Exhibit No.: KCP1L-59

Issue: Depreciation Study Witness: John J. Spanos Type of Exhibit: Direct Testimony Sponsoring Party: Kansas City Power & Light Company Case No.: ER-2010-____ Date Testimony Prepared: June 4, 2010

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-____

DIRECT TESTIMONY

OF

JOHN J. SPANOS

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri June 2010

KCPL Exhibit No.KCPL Date 2/4/11_ Reporter LMJ File No. ER-2010-0355

DIRECT TESTIMONY

OF

JOHN J. SPANOS

Case No. ER-2010-____

1	Q.	Please state your name and business address.
2	А.	John J. Spanos, 207 Senate Avenue, Camp Hill, Pennsylvania, 17011.
3	Q.	On whose behalf are you testifying?
4	А.	I am testifying on behalf of Kansas City Power & Light Company ("KCP&L" or the
5		"Company").
6	Q.	Please state your educational background and describe your professional
7		training and experience.
8	Α.	I have Bachelor of Science degrees in Industrial Management and Mathematics from
9		Carnegie-Mellon University and a Master of Business Administration from York
10		College of Pennsylvania.
11	Q.	By whom and in what capacity have you been employed?
12	А.	I am employed by Gannett Fleming as Vice President of the Valuation and Rate
13		Division, which provides depreciation consulting services to utility companies in the
14		United States and Canada. I am responsible for conducting depreciation, valuation
15		and original cost studies, determining service life and salvage estimates, conducting
16		field reviews, presenting recommended depreciation rates to clients, and supporting
17		such rates before state and federal regulatory agencies. I have been associated with
18		the firm since college graduation in 1986.

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Q. Do you belong to any professional societies?

A. Yes. I am a member of the Society of Depreciation Professionals and the American
 Gas Association/Edison Electric Institute Industry Accounting Committee.

Q. Do you hold any special certification as a depreciation expert?

A. Yes. The Society of Depreciation Professionals has established national standards for depreciation professionals. The Society administers an examination to become certified in this field. I passed the certification exam in September 1997, and was recertified in August 2003 and February 2008.

9 Q. Can you outline your experience in the field of depreciation?

10 A. Yes. A synopsis of my depreciation experience is set forth in Appendix A.

Q. Have you received any additional education relating to utility plant depreciation?

A. Yes. I have completed the following courses conducted by Depreciation Programs,
Inc.: "Techniques of Life Analysis," "Techniques of Salvage and Depreciation
Analysis," "Forecasting Life and Salvage," "Modeling and Life Analysis Using
Simulation" and "Managing a Depreciation Study." I have also completed the
"Introduction to Public Utility Accounting" program conducted by the American Gas
Association. –

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Q. Have you previously testified on public utility ratemaking matters?

A. Yes. I have submitted testimony to the Pennsylvania Public Utility Commission; the
Commonwealth of Kentucky Public Service Commission; the Public Utilities
Commission of Ohio; the Nevada Public Utility Commission; the Public Utilities
Board of New Jersey; the Missouri Public Service Commission; the Massachusetts
Department of Telecommunications and Energy; the Alberta Energy & Utility Board;

1 the Idaho Public Utility Commission; the Louisiana Public Service Commission; the 2 State Corporation Commission of Kansas; the Oklahoma Corporate Commission; the 3 Public Service Commission of South Carolina; Railroad Commission of Texas - Gas 4 Services Division; the New York Public Service Commission; Illinois Commerce Commission; the Indiana Utility Regulatory Commission; the California Public 5 Utilities Commission; the Federal Energy Regulatory Commission ("FERC"); the 6 7 Arkansas Public Service Commission; the Public Utility Commission of Texas; District of Columbia, Delaware Public Service Commission, Maryland Public Service 8 9 Commission; Washington Utilities and Transportation Commission; the Tennessee 10 Regulatory Commission; the Regulatory Commission of Alaska; and the North 11 Carolina Utilities Commission.

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Q. What is the purpose of your testimony?

A. I am sponsoring Schedule JJS2010-1 stating the results of my depreciation study for
 KCP&L's electric plant as of December 31, 2008 (the "2008 Depreciation Study" or
 "Depreciation Study").

16 Q. Would you please summarize your testimony?

A. My testimony will explain the methods and procedures of the Depreciation Study and
set forth the annual depreciation rates as of December 31, 2008. Schedule JJS2010-1
contains the report which sets forth detailed methods, procedures and results of the
Depreciation Study as of December 31, 2008. This report will be explained in Part II
of my testimony.

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Q.

What are the principal conclusions of your study and the bases for them?

A. The principal conclusions of the study are depreciation accrual rates by account for KCP&L. Overall, the proposed depreciation rates are determined based on the remaining life method and the utilization of the life span procedure.

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Q. Please describe the contents of your report.

A. My report is presented in three parts. Part I, Introduction, presents the scope and basis for the Depreciation Study. Part II, Methods Used in the Estimation of Depreciation, includes descriptions of the basis of the study, the estimation of survivor curves and net salvage and the calculation of annual and accrued depreciation. Part III, Results of Study, presents a description of the results, summary of the depreciation calculations, graphs and tables that relate to the service life and net salvage analyses, and the detailed depreciations.

13 The table on pages III-4 through III-8 of the report presents the estimated 14 survivor curve, the net salvage percent, the original cost as of December 31, 2008, the 15 book reserve and the calculated annual depreciation accrual and rate for each account 16 or subaccount. The section beginning on page III-9 of the report presents the results 17 of the retirement rate analyses prepared as the historical bases for the service life 18 estimates. The section beginning on page III-149 of Schedule JJS2010-1 presents the 19 results of the salvage analysis. The section beginning on page III-215 of Schedule 20 JJS2010-1 presents the depreciation calculations related to surviving original cost as 21 of December 31, 2008.



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II. METHODS USED IN DEPRECIATION STUDY

Q. Please define the concept of depreciation.

A. Depreciation refers to the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes that can be reasonably anticipated or contemplated, against which the Company is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and the requirements of public authorities.

Q. In preparing the depreciation study, did you follow generally accepted practices in the field of depreciation and valuation?

A Yes.

13 Q. Please identify the depreciation method that you used.

A. I used the straight line remaining life method of depreciation, with the average service life procedure. This method reflects a change from how rates were adopted for KCP&L the last time depreciation was reviewed. This method of depreciation aims to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit or group of assets in a systematic and rational manner. –

19 Q. What are your recommended annual depreciation accrual rates for KCP&L?

A. My recommended annual depreciation accrual rates as of December 31, 2008 are set
forth on pages III-4 through III-8 of Schedule JJS2010-1.

22 Q. How did you determine the recommended annual depreciation accrual rates?

A. I did this in two phases. In the first phase, I estimated the service life and net salvage
characteristics for each depreciable group, that is, each plant account or subaccount

identified as having similar characteristics. In the second phase, I calculated the composite remaining lives and annual depreciation accrual rates based on the service life and net salvage estimates determined in the first phase.

Q. Please describe the first phase of the depreciation study, in which you estimated the service life and net salvage characteristics for each depreciable group.

A. The service life and net salvage study consisted of compiling historic data from records related to KCPL's plant; analyzing these data to obtain historic trends of survivor and net salvage characteristics; obtaining supplementary information from management, and operating personnel concerning practices and plans as they relate to plant operations; and interpreting the above data and the estimates used by other electric utilities to form judgments of average service life and net salvage characteristics.

Q. What historic data did you analyze for the purpose of estimating service life characteristics?

A. I analyzed the Company's accounting entries that record plant transactions during the
 89-year period 1920 through 2008. The transactions included additions, retirements,
 transfers and the related balances. The Company records also included surviving
 dollar value by year installed for each plant account as of December 31, 2008.

19 Q. What method did you use to analyze this service life data?

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A. I used the retirement rate method for all accounts. This is the most appropriate
 method when aged retirement data are available, because this method determines the
 average rates of retirement actually experienced by the Company during the period
 covered by the study.

Q. Would you explain how you used the retirement rate method to analyze KCP&L's service life data?

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3 A. I applied the retirement rate method to each different group of property in the study. 4 For each property group, I used the retirement rate method to form a life table which, 5 when plotted, shows an original survivor curve for that property group. Each original 6 survivor curve represents the average survivor pattern experienced by the several 7 vintage groups during the experience band studied. The survivor patterns do not necessarily describe the life characteristics of the property group; therefore, 8 9 interpretation of the original survivor curves is required in order to use them as valid 10 considerations in estimating service life. The Iowa-type survivor curves were used to 11 perform these interpretations.

Q. What is an "Iowa-type survivor curve" and how did you use such curves to estimate the service life characteristics for each property group?

A. Iowa-type curves are a widely used group of generalized survivor curves that contain
 the range of survivor characteristics usually experienced by utilities and other
 industrial companies. The Iowa curves were developed at the Iowa State College
 Engineering Experiment Station through an extensive process of observing and
 classifying the ages at which various types of property used by utilities and other
 industrial companies had been retired.

Iowa-type curves are used to smooth and extrapolate original survivor curves determined by the retirement rate method. The Iowa curves and truncated Iowa curves were used in this study to describe the forecasted rates of retirement based on the observed rates of retirement and the outlook for future retirements. As I will

explain, the use of truncated curves is appropriate to reflect retirements of plant components that may not be fully depreciated at the time a plant is retired.

The estimated survivor curve designations for each depreciable property group indicate the average service life, the family within the Iowa system to which the property group belongs, and the relative height of the mode. For example, the Iowa 55-R2 indicates an average service life of fifty-five years; a right-moded, or R, type curve (the mode occurs after average life for right-moded curves); and a moderate height, 2, for the mode (possible modes for R type curves range from 1 to 5).

Q. What approach did you use to estimate the lives of significant facilities structures such as production plants and service centers?

A. I used the life span technique to estimate the lives of significant facilities for which concurrent retirement of the entire facility is anticipated. In this technique, the survivor characteristics of such facilities are described by the use of interim survivor curves and estimated probable retirement dates.

The interim survivor curves describe the rate of retirement related to the replacement of elements of the facility, such as, for a building, the retirements of plumbing, heating, doors, windows, roofs, etc., that occur during the life of the facility. The probable retirement date provides the rate of final retirement for each year of installation for the facility by truncating the interim survivor curve for each installation year at its attained age at the date of probable retirement. The use of interim survivor curves truncated at the date of probable retirement provides a consistent method for estimating the lives of the several years of installation for a

particular facility inasmuch as a single concurrent retirement for all years of installation will occur when it is retired.

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Q. Has Gannett Fleming used this approach in other proceedings?

A. Yes, we have used the life span technique in performing depreciation studies presented to and accepted by many public utility commissions across the United States and Canada.

Q. What are the bases for the probable retirement years that you have estimated for each facility?

9 A. The bases for the probable retirement years are life spans for each facility that are 10 based on judgment and incorporate consideration of the age, use, size, nature of 11 construction, management outlook and typical life spans experienced and used by 12 other electric utilities for similar facilities. Most of the life spans result in probable 13 retirement years that are many years in the future. As a result, the retirements of 14 these facilities are not vet subject to specific management plans. Such plans would be 15 premature. At the appropriate time, detailed studies of the economics of 16 rehabilitation and continued use or retirement of the structure will be performed and 17 the results incorporated in the estimation of the facility's life span.

18 Q. Did you physically observe KCP&L's plants and equipment as part of your 19 depreciation study?

A. Yes. I made a field review of KCP&L's property on August 17-19, 2009 to observe representative portions of plant. Field reviews are conducted to become familiar with Company operations and obtain an understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements. This knowledge, as well as information from other discussions

with management, was incorporated in the interpretation and extrapolation of the statistical analyses.

Q. How did your experience in development of other depreciation studies affect your work in this case?

A. Because I customarily conduct field reviews for my depreciation studies, I have had the opportunity to visit scores of similar plants and meet with operations personnel at other companies. The knowledge accumulated from those visits and meetings provide me useful information that I can draw on to confirm or challenge my numerical analyses concerning plant condition and remaining life estimates.

Q. Would you please explain the concept of "net salvage"?

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A. Net salvage is a component of the service value of capital assets that is recovered through depreciation rates. The service value of an asset is its original cost less its net salvage. Net salvage is the salvage value received for the asset upon retirement less the cost to retire the asset. When the cost to retire exceeds the salvage value, the result is negative net salvage.

Inasmuch as depreciation expense is the loss in service value of an asset during a defined period, *e.g.*, one year, it must include a ratable portion of both the original cost and the net salvage. That is, the net salvage related to an asset should be incorporated in the cost of service during the same period as its original cost so that customers receiving service from the asset pay rates that include a portion of both elements of the asset's service value, the original cost and the net salvage value.

For example, the full recovery of the service value of a \$1000 electric pole will include not only the \$1000 of original cost, but also, on average, \$450 to remove the pole at the end of its life and \$50 in salvage value. In this example, the net salvage component is negative \$400 (\$50 - \$450), and the net salvage percent is negative 40% ((\$50 - \$450)/\$1000).

Q. Please describe how you estimated net salvage percentages.

A. I estimated the net salvage percentages based on judgment that, for most accounts, incorporated analyses of the historical data for the period 1976 through 2008 and considered estimates for other electric companies. In the historical analyses, the net salvage, cost of removal and gross salvage amounts were expressed as percents of the original cost retired. These percents were calculated on annual and three-year moving average bases for the 1976 to 2008 period.

10Q.Please describe the second phase of the process that you used in the depreciation11study in which you calculated composite remaining lives and annual12depreciation accrual rates.

A. After I estimated the service life and net salvage characteristics for each depreciable
 property group, I calculated the annual depreciation accrual rates for each group
 based on the straight line remaining life method, using remaining lives weighted
 consistent with the average service life procedure. The annual depreciation accrual
 rates were developed as of December 31, 2008.

18 Q. Please describe the straight line remaining life method of depreciation.

A. The straight line remaining life method of depreciation allocates the original cost of
 the property, less accumulated depreciation, less future net salvage, in equal amounts
 to each year of remaining service life.



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Q. Please describe the average service life procedure for calculating remaining life accrual rates.

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A. The average service life procedure defines the group for which the remaining life annual accrual is determined. Under this procedure, the annual accrual rate is determined for the entire group or account based on its average remaining life and this rate is applied to the surviving balance of the group's cost. The average remaining life of the group is calculated by first dividing the future book accruals (original cost less allocated book reserve less future net salvage) by the average remaining life for each vintage. The average remaining life for each vintage is derived from the area under the survivor curve between the attained age of the vintage and the maximum age. Then, the sum of the future book accruals is divided by the sum of the annual accruals to determine the average remaining life of the entire group for use in calculating the annual depreciation accrual rate.

Q. Please use an example to illustrate the development of the annual depreciation
accrual rate for a particular group of property in your depreciation studies.

A. I will use Account 367.00, Underground Conductors and Devices, as an example
 because it is one of the largest depreciable groups and represents approximately seven
 percent of depreciable plant.

The retirement rate method was used to analyze the survivor characteristics of this property group. Aged plant accounting data were compiled from 1927 through 2008 and analyzed for periods that best represent the overall service life of this property. The life tables for the 1927-2008 and 1989-2008 experience bands are presented on pages III-107 through III-110 of Schedule JJS2010-1. The life table displays the retirement and surviving ratios of the aged plant data exposed to

retirement by age interval. For example, page III-107 shows \$1,249,341 retired during age interval 0.5-1.5 with \$374,525,652 exposed to retirement at the beginning of the interval. Consequently, the retirement ratio 0.0033 is (\$1,249,341/\$374,525,652) and the surviving ratio is 0.9967 (1-.0033). The percent surviving at age 0.5 of .9967 percent is multiplied by the survivor ratio of 99.78 to derive the percent surviving at age 1.5 of 99.45 percent. This process continues for the remaining age intervals for which plant was exposed to retirement during the period 1927-2008. The resultant life table, along with the 1989-2008 life table, or original survivor curves, are plotted along with the estimated smooth survivor curve, the 50-R1.5 on page III-106.

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The net salvage percent is presented on pages III-197 and III-198 of Schedule 12 JJS2010-1. The percentage is-based on the result of annual gross salvage minus the 13 cost to remove plant assets as compared to the original cost of plant retired during the 14 period 1976 through 2008. The 33-year period experienced positive \$3,576,439 15 (\$13,622,027 - \$10,045,588) in net salvage for \$32,403,688 plant retired. The result 16 is positive net salvage of 11 percent (\$3,576,439/\$32,403,688); however, the most 17 recent five-year period and the rolling three-year averages trend toward negative two 18 and-negative five percent, respectively. Therefore, based on the statistics and 19 industry averages, negative five percent was recommended.

20 My calculation of the annual depreciation related to original cost of Account 21 367.00, Underground Conductors and Devices, at December 31, 2008, is presented on 22 pages III-311 and III-312 Schedule JJS2010-1. The calculation is based on the 23 50-R1.5 survivor curve, five percent negative net salvage, the attained age, and the 24 allocated book reserve. The tabulation sets forth the installation year, the original

cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual. These totals are brought forward to the table on page III-7.

Have you made any adjustments to the accumulated depreciation amounts prior

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to developing your depreciation accrual rates?

A. Yes, I have. The reserve adjustments relate to the following: 1) proper amortization rates for general plant accounts, and 2) the allocation of the additional amortization.

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Q. Please describe amortization accounting.

9 A. Amortization accounting is used for accounts with a large number of units, but small 10 asset values. In amortization accounting, units of property are capitalized in the same 11 manner as they are in depreciation accounting. However, depreciation accounting is 12 difficult for these assets because periodic inventories are required to properly reflect 13 plant in service. Consequently, retirements are recorded when a vintage is fully 14 amortized rather than as the units are removed from service. That is, there is no 15 dispersion of retirement. All units are retired when the age of the vintage reaches the 16 amortization period. Each plant account or group of assets is assigned a fixed period 17 which represents an anticipated life during which the asset will render service. For 18 example, in amortization accounting, assets that have a 20-year amortization period 19 will be fully recovered after 20 years of service and taken off the Company books, but 20 not necessarily removed from service. In contrast, assets that are taken out of service 21 before 20 years remain on the books until the amortization period for that vintage has 22 expired.

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Q.

Amortization accounting is being implemented for which plant accounts?

A. Amortization accounting is only appropriate for certain General Plant accounts. These accounts are 391.0, 391.01, 391.02, 393.0, 394.0, 395.0, 397.0, and 398.0, which represents slightly more than two percent of depreciable plant.

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Q. Has amortization accounting been accepted by regulatory commissions?

A. Yes, it has. In my experience, amortization accounting has been accepted since the early 1990s by almost every regulatory commission, including in Missouri. The utilization of amortization accounting is established to reduce the effort of keeping track of many small valued assets as well as the future expectations of more constant levels of depreciation.

Q. Please explain the reserve adjustment for general plant.

12 Α. The utilization of the general plant amortization methodology is designed to smooth 13 depreciation expense consistent with capital investment. In order to establish 14 constant rates that are consistent with amortization accounting and the remaining life 15 methodology, the accumulated reserve must be set equal to the theoretical reserve. 16 This is based on the age and amount of the surviving plant in service. However, it is 17 not appropriate to adjust a reserve amount without making proper offsetting amounts 18 to insure only full recovery, no more, no less. Therefore, we have segregated the 19 reserve into two components. The first component is established to produce an 20 amortization rate which will match the amortization period. The positive or negative 21 excess from the accumulated reserve amount is recovered over a 10-year amortization 22 period separately from the plant in service.

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Q. How does this adjustment improve recovery practices?

A. Without this adjustment, general plant amortization accruals could fluctuate drastically based on past recovery patterns. This segregation will establish a constant rate in the future for these accounts and any past under- or over-recovered assets will be recovered equally over the next 10 years.

Q. Can you discuss the reserve allocation for Additional Amortization?

A. The Additional Amortization relates to the accumulation of depreciation of future
plant in service. This allocation was based on facilities and assets in service or soon
to be placed in service and on distribution of accumulated depreciation to these assets.
The reserve allocation was established through the review of plant balances as of
December 2008. A total of \$168.9 million Additional Amortization has been
allocated to all the depreciable plant accounts.

Q. Did you establish rates for the assets to be placed into service as of April 2009 for Iatan Unit 1?

A. No. The rates to be used for these assets should be those established in the
 Depreciation Study since assets for these locations have already existed as of
 December 31, 2008.

18 Q. Are there any other depreciation rates that need to be addressed?

A. Yes, there are. In the very near future the Iatan Unit 2 will be completed and placed
into service. These assets should have a depreciation rate in place when they come
on-line. Therefore, I have performed a calculation to establish rates for Accounts 311
through 316. These rates are set forth on page III-8 of the Depreciation Study. The
rates are based on the same interim survivor curve and net salvage percent as the

other facilities in these accounts. The specific results by account and the parameters used are set forth in Schedule JJS2010-2.

Q. Does this conclude your testimony?

4 A. Yes, it does.

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BEFORE THE PUBLIC SERVICE COMMISSION **OF THE STATE OF MISSOURI**

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to) Continue the Implementation of Its Regulatory Plan)

Docket No. ER-2010-

AFFIDAVIT OF JOHN J. SPANOS

COMMONWEALTH OF PENNSYLVANIA) ss COUNTY OF CUMBERLAND

John J. Spanos, being first duly sworn on his oath, states:

1. My name is John J. Spanos. I am employed by Gannett Fleming as Vice President of the Valuation and Rate Division. My services have been retained by Kansas City Power & Light Company.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony

on behalf of Kansas City Power & Light Company consisting of Seventeen $(\sqrt{1})$

pages, having been prepared in written form for introduction into evidence in the abovecaptioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

John J. Apanos

Subscribed and sworn before me this <u>20 H</u> day of May, 2010.

Notary Public

My commission expires: February 20, 2011 COMMONWEALTH OF PENNSYLVANIA

Notarial See Cheryl Ann Rutter, Notary Public East Pennsboro Twp., Cumberland County My Commission Expires Feb. 20, 2011 Member, Pennsylvania Association of Notaries

APPENDIX A

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JOHN SPANOS

DEPRECIATION EXPERIENCE

In June, 1986, I was employed by Gannett Fleming Valuation and Rate Consultants, Inc. as a Depreciation Analyst. During the period from June, 1986 through December, 1995, I assisted in the preparation of numerous depreciation and original cost studies for utility companies in various industries. I helped perform depreciation studies for the following telephone companies: United Telephone of Pennsylvania, United Telephone of New Jersey and Anchorage Telephone Utility. I helped perform depreciation studies for the following companies in the railroad industry: Union Pacific Railroad, Burlington Northern Railroad and Wisconsin Central Transportation Corporation.

I assisted in the preparation of depreciation studies for the following organizations in the electric industry: Chugach Electric Association, The Cincinnati Gas & Electric Company (CG&E), The Union Light, Heat and Power Company (ULH&P), Northwest Territories Power Corporation and the City of Calgary - Electric System.

I assisted in the preparation of depreciation studies for the following pipeline companies: TransCanada Pipelines Limited, Trans Mountain Pipe Line Company Ltd., Interprovincial Pipe Line Inc., Nova Gas Transmission Limited and Lakehead Pipeline Company.

I assisted in the preparation of depreciation studies for the following gas companies: Columbia Gas of Pennsylvania, Columbia Gas of Maryland, The Peoples Natural Gas Company, T. W. Phillips Gas & Oil Company, CG&E, ULH&P, Lawrenceburg Gas Company and Penn Fuel Gas, Inc.

I assisted in the preparation of depreciation studies for the following water companies: Indiana-American Water Company, Consumers Pennsylvania Water Company and The York Water Company; and depreciation and original cost studies for Philadelphia Suburban Water Company and Pennsylvania-American Water Company.

In each of the above studies, I assembled and analyzed historical and simulated data, performed field reviews, developed preliminary estimates of service life and net salvage, calculated annual depreciation, and prepared reports for submission to state Public Utility Commissions or federal regulatory agencies. I performed these studies under the general direction of William M. Stout, P.E.

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In January, 1996, I was assigned to the position of Supervisor of Depreciation Studies. In July, 1999, I was promoted to the position of Manager, Depreciation and Valuation Studies. In December, 2000, I was promoted to my present position as Vice President of Gannett Fleming Valuation and Rate Consultants, Inc., now the Valuation and Rate Division of Gannett Fleming, Inc. I am responsible for conducting depreciation, valuation and original cost studies, including the preparation of final exhibits and responses to data requests for submission to the appropriate regulatory bodies.

Since January 1996, I have conducted depreciation studies similar to those previously listed including assignments for Pennsylvania American Water Company; Aqua Pennsylvania; Kentucky American Water Company; Virginia American Water Company; Indiana American Water Company; Hampton Water Works Company; Omaha Public Power District; Enbridge Pipe Line Company; Inc.; Columbia Gas of Virginia, Inc.; Virginia Natural Gas Company National Fuel Gas Distribution Corporation - New York and Pennsylvania Divisions; The City of Bethlehem - Bureau of Water; The City of Coatesville Authority; The City of Lancaster - Bureau of Water; Peoples Energy Corporation; The York Water Company; Public Service Company of Colorado; Enbridge Pipelines; Enbridge Gas Distribution, Inc.; Reliant Energy-HLP; Massachusetts-American Water Company; St. Louis County Water Company; MissouriAmerican Water Company; Chugach Electric Association; Alliant Energy; Oklahoma Gas & Electric Company; Nevada Power Company; Dominion Virginia Power; NUI-Virginia Gas Companies; Pacific Gas & Electric Company; PSI Energy; NUI - Elizabethtown Gas Company; Cinergy Corporation – CG&E; Cinergy Corporation – ULH&P; Columbia Gas of Kentucky; SCANA, Inc.; Idaho Power Company; El Paso Electric Company; Central Hudson Gas & Electric; Centennial Pipeline Company; CenterPoint Energy-Arkansas; CenterPoint Energy -Oklahoma; CenterPoint Energy - Entex; CenterPoint Energy - Louisiana; NSTAR - Boston Edison Company; Westar Energy, Inc.; PPL Electric Utilities; PPL Gas Utilities; Wisconsin Power & Light Company; TransAlaska Pipeline; Avista Corporation; Northwest Natural Gas; Allegheny Energy Supply, Inc.: Public Service Company of North Carolina; Artesian Water Company, Potomac Electric Power Company, South Jersey Gas Company; Duquesne Light Company; MidAmerican Energy Company; Laclede Gas; Duke Energy Company; E.ON U.S. Services Inc.; Elkton Gas Services; Anchorage Water and Wastewater Utility; Duke Energy Carolinas; Duke Energy Ohio Gas; Duke Energy Kentucky; Duke Energy Indiana; Northern Indiana Public Service Company; Tennessee American Water Company; Columbia Gas of Maryland; Bonneville Power Administration; NSTAR Electric and Gas Company; EPCOR Distribution, Inc. and B. C. Gas Utility, Ltd. My additional duties include determining final life and salvage estimates, conducting field reviews, presenting recommended depreciation rates to management for its consideration and supporting such rates before regulatory bodies.

KANSAS CITY POWER AND LIGHT COMPANY KANSAS CITY, MISSOURI

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO ELECTRIC PLANT

AS OF DECEMBER 31, 2008

Schedule JJS2010-1

KANSAS CITY POWER AND LIGHT COMPANY Kansas City, Missouri

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2008

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania

Schedule JJS2010-1



GANNETT FLEMING, INC. P.O. Box 67100 Harrisburg, PA 17106-7100 Location:

207 Senate Avenue Camp Hill, PA 17011

Office: (717) 763-7211 Fax: (717) 763-4590 www.gannettfleming.com

May 18, 2010

Kansas City Power and Light Company One Kansas City Place 1200 Main Kansas City, MO 64105

Attention Mr. Tim M. Rush Director, Regulatory Affairs

Ladies and Gentlemen:

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Pursuant to your request, we have conducted a depreciation study related to the electric plant of Kansas City Power and Light Company as of December 31, 2008. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual and accrued depreciation, the statistical support for the service life and net salvage estimates, and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

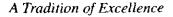
GANNETT FLEMING, INC.

John J. Apanos

JOHN J. SPANOS Vice President Valuation and Rate Division

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Schedule JJS2010-1



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PART I. INTRODUCTION

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KANSAS CITY POWER AND LIGHT COMPANY

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2008

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for Kansas City Power and Light Company ("Company") as applied to electric plant in service as of December 31, 2008. It relates to the concepts, methods and basic judgments which underlie recommended annual depreciation accrual rates related to current electric plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2008; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the electric industry, including knowledge of service life and salvage estimates used for other electric properties.

PLAN OF REPORT

Part I includes brief statements of the scope and basis of the study. Part II presents descriptions of the methods used in the service life study and the methods and procedures used in the calculation of depreciation. Part III presents the results of the study, including summary tables, survivor curve charts and life tables resulting from the retirement rate method of analysis; tabular results of the historical net salvage analyses; and detailed

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tabulations of the calculated annual accruals utilizing remaining life methodology for all asset classes.

BASIS OF STUDY

Depreciation

For most accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For certain General Plant accounts, the annual depreciation was based on amortization accounting. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group.

Survivor Curve and Net Salvage Estimates

The procedure for estimating survivor curves, which define service lives and remaining lives, consisted of compiling historical service life data for the plant accounts or other depreciable groups, analyzing the historical data base through the use of accepted techniques, and forecasting the survivor characteristics for each depreciable account or group. These forecasts were based on interpretations of the historical data analyses and the expectations of future survivors. The combination of the historical data and the estimated future trend yields a complete pattern of life characteristics, i.e., a survivor curve, from which the average service life and remaining service life are derived.

The historical data analyzed for life estimation purposes were compiled through 2008 from the Company's fixed asset records. Such data included plant additions, retirements, transfers and other activity recorded by the Company for each of its plant accounts and subaccounts.

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The estimates of net salvage by account incorporated a review of experienced costs of removal and salvage related to plant retirements by account, and consideration of trends exhibited by the historical data. Each component of net salvage, i.e., cost of removal and salvage, was stated in dollars and as a percent of retirement.

An understanding of the function of the plant and information with respect to the reasons for past retirements and the expected causes of future retirements was obtained through discussions with operating and management personnel. The supplemental information obtained in this manner was considered in the interpretation and extrapolation of the statistical analyses.

Calculation of Depreciation

The depreciation accrual rates were calculated using the straight line method, the remaining life basis and the average service life depreciation procedure. Amortization accounting for certain accounts is continued with updated recovery periods recommended to appropriately match anticipated useful lives to amortization recovery periods. An explanation of the calculation of annual and accrued amortization is presented on page II-32 of the report.

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

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PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

DEPRECIATION

Depreciation, as defined in the Uniform System of Accounts, is the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric and gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, requirements of public authorities, and, in the case of natural gas companies, the exhaustion of natural resources.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

The calculation of annual depreciation based on the straight line method requires the estimation of average life and salvage. These subjects are discussed in the sections which follow.

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SERVICE LIFE AND NET SALVAGE ESTIMATION

Average Service Life

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages. A discussion of the general concept of survivor curves is presented. Also, the lowa type survivor curves are reviewed.

Survivor Curves

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1, the remaining life at age 30 is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval and is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

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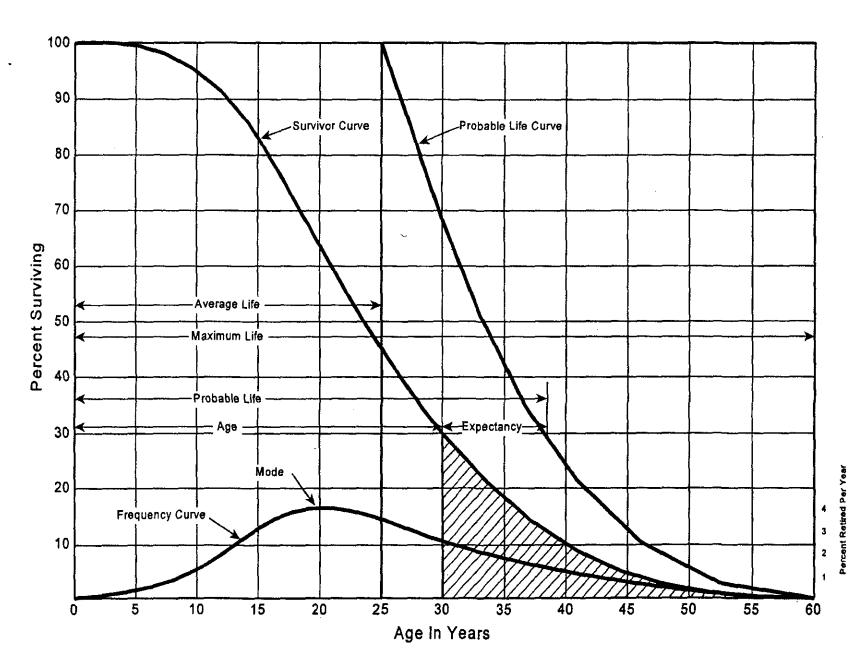


Figure 1. A Typical Survivor Curve and Derived Curves

<u>Iowa Type Curves</u>. The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded or L curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded or S curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded or R curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded or O curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numerical subscripts represent the relative heights of the modes of the frequency curves within each family.

The lowa curves were developed at the lowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.¹ These type curves have also been presented in subsequent Experiment Station

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¹Winfrey, Robley. <u>Statistical Analyses of Industrial Property Retirements</u>. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.



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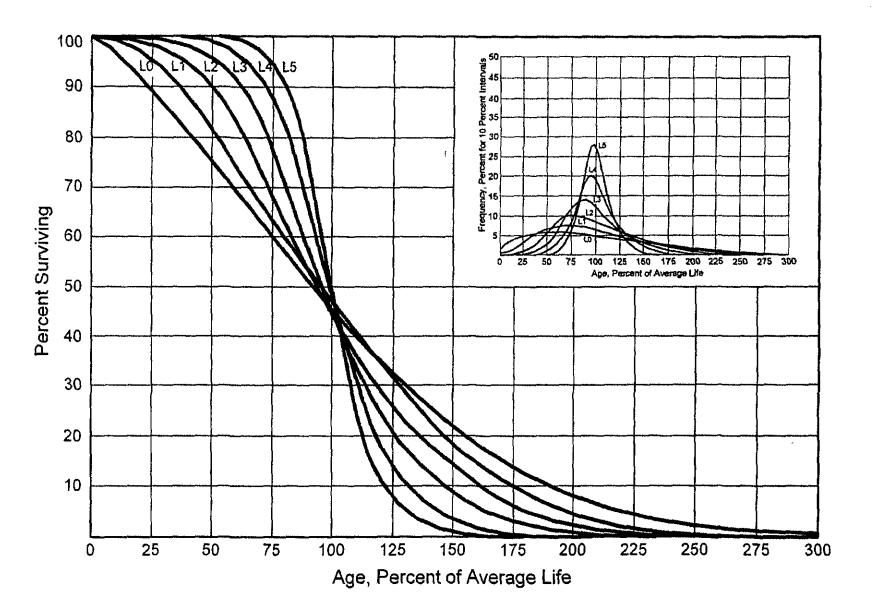
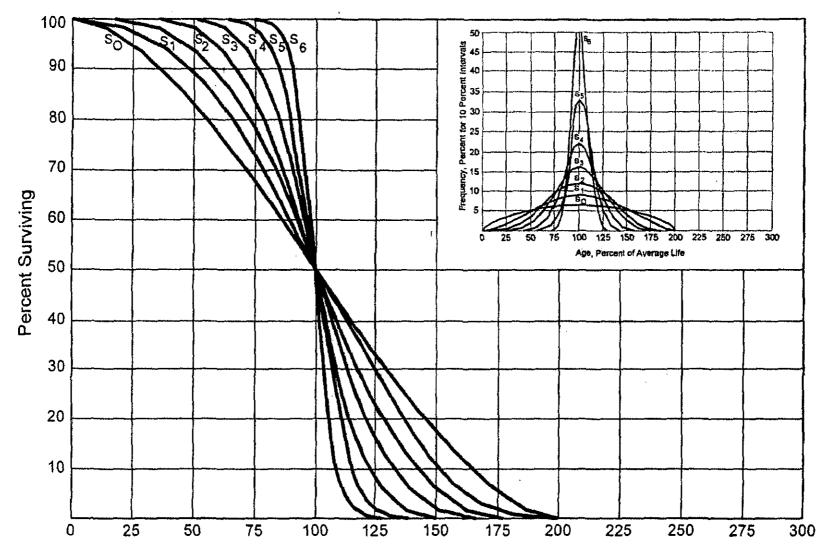


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

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Age, Percent of Average Life

Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

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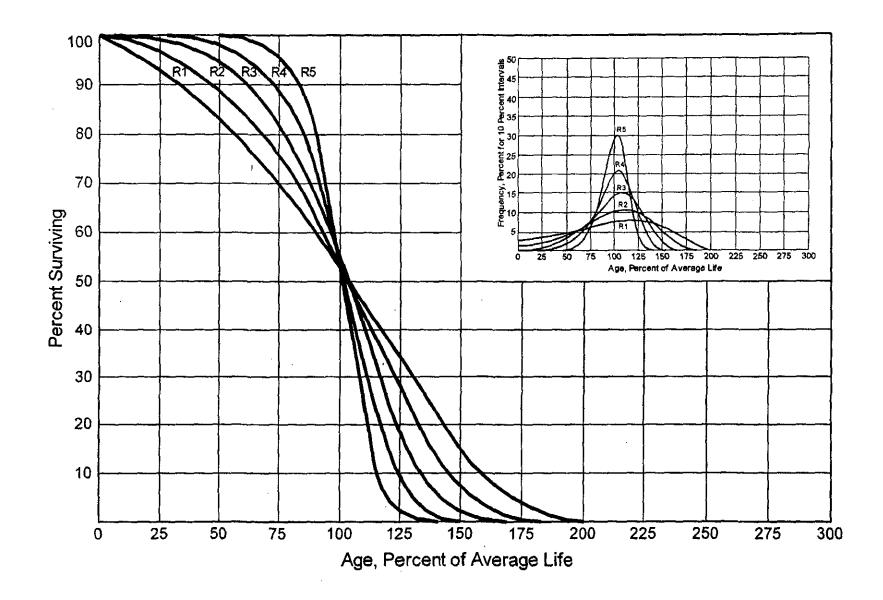


Figure 4. Right Modal or "R" lowa Type Survivor Curves

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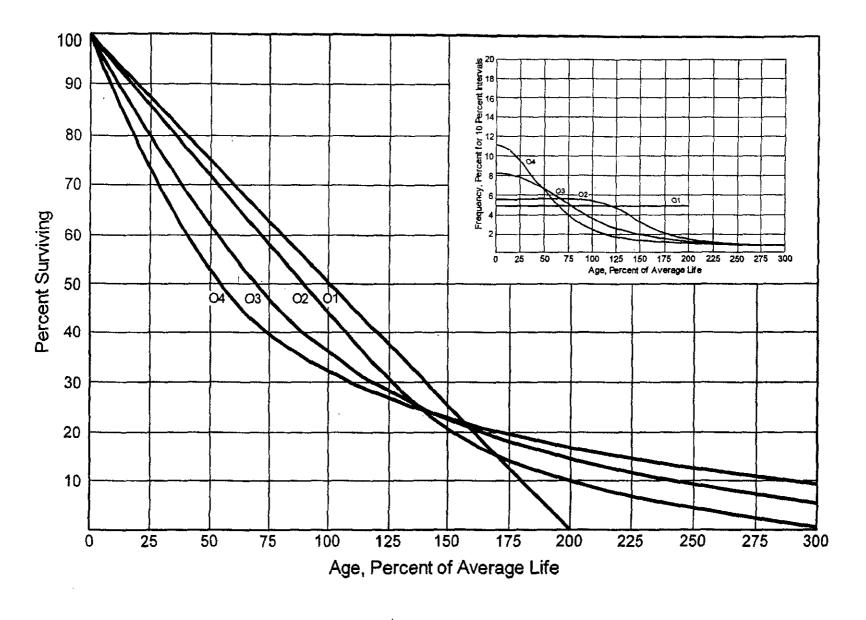


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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bulletins and in the text, "Engineering Valuation and Depreciation."² In 1957, Frank V. B.Couch, Jr., an Iowa State College graduate student, submitted a thesis³ presenting his development of the fourth family consisting of the four O type survivor curves.

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available or for which aged accounting experience is developed by statistically aging unaged amounts and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"⁴ "Engineering Valuation and Depreciation,"⁵ and "Depreciation Systems."⁶

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the

²Marston, Anson, Robley Winfrey and Jean C. Hempstead. <u>Engineering Valuation</u> <u>and Depreciation</u>, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

⁴Winfrey, Robley, Supra Note 1.

⁵Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 2.

³Couch, Frank V. B., Jr. "Classification of Type O Retirement Characteristics of Industrial Property." Unpublished M.S. thesis (Engineering Valuation). Library, Iowa State College, Ames, Iowa. 1957.

⁶Wolf, Frank K. and W. Chester Fitch. <u>Depreciation Systems</u>. Iowa State University Press. 1994

property exposed to retirement at the beginnings of the age intervals during the same period. The period of observation is referred to as the <u>experience band</u>, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the <u>placement band</u>. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

Schedules of Annual Transactions in Plant Records. The property group used to illustrate the retirement rate method is observed for the experience band 1999-2008 during which there were placements during the years 1994-2008. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Tables 1 and 2 on pages II-12 and II-13. In Table 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 1994 were retired in 1999. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age

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TABLE 1. RETIREMENTS FOR EACH YEAR 1999-2008 SUMMARIZED BY AGE INTERVAL

Experience Band 1999-2008

Placement Band 1994-2008

				Re	<u>tirements</u>	s <u>, Thousa</u>	ands of [Dollars				
Year		·····				ing Year					Total During	Age
<u>Placed</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	Age Interval	<u>Interval</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1994	10	11	12	13	14	16	23	24	25	26	26	131⁄2-141⁄2
1995	11	12	13	15	16	18	20	21	22	19	44	12½-13½
1996	11	12	13	14	16	17	19	21	22	18	64	11½-12½
1997	8	9	10	11	11	13	14	15	16	17	83	101⁄2-111⁄2
1998	9	10	11	12	13	14	16	17	19	20	93	91⁄2-101⁄2
1999	4	9	10	11	12	13	14	15	16	20	105	81⁄2-91⁄2
2000		5	11	12	13	14	15	16	18	20	113	71⁄2-81⁄2
2001			6	12	_13	15	16	17	19	19	124	61⁄2-71⁄2
2002				6	13	15	16	17	19	19	131	51⁄2-61⁄2
2003				. 7	•	14	16	17	19	20	143	41⁄2-51⁄2
2004						8	18	20	22	23	146	31/2-41/2
2005							9	20	22	25	150	21/2-31/2
2006								11	23	25	151	11⁄2-21⁄2
2007									11	24	153	1/2-11/2
2008		—			<u></u>	 ,	<u> </u>		·····	_ <u>13</u>	80	0-1⁄2
Total	<u>53</u>	<u>68</u>	<u>86</u>	<u>106</u>	<u>128</u>	<u>157</u>	<u>196</u>	<u>231</u>	<u>273</u>	<u>308</u>	<u>1.606</u>	

TABLE 2. OTHER TRANSACTIONS FOR EACH YEAR 1999-2008 SUMMARIZED BY AGE INTERVAL

Experience Band 1999-2008

Placement Band 1994 -2008

N			Acquis	itions, T	and the second se			sands of D	ollars	<u> </u>		A
Year						<u>iring Yea</u>					Total During	Age
<u>Placed</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	2007	<u>2008</u>	<u>Age Interval</u>	<u>Interval</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1994	-	-	-	-	-	-	60°	-	-	-	-	131⁄2-141⁄2
1995	-	-	-	-	-	-	-	-	-	-	-	121⁄2-131⁄2
1996	-	-	-	-	-	-	~	-	~ `	-	-	111/2-121/2
1997	-	-	-	-	-	-	-	(5) ^b	-	-	60	10½-11½
1998	-	-	-	-	-	-	-	່6 ^{′a}	-	-	-	91⁄2-101⁄2
1999		-	-	-	-	-	-	-	-	-	(5)	81⁄2-91⁄2
2000		-	-	-	-	-	-	-	-	-	6	71⁄2-81⁄2
2001			-	-	-	-	-	-	-	-	-	61/2-71/2
2002				-	-	-	-	(12) ^b	-	-	-	51/2-61/2
2003					-	-	-	-	22 [°]	-	-	41/2-51/2
2004						-	-	(19) ^⁵	-	-	10	31/2-41/2
2005							-	-	-	-	-	21/2-31/2
2006								-	-	(102) [°]	(121)	11/2-21/2
2007									-	-	-	1/2-11/2
2008												0-1⁄2
Total	.	-	-	-	-	-	<u>60</u>	(<u>30</u>)	<u>22</u>	(<u>102</u>)	(<u>50</u>)	

^a Transfer Affecting Exposures at Beginning of Year ^b Transfer Affecting Exposures at End of Year ^c Sale with Continued Use

Parentheses denote Credit amount.

interval. For example, the total of \$143,000 retired for age interval $4\frac{1}{2}-5\frac{1}{2}$ is the sum of the retirements entered on Table 1 immediately above the stairstep line drawn on the table beginning with the 1999 retirements of 1994 installations and ending with the 2008 retirements of the 2002 installations. Thus, the total amount of 143 for age interval $4\frac{1}{2}-5\frac{1}{2}$ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20$$
.

In Table 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements, but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement. The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Table 3 on page II-15.

The surviving plant at the beginning of each year from 1999 through 2008 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Table 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Tables 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being <u>exposed</u> to retirement in this group <u>at the beginning of the year</u> in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the <u>beginning of the following year</u>.

Schedule JJS2010-1

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TABLE 3. PLANT EXPOSED TO RETIREMENT JANUARY 1 OF EACH YEAR 1999-2008 SUMMARIZED BY AGE INTERVAL

Experience Band 1999-2008

Placement Band 1994-2008

			1			<u>s, Thous</u>			<u> </u>		T . 6 . 6 . 6	
Year				Annua	<u>I Survivo</u>	rs at the	Beginnir	ng of the '	Year		Total at	A .co
Placed	<u>1999</u>	2000	<u>2001</u>	2002	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	2008	Beginning of Age Interva <u>l</u>	Age Interval
(1)	(2)	(3)	$\frac{2001}{(4)}$	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1994	255	245	234	222	209	195	239	216	192	167	167	131⁄2-141⁄2
1995	279	268	256	243	228	212	194	174	153	131	323	121⁄2-131⁄2
1996	307	296	284	271	257	24 1	224	205	184	162	531	11½-12½
1997	338	330	321	311	300	289	276	262	242	226	823	101⁄2-111⁄2
1998	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
1999	420 ^a	416	407	397	386	374	361	347	332	316	1,503	81⁄2-91⁄2
2000		460ª	455	444	432	419	405	390	374	356	1,952	71⁄2-81⁄2
2001			510ª	504	492	479	464	448	431	412	2,463	61⁄2-71⁄2
2002				580ª	574	561	546	530	501	482	3,057	51⁄2-61⁄2
2003					660ª	653	639	623	628	609	3,789	41⁄2-51⁄2
2004						750ª	742	724	685	663	4,332	31/2-41/2
2005							850°	841	821	799	4,955	21/2-31/2
2006								960ª	949	926	5,719	11/2-21/2
2007									1,080ª	1,069	6,579	1/2-11/2
2008			<u> </u>		<u></u>		<u></u>			<u>1,220</u> ª	7,490	0-1⁄2
Total	<u>1,975</u>	<u>2,382</u>	<u>2,824</u>	<u>3,318</u>	<u>3,872</u>	<u>4,494</u>	<u>5,247</u>	<u>6,017</u>	<u>6,852</u>	<u>7,799</u>	<u>44,780</u>	

^a Additions during the year.

Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2003 are calculated in the following manner:

Exposures at age 0= amount of addition= \$750,000Exposures at age $\frac{1}{2}$ = \$750,000 - \$8,000= \$742,000Exposures at age $\frac{1}{2}$ = \$742,000 - \$18,000= \$724,000Exposures at age $\frac{2}{2}$ = \$724,000 - \$20,000 - \$19,000= \$685,000Exposures at age $\frac{3}{2}$ = \$685,000 - \$22,000= \$663,000

For the entire experience band 1999-2008, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Table 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

Original Life Table. The original life table, illustrated in Table 4 on page II-17, is developed from the totals shown on the schedules of retirements and exposures, Tables 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirements during the retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and

TABLE 4. ORIGINAL LIFE TABLE CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 1999-2008

Placement Band 1994-2008

(Exposure and Retirement Amounts are in Thousands of Dollars)

	•				Percent
Age at	Exposures at	Retirements			Surviving at
Beginning of	Beginning of	During Age	Retirement	Survivor	Beginning of
Interval	Age Interval	Interval	Ratio	<u>Ratio</u>	Age Interval
(1)	(2)	(3)	(4)	(5)	(6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	<u>167</u>	26	0.1557	0.8443	42.24
					35.66
Total	<u>44,780</u>	<u>1,606</u>			

Column 2 from Table 3, Column 12, Plant Exposed to Retirement.

- Column 3 from Table 1, Column 12, Retirements for Each Year.
- Column 4 = Column 3 divided by Column 2.
- Column 5 = 1.0000 minus Column 4.

Column 6 = Column 5 multiplied by Column 6 as of the Preceding Age Interval.



successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15				
Exposures at age 4 ¹ / ₂	Ξ	3,789,000				
Retirements from age 4 ¹ / ₂ to 5 ¹ / ₂	=	143,000				
Retirement Ratio	=	143,000	÷	3,789,000	=	0.0377
Survivor Ratio	Ŧ	1.000	**	0.0377	Ξ	0.9623
Percent surviving at age 5 ¹ / ₂	=	(88.15)	X	(0.9623)	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Tables 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

The original survivor curve is plotted from the original life table (column 6, Table 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

<u>Smoothing the Original Survivor Curve</u>. The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The lowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the lowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve

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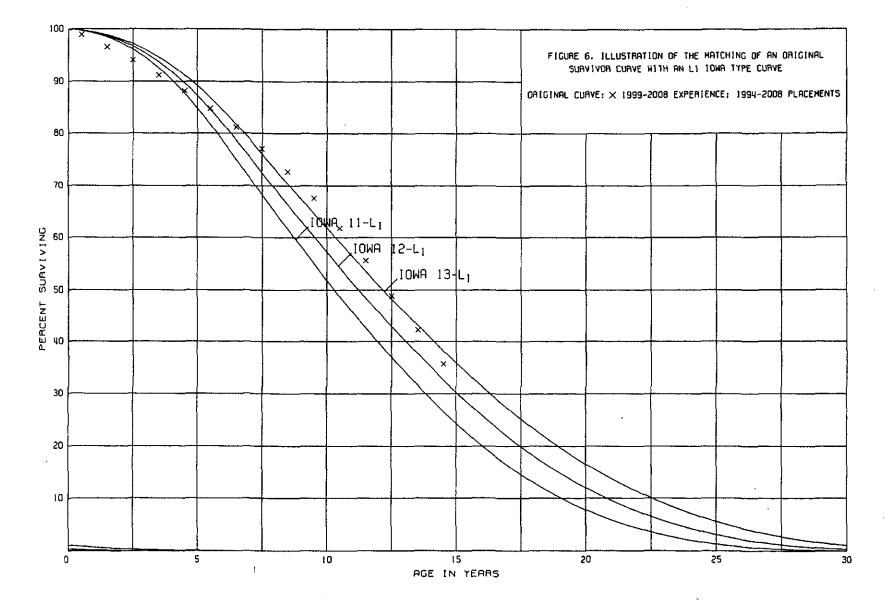
developed in Table 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be the best fit and appears to be better than either the L1 or the S0. In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 lowa curve would be selected as the most representative of the plotted survivor characteristics of the group, assuming no contrary relevant factors external to the analysis of historical data.

Field Trips

In order to be familiar with the operation of the Company and to observe representative portions of the plant, field trips were conducted. A sampling of major facilities was selected to best represent the various assets in service. Aside from the obtained knowledge of age, type and condition of each group of assets that were visited, a discussion with key operational personnel as to the outlook of each asset group was conducted. A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements were obtained during these field trips. This knowledge and information were incorporated the interpretation and extrapolation of the statistical analyses.

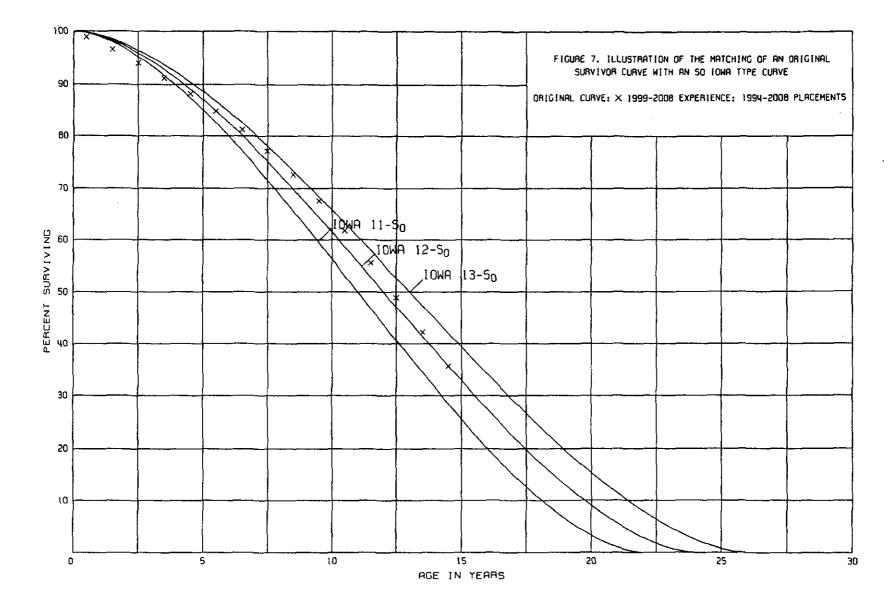
The plant facilities visited on August 17-19, 2009, are as follows:

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100 FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN RI IOWA TYPE CURVE 90 ORIGINAL CURVE: X 1999-2008 EXPERIENCE: 1994-2008 PLACEMENTS 80 ~ 70 YONG 11-B1 SURVIVING 00 JOWA 12-R 10WA 13-R1 PERCENT 6 30 50 10 20 25 5 10 15 30 Ď AGE IN YEARS

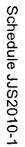
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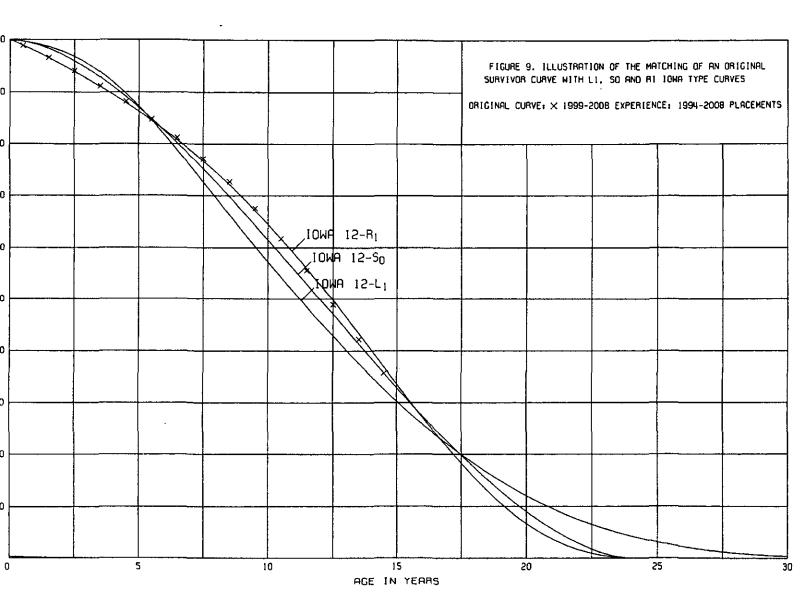


PERCENT SURVIVING





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August 17-19, 2009

Hawthorn Generating Station Hawthorn Combustion Turbine Station latan Generating Station Northeast Combustion Turbine Station Chouteau Substation latan Substation Northeast CT Substation Facilities and Maintenance Facility

Service Life Considerations

The service life estimates were based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current Company policies and outlook as determined during conversations with management; and the survivor curve estimates from previous studies of this company and other electric utility companies.

The 23 plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method resulted in good to excellent indications of the survivor patterns experienced. These accounts represent 76 percent of depreciable plant. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below. The statistical support for the service life estimates is presented in the section beginning on page III-9.

STEAM PRODUCTION PLANT

311.00 Structures and Improvement	Structures and I	Improvements
-----------------------------------	------------------	--------------

- 312.00 Boiler Plant Equipment
- 314.00 Turbogenerator Units
- 315.00 Accessory Electric Equipment
- 316.00 Miscellaneous Power Plant Equipment

NUCLEAR PLANT

- 321.00 Structures and Improvements
- 322.00 Reactor Plant Equipment

TRANSMISSION PLANT

- 352.00 Structures and Improvements
- 353.00 Station Equipment
- 355.00 Poles and Fixtures
- 356.00 Overhead Conductors and Devices

DISTRIBUTION PLANT

- 361.00 Structures and Improvements
- 362.00 Station Equipment
- 364.00 Poles, Towers and Fixtures
- 365.00 Overhead Conductors and Devices
- 367.00 Underground Conductors and Devices
- 368.00 Line Transformers
- 369.00 Services
- 370.00 Meters
- 371.00 Installations on Customers' Premises
- 373.00 Street Lighting and Signal Systems

GENERAL PLANT

- 392.00 Heavy Trucks
- 396.00 Power Operated Equipment

Account 364.00, Poles, Towers and Fixtures, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Aged plant accounting data have been compiled for the years 1920 through 2008. These data have been coded in the course of the Company's normal record keeping according to account or property group, type of transaction, year in which the transaction took place, and year in which the electric plant was placed in service. The retirements, other plant transactions, and plant additions were analyzed by the retirement rate method.

The survivor curve estimate is based on the statistical indications for the periods 1920 through 2008 and 1979 through 2008. The Iowa 38-R3 is a reasonable fit of the stub original survivor curve for Poles, Towers and Fixtures. The 38-year service life is within the typical service life range of 35 to 45 years for distribution poles. The 38-year life reflects the Company's plans to replace poles at the time the equipment fails or requires an upgrade due to growth in the service territory.

Inasmuch as production plant consists of large generating units, the life span technique was employed in conjunction with the use of interim survivor curves which reflect interim retirements that occur prior to the ultimate retirement of the major unit. An interim survivor curve was estimated for each plant account, inasmuch as the rate of interim retirements differ from account to account. The interim survivor curves estimated for steam, nuclear and other production plant related to Kansas City Power and Light Company stations were based on the retirement rate method.

The life span estimates for power generating stations were the result of considering experienced life spans of similar generating units, the age of surviving units, general operating characteristics of the units, major refurbishing, and discussions with management personnel concerning the probable long-term outlook for the units. Final decisions as to date of retirement will be determined by management on a unit by unit basis.

The life span estimate for the steam and nuclear, base-load units is 34 to 67 years, which is within the typical range of life spans for such units. The 55 to 60-year life span estimate applies to almost all the steam and nuclear units. The life span for the nuclear unit at Wolf Creek is based on the license date. The typical range of life spans for other production units is 25-45 years. Most of the units within this category have life spans within the range. The Spearville Wind facility has a life span of 20 years which is typical for this type of facility.

A summary of the year in service, life span and probable retirement year for each power production unit follows:

Depreciable Group	Major Year in <u>Service</u>	Probable Retirement Year	Life Span
Boptonable ordep	0011100	<u> </u>	
Steam Production Plant			
Hawthorn Unit 5	1969	2036	67
Hawthorn Unit 9	1955,2000	2034	79,34
Montrose Unit 1	1958	2020	62
Montrose Unit 2	1960	2020	60
Montrose Unit 3	1964	2020	56
latan Unit 1	1980	2040	60
Lacygne Unit 1	1973	2032	59
Lacygne Unit 2	1977	2032	55
Nuclear Production			
Wolf Creek	1985	2045	60
Other Production Plant			
Northeast	1972	2030	58
West Gardner	2003	2038	35
Miami County	2003	2038	35
Hawthorn Unit 6	2001	2034	33
Hawthorn Unit 7	2000	2035	35
Hawthorn Unit 8	2000	2035	35
Spearville	2006	2026	20

The survivor curve estimates for the remaining accounts were based on judgment incorporating the statistical analyses and previous studies for this and other electric utilities. <u>Salvage Analysis</u>

The estimates of net salvage by account were based in part on historical data compiled through 2008. Cost of removal and salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired.

Net Salvage Considerations

The estimates of future net salvage are expressed as percentages of surviving plant in service, i.e., all future retirements. In cases in which removal costs are expected to exceed salvage receipts, a negative net salvage percentage is estimated. The net salvage estimates were based on judgment which incorporated analyses of historical cost of removal and salvage data, expectations with respect to future removal requirements and markets for retired equipment and materials.

The analyses of historical cost of removal and salvage data are presented in the section titled "Net Salvage Statistics" for the plant accounts for which the net salvage estimate relied partially on those analyses.

Statistical analyses of historical data for the period 1976 through 2008 for electric plant were analyzed. The analyses contributed significantly toward the net salvage estimates for 21 plant accounts, representing 66 percent of the depreciable plant, as follows:

Steam Production Plant

- 311.00 Structures and Improvements
- 314.00 Turbogenerator Units
- 315.00 Accessory Electric Equipment

Nuclear Plant

- 321.00 Structures and Improvements
- 322.00 Reactor Plant Equipment
- 323.00 Turbogenerator Units
- 324.00 Accessory Electric Equipment
- 325.00 Miscellaneous Plant Equipment

Other Production Plant 344.00 Generators

Transmission Plant

- 352.00 Structures and Improvements
- 353.00 Station Equipment
- 355.00 Poles and Fixtures

Distribution Plant

- 361.00 Structures and Improvements
- 364.00 Poles, Towers & Fixtures
- 366.00 Underground Conduit
- 367.00 Underground Conductors & Devices
- 368.00 Line Transformers
- 370.00 Meters
- 371.00 Installations on Customers' Premises

General Plant 390.00 Structures and Improvements 396.00 Power Operated Equipment

Account 364.00, Poles, Towers and Fixtures, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Net salvage data for the period 1976 through 2008 were analyzed for this account. The data include cost of removal, gross salvage and net salvage amounts and each of these amounts is expressed as a percent of the original cost of regular retirements. Three-year moving averages for the 1976-1978 through 2006-2008 periods were computed to smooth the annual amounts.

Cost of removal was high during the entire thirty-three year period. The primary cause of the high levels of cost of removal was the required effort needed to take out the poles and towers. Cost of removal for the most recent five years averaged 136 percent.

Gross salvage has varied widely throughout the period but relatively high in comparison to most utilities for poles. The most recent five-year average of 85 percent gross salvage reflects recent trends and the reuse value of poles for Kansas City Power and Light Company.

The net salvage percent based on the overall period 1976 through 2008 is 29 percent negative net salvage and based on the most recent five-year period is 50 percent. The range of estimates made by other electric companies for Poles, Towers and Fixtures is negative 20 to negative 50 percent. The net salvage estimate for poles is negative 40 percent, is within the range of other estimates and reflects the trend toward more negative net salvage.

The net salvage percents for the remaining accounts representing 34 percent of plant were based on judgment incorporating estimates of previous studies of this and other electric utilities.

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CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

After the survivor curve and salvage are estimated, the annual depreciation accrual rate can be calculated. In the average service life procedure, the annual accrual rate is computed by the following equation:

Annual Accrual Rate,
$$Percent = \frac{(100\% - Net Salvage, Percent)}{Average Service Life}$$
.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which will not be allocated to expense through future depreciation accruals if current forecasts of life characteristics are used as a basis for straight line depreciation accounting.

The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and the estimated survivor curve. The accrued depreciation ratios are calculated as follows:

Ratio = (1 - Average Remaining Life Expectancy Average Service Life) (1 - Net Salvage, Percent).

The application of these procedures is described for a single unit of property and a group of property units. Salvage is omitted from the description for ease of application.

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a \$1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1,000}{(4+6)}$$
 = \$100 per year.

The accrued depreciation is:

$$(1 - \frac{6}{10}) = 400.$$

Group Depreciation Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.

<u>Remaining Life Annual Accruals</u>. For the purpose of calculating remaining life accruals as of December 31, 2008, the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2008, are set forth in the Results of Study section of the report.

<u>Average Service Life Procedure</u>. In the average service life procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the average remaining life of the vintage. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which would not be allocated to expense through future depreciation accruals, if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon

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the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

Ratio = $1 - \frac{\text{Average Remaining Life}}{\text{Average Service Life}}$

CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization, as defined in the Uniform System of Accounts, is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization periods and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is appropriate for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable electric plant

	Account	Amortization Period, <u>Years</u>
ELECTRIC	PLANT	
391.00	Office Furniture & Equipment	20
391.02	Computer Equipment	5
393.00	Stores Equipment	25
394.00	Tools, Shop and Garage Equipment	20
395.00	Laboratory Equipment	20
397.00	Communication Equipment	15
398.00	Miscellaneous Equipment	20
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For the purpose of calculating annual amortization amounts as of December 31, 2008, the book or ratemaking book depreciation reserve for each plant account or subaccount is assigned or allocated to vintages. The reserve assigned to vintages with an age greater than the amortization period is equal to the vintage's original cost. The remaining reserve is allocated among vintages with an age less than the amortization period in proportion to the calculated accrued amortization. The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage.

PART III. RESULTS OF STUDY

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PART III. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual depreciation accrual rates are the principal results of the study. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage and for the change of the composition of property in service. The annual accrual rates were calculated in accordance with the straight line remaining life method of depreciation using the annual service life procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

The annual depreciation accrual rates are applicable specifically to the electric plant in service as of December 31, 2008. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2008, is reasonable for a period of three to five years.

DESCRIPTION OF STATISTICAL SUPPORT

The service life and salvage estimates were based on judgment which incorporated statistical analyses of retirement data, discussions with management and consideration of estimates made for other electric utility companies. The results of the statistical analyses of service life are presented in the section titled "Service Life Statistics".

The estimated survivor curves for each account are presented in graphical form. The charts depict the estimated smooth survivor curve and original survivor curve(s), when applicable, related to each specific group. For groups where the original survivor curve was plotted, the calculation of the original life table is also presented.

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DESCRIPTION OF DEPRECIATION TABULATIONS

The summary schedule of the results of the study, as applied to the original cost of electric plant at December 31, 2008, are presented on pages III-4 through III-8 of this report. The schedule sets forth the original cost, the book reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to electric plant in service at December 31, 2008.

The tables of the calculated annual depreciation accruals are presented in account sequence in the section titled "Depreciation Calculations." The tables indicate the estimated survivor curve and net salvage percent for the account and set forth, for each installation year, the original cost, the calculated accrued depreciation, the allocated book reserve, future accruals, the remaining life and the calculated annual accrual amount.

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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION AS OF DECEMBER 31, 2008

		PROBABLE RETIREMENT	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	BOOK	FUTURE	CALCUL ANNUAL A		COMPOSITE REMAINING
	ACCOUNT	DATE	CURVE	PERCENT	DECEMBER 31, 2008	RESERVE	ACCRUALS	AMOUNT	RATE	LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
9	TEAM PRODUCTION PLANT									
311.00	STRUCTURES AND IMPROVEMENTS						•			
	HAWTHORN COMMON	06-2036	90-S0.6 *	(20)	5,418,652.93	1,330,572	5,171,811	193,893	3.56	26.7
	HAWTHORN UNIT 5	06-2036	90-50.5	(20)	8,438,000.83	4,486,008	5,639,592	216,332	2.56	26.1
	HAWTHORN UNIT 9	06-2034	90-50.5	(20)	1,187,244,15	390,685	1,034,008	41,817	3.52	24.7
	MONTROSE COMMON	06-2020	90-S0.5	(20)	6,103,650.67	4,367,046	2,957,333	260,675	4.27	11.3
	MONTROSE UNIT 1	06-2020	90-50.5	(20)	2,008,063.01	1,930,136	479,541	42,644	2.12	11.2
	MONTROSE UNIT 2	06-2020	90-50.5	(20)	76,613.37	67,335	24,601	2,180	2.85	11.3
	MONTROSE UNIT 3	06-2020	90-50.5	(20)	187,891 34	181,835	43,634	3,887	2.07	11.2
	IATAN UNIT 1	06-2040	90-50.5	(20)	11.463.833.91	6,962,916	6,793,685	234,381	2.04	29 0
	LACYGNE COMMON	06-2032	90-50 5	(20)	2,505,740.24	1,106,806	1,900,083	83,514	3 33	22 8
	LACYGNE UNIT 1	06-2032	90-50 5	(20)	8,951,819 02	5,968,352	4,773,833	213,953	2 39	22 3
	LACYONE UNIT 2	06-2032	90-50 5	(20)	1,453,107.06	981,477	762,252	34,204	2.35	22 3
	TOTAL STRUCTURES AND IMPROVEMENTS				47.794.616.53	27,773,168	29,580,373	1.327,480	2.78	22.3
312 00	BOILER PLANT EQUIPMENT									
012 00	HAWTHORN COMMON	06-2035	55-R1 *	(15)	56,611,62	1,627	63.476	2,509	4,43	25.3
	HAWTHORN UNIT 5	06-2036	55-R1	(15)	30,913,601.28	9,487,516	26.063.009	1,044,858	3.38	24,9
	HAWTHORN UNIT 9	06-2034	55-R1	(15)	22,727,403,49	9,010,731	17,125,783	737,263	3.24	23.2
	MONTROSE COMMON	06-2020	55-R1 *	(15)	10,759,129,92	8,541,303	3.831.695	346,138	3.22	11.1
	MONTROSE UNIT 1	06-2020	55-R1	(15)	22,460,663,47	17,905,569	7,924,195	712,369	3.17	11.1
	MONTROSE UNIT 2	06-2020	55-R1 *	(15)	15,645,668,13	13,849,951	4,372,818	393,319	2.48	11.1
	MONTROSE UNIT 3	06-2020	55-R1	(15)	17,817,730,04	14,987,182	5,503,205	494,762	2.78	11.1
	IATAN UNIT 1	06-2040	55-R1 *	(15)	92,592,394,98	62,601,194	43,880,059	1,676,270	1.81	26.2
	LACYGNE COMMON	06-2032	55-R1 *	(15)	3,530,823.65	1,770,467	2,289,978	106,538	3.02	21.5
	LACYGNE UNIT 1	06-2032	55-R1	(15)	73,360,035.16	34,601,780	49,762,258	2,307,585	3.15	21.6
	LACYGNE UNIT 2	06-2032	55-R1	(15)				896,903	1.68	20.7
	MISCELLANEOUS	00-2032	55-R1	(15)	53,388,716.81 11,545,72	42,803,893 2,176	18,593,130 11,102	227	1.97	48.9
	TOTAL BOILER PLANT EQUIPMENT			()/	343,464,444.27	215,563,389	179,420,708	8.718.741	2.54	20.6
					0.0,404,444,51	210,000,000	110.420.100	0	2.04	
312 01	BOILER PLANT EQUIPMENT - UNIT TRAINS		25-R2 5	20	11,680,725,33	1.674.672	7,669,909	338,478	2.90	22.7
312.02	BOILER PLANT EQUIPMENT - AQC									
	HAWTHORN UNIT 5	06-2036	55-R1	(15)	134,571.05	154,757	0	0	-	-
	LACYGNE UNIT 1	06-2032	\$5-R1 *	(15)	18,542,303 82	21,323,649	0	0	•	•
	TOTAL BOILER PLANT EQUIPMENT - AQC				18,676,874.87	21,478,406	o	0	•	•
314.00	TURBOGENERATOR UNITS									
	HAWTHORN UNIT 5	06-2036	60-R1.5 *	(15)	41,092,410.68	16,865,136	30,391,135	1.203,727	2.93	25.2
	HAWTHORN UNIT 9	05-2034	60-R1,5 *	(15)	8.676,220.27	3,042,372	6,935,281	290,664	3.35	23.9
	MONTROSE COMMON	06-2020	60-R1.5 *	(15)	22,552,22	10,669	15,266	1.357	6.02	11.2
	MONTROSE UNIT 1	06-2020	60-R1.5 *	(15)	6,153,836,92	4,916,677	2,160,236	192,095	3.12	11.2
	MONTROSE UNIT 2	06-2020	60-R1.5	(15)	6,431,684.70	4,691,374	2,705,291	241,020	3.75	11.2
	MONTROSE UNIT 3	06-2020	60-R1.5	(15)	10,040,356.91	5,888,232	5,658,179			
	IATAN UNIT 1							503,544	5.02	11.2
	LACYGNE COMMON	06-2040	60-R1.5	(15)	24,418,895.74	14,800,989	13,280,742	493,182	2.02	26.9
		06-2032	60-R1 5	(15)	54,053,45	17,455	44,707	2,016	3 73	22.2
	LACYGNE UNIT 1	06-2032	60-R1.5	(15)	18,031,258.95	8,895,269	11.840.681	542,409	3.01	21.8
	LACYGNE UNIT 2	06-2032	60-R1.5	(15)	12,564,590.62	8,091,502	6,380.777	298,025	2.37	214
	TOTAL TURBOGENERATOR UNITS		,		127,506,060.66	67,219,675	79,412,295	3,768,039	2 96	21.1

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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION AS OF DECEMBER 31, 2008

		PROBABLE RETIREMENT	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	BOOK	FUTURE	CALCUL ANNUAL A	CCRUAL	COMPOSITE
	ACCOUNT	DATE	CURVE	PERCENT	DECEMBER 31, 2008	RESERVE	ACCRUALS	AMOUNT	RATE	LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
315.00										
315.00	ACCESSORY ELECTRIC EQUIPMENT HAWTHORN COMMON	06-2036	50-L1 ·	(10)	445,872,70	77.302	413,159	16,895	3,79	24.5
	HAWTHORN UNIT 5	06-2036	50-L1 *	(10)	5.712.879.09	1,039,703	5,244,464	214,891	3.76	24.4
						2,169,738	5,704,892	256,687	3.59	22.2
	HAWTHORN UNIT 9	05-2034	00.01	(10)	7,158,753.62		979,755	89,742	5.14	10.9
	MONTROSE COMMON	06-2020	39-01	(10)	1,744,969,96	939,712		120,176	4.50	10.8
	MONTROSE UNIT 1	06-2020	50-L1 *	(10)	2,670,508.86	1,643,682	1,293,880		4.34	10.0
	MONTROSE UNIT 2	06-2020	50-L1 *	(10)	2,504,699.34	1,588,727	1,166,444	108,758		10.9
	MONTROSE UNIT 3	06-2020	50-L1	(10)	3.677.759.34	2,061,229	1,984,306	182,426	4.96	24.6
	IATAN UNIT 1	06-2040	50-L1 *	(10)	16,691,228 86	6.503,158	11,857,191	481.079	2.68	24.8
	LACYGNE COMMON	06-2032	50-L1	(10)	982,115.25	326,837	753,489	36,419	3.71	20.7
	LACYGNE UNIT 1	Q6-2032	50-L1 *	(10)	9,255,239 38	3,703,925	6,476,837	320.032	3 46	
	LACYGNE UNIT 2	06-2032	50-L1 *	(10)	7,660,912.42	3,897,456	4,529,546	233,947	3.05	19.4
	MISCELLANEOUS		50-L1	(10)	10,772.97	1,207	10,643	236	2.19	45 1
	TOTAL ACCESSORY ELECTRIC EQUIPMENT				58,515,711.69	23.952,676	40,414,606	2,061,268	3.52	19.6
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT									
010.00	HAWTHORN COMMON	06-2036	55-L1 *	o	1,179,543.60	277.069	902,476	36,043	3,05	25.0
	HAWTHORN UNIT 5	06-2036	55-L1	ő	3,171,562.64	1,845,185	1,326,377	56,720	1,79	23.4
	HAWTHORN UNIT 9	06-2034	55-L1 *	õ	95.002.18	40,095	57,907	2,536	2.59	22.8
			55-LT	ő		1,693,575	622,100	55,396	2.39	11.2
	MONTROSE COMMON	06-2020		ບ ົ	2,315,674.39		022,100	00,350	2.00	11.6
	MONTROSE UNIT 1	06-2020	55-L1	-	58,410.56	58,411	0	0	-	-
	MONTROSE UNIT 2	06-2020	55-L1	0	23,527 84	23,528	0	0	•	•
	MONTROSE UNIT 3	06-2020	55-L1 *	0	32.757.38	32,757	0	•		
	IATAN UNIT 1	06-2040	55-L1	0	2.591,265.54	1,446,107	1,145,158	43,775	1.69	26.2
	LACYGNE COMMON	06-2032	55-L1 *	0	1,527,102.68	662,932	864,167	40,221	2.63	21.5
	LACYGNE UNIT 1	06-2032	55-L1 °	Q	622,437,34	472,720	149,717	7.342	1.18	20.4
	LACYGNE UNIT 2	06-2032	55-L1 *	0	737,626.51	580,842	156,784	7,857	1 07	20.0
	MISCELLANEOUS		55-L1	0	2,596,657.00	455,222	2,141,434	43,596	1,68	49.1
	, TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT				14,954,567,66	7,588,443	7,356,120	293,486	196	25.1
-	TOTAL STEAM PRODUCTION PLANT				622,593,001.01	365,250,429	343,864,011	16,507,512	2.65	20,8
	RAWTHORN UNIT 5 REBUILD									
311.02	STRUCTURES AND IMPROVEMENTS	06-2036	90-50.5 *	(20)	4,905,013,72	4,593,684	1,292,132	48,595	0.99	25.6
312.03	SOILER PLANT EQUIPMENT	06-2036	55-R1 *	(15)	127.024,514.71	115,040,945	31,037,247	1,247,474	0.98	24.9
315,01	ACCESSORY ELECTRIC EQUIPMENT	06-2036	50-L1	(10)	21,663,432.88	19,462,956	4,366,820	182,865	0.84	23.9
316.01	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2036	55-L1	0	1,267,185.72	1,147,648	119,538	4,883	0.39	24.5
310.91		00-2030	33-01	u	1,207,100.72	1,147,040	118,550	4,003	0.30	24.0
1	TOTAL HAWTHORN 6 REBUILD				154,860,147.03	140,245,433	36,815,737	1,483,817	0.96	24.8
	NUCLEAR PRODUCTION PLANT									
321 00	STRUCTURES AND IMPROVEMENTS	06-2045	90-S0.5	(5)	235,627,573.85	145,473,252	101,935,699	3,069,911	1.30	33.2
322.00	REACTOR PLANT EQUIPMENT	06-2045	60-R2 *	(5)	324,171,811 87	197,443,058	142,937,342	4,586,384	1.41	31.2
323.00	TURBOGENERATOR UNITS	06-2045	50-S1.5	(10)	95,835,925.18	68,615,849	36,803,667	1,427,463	1.49	25.8
324,00	ACCESSORY ELECTRIC EQUIPMENT	06-2045	50-S1.5	0	74,417,670,11	37,336,740	37,080,929	1,403,412	1.89	26.4
325 00	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2045	40-R0.5 *	0	39 477 713 73	12,338,258	27,139,455	1,062,910	2.69	25.5
	TOTAL NUCLEAR PRODUCTION PLANT				769,530,694,54	461,207,157	345,897,092	11,550,080	1.50	29.9

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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION AS OF DECEMBER 31, 2008

		PROBABLE	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	BOOK	FUTURE	CALCUL ANNUAL A	CCRUAL	COMPOSITE
	ACCOUNT	DATE	CURVE	PERCENT	DECEMBER 31, 2008	RESERVE	ACCRUALS	AMOUNT	RATE	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	OTHER PRODUCTION PLANT									
341.00	STRUCTURES AND IMPROVEMENTS									
4	NORTHEAST COMBUSTION TURBINES	05-2030	60-R1 ·	(5)	600,689,62	408,218	222,506	11,198	1.66	19,9
	WEST GARDER COMBUSTION TURBINES	06-2038	60-R1	(5)	1,129,306.31	282,235	903,537	33,574	2.97	26.9
	MIAMI COUNTY COMBUSTION TURBINES	06-2038	60-R1	(5)	820.657.18	204,299	657,391	24.426	2 98	26.9
	HAWTHORN UNIT 6	06-2034	60-R1	(5)	84,311 88	30,683	57,844	2,460	2 92	23 5
	HAWTHORN UNIT 7	06-2035	60-R1	(5)	418,527 65	146,882	292,572	12,012	2.87	24.4
	HAWTHORN UNIT 8	06-2035	60-R1 *	(5)	45,809.97	17,822	30,278	1,245	2.72	24 3
	TOTAL STRUCTURES AND IMPROVEMENTS				3,099,302.61	1,090,139	2,154,128	84,916	2.74	25 5
342 00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES									
	NORTHEAST COMBUSTION TURBINES	06-2030	45-R2	(10)	1.023,421 85	852,148	273,617	15,295	1,49	17.9
	WEST GARDER COMBUSTION TURBINES	06-2038	45-R2	(10)	1,701,552,94	400,408	1.471.301	54,967	3 23	26.8
	MIAMI COUNTY COMBUSTION TURBINES	06-2038	45-R2 *	(10)	1.076.846.30	260,154	924,377	34,569	3.21	26.7
	HAWTHORN UNIT 5	06-2034	45-R2	(10)	657,040,92	202,216	520,529	22,149	3,37	23.5
	HAWTHORN UNIT 7	06-2035	45-R2 *	(10)	1.549,775.78	572,216	1,132,539	47,152	3.04	24.0
	HAWTHORN UNIT 8	06-2035	45-R2	(10)	307,033,68	113,977	223,760	9,319	3,04	24.0
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES	5			6,315,672,47	2,401,119	4,546,123	183,451	2.90	24.8
344 00	GENERATORS									
	NORTHEAST COMBUSTION TURBINES	06-2030	35-50.5	(10)	21,272,809.39	18,723,488	4,676,602	314,246	1,48	14,9
	WEST GARDER COMBUSTION TURBINES	06-2038	35-S0.5	(10)	59,099,634 31	15,883,378	49,126,220	2,081,607	3 52	23.6
	MIAMI COUNTY COMBUSTION TURBINES	06-2038	35-\$0.5 *	(10)	14,159,484 19	3,804,181	11,771,252	498,762	3.52	23 6
	HAWTHORN UNIT 6	06-2034	35-80.5	(10)	23,197,014,44	7,680,154	17,836,563	843,914	3.64	21.1
	HAWTHORN UNIT 7	06-2035	35-\$0.5	(10)	12,129,959 49	4,843,195	8,499,760	403,062	3 32	21.1
	HAWTHORN UNIT 8	06-2035	35-50 5	(10)	12,971,322,39	5,180,110	9.088,345	430,985	3 32	21.1
	TOTAL GENERATORS				142,830,224 21	56,114,506	100,998,742	4,572,576	3 20	22.1
345 00	ACCESSORY ELECTRIC EQUIPMENT									
	NORTHEAST COMBUSTION TURBINES	06-2030	45-R2.5	a	3.817,122.64	3,643,251	173,871	8,544	0 22	20.4
	WEST GARDER COMBUSTION TURBINES	06-2038	45-R2.5	à	3,523,935 28	918,433	2,705,502	99,248	2.74	27.3
	MIAMI COUNTY COMBUSTION TURBINES	05-2038	45-R2.5 *	Ó	950,357.98	240,654	709,504	26,027	2.74	27 3
	HAWTHORN UNIT 6	06-2034	45-R2.5	0	1,385,607,35	496,904	888,704	37,336	2.69	23 8
	HAWTHORN UNIT 7	06-2035	45-R2.5	ō	1,142,490.56	444,989	697,502	28,539	2.50	24.4
	HAWTHORN UNIT B	06-2035	45-R2.5	D	721,311.87	280,944	440,368	18,018	2.50	24.4
	TOTAL ACCESSORY ELECTRIC EQUIPMENT				11,640,825.58	6,025,375	5,615,451	217,712	1,87	25.8
-	TOTAL OTHER PRODUCTION PLANT									
	I TAL OTHER PRODUCTION PLANT				163,886,024.97	65,631,139	113,324,444	5,058,655	3.09	22.4
	WIND PRODUCTION PLANT									
341 02	STRUCTURES AND IMPROVEMENTS	06-2026	SQUARE *	Ô	1,862.413.65	299,255	-1,563,159	89,323	4.80	17.5
344 02	GENERATORS	06-2025	SQUARE	o	83,379.978 66	14,261,596	69,118,383	3,949,522	4.74	17 5
345 02	ACCESSORY ELECTRIC EQUIPMENT	06-2026	SQUARE '	0	69,349.45	6.999	62,350	3,563	5.14	17.5
	TOTAL WIND PRODUCTION PLANT				85,311,741.76	14,567,850	70,743,892	4,042,508	4.74	17.5

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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION AS OF DECEMBER 31, 2008

		PROBABLE RETIREMENT	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	BOOK	FUTURE	CALCUL ANNUAL A		COMPOSITE
	ACCOUNT	DATE	CURVE	PERCENT	DEGEMBER 31, 2008	RESERVE	ACCRUALS	AMOUNT	RATE	LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
т	RANSMISSION PLANT									
52 00	STRUCTURES AND IMPROVEMENTS		60-R2.5	(5)	2,537,328,50	900,183	1,669,011	45 705	1 73	40,9
53 00	STATION EQUIPMENT		60-R0.5	(10)	67,405,463,03	26,754,455	47,391,552	905,325	1 34	52.3
53 03	STATION EQUIPMENT - COMMUNICATION EQUIPMENT		15-52.5	0	4,320,185.84	537,863	3,782,324	1,249,596	28.92	3.0
54 00	TOWERS AND FIXTURES		70-R3	(20)	2,233,561 58	2,011,107	669,169	15,048	0.72	41 '
55 00	POLES AND FIXTURES		50-SQ.5	(40)	57,018,757,32	30,441,087	49,385,174	1,255,758	2.20	39.3
56 00	OVERHEAD CONDUCTORS AND DEVICES		53-R2	(20)	51,423,042,65	26 390 137	35,317,516	787,960	1 53	44
57 00	UNDERGROUND CONDUIT		60-R3	0	1,707.329.12	1 057 793	639,536	22,301	1 3 1	28.
58 OD	UNDERGROUND CONDUCTORS AND DEVICES		55-R4	D	1,564,564.87	1,340,618	223,948	8,681	0.55	25
T	OTAL TRANSMISSION PLANT				188,310,232.91	89,443,243	139,278,230	4,291,374	2,28	32.
D	ISTRIBUTION PLANT									
61.00	STRUCTURES AND IMPROVEMENTS		50-50.5	(5)	5,411,262,99	2,918,212	2,763,616	71,749	1 33	38 :
62.00	STATION EQUIPMENT		48-R1.5	(5)	88,183,335,66	36,150,213	56,442,285	1,503,177	1.70	37.:
52.03	STATION EQUIPMENT - COMMUNICATION EQUIPMENT		15-\$2.5	0	2,139,834,31	745,445	1,394,390	586,579	27.41	2.
64.00	POLES, TOWERS AND FIXTURES		38-R3	(40)	127,905,794,87	75,787 826	103,281,683	3,840,350	3.00	26.
65.00	OVERHEAD CONDUCTORS AND DEVICES		45-R0.5	(20)	107,607.476.93	34,879,590	94,249,380	2,567,987	2,39	36.
6,00	UNDERGROUND CONDUIT		55-R2	(25)	101,154,717.94	21,083,955	105,359,428	2,519,217	2.49	41.
37.00	UNDERGROUND CONDUCTORS AND DEVICES		50-R1.5	(5)	184,961,241,78	41.078.604	153,130,700	3,767,991	2.04	40
00.8	LINE TRANSFORMERS		34-R2	10	136,162,481,43	64,559,867	57,986,361	2,182,083	1.60	26.
59 00	SERVICES		4B-R2.5	(100)	43,707,937,49	23,325,393	64,090,483	2.075.234	4.75	30.
10 00	METERS		36-R1.5	0	47,384,637,62	32,939,083	14,445,555	448 387	0.95	32
71 00	INSTALLATIONS ON CUSTOMERS' PREMISES		20-L1 5	(15)	7,988,265.67	7,942,244	1,244,259	65,092	0.81	19.
73 60	STREET LIGHTING AND SIGNAL SYSTEMS		25-L0 5	(5)	8,464.644.53	2,590,566	6,297,311	351,932	4.16	17
T	OTAL DISTRIBUTION PLANT				861,072,631.22	344,001,011	660,685,452	19,979,778	2.32	33.*
G	ENERAL PLANT									
90.00	STRUCTURES AND IMPROVEMENTS		45-R1	(15)	31,280,132.76	12,225,408	23,746,748	646,690	2.07	36,7
91 00	OFFICE FURNITURE & EQUIPMENT									
	FULLY ACCRUED		FULLY AG	CORUED	506.316.82	506,317	0	0		•
	AMORTIZABLE		20-SQ **	0	5.812.972 57	3,495,279	2,317,693	290,360	5 00	8.6
	TOTAL OFFICE FURNITURE & EQUIPMENT				6,319,289.49	4,001,596	2,317,693	290,360		
91.01	OFFICE FURNITURE AND EQUIPMENT - WOLF CREEK		20-SQ **	o	1,722,156,97	571,598	1,150.559	86,040	5.00	13.4
91 02	COMPUTER EQUIPMENT									
	FULLY ACCRUED		FULLY AG		25,752.14	25,752	0	0	•	-
	AMORTIZABLE		5-SQ **	0	38,849,10	24,169	14,680	7,771	20.00	1.0
	TOTAL COMPUTER EQUIPMENT				64,601.24	49,921	14,680	7,771		
92.00	TRANSPORTATION EQUIPMENT									
	AUTOS		7-R2	25	347,869.03	172,319	88,583	23,424	6.73	3.8
	LIGHT TRUCKS		8-R0.5	25	7,377,084.02	1,117,892	4.414,921	648,179	8.79	6.1
	HEAVY TRUCKS		10-51.5	25	12,328,194,18	2 775 000	6,471,146	928.568	7 53	7.0
	TRACTORS		12-50	25	366,209.92	82,015	192.642	21,340	5.83	9.
	TRAILERS		20-\$15	25	799,114.50	358,663	240,672	14,697	1 84	16.4
	TOTAL TRANSPORTATION EQUIPMENT				21,218,471 65	4,506,889	11,407,964	1,636,208	7.75	7.3

KANSAS CITY POWER & LIGHT COMPANY MISSOURI JURISDICTