. 16 Q. Did the Stipulation and Agreement (S&A) from KCPL Case No. 17 EO-2005-0329 specifically allow for parties to request additional changes in depreciation 18 rates that may result from depreciation studies? 19 Yes. Page 32, line 9, of the S&A in KCPL Case No. EO-2005-0329, states: A. 20 Paragraph III.B.1.i does not preclude KCPL, or any other party from requesting that this amortization be directed toward specific plant 21 22 accounts or from requesting additional changes in depreciation rates that may result from depreciation studies. 23 Q. Would you summarize Staff's position on the appropriateness of reviewing 24 25 depreciation rates at this time?

A. Yes. Staff's position is that a review of depreciation rates is necessary to
 determine the appropriate level of annual depreciation expense for the Company.

3 <u>THE TREATMENT OF GENERATION ASSETS AS MASS PROPERTY ACCOUNTS</u> 4 RATHER THAN LIFE SPAN ACCOUNTS

- Q. Mr. Frerking states on page 17, line 4, of his rebuttal testimony:
- If the generic retire

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- If the Staff study did not incorporate lifespan analysis for the generation accounts, Ms. Schad has misapplied the generation retirement data that the Company provided and has not followed standard depreciation principles with regard to generation assets.
- 10 Staff has advocated the fitting of Iowa curves to the mortality data of the generation
- 11 accounts, just as with the mass property accounts. Staff's position on this reflects the
- 12 situation of uncertainty of retirement dates of generation facilities. In the Company's 2005
- 13 Depreciation Study, a footnote asserts:

14The lifespan and retirement date estimates listed above are for capital15recovery purpose only and do not necessarily represent retirement date16expectations for the Company's generation planning nor general17corporate planning purposes.

- 18 Has the Commission addressed this concern lately?
- A. Yes, in the Report and Order from The Empire District Electric Company
- 20 Case No. ER-2002-0570, page 51, line 4, the Commission stated:

21 The record shows that generation plants tend to remain in service 22 indefinitely under present conditions and that this is likely to continue 23 to be the case in the future. For these reasons, the Commission will 24 reject the reduced service lives sponsored by Empire in favor of the 25 longer lives produced through the use of Iowa Curves as advocated by 26 Staff and Public Counsel. The Commission concludes that the 27 estimated retirement dates relied upon by Roff are simply not 28 persuasive.

1	Q. Does Staff have any basis to conclude that KCPL's retirement dates relied
2	upon by Mr. Frerking in the Company's 2005 Depreciation Study are any more persuasive
3	than the Empire District Electric Company's retirement dates for its generation plant?
4	A. ** No. In the Company's 2006 Capacity Balance Spreadsheet Response
5	attached to this testimony as Schedule 1, the Company did not present any plans to eliminate
6	capacity, a condition that shows retirement of plant(s) is not imminent. **
7	Q. Would you summarize Staff's position on the treatment of generation assets as
8	mass property accounts rather than life span accounts?
9	A. Yes. Staff's position is that absent a verifiable retirement schedule for specific
10	generation assets, it is more appropriate to treat the generation assets as mass property
11	accounts than life span accounts.
12	THE AVERAGE SERVICE LIVES FOR TRANSMISSION DISTRIBUTION AND
14	THE AVERAGE SERVICE EIVES FOR TRANSMISSION, DISTRIBUTION, AND
13	CENERAL ACCOUNTS
13	<u>GENERAL ACCOUNTS</u>
13 14	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony:
13 14 15 16 17	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study.
13 14 15 16 17 18	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study.
13 14 15 16 17 18 19	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study and the Staff's depreciation study?
 13 14 15 16 17 18 19 20 	 GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study and the Staff's depreciation study? A. Yes. I have provided the Company's (Mr. Frerking's) observed life data and
 13 14 15 16 17 18 19 20 21 	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study and the Staff's depreciation study? A. Yes. I have provided the Company's (Mr. Frerking's) observed life data and graph from their last depreciation study attached as Schedule 2, and Staff's observed life data
 13 14 15 16 17 18 19 20 21 22 	GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study? A. Yes. I have provided the Company's (Mr. Frerking's) observed life data and graph from their last depreciation study attached as Schedule 2, and Staff's observed life data and graph from Staff's depreciation study attached as Schedule 3, for Account 358,
 13 14 15 16 17 18 19 20 21 22 23 	 GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study and the Staff's depreciation study? A. Yes. I have provided the Company's (Mr. Frerking's) observed life data and graph from their last depreciation study attached as Schedule 2, and Staff's observed life data and graph from Staff's depreciation study attached as Schedule 3, for Account 358, Transmission Underground Conductors and Devices. Staff's study examined historical data
 13 14 15 16 17 18 19 20 21 22 23 24 	 GENERAL ACCOUNTS Q. Mr. Frerking states on page 18, line 22, of his rebuttal testimony: In order to check the reasonableness of Staff's curve matches, I plotted Staff's proposed curve matches against the observed life data in the Company's last depreciation study. Have you compared the observed life data in the Company's last depreciation study and the Staff's depreciation study? A. Yes. I have provided the Company's (Mr. Frerking's) observed life data and graph from their last depreciation study attached as Schedule 2, and Staff's observed life data and graph from Staff's depreciation study attached as Schedule 3, for Account 358, Transmission Underground Conductors and Devices. Staff's study examined historical data up to and including year 2005. Staff's Survivor Curve plotting Percent Surviving on the

1 vertical axis and Age in Years on the horizontal axis does not produce the same data 2 dispersion Mr. Frerking presents as his results in his last depreciation study or in his rebuttal 3 testimony on Schedule DAF-9, page 2 of 11, attached as Schedule 4. The observed life data 4 and graph from Mr. Frerking's study does not represent the account's observed life data and 5 graph as of December 31, 2005, from Staff's study. Staff's study more accurately depicts the 6 current survival history, whereas Mr. Frerking's study does not. I reviewed the Company's 7 Original Life Table, attached as Schedule 2, and Staff's Original Life Table, attached as 8 Schedule 3. Most notably one can see where the entries for exposures differ: A comparison 9 of the two tables indicate that Mr. Frerking's data is approximately five years short; i.e., the 10 point at which EXPOSURES drop below \$1 million occurs at AGE 37.5 years for Mr. Frerking's analysis and at AGE 42.5 years for Staff's analysis. I examined this account, 11 12 shorting the experience band incrementally by a one year period starting with the most recent 13 year of 2005 data, and continuing for a total of five years, as shown in Schedule 5. The 14 survivor curve with experience up to and including year 2000 data only, seems to produces 15 the survivor curve Mr. Frerking produced in his study and, subsequently, in his rebuttal 16 testimony to use as a reasonable check against which he judged Staff's study. Mr. Frerking's 17 conclusion that major flaws exist with regard to Staff's study is wrong. In fact, Mr. Frerkings 18 study appears to lack validity.

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Q. On the basis of the historical data Mr. Frerking selected to use, what was Mr. Frerking's best mathematical fit curve and best visual fit curve for Account 358?

- A. As shown in Schedule 6 attached to this testimony, his best mathematical fit
 curve was a 72 year Average Service Life (ASL) and his best visual fit curve was a 45 ASL.
- 23

Q. Mr. Frerking states on page 19, line 4, of his rebuttal testimony:

1 2 3 The results of these questionable curve matches are average service lives for many of these accounts that are approximately 10-20 years too long.

4

Do you agree with this statement?

5 A. No. As noted earlier, Mr. Frerking's observed life data and graph do not 6 represent the account's current survival history and, thus, are incomplete. Based on current 7 historical data, Staff recommended an ASL of 60 years attached as Schedule 7. Staff's best 8 mathematical fit curve was 72.1 years as shown in Schedule 3. The selection of an ASL of 9 60 years was a better visual fit to the observed life data and, if anything, could be considered 10 somewhat short rather than 10-20 years too long. I have provided a graph attached as 11 Schedule 8, depicting Staff's best mathematical fit curve of IOWA 72.1 L2.5 and Staff's 12 recommended curve IOWA 60 L4, demonstrating the fitting of the curves to the data 13 dispersion. Mr. Frerking choice to recommend a 45 ASL for this account is almost a 30 year 14 reduction from his best mathematical fit curve of 72 ASL. Mr. Frerking's selection of a 15 45 ASL, in and of itself, can frame Staff's selection as 10-20 years too long, even without 16 consideration for Mr. Frerking's failure to analyze the account's current survival history.

Staff's average service lives for the Transmission, Distribution, and General accounts
reflect the most current examination of the Company's mortality data, including retirements
and additions through year 2005.

Q. Would you summarize Staff's position on the average service lives for
Transmission, Distribution, and General accounts?

A. Yes. Staff's position is that the average service lives from Staff's depreciation study are based on the most current historical data available through year-end 2005, and take into consideration current retirement and addition activity, as well as current developments and informed judgment.

1 THE LEVEL OF NET COST OF REMOVAL

2 Q. Mr. Frerking states on page 20, line 20, of his rebuttal testimony: 3 The result of Ms. Schad's 'correction' significantly overstates the net salvage rates that have been proposed by the Staff to be included in the 4 5 depreciation rate calculations. 6 Do you agree with this statement? 7 No. Staff's net cost of removal percentages in the depreciation rates, as A. 8 attached in Schedule 9, provide for \$4,227,417 net cost of removal annually. Based on an 9 actual average annual net cost of removal expense (for the ten years 1996-2005) of \$679,893, 10 as shown in Schedule 10 of this testimony, Staff's annual depreciation expense is providing 11 for over six times the average annual amount spent over the last ten years. Significantly 12 overstating the net salvage rates would create a situation where the Company's annual net

cost of removal expense was not covered by the depreciation rate allowance and based on the
last ten years of cost of removal and gross salvage data that is simply not the case.

Q. Did Staff calculate, with respect to Mass Property Accounts, traditional accrualof net salvage?

A. Yes. Staff's calculation for net cost of removal was in accordance with the Commission's Report and Order from a recent Empire District Electric case. In the Report and Order from Empire Case No. ER-2002-0570, page 55, line 4, the Commission stated, "As in the <u>Laclede</u> case cited above, it is the Commission's conclusion that, with respect to Mass Property, traditional accrual of Net Salvage is required." To address continuing concerns of the level of net cost of removal, Staff recommends that KCPL keep a separate tracking mechanism.

24

Q. Has the Commission addressed a tracking mechanism lately?

A. Yes. On page 21, in the Third Report and Order issued January 11, 2005, from
 Laclede Case No. GR-99-315, The Commission stated: "That Laclede Gas Company shall
 keep a separate accounting of its amounts accrued for recovery of its initial investment in
 plant from the amounts accrued for the cost of removal."

5

Q. Would you summarize Staff's position on the level of net cost of removal?

A. Yes. Staff calculated depreciation rates using the traditional accrual of net
salvage. Staff's level of net cost of removal in annual depreciation expense is over six times
the average annual net cost of removal incurred over the last ten years. Staff recommends
KCPL keep a separate accounting of its amounts accrued for recovery of its initial investment
in plant form the amounts accrued for the cost of removal.

11 THE LEVEL OF INTERIM RETIREMENTS FOR THE NUCLEAR ACCOUNTS

12

Q. Mr. Frerking states on page 18, line 3, of his rebuttal testimony:

Staff's study suggests that the average service life for the nuclear accounts should be 59.5 years. In order to have an average service life of 59.5 years, one would have to assume that there have been no retirements in the past in these nuclear accounts, and that there will be <u>no</u> retirements of existing plant in these nuclear accounts in the future until the final retirement of the whole plant at the end of the assumed extended operating license.

20 Do you agree with this statement?

A. No. Page 24, line 15, of the S&A for KCPL Case No. EO-2005-0329, states:

22 "Upon the effective date of this Agreement, KCPL will begin recording depreciation expense

23 for the Wolf Creek Nuclear Generating Station based on a 60-year life span." The Wolf

24 Creek nuclear unit was originally licensed for 40 years. Per the Report and Order in KCPL

25 Case Nos. EO-85-185 and EO-85-224, page 208, "Accordingly the Commission finds that the

26 Wolf Creek depreciation accrual rate shall be 2.60 percent." A depreciation life rate of 2.5%

1 for the 40-year lifespan plus and interim retirement rate of 0.1 percent made up the 2.60%. In 2 KCPL Case No. EO-94-199, the depreciation rates for the Wolf Creek accounts were changed 3 to just over 3% (approximately a 0.53% adjustment from the life depreciation rate of 2.5%). 4 After 20 years of a 40-year lifespan, the depreciation reserve for Wolf Creek is 51.5 % of 5 plant balance (\$387,126,235 of \$751,882,142 on a Missouri jurisdictional allocated basis). In 6 order to not overcollect over the next 40 years remaining in the 60 year lifespan, an ASL of 80 7 years (depreciation rate of 1.25%) needs to be used to arrive at the 60-year life span required 8 from Case No.EO-2005-0329. With the depreciation reserve at 51.5% of plant balance, an 9 adjustment for interim retirements of 0.43% (0.53%- 0.1%) was added to the life rate of 10 1.25%, producing a 1.68% depreciation rate. This equates to a 59.5 ASL to be used in the 11 depreciation rate formula to arrive at the proper amount of depreciation expense over the 12 60-year lifespan.

Q. Would you summarize Staff's position on interim retirements for nuclearplants?

15 A. Staff included a level of interim retirements in the nuclear account Yes. depreciation rate equal to 0.43%. As the plant is half-way through a 40-year license, and an 16 17 extension of 20 years is anticipated to the operating license, a 60-year lifespan has been 18 adopted. Staff's interim retirement rate is higher than the 0.1% ordered in 1985, but should 19 allow for retirement activity through the life extension. Future analysis of any change to this 20 interim retirement rate for the nuclear plant accounts may be warranted as circumstances 21 necessitate.

Q. What is Staff's view regarding the appropriateness of its recommendeddepreciation rates?

A. Staff conducted a depreciation study of the Company's capital assets and based on the mortality characteristics determined in the study, net cost of removal experience, current developments, and informed judgment, Staff determined the appropriate depreciation rates and annual depreciation expense, which should be included in the revenue requirement for the Company. Staff recommends that the Commission order the depreciation rates proposed in Schedule 2 of my direct testimony.

7

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Q. Does this conclude your testimony?

A. Yes.

SCHEDULE 1 HAS BEEN DEEMED HIGHLY CONFIDENTIAL IN ITS ENITIRETY

ACCOUNT 358 UNDERGROUND CONDUCTORS AND DEVICES

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EOY 2004 Depreciation Study

4.45.5

Kansas City Power Light Company

AGE	EXPOSURES		DETIDEMENT	SUDVIVODE	
IN VEADO	EAPOSURES	KETIKEMEN (3	RETIREMENT	DATIONS	UBSERVED
INTEARS	(9)	()	KATIUS	RAISUS	LIFE TABLE
68.5	1	-	-	1.00000000	0.00002020
69.5	1	-	-	1.00000000	0.00002020
70.5	. 1	-	-	1.00000000	0.00002020
71.5	1	•	-	1.00000000	0.00002020
72.5	1	-	-	1.00000000	0.00002020
73.5	1	•	-	1.00000000	0.00002020
74.5	1	-	-	1.00000000	0.00002020
75.5	1	•	-	1.00000000	0.00002020
76.5	1	•	-	1.00000000	0.00002020
77.5	1	•	•	1.00000000	0.00002020
78.5	1	-	-	1.00000000	0.00002020
79.5	1	-	-	1.00000000	0.00002020
TOTAL		319.314			43.82235458

OBSERVED LIFE TABLE

Schedule RLS 2-2

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OBSERVED LIFE TABLE

	I		· · · · · · · · · · · · · · · · · · ·		
AGE	EXPOSURES	RETIREMENTS	RETIREMENT	SURVIVORS	OBSERVED
IN YEARS	(\$)	/\$1	RATIOS	RATIOS	LIFE TABLE
0	2 889 437		0.00000727	0.99999273	1.00000000
0.5	2,795,918	9.601	0.00343393	0.99656607	0.99999273
1.5	2,786,317	11.603	0.00416428	0.99583572	0.99655882
2.5	2.774.714	1.385	0.00049915	0.99950085	0.99240887
3.5	2.773.329	8.900	0.00320914	0.99679086	0.99191351
4.5	2,764,429	2,961	0.00107111	0.99892889	0.98873032
5.5	2,761,468	428	0.00015499	0.99984501	0.98767129
6.5	2,811,925	-	-	1.00000000	0.98751821
7.5	2,629,191	•	-	1.00000000	0.98751821
8.5	2,629,191	-	-	1.00000000	0.98751821
9.5	2,629,191	. 595	0.00022631	0.99977369	0.98751821
10.5	2,628,596	4,86 9	0.00185232	0.99814768	0.98729473
11.5	2,623,727	•	-	1.00000000	0.98546594
12.5	2,623,727	-	-	1.00000000	0.98546594
13.5	2,623,727	1,562	0.00059534	0.99940400	0.98040094
14.5	2,041,777	11,307	0.00428007	0.99371993	0.90407920
10.0	2,030,942	3,039	0.00138070	1.00000000	0.90000390
17.5	2,078,740	-	-	1.00000000	0.97930004
18.5	2,037,251	-	-	1.00000000	0 97930004
19.5	2,712,748	-	-	1.00000000	0.97930004
20.5	2 712 749	-	-	1.00000000	0.97930004
21.5	2,712,749	-	· _	1.00000000	0.97930004
22.5	2.712.749	-	-	1.00000000	0.97930004
23.5	2,712,749	• –	•	1.00000000	0.97930004
24.5	2,712,749	21,860	0.00805825	0.99194175	0.97930004
25.5	2,707,480	-	+'	1.00000000	0.97140860
26.5	2,707,480	-	•	1.00000000	0.97140860
27.5	2,753,960	243	0.00008824	0.99991176	0.97140860
28.5	2,753,716	•	-	1.00000000	0.97132288
29.5	2,751,627	•	-	1.00000000	0.97132288
30.5	2,202,072	- 23 037	0.01440304	0.08559696	0.97132200
32.5	1.576.417	20,007	-	1.00000000	0.95733288
33.5	1,576,417	19,369	0.01228672	0.98771328	0.95733288
34.5	1,557,047	15,458	0.00992777	0.99007223	0.94557040
35.5	1,137,237	53,774	0.04728478	0.95271522	0.93618299
36.5	1,083,463	29,014	0.02677895	0.97322105	0.89191579
37.5	1,054,448	-	-	1.00000000	0.86803122
38.5	456,267	43,785	0.09596355	0.90403645	0.86803122
39.0	412,402	10.040	0.04560210	0.05420700	0.704/310/
40.5	37 074	5 123	0.04300210	0.86181691	0 74894644
42.5	31,951	-	-	1.00000000	0.64545471
43.5	31.951	2.452	0.07674251	0.92325749	0.64545471
44.5	29,499	•	-	1.00000000	0.59592089
45.5	29,499	2,283	0.07739245	0.92260755	0.59592089
46.5 ·	27,216	-	•	1.00000000	0.54980111
47.5	27,216	26,743	0.98262052	0.01737948	0.54980111
48.5	473	•	-	1.00000000	0.00955526
49.0 60.6	4/3	-	-	1.00000000	0.00900020
50.5	4/3	· · ·	•	1.00000000	0.00955526
52.5	473		•	1.00000000	0.00955526
53.5	473	•	-	1.00000000	0.00955526
54.5	473	472	0.99788584	0.00211416	0.00955526
55.5	1	•	-	1.00000000	0.00002020
56.5	. 1	-	•	1.00000000	0.00002020
57.5	1	-	•	1.00000000	0.00002020
58.5	1	-	-	1.00000000	0.00002020
59.5	1	-	-	1.00000000	0.00002020
5U.5 81 5	1	-	-	1.00000000	0.00002020
62.5	1	-	•	1.00000000	0.00002020
63.5		-	•	1 0000000	0.00002020
64.5	1	-	-	1.00000000	0.00002020
65.5	1	•	- -	1.00000000	0.00002020
66.5	1	•	-	1.00000000	0.00002020
67.5	1 '	•	-	1.00000000	0.00002020

Schedule RLS 2-3

3/30/2005, 11:12 AM

DV05



Schedule RLS 3-1

PROGRAM OPTIONS IN EFFECT:

MAXIMUM DATA FILE EXPERIENCE BAND	1948-2005
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

-

ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2005

TRAN	TOTAL	INPUT	D A T A
CODE	AGED	UNAGED	TOTAL
0	319,314.00-		319,314.00-
3	76,504.00-		76,504.00-
9	3,218,539.00		3,218,539.00
TOTAL DATA	A 2,822,721.00		2,822,721.00
8	2,822,721.00		2,822,721.00

Schedule RLS 3-3

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ACCOUNT 358.00

ORIGINAL LIFE TABLE

AVG AGE R PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2005
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,244,852 3,713,407 3,704,319 3,700,845 3,665,533 3,506,720 3,506,292 3,515,865 3,290,025	21 9,601 11,603 1,385 8,900 2,961 428	$\begin{array}{c} 0.0000\\ 0.0030\\ 0.0031\\ 0.0004\\ 0.0024\\ 0.0008\\ 0.0001\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 0.9970 0.9969 0.9996 0.9976 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.70 99.39 99.35 99.11 99.03 99.02 99.02 99.02
9.510.511.512.513.514.515.516.517.518.5	3,305,064 3,348,504 3,555,621 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0005 0.0039 0.0013 0.0013 0.0000 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000 1.0000	99.02 99.00 98.85 98.85 98.85 98.85 98.80 98.41 98.28 98.28 98.28
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	0.0000 0.0000 0.0000 0.0000 0.0000 0.0079 0.0000 0.0000 0.0001 0.0001	1.0000 1.0000 1.0000 1.0000 0.9921 1.0000 1.0000 0.9999 1.0000	98.28 98.28 98.28 98.28 98.28 98.28 98.28 97.50 97.50 97.50 97.50 97.49
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,898,426 2,913,884 2,940,296 2,835,019 2,835,019 2,795,705 2,281,292 1,547,887 1,536,242 1,496,517	23,037 19,369 15,458 53,774 29,014 43.785	0.0000 0.0078 0.0000 0.0068 0.0055 0.0236 0.0187 0.0000 0.0293	1.0000 1.0000 0.9922 1.0000 0.9932 0.9945 0.9764 0.9813 1.0000 0.9707	97.49 97.49 96.73 96.73 96.07 95.54 93.29 91.55 91.55

Schedule RLS 3-4

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		EXPERIEN	LACEMENI ICE BAND	' ANALYSIS 1948-2005
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	1,497,2531,092,9001,074,0901,064,124391,230386,098386,09827,21627,216473	18,810 5,123 2,452 2,283 26,743	0.0000 0.0172 0.0048 0.0000 0.0063 0.0000 0.0059 0.0000 0.9826 0.0000	1.0000 0.9828 0.9952 1.0000 0.9937 1.0000 0.9941 1.0000 0.0174 1.0000	88.87 88.87 87.34 86.92 86.92 86.37 86.37 85.86 85.86 1.49
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 473 473 473 473 473 1	472	0.0000 0.0000 0.0000 0.0000 0.0000 0.9979 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 0.0021 1.0000	1.49 1.49 1.49 1.49 1.49 1.49 1.49 0.00 0.00
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

VG AGE RET 31.7 PLACEMENT ANALYSIS					
PLACEMENT	BAND 1920-2000	E	XPERIENC	CE BAND	1948-2005
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5	1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
TOTAL	122,498,446	319,314			

Schedule RLS 3-6

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ACCOUNT 358.00

SUMMARY OF	CURVE	FITTING RESULTS	- PCT SURV BA	LANCED AREAS
PLACEMENT B	AND 192	0-2000	EXPERIENCE B	AND 1948-2005
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR RE CURVE M	SID RANGE OF EAS FIT*
126.6-S0 103.9-S0.5 85.3-S1 75.3-S1.5 66.7-S2 61.8-S2.5	1.94 1.70 1.31 1.15 1.27 1.48	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT	FED TED TED TED TED TED
228.7-R0.5 169.7-R1 129.5-R1.5 96.6-R2 79.3-R2.5 66.3-R3 55.0-R4 48.7-R5	2.67 2.57 2.43 2.04 1.66 1.13 1.69 4.34	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT	FED FED FED FED FED FED FED
198.2-L0 154.2-L0.5 117.1-L1 97.8-L1.5 80.7-L2 72.1-L2.5 64.0-L3 54.6-L4	2.26 2.12 1.66 1.46 1.11 1.10 1.51 2.53	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT NOT FIT	fed fed fed fed fed fed fed
292.6-01 320.0-02 320.0-03 320.0-04	2.71 = STOP = STOP = STOP	0 - 47 FITTING FITTING FITTING	NOT FIT	ſED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

Kansas City Power and Light Company EOY 2004 Depreciation Study





Schedule DAF-9 (Page 2 of 11)

Schedule RLS 4-1



Schedule RLS 5A-1

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PROGRAM OPTIONS IN EFFECT:

MAXIMUM DATA FILE EXPERIENCE BAND	1948-2004
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

Schedule RLS 5A-2

ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2004

TRAN	TOTAL	INPUT UNACED	DATA
CODE	AGED	UNAGED	TOTAL
0	319,314.00-		319,314.00-
9	3,218,539.00		3,218,539.00
TOTAL DATA	2,822,721.00		2,822,721.00
8	2,822,721.00		2,822,721.00

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ACCOUNT 358.00

ORIGINAL LIFE TABLE

AV PI	/G AGE RI JACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2004
7 BE IN	AGE AT EGIN OF NTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
	0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,244,852 3,713,407 3,704,319 3,700,845 3,538,945 3,506,720 3,506,292 3,515,865 3,290,025	21 9,601 11,603 1,385 8,900 2,961 428	$\begin{array}{c} 0.0000\\ 0.0030\\ 0.0031\\ 0.0004\\ 0.0024\\ 0.0008\\ 0.0001\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 0.9970 0.9969 0.9996 0.9976 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.70 99.39 99.35 99.11 99.03 99.02 99.02 99.02
	$9.5 \\10.5 \\11.5 \\12.5 \\13.5 \\14.5 \\15.5 \\16.5 \\17.5 \\18.5$	3,305,064 3,348,504 3,372,886 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0005 0.0039 0.0013 0.0013 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000 1.0000	99.02 99.00 98.85 98.85 98.85 98.80 98.41 98.28 98.28 98.28
	19.520.521.522.523.524.525.526.527.528.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0079\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0001\\ 0.0000 \end{array}$	1.0000 1.0000 1.0000 1.0000 0.9921 1.0000 1.0000 0.9999 1.0000	98.28 98.28 98.28 98.28 98.28 98.28 97.50 97.50 97.50 97.50 97.49
	29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,898,426 2,913,884 2,940,296 2,835,019 2,832,930 2,296,750 1,628,073 1,547,887 1,536,242 1,496,517	23,037 19,369 15,458 53,774 29,014 43,785	0.0000 0.0078 0.0000 0.0068 0.0067 0.0330 0.0187 0.0000 0.0293	1.0000 1.0000 0.9922 1.0000 0.9932 0.9933 0.9670 0.9813 1.0000 0.9707	97.49 97.49 97.49 96.73 96.73 96.07 95.43 92.28 90.55 90.55

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2004
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 46.5 47.5 48.5	$1,092,900 \\1,092,900 \\1,074,090 \\465,942 \\391,230 \\386,098 \\29,499 \\27,216 \\27,216 \\473$	18,810 5,123 2,452 2,283 26,743	0.0000 0.0172 0.0048 0.0000 0.0063 0.0000 0.0774 0.0000 0.9826 0.0000	1.0000 0.9828 0.9952 1.0000 0.9937 1.0000 0.9226 1.0000 0.0174 1.0000	87.90 87.90 86.39 85.98 85.98 85.44 85.44 78.83 78.83 1.37
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 473 473 473 473 473	472	0.0000 0.0000 0.0000 0.0000 0.0000 0.9979 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 0.0021	1.37 1.37 1.37 1.37 1.37 1.37 1.37 0.00
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$		
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000 \end{array}$		

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000	Е	PI XPERIEN(LACEMENT CE BAND	ANALYSIS 1948-2004
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5	1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000		
TOTAL	119,675,725	319,314			

Schedule RLS 5A-6

ACCOUNT 358.00

SUMMARY OF	CURVE	FITTING RESULTS	- PCT SURV BALANCED ARE	AS
PLACEMENT BA	AND 1920	0-2000	EXPERIENCE BAND 1948-2	004
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR RESID RANGE CURVE MEAS FIT	OF
124.1-S0 101.8-S0.5 83.6-S1 73.8-S1.5 65.3-S2 60.5-S2.5 56.2-S3	2.15 1.91 1.50 1.30 1.29 1.42 1.99	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED	
224.2-R0.5 166.3-R1 127.0-R1.5 94.7-R2 77.7-R2.5 64.9-R3 53.8-R4 47.7-R5	2.87 2.77 2.63 2.26 1.87 1.29 1.60 4.10	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED	
194.3-L0 151.2-L0.5 114.8-L1 95.8-L1.5 79.0-L2 70.6-L2.5 62.7-L3 53.5-L4	2.47 2.33 1.87 1.67 1.25 1.18 1.43 2.35	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED	
287.0-01 320.0-02 320.0-03 320.0-04	2.91 = STOP = STOP = STOP	0 - 46 FITTING FITTING FITTING	NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

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Schedule RLS 5A-7

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Schedule RLS 5B-1

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PROGRAM OPTIONS IN EFFECT:

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MAXIMUM DATA FILE EXPERIENCE BAND	1948-2003
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2003

TRAN	T O T A L	INPUT	DATA
CODE	AGED	UNAGED	TOTAL
0	319,314.00-		319,314.00-
3	76,504.00-		76,504.00-
9	3,218,539.00		3,218,539.00
TOTAL DATA	2,822,721.00		2,822,721.00
8	2,822,721.00		2,822,721.00

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ACCOUNT 358.00

ORIGINAL LIFE TABLE

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		PEXPERIEN	CE BAND	ANALYSIS 1948-2003
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,244,852 3,713,407 3,704,319 3,574,257 3,538,945 3,506,720 3,506,292 3,515,865 3,290,025	21 9,601 11,603 1,385 8,900 2,961 428	$\begin{array}{c} 0.0000\\ 0.0030\\ 0.0031\\ 0.0025\\ 0.0025\\ 0.0008\\ 0.0001\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 0.9970 0.9969 0.9996 0.9975 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.70 99.39 99.35 99.10 99.02 99.01 99.01 99.01
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	3,305,064 3,165,769 3,372,886 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0005 0.0039 0.0013 0.0000 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000 1.0000	99.01 98.99 98.84 98.84 98.79 98.40 98.27 98.27 98.27 98.27
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	0.0000 0.0000 0.0000 0.0000 0.0079 0.0000 0.0000 0.0001 0.0001	1.0000 1.0000 1.0000 1.0000 0.9921 1.0000 1.0000 0.9999 1.0000	98.27 98.27 98.27 98.27 98.27 98.27 97.49 97.49 97.49 97.49 97.49
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,898,426 2,913,884 2,940,296 2,832,930 2,333,975 1,643,531 1,628,073 1,547,887 1,536,242 1,092,164	23,037 19,369 15,458 53,774 29,014 43,785	0.0000 0.0078 0.0000 0.0083 0.0094 0.0330 0.0187 0.0000 0.0401	1.0000 1.0000 0.9922 1.0000 0.9917 0.9906 0.9670 0.9813 1.0000 0.9599	97.48 97.48 96.72 96.72 95.92 95.02 91.88 90.16 90.16

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT CE BAND	ANALYSIS
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	$1,092,900 \\ 1,092,900 \\ 475,908 \\ 465,942 \\ 391,230 \\ 29,499 \\ 29,499 \\ 27,216 \\ 27,216 \\ 473 \\ 473$	18,810 5,123 2,452 2,283 26,743	0.0000 0.0172 0.0000 0.0063 0.0000 0.0774 0.0000 0.9826 0.0000	1.0000 0.9828 0.9892 1.0000 0.9937 1.0000 0.9226 1.0000 0.0174 1.0000	86.54 86.54 85.05 84.13 84.13 83.60 83.60 77.13 77.13 1.34
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 473 473 473 472 1 1 1	472	0.0000 0.0000 0.0000 0.0000 1.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.0000	$1.34 \\ 1.34 \\ 1.34 \\ 1.34 \\ 1.34 \\ 1.34 \\ 1.34 \\ 0.00$
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$		
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RE PLACEMENT	ET 31.7 BAND 1920-2000	Ē	P) EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2003
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5	1. 1 1 1		0.0000 0.0000 0.0000 0.0000		
TOTAL	116,853,004	319,314			

ACCOUNT 358.00

SUMMARY OF	CURVE	FITTING RESULTS	- PCT SURV BALANCED AREAS
PLACEMENT B	AND 192	20-2000	EXPERIENCE BAND 1948-2003
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR RESID RANGE OF CURVE MEAS FIT*
121.0-S0 99.3-S0.5 81.6-S1 72.0-S1.5 63.8-S2 59.1-S2.5 54.9-S3 48.9-S4	2.50 2.24 1.80 1.55 1.34 1.34 1.75 3.25	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
218.1-R0.5 161.9-R1 123.6-R1.5 92.3-R2 75.8-R2.5 63.4-R3 52.6-R4 46.6-R5	3.21 3.11 2.97 2.59 2.19 1.56 1.39 3.73	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
189.2-L0 147.3-L0.5 111.9-L1 93.4-L1.5 77.1-L2 68.9-L2.5 61.2-L3 52.3-L4 47.6-L5	2.81 2.67 2.21 1.99 1.48 1.32 1.31 2.04 3.85	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
279.0-01 313.6-02 320.0-03 320.0-04	3.24 3.24 = STOR = STOR	0 - 45 0 - 45 ? FITTING ? FITTING	NOT FITTED NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

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Schedule RLS 5C-1

PROGRAM OPTIONS IN EFFECT:

MAXIMUM DATA FILE EXPERIENCE BAND	1948-2002
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

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ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2002

TRAN		- T O T A L	INPUT	D A T A
CODE		AGED	UNAGED	TOTAL
0	31	9.314.00-		319.314.00-
3	7	6,504,00-		76,504.00-
9	3,21	8,539.00		3,218,539.00
TOTAL	DATA 2,82	2,721.00		2,822,721.00
8	2,82	2,721.00		2,822,721.00

' Schedule RLS 5C-3

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ACCOUNT 358.00

ORIGINAL LIFE TABLE

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		P: EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2002
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	TS E RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,244,852 3,713,407 3,577,731 3,574,257 3,538,945 3,506,720 3,506,292 3,515,865 3,290,025	21 9,601 11,603 1,385 8,900 2,961 428	0.0000 0.0030 0.0031 0.0025 0.0008 0.0001 0.0000 0.0000 0.0000	1.0000 0.9970 0.9969 0.9996 0.9975 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.70 99.39 99.35 99.10 99.02 99.01 99.01 99.01
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5	3,122,329 3,165,769 3,372,886 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0005 0.0039 0.0013 0.0013 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000	99.01 98.99 98.84 98.84 98.84 98.79 98.40 98.27 98.27 98.27
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	0.0000 0.0000 0.0000 0.0000 0.0000 0.0079 0.0000 0.0000 0.0001 0.0001	1.0000 1.0000 1.0000 1.0000 1.0000 0.9921 1.0000 1.0000 0.9999 1.0000	98.27 98.27 98.27 98.27 98.27 98.27 98.27 98.27 97.49 97.49 97.49 97.49 97.49
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,898,426 2,913,884 2,938,207 2,333,975 1,680,756 1,643,531 1,628,073 1,547,887 1,131,889 1,092,164	23,037 19,369 15,458 53,774 29,014 43,785	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0078\\ 0.0000\\ 0.0115\\ 0.0094\\ 0.0330\\ 0.0187\\ 0.0000\\ 0.0401 \end{array}$	1.0000 1.0000 0.9922 1.0000 0.9885 0.9906 0.9670 0.9813 1.0000 0.9599	97.48 97.48 97.48 96.72 96.72 95.61 94.71 91.58 89.87 89.87

Schedule RLS 5C-4

ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT ICE BAND	ANALYSIS 1948-2002
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	1,092,900 494,718 475,908 465,942 34,631 29,499 29,499 27,216 27,216 473	18,810 5,123 2,452 2,283 26,743	$\begin{array}{c} 0.0000\\ 0.0380\\ 0.0108\\ 0.0000\\ 0.0708\\ 0.0000\\ 0.0774\\ 0.0000\\ 0.9826\\ 0.0000\\ \end{array}$	1.0000 0.9620 0.9892 1.0000 0.9292 1.0000 0.9226 1.0000 0.0174 1.0000	86.27 86.27 82.99 82.09 82.09 76.28 76.28 70.38 70.38 1.22
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 473 473 472 472 472 1 1 1 1	472	0.0000 0.0000 0.0000 0.0000 1.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.0000 1.0000 1.0000 1.0000 1.0000	$1.22 \\ 1.22 \\ 1.22 \\ 1.22 \\ 1.22 \\ 1.22 \\ 1.22 \\ 0.00 \\ $
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	$\begin{array}{c} 0.00\\$
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RE PLACEMENT	ET 31.7 BAND 1920-2000	1	P EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2002
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT: DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5	1 1 1		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	0.00 0.00 0.00 0.00
TOTAL	114,030,283	319,314			

ACCOUNT 358.00

SUMMARY OF	CURVE	FITTING RESULTS	- PCT SURV BALANCED AREAS
PLACEMENT B	AND 192	20-2000	EXPERIENCE BAND 1948-2002
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR RESID RANGE OF CURVE MEAS FIT*
120.0-S0 98.3-S0.5 80.5-S1 71.0-S1.5 62.8-S2 58.1-S2.5 54.0-S3 48.0-S4	2.74 2.50 2.06 1.79 1.48 1.36 1.54 2.79	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
218.3-R0.5 161.7-R1 123.2-R1.5 91.6-R2 75.0-R2.5 62.5-R3 51.7-R4 45.7-R5	3.41 3.32 3.19 2.83 2.45 1.80 1.29 3.24	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
188.3-L0 146.3-L0.5 110.8-L1 92.3-L1.5 76.0-L2 67.9-L2.5 60.2-L3 51.3-L4 46.6-L5	3.04 2.90 2.46 2.25 1.71 1.51 1.28 1.78 3.44	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED NOT FITTED
279.4-01 314.2-02 320.0-03 320.0-04	3.45 3.45 = STOR = STOR	0 - 44 0 - 44 P FITTING P FITTING	NOT FITTED NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

Schedule RLS 5C-7



Schedule RLS 5D-1

PROGRAM OPTIONS IN EFFECT:

MAXIMUM DATA FILE EXPERIENCE BAND	1948-2001
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

Schedule RLS 5D-2

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ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2001

TRAN CODE		T O T A L AGED	INPUT UNAGE	DATA- D	TOTAL
0 3 9	319, 76, 3,218,	,314.00- ,504.00- ,539.00		319, 76, 3,218,	314.00- 504.00- 539.00
TOTAL	DATA 2,822	,721.00		2,822,	721.00
8	2,822	,721.00		2,822,	721.00

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ACCOUNT 358.00

ORIGINAL LIFE TABLE

AVG AGE R PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2001
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,244,852 3,586,819 3,577,731 3,574,257 3,538,945 3,506,720 3,506,292 3,515,865 3,107,290	21 9,601 11,603 1,385 8,900 2,961 428	0.0000 0.0030 0.0032 0.0004 0.0025 0.0008 0.0001 0.0000 0.0000 0.0000	1.0000 0.9970 0.9968 0.9996 0.9975 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.70 99.38 99.34 99.09 99.01 99.00 99.00 99.00
9.510.511.512.513.514.515.516.517.518.5	3,122,329 3,165,769 3,372,886 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0005 0.0039 0.0013 0.0000 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000 1.0000	99.00 98.98 98.83 98.83 98.83 98.78 98.39 98.26 98.26 98.26
19.520.521.522.523.524.525.526.527.528.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0079\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0001\\ 0.0000 \end{array}$	1.0000 1.0000 1.0000 1.0000 0.9921 1.0000 1.0000 0.9999 1.0000	98.26 98.26 98.26 98.26 98.26 98.26 97.48 97.48 97.48 97.48
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,898,426 2,911,795 2,439,252 1,680,756 1,680;756 1,643,531 1,628,073 1,143,534 1,131,889 1,092,164	23,037 19,369 15,458 53,774 29,014 43,785	0.0000 0.0094 0.0000 0.0115 0.0094 0.0330 0.0254 0.0000 0.0401	1.0000 1.0000 0.9906 1.0000 0.9885 0.9906 0.9670 0.9746 1.0000 0.9599	97.47 97.47 96.55 96.55 95.44 94.54 91.42 89.10 89.10

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ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	LACEMENT	ANALYSIS 1948-2001
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	494,718 494,718 475,908 109,343 34,631 29,499 29,499 27,216 27,216 473	18,810 5,123 2,452 2,283 26,743	$\begin{array}{c} 0.0000\\ 0.0380\\ 0.0108\\ 0.0000\\ 0.0708\\ 0.0000\\ 0.0774\\ 0.0000\\ 0.9826\\ 0.0000\\ \end{array}$	1.0000 0.9620 0.9892 1.0000 0.9292 1.0000 0.9226 1.0000 0.0174 1.0000	85.53 85.53 82.28 81.39 81.39 75.63 75.63 69.78 69.78 1.21
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 472 472 472 473 1 1 1	472	0.0000 0.0000 0.0000 0.0000 0.9979 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.0021 1.0000 1.0000 1.0000 1.0000	$1.21 \\ 1.21 \\ 1.21 \\ 1.21 \\ 1.21 \\ 1.21 \\ 1.21 \\ 0.00 \\ $
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000 \end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Schedule RLS 5D-5

ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RI	ET 31.7		P	LACEMENT	ANALYSIS
PLACEMENT	BAND 1920-2000	I	EXPERIEN	CE BAND	1948-2001
ልርፍ ልጥ	FYPOSIBES AT	RETIREMENT	3		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
79 5	1		0 0000	1 0000	0.00
80.5	1		0.0000	1.0000	0.00
81.5					0.00
TOTAL	111,207,562	319,314			

Schedule RLS 5D-6

ACCOUNT 358.00

SUMMARY OF	CURVE	FITTING RESULTS	- PCT SURV	BALANCED AREAS
PLACEMENT E	AND 192	20-2000	EXPERIENCE	E BAND 1948-2001
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID RANGE OF MEAS FIT*
117.5-S0 96.5-S0.5 79.4-S1 70.1-S1.5 62.2-S2 57.6-S2.5 53.6-S3 47.7-S4	2.90 2.65 2.18 1.90 1.54 1.40 1.55 2.87	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT F NOT F NOT F NOT F NOT F NOT F	FITTED FITTED FITTED FITTED FITTED FITTED FITTED
210.9-R0.5 156.6-R1 119.7-R1.5 89.6-R2 73.7-R2.5 61.7-R3 51.3-R4 45.5-R5	3.60 3.50 3.36 2.98 2.58 1.90 1.31 3.29	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT H NOT H NOT H NOT H NOT H NOT H	FITTED FITTED FITTED FITTED FITTED FITTED FITTED
183.5-L0 142.9-L0.5 108.8-L1 90.9-L1.5 75.1-L2 67.2-L2.5 59.7-L3 51.0-L4 46.4-L5	3.21 3.07 2.61 2.38 1.81 1.59 1.31 1.78 3.50	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT H NOT H NOT H NOT H NOT H NOT H NOT H NOT H	FITTED FITTED FITTED FITTED FITTED FITTED FITTED FITTED
269.7-01 303.1-02 320.0-03 320.0-04	3.64 3.64 = STOE = STOE	0 - 44 0 - 44 P FITTING P FITTING	NOT H NOT H	FITTED FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

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Schedule RLS 5E-1

PROGRAM OPTIONS IN EFFECT:

MAXIMUM DATA FILE EXPERIENCE BAND	1948-2000
PERFORM CURVE FITTING ROUTINE	YES
TRAN CODES INCLUDED AS RETIREMENTS	0
DEVELOP ENDING BALANCES FROM DATA FILE	YES

Schedule RLS 5E-2

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KCPL

ACCOUNT 358.00

INPUT CONTROL TOTALS THROUGH 2000

TRAN	T O T A L	INPUT	DATA
CODE	AGED	UNAGED	TOTAL
0	319,314.00-		319,314.00-
3	76,504.00-		76,504.00-
9	3,218,539.00		3,218,539.00
TOTAL DATA	2,822,721.00		2,822,721.00
8	2,822,721.00		2,822,721.00

ACCOUNT 358.00

ORIGINAL LIFE TABLE

AVG AGE R PLACEMENT	ET 31.7 BAND 1920-2000	:	P: EXPERIEN	LACEMENT CE BAND	ANALYSIS 1948-2000
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,218,539 3,118,264 3,586,819 3,577,731 3,574,257 3,538,945 3,506,720 3,506,292 3,333,130 3,107,290	21 9,601 11,603 1,385 8,900 2,961 428	$\begin{array}{c} 0.0000\\ 0.0031\\ 0.0032\\ 0.0004\\ 0.0025\\ 0.0008\\ 0.0001\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 0.9969 0.9968 0.9975 0.9975 0.9992 0.9999 1.0000 1.0000 1.0000	100.00 100.00 99.69 99.37 99.33 99.08 99.00 98.99 98.99 98.99
$\begin{array}{r} 9.5 \\ 10.5 \\ 11.5 \\ 12.5 \\ 13.5 \\ 14.5 \\ 15.5 \\ 16.5 \\ 17.5 \\ 18.5 \end{array}$	3,122,329 3,165,769 3,372,886 2,943,196 2,943,196 2,926,595 2,872,213 2,648,491 2,648,491 2,689,804	595 4,869 1,562 11,307 3,659	0.0002 0.0015 0.0000 0.0000 0.0005 0.0039 0.0013 0.0000 0.0000 0.0000	0.9998 0.9985 1.0000 1.0000 0.9995 0.9961 0.9987 1.0000 1.0000 1.0000	98.99 98.97 98.82 98.82 98.82 98.77 98.38 98.25 98.25 98.25 98.25
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,689,804 2,689,804 2,764,516 2,764,516 2,764,516 2,764,516 2,742,656 2,762,389 2,762,861 2,815,445	21,860 243	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0079\\ 0.0000\\ 0.0000\\ 0.0001\\ 0.0001\\ 0.0000 \end{array}$	$\begin{array}{c} 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 0.9921\\ 1.0000\\ 1.0000\\ 0.9999\\ 1.0000\\ \end{array}$	98.25 98.25 98.25 98.25 98.25 98.25 98.25 97.47 97.47 97.46
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,896,337 2,412,840 1,786,033 1,680,756 1,680,756 1,643,531 1,223,720 1,143,534 1,131,889 493,982	23,037 19,369 15,458 53,774 29,014 43,785	0.0000 0.0129 0.0000 0.0115 0.0094 0.0439 0.0254 0.0000 0.0886	1.0000 1.0000 0.9871 1.0000 0.9885 0.9906 0.9561 0.9746 1.0000 0.9114	97.46 97.46 96.20 96.20 95.09 94.20 90.06 87.77 87.77

ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE R PLACEMENT	ET 31.7 BAND 1920-2000		P EXPERIEN	PLACEMENT	ANALYSIS 1948-2000
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 46.5 48.5	494,718 494,718 119,309 109,343 34,631 29,499 29,499 27,216 27,216 473	18,810 5,123 2,452 2,283 26,743	0.0000 0.0380 0.0429 0.0000 0.0708 0.0000 0.0774 0.0000 0.9826 0.0000	$\begin{array}{c} 1.0000\\ 0.9620\\ 0.9571\\ 1.0000\\ 0.9292\\ 1.0000\\ 0.9226\\ 1.0000\\ 0.0174\\ 1.0000\end{array}$	79.99 79.99 76.95 73.65 73.65 68.44 68.44 63.14 63.14 1.10
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	473 473 472 472 473 473 1 1 1	472	0.0000 0.0000 0.0000 0.0000 0.9979 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.0021 1.0000 1.0000 1.0000 1.0000	$ \begin{array}{r} 1.10\\ 1.10\\ 1.10\\ 1.10\\ 1.10\\ 1.10\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00 \end{array} $
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1 1 1 1 1 1 1 1		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	$\begin{array}{c} 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\end{array}$	$\begin{array}{c} 0.00\\$
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1 1 1 1 1 1 1 1 1		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Schedule RLS 5E-5

ACCOUNT 358.00

ORIGINAL LIFE TABLE, CONT.

AVG AGE RE	ET 31.7		Р	LACEMENT	ANALYSIS
PLACEMENT	BAND 1920-2000	E	EXPERIEN	CE BAND	1948-2000
AGE AT	EXPOSURES AT	RETIREMENTS	5		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
70 5	-		0 0000	1 0000	0 00
79.5	1		0.0000	1.0000	0.00
80.5					0.00
TOTAL	108,384,841	319,314			

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ACCOUNT 358.00 SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BA	AND 1920)-2000	EXPERIENC	CE BAND	1948-2000
SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
104.8-S0 87.4-S0.5 73.5-S1 65.6-S1.5 58.9-S2 54.9-S2.5 51.5-S3 46.4-S4 43.8-S5	4.46 4.14 3.56 3.16 2.56 2.17 1.82 2.46 4.52	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT NOT NOT NOT NOT NOT NOT	FITTED FITTED FITTED FITTED FITTED FITTED FITTED FITTED	
175.5-R0.5 132.2-R1 102.9-R1.5 79.6-R2 67.1-R2.5 57.6-R3 49.2-R4 44.4-R5	5.30 5.17 4.97 4.47 3.96 3.10 1.83 2.99	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT NOT NOT NOT NOT NOT	FITTED FITTED FITTED FITTED FITTED FITTED FITTED	
159.6-L0 126.0-L0.5 98.7-L1 83.4-L1.5 70.4-L2 63.4-L2.5 57.0-L3 49.3-L4 45.4-L5	4.85 4.64 4.08 3.77 3.01 2.67 1.99 1.74 3.07	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	NOT NOT NOT NOT NOT NOT NOT	FITTED FITTED FITTED FITTED FITTED FITTED FITTED FITTED	
223.0-01 250.7-02 320.0-03 320.0-04	5.35 5.35 = STOP = STOP	0 - 44 0 - 44 FITTING FITTING	NOT NOT	FITTED FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING.

Schedule RLS 5E-7

VINTAGE YEARS: 1920-2004 RETIREMENT YEARS: 1948-2004

ACCOUNT 358 UNDERGROUND CONDUCTORS AND DEVICES

DESCRIPTION

This account includes the cost installed of underground conductors and devices used for transmission purposes. See KCPL's plant catalog for further detail.

ACTUARIAL ANALYSIS

44

BAND ANALYSIS:	FULL HISTOR	RY				
				IOW	A CURVE 1	TYPE
		FIT EQUATION	ASL	L	S	
		1st DEGREE	72	2.00	0.50	1
		2nd DEGREE	48	3.00	2.00	3

CHOSEN	I CURVE
CURVE	LIFE
R5	45

3rd DEGREE

BEST VISUAL FIT CURVE LIFE R5 45

R

1.00

3.00

4.00

3.00

COMMENTS

The survivor data for the full history were fit to 1st, 2nd, and 3rd degree equations and compared to lowa Curves. The resulting lowa Curves were plotted against the actual survivor data and served as the preliminary basis for visual curve matching. Additional lowa Curves were plotted until the one exhibiting the best visual fit was chosen. Refer to the detail on curve fits, observed life tables, and survivor curve plots for more information on the actuarial analysis.

4.00

LIFESPAN ANALYSIS										
BASE LIFESPAN ESTIMATE	N/A	TERMINAL DATE	N/A	WEIGHTED AGE	35.7					
REVISED LIFESPAN ESTIMATE	N/A	TRUNCATION AGE	N/A	REMAINING LIFE	11.3					

COMMENTS

Lifespan analysis is not applicable for this account.

SALVAGE ANALYSIS										
CHOSEN	FORECST		AVERA	GE NET SA		_				
NET	FOR	LAST	LAST	LAST	LAST	LAST				
SALVAGE	2005	5 YRS	10 YRS	15 YRS	20 YRS	25 YRS				
2%	-86%	-223%	-223%	-101%	-62%	-62%				

COMMENTS

There was not sufficient salvage and removal cost data for this account to develop a reliable net salvage indication. Thus, the net salvage indication for the Distribution underground conductors account (Account 367) was utilized for this account. See Account 367 for more information.

ACCOUNTING ADJUSTMENTS, DATA ANOMALIES, & MANAGEMENT DECISIONS

						<u></u>	
		<u>SUM</u>	MARY			•	
PARAMETERS	STUDY	MPSC		RATES	STUDY	MPSC	
CURVE TYPE	R5	L5	1	ALG	2.18%	2.55%	
AVG SERVICE LIFE	45.0	39.2		RL	2.50%	N/A	
REMAINING LIFE	11.3	N/A		ELG	2.10%	N/A	
EQUIV ELG LIFE	46.6	Ň/A					
NET SALVAGE %	2.0%	0.0%					
RESERVE RATIO	69.8%	N/A					

COMMENTS

Refer to the detail on the ALG, ELG, and Remaining Life depreciation rate calculations for more information.

accts04



Schedule RLS 7-1



Schedule RLS 8-1

ER-2006-0314 KCPL SCHEDULE 2 Depreciation Rate Recommendation

							Staff Proposed					Existing Order	ed	
Account		A Jur Pla	Adjusted risdictional int Balance	ASL	lowa	Average	Depreciation	Annual	Annual Accrual	ASL	lowa	Average	Depreciation	Annual
Number	Description	6	6/30/2006	(Years)	Curve	Net Salvage	Rate	Accrual	Net Cost of Removal	(Years)	Curve	Net Salvage	Rate	Accrual
(1)	(2)		(3)	(4)	(5)	(6)	(7)={[100%-(6)]/(4)}	(8)=[(3)*(7)]	(9)={(3)*([-(6)]/(4))}	(9)	(10)	(11)	(12)	(13)=[(3)*(12)]
	STEAM PRODUCTION PLANT													
311.00	Structures and Improvements	\$	45,514,273	60.0	R3	-12%	1.87%	\$851,117	\$91,029	30.5		-1%	3.31%	\$1,506,522
311.00	Structures and Improvements-Hawthorn 5 Rebuild	\$	4,512,625	60.0	R3	-12%	1.87%	\$84,386	\$9,025				0.82%	\$37,004
312.00	Boiler Plant Eq. (including trains)	\$	304,286,464	45.0	R2	-6%	2.35%	\$7,150,732	\$405,715	28.6		-4%	3.63%	\$11,045,599
312.00	Boiler Plant EqHawthorn 5 Rebuild	\$	119,194,508	45.0	R2	-6%	2.35%	\$2,801,071	\$158,926				0.90%	\$1,072,751
314.00	Turbogenerator Units	\$	120,289,821	45.0	R2.5	-7%	2.38%	\$2,862,898	\$187,117	32.3		-1%	3.13%	\$3,765,071
315.00	Accessory Electric Eq.	\$	46,923,978	45.0	L1	-2%	2.26%	\$1,060,482	\$20,855	31.3		-1%	3.23%	\$1,515,644
315.00	Accessory Electric Equipment-Hawthorn 5 Rebuild	\$	20,020,518	45.0	L1	-2%	2.26%	\$452,464	\$8,898				0.80%	\$160,164
315.00	Accessory Electric Eq(like 391)	\$	7,655	45.0	L1	-2%	2.26%	\$173	\$3	18.4		1%	5.40%	\$413
316.00	Miscellaneous Power Plant Eq.	\$	13,063,793	36.0	R3	2%	2.80%	\$365,786	(\$7,258)	28.0		2%	3.50%	\$457,233
316.00	Miscellaneous Power Plant EqHawthorn 5 Rebuild	\$	1,165,814	36.0	R3	2%	2.80%	\$ <u>32,643</u>	(<u>\$648</u>)				0.87%	\$ <u>10,143</u>
	Total Steam Production Plant:	\$	674,979,449					\$ 15,661,751	\$873,664					\$ 19,570,544
	NUCLEAR PRODUCTION PLANT													
321.00	Nuc Structures & Improvements	\$	232,471,905	59.5	SQ	-4%	1.75%	\$4,068,258	\$156,284				1.55%	\$3,603,315
322.00	Nuc Reactor Plant Eq.	\$	388,939,912	59.5	SQ	-5%	1.76%	\$6,845,342	\$326,840				1.73%	\$6,728,660
323.00	Nuc Turbogenerator Units	\$	94,539,560	59.5	SQ	-1%	1.70%	\$1,607,173	\$15,889				1.96%	\$1,852,975
324.00	Nuc Accessory Electric Eq.	\$	77,415,819	59.5	SQ	0%	1.68%	\$1,300,586	\$0				1.73%	\$1,339,294
325.00	Nuc Miscellaneous Power Plant Eq.	\$	38,150,311	59.5	SQ	2%	1.65%	\$629,480	(\$12,824)				2.36%	\$900,347
328.00	Nuc Plant Write-Off	\$ ((144,993,259)	59.5	SQ	0%	1.68%	(<u>\$2,435,887</u>)	\$ <u>0</u>				1.73%	(\$2,508,383)
	Total Nuclear Production Plant:	\$	686,524,248					\$ 12,014,952	486,189					\$ 11,916,208
	OTHER PRODUCTION PLANT													
341.00	Structures and Improvements	\$	2,398,024	60.0	R2.5	0%	1.74%	\$41,726	\$0	24.3		0%	4.12%	\$98,799
342.00	Fuel Holders, Producers and Access.	\$	5,755,918	35.0	S6	0%	2.86%	\$164,619	\$0	24.3		0%	4.12%	\$237,144
344.00	Generators	\$	139,643,739	35.0	R2.5	-3%	2.94%	\$4,105,526	\$119,695	24.3		0%	4.12%	\$5,753,322
345.00	Accessory Electric Equipment	\$	7,453,976	35.0	R4	0%	2.86%	\$ <u>213,184</u>	\$ <u>0</u>	24.3		0%	4.12%	\$ <u>307,104</u>
	Total Other Production Plant:	\$	155,251,657					\$ 4,525,055	\$119,695					\$ 6,396,368
	OTHER PRODUCTION PLANT-WIND													
341.00	Structures and Improvements		\$0	20.0	SQ	0%	5.00%	\$0		20.0			5.00%	\$0
343.10	Wind Turbines		\$0	20.0	SQ	0%	5.00%	\$0		20.0			5.00%	\$0
345.00	Accessory Electric Equipment		\$ <u>0</u>	20.0	SQ	0%	5.00%	\$ <u>0</u>		20.0			5.00%	\$ <u>0</u>
	Total Other Production-Wind Plant:		\$0					\$ <u>0</u>						\$ <u>0</u>

ER-2006-0314 KCPL

SCHEDULE 2 Depreciation Rate Recommendation

				Staff Proposed							Existing Ordered						
•		J	Adjusted urisdictional	401	1	•	Dennelation		A	Annual	401		•	Dennedation		A	
Account	Description	Р	lant Balance	ASL	lowa	Average	Depreciation		Annual	Accrual	ASL	Iowa	Average	Depreciation		Annual	
Number	Description		6/30/2006	(rears)	Curve	Net Salvage	Rate		Accruai	Net Cost of Removal	(Years)	Curve	Net Salvage	Rate		Accruai	
	TRANSMISSION PLANT																
352.00	Structures and Improvements	\$	2,367,556	60.0	S1.5	-1%	1.69%		\$40,012	\$395	73.5		0%	1.36%		\$32,199	
353.00	Station Eq.	\$	67,304,577	55.0	R1.5	-8%	1.97%		\$1,325,900	\$97,898	42.0		6%	2.24%		\$1,507,623	
353.00	Station EqCommunication Eq. (like 397)	\$	3,290,197	55.0	R1.5	-8%	1.97%		\$64,817	\$4,786	38.8		3%	2.50%		\$82,255	
354.00	Towers and Fixtures	\$	2,154,273	55.0	L4	0%	1.82%		\$39,208	\$0	50.0		0%	2.00%		\$43,085	
355.00	Poles and Fixtures	\$	51,674,525	55.0	SQ	-26%	2.29%		\$1,183,347	\$244,280	39.0		-40%	3.59%		\$1,855,115	
356.00	Overhead Conductors and Devices	\$	41,685,986	55.0	R2	55%	0.82%		\$341,825	(\$416,860)	48.0		-49%	3.10%		\$1,292,266	
357.00	Underground Conduit	\$	1,646,721	60.0	R5	0%	1.67%		\$27,500	\$0	75.5		0%	1.32%		\$21,737	
358.00	Underground Conductors and Devices	\$	1,509,025	60.0	L4	0%	1.67%		\$25,201	\$ <u>0</u>	39.2		0%	2.55%		\$38,480	
	Total Transmission Plant:	\$	171,632,860					\$	3,047,809	(\$69,502)					\$	4,872,760	
	DISTRIBUTION PLANT																
361.00	Structures and Improvements	\$	5,109,675	60.0	L0.5	-2%	1.70%		\$86,864	\$1,703	33.8		0%	2.96%		\$151,246	
362.00	Station Eq.	\$	80,086,584	55.0	R1	-5%	1.91%		\$1,529,654	\$72,806	45.0		10%	2.00%		\$1,601,732	
362.00	Station EqCommunication Eq. (like 397)	\$	1,957,923	55.0	R1	-5%	1.91%		\$37,396	\$1,780	38.8		3%	2.50%		\$48,948	
364.00	Poles, Towers and Fixtures	\$	114,992,975	55.0	L1.5	-20%	2.18%		\$2,506,847	\$418,156	32.0		-31%	4.09%		\$4,703,213	
365.00	Overhead Conductors and Devices	\$	88,905,798	55.0	L0	2%	1.78%		\$1,582,523	(\$32,329)	41.0		17%	2.02%		\$1,795,897	
366.00	Underground Conduit	\$	74,505,280	60.0	S0.5	-17%	1.95%		\$1,452,853	\$211,098	75.3		0%	1.33%		\$990,920	
367.00	Underground Conductors and Devices	\$	154,828,560	60.0	S0	4%	1.60%		\$2,477,257	(\$103,219)	65.0		20%	1.23%		\$1,904,391	
368.00	Line Transformers	\$	120,066,514	35.0	R2	-55%	3.00%		\$3,601,995	\$1,886,760	30.0		7%	3.10%		\$3,722,062	
369.00	Overhead Services	\$	39,802,369	55.0	R1.5	-116%	3.93%		\$1,564,233	\$839,468	33.8		-6%	3.14%		\$1,249,794	
370.00	Meters	\$	46,462,809	55.0	R0.5	3%	1.77%		\$822,392	(\$25,343)	23.6		-2%	4.31%		\$2,002,547	
371.00	Installations on Customers' Premises	\$	6,863,264	25.0	L0.5	-7%	4.28%		\$293,748	\$19,217	10.9		-4%	9.51%		\$652,696	
373.00	Street Lighting and Signal Systems	\$	6,928,608	20.0	L0	0%	5.00%		\$346,430	\$ <u>0</u>	24.4		10%	3.69%		\$255,666	
	Total Distribution Plant:	\$	740,510,359					\$	16,302,193	\$3,290,097					\$	19,079,113	
	GENERAL PLANT																
390.00	Structures and Improvements	\$	29,668,966	60.0	L0	-2%	1.70%		\$504,372	\$9,890	39.4		0%	2.54%		\$753,592	
391.00	Office Furniture and Eq.	\$	6,967,949	20.0	R2	31%	3.45%		\$240,394	(\$108,003)	18.4		1%	5.40%		\$376,269	
392.00	Transportation Eq.	\$	15,288,503	10.0	R1.5	22%	7.75%		\$1,184,859	(\$336,347)	13.3		28%	5.43%		\$830,166	
393.00	Stores Eq.	\$	361,039	30.0	R2.5	0%	3.33%		\$12,023	\$0	27.1		3%	3.58%		\$12,925	
394.00	Tools, Shop and Garage Eq.	\$	1,730,833	40.0	R2.5	2%	2.45%		\$42,405	(\$865)	37.5		2%	2.61%		\$45,175	
395.00	Laboratory Eq.	\$	2,561,898	30.0	R2.5	2%	3.26%		\$83,518	(\$1,708)	29.4		1%	3.37%		\$86,336	
396.00	Power Operated Eq.	\$	5,855,501	15.0	R1.5	9%	6.03%		\$353,087	(\$35,133)	16.2		10%	5.55%		\$324,980	
397.00	Communications Eq.	\$	40,305,253	30.0	S0	0%	3.33%		\$1,342,165	\$0	38.8		3%	2.50%		\$1,007,631	
398.00	Miscellaneous Eq.	\$	111,674	20.0	L0	10%	4.50%		\$5,025	(<u>\$558</u>)	31.3		1%	3.16%		\$3,529	
	Total General Plant:	\$	102,851,616					\$	3,767,848	(\$472,725)					\$	3,440,603	
	Total Plant:	\$	2,531,750,189						\$55,319,609	\$4,227,417						\$65,275,596	

ER-2006-0314 KCPL SCHEDULE 2 Depreciation Rate Recommendation

				Staff Proposed						Existing Ordered						
Account		Ju Pl	Adjusted urisdictional ant Balance	ASL	lowa	Average	Depreciation	Annual	Annual Accrual	ASL	lowa	Average	Depreciation	Annual		
Number	Description		6/30/2006	(Years)	Curve	Net Salvage	Rate	Accrual	Net Cost of Removal	(Years)	Curve	Net Salvage	Rate	Accrual		
(1)	(2)		(3)	(4)	(5)	(6)	(7)={[100%-(6)]/(4)}	(8)=[(3)*(7)]	(9)={(3)*([-(6)]/(4))}	(10)	(11)	(12)	(13)	(14)=[(3)*(13)]		
	STEAM PRODUCTION PLANT															
311.00	Structures and Improvements	\$	45,514,273	60.0	R3	-12%	1.87%	\$851,117	\$91,029	30.5		-1%	3.31%	\$1,506,522		
311.00	Structures and Improvements-Hawthorn 5 Rebuild	\$	4,512,625	60.0	R3	-12%	1.87%	\$84,386	\$9,025				0.82%	\$37,004		
312.00	Boiler Plant Eq. (including trains)	\$	304,286,464	45.0	R2	-6%	2.35%	\$7,150,732	\$405,715	28.6		-4%	3.63%	\$11,045,599		
312.00	Boiler Plant EqHawthorn 5 Rebuild	\$	119,194,508	45.0	R2	-6%	2.35%	\$2,801,071	\$158,926				0.90%	\$1,072,751		
314.00	Turbogenerator Units	\$	120,289,821	45.0	R2.5	-7%	2.38%	\$2,862,898	\$187,117	32.3		-1%	3.13%	\$3,765,071		
315.00	Accessory Electric Eq.	\$	46,923,978	45.0	L1	-2%	2.26%	\$1,060,482	\$20,855	31.3		-1%	3.23%	\$1,515,644		
315.00	Accessory Electric Equipment-Hawthorn 5 Rebuild	\$	20,020,518	45.0	L1	-2%	2.26%	\$452,464	\$8,898				0.80%	\$160,164		
315.00	Accessory Electric Eq(like 391)	\$	7,655	45.0	L1	-2%	2.26%	\$173	\$3	18.4		1%	5.40%	\$413		
316.00	Miscellaneous Power Plant Eq.	\$	13,063,793	36.0	R3	2%	2.80%	\$365,786	(\$7,258)	28.0		2%	3.50%	\$457,233		
316.00	Miscellaneous Power Plant EqHawthorn 5 Rebuild	\$	1,165,814	36.0	R3	2%	2.80%	\$ <u>32,643</u>	(<u>\$648</u>)				0.87%	\$ <u>10,143</u>		
	Total Steam Production Plant:	\$	674,979,449					\$ 15,661,751	\$873,664					\$ 19,570,544		
321.00	Nuc Structures & Improvements	\$	232 471 905	59.5	50	-4%	1 75%	\$4 068 258	\$156 284				1.55%	\$3 603 315		
322.00	Nuc Reactor Plant Eq.	¢	388 030 012	59.5	50	-5%	1.76%	\$6 845 342	\$326.840				1 73%	\$6,728,660		
323.00	Nuc Turbogenerator Linits	¢	94 539 560	59.5	50	-1%	1.70%	\$1,607,173	\$15,889				1.75%	\$1,852,075		
324.00		s	77 415 819	59.5	so	-1%	1.68%	\$1,300,586	\$0				1.30%	\$1,339,294		
325.00	Nuc Miscellaneous Power Plant Eq.	¢	38 150 311	59.5	50	2%	1.65%	\$629,480	(\$12,824)				2.36%	\$900.347		
328.00	Nuc Plant Write-Off	\$ \$	(144,993,259)	59.5	SQ	0%	1.68%	(\$2.435.887)	\$0				1.73%	(\$2,508,383)		
	Total Nuclear Production Plant:	\$	686,524,248					\$ 12,014,952	486,189					\$ 11,916,208		
	OTHER PRODUCTION PLANT															
341.00	Structures and Improvements	\$	2,398,024	60.0	R2.5	0%	1.74%	\$41,726	\$0	24.3		0%	4.12%	\$98,799		
342.00	Fuel Holders, Producers and Access.	\$	5,755,918	35.0	S6	0%	2.86%	\$164,619	\$0	24.3		0%	4.12%	\$237,144		
344.00	Generators	\$	139,643,739	35.0	R2.5	-3%	2.94%	\$4,105,526	\$119,695	24.3		0%	4.12%	\$5,753,322		
345.00	Accessory Electric Equipment	\$	7,453,976	35.0	R4	0%	2.86%	\$ <u>213,184</u>	\$ <u>0</u>	24.3		0%	4.12%	\$ <u>307,104</u>		
	Total Other Production Plant:	\$	155,251,657					\$ 4,525,055	\$119,695					\$ 6,396,368		
	OTHER PRODUCTION PLANT-WIND															
341.00	Structures and Improvements		\$0	20.0	SQ	0%	5.00%	\$0		20.0			5.00%	\$0		
343.10	Wind Turbines		\$0	20.0	SQ	0%	5.00%	\$0		20.0			5.00%	so		
345.00	Accessory Electric Equipment		\$0	20.0	SQ	0%	5.00%	\$0		20.0			5.00%	\$0		
	Total Other Production-Wind Plant:		\$0					\$ <u>0</u>						\$ <u>0</u>		

ER-2006-0314 KCPL

SCHEDULE 2 Depreciation Rate Recommendation

				Staff Proposed							Existing Ordered						
•		J	Adjusted urisdictional	401	1	•	Dennelation		A	Annual	401		•	Dennedation		A	
Account	Description	Р	lant Balance	ASL	lowa	Average	Depreciation		Annual	Accrual	ASL	Iowa	Average	Depreciation		Annual	
Number	Description		6/30/2006	(rears)	Curve	Net Salvage	Rate		Accruai	Net Cost of Removal	(Years)	Curve	Net Salvage	Rate		Accruai	
	TRANSMISSION PLANT																
352.00	Structures and Improvements	\$	2,367,556	60.0	S1.5	-1%	1.69%		\$40,012	\$395	73.5		0%	1.36%		\$32,199	
353.00	Station Eq.	\$	67,304,577	55.0	R1.5	-8%	1.97%		\$1,325,900	\$97,898	42.0		6%	2.24%		\$1,507,623	
353.00	Station EqCommunication Eq. (like 397)	\$	3,290,197	55.0	R1.5	-8%	1.97%		\$64,817	\$4,786	38.8		3%	2.50%		\$82,255	
354.00	Towers and Fixtures	\$	2,154,273	55.0	L4	0%	1.82%		\$39,208	\$0	50.0		0%	2.00%		\$43,085	
355.00	Poles and Fixtures	\$	51,674,525	55.0	SQ	-26%	2.29%		\$1,183,347	\$244,280	39.0		-40%	3.59%		\$1,855,115	
356.00	Overhead Conductors and Devices	\$	41,685,986	55.0	R2	55%	0.82%		\$341,825	(\$416,860)	48.0		-49%	3.10%		\$1,292,266	
357.00	Underground Conduit	\$	1,646,721	60.0	R5	0%	1.67%		\$27,500	\$0	75.5		0%	1.32%		\$21,737	
358.00	Underground Conductors and Devices	\$	1,509,025	60.0	L4	0%	1.67%		\$25,201	\$ <u>0</u>	39.2		0%	2.55%		\$38,480	
	Total Transmission Plant:	\$	171,632,860					\$	3,047,809	(\$69,502)					\$	4,872,760	
	DISTRIBUTION PLANT																
361.00	Structures and Improvements	\$	5,109,675	60.0	L0.5	-2%	1.70%		\$86,864	\$1,703	33.8		0%	2.96%		\$151,246	
362.00	Station Eq.	\$	80,086,584	55.0	R1	-5%	1.91%		\$1,529,654	\$72,806	45.0		10%	2.00%		\$1,601,732	
362.00	Station EqCommunication Eq. (like 397)	\$	1,957,923	55.0	R1	-5%	1.91%		\$37,396	\$1,780	38.8		3%	2.50%		\$48,948	
364.00	Poles, Towers and Fixtures	\$	114,992,975	55.0	L1.5	-20%	2.18%		\$2,506,847	\$418,156	32.0		-31%	4.09%		\$4,703,213	
365.00	Overhead Conductors and Devices	\$	88,905,798	55.0	L0	2%	1.78%		\$1,582,523	(\$32,329)	41.0		17%	2.02%		\$1,795,897	
366.00	Underground Conduit	\$	74,505,280	60.0	S0.5	-17%	1.95%		\$1,452,853	\$211,098	75.3		0%	1.33%		\$990,920	
367.00	Underground Conductors and Devices	\$	154,828,560	60.0	S0	4%	1.60%		\$2,477,257	(\$103,219)	65.0		20%	1.23%		\$1,904,391	
368.00	Line Transformers	\$	120,066,514	35.0	R2	-55%	3.00%		\$3,601,995	\$1,886,760	30.0		7%	3.10%		\$3,722,062	
369.00	Overhead Services	\$	39,802,369	55.0	R1.5	-116%	3.93%		\$1,564,233	\$839,468	33.8		-6%	3.14%		\$1,249,794	
370.00	Meters	\$	46,462,809	55.0	R0.5	3%	1.77%		\$822,392	(\$25,343)	23.6		-2%	4.31%		\$2,002,547	
371.00	Installations on Customers' Premises	\$	6,863,264	25.0	L0.5	-7%	4.28%		\$293,748	\$19,217	10.9		-4%	9.51%		\$652,696	
373.00	Street Lighting and Signal Systems	\$	6,928,608	20.0	L0	0%	5.00%		\$346,430	\$ <u>0</u>	24.4		10%	3.69%		\$255,666	
	Total Distribution Plant:	\$	740,510,359					\$	16,302,193	\$3,290,097					\$	19,079,113	
	GENERAL PLANT																
390.00	Structures and Improvements	\$	29,668,966	60.0	L0	-2%	1.70%		\$504,372	\$9,890	39.4		0%	2.54%		\$753,592	
391.00	Office Furniture and Eq.	\$	6,967,949	20.0	R2	31%	3.45%		\$240,394	(\$108,003)	18.4		1%	5.40%		\$376,269	
392.00	Transportation Eq.	\$	15,288,503	10.0	R1.5	22%	7.75%		\$1,184,859	(\$336,347)	13.3		28%	5.43%		\$830,166	
393.00	Stores Eq.	\$	361,039	30.0	R2.5	0%	3.33%		\$12,023	\$0	27.1		3%	3.58%		\$12,925	
394.00	Tools, Shop and Garage Eq.	\$	1,730,833	40.0	R2.5	2%	2.45%		\$42,405	(\$865)	37.5		2%	2.61%		\$45,175	
395.00	Laboratory Eq.	\$	2,561,898	30.0	R2.5	2%	3.26%		\$83,518	(\$1,708)	29.4		1%	3.37%		\$86,336	
396.00	Power Operated Eq.	\$	5,855,501	15.0	R1.5	9%	6.03%		\$353,087	(\$35,133)	16.2		10%	5.55%		\$324,980	
397.00	Communications Eq.	\$	40,305,253	30.0	S0	0%	3.33%		\$1,342,165	\$0	38.8		3%	2.50%		\$1,007,631	
398.00	Miscellaneous Eq.	\$	111,674	20.0	L0	10%	4.50%		\$5,025	(<u>\$558</u>)	31.3		1%	3.16%		\$3,529	
	Total General Plant:	\$	102,851,616					\$	3,767,848	(\$472,725)					\$	3,440,603	
	Total Plant:	\$	2,531,750,189						\$55,319,609	\$4,227,417						\$65,275,596	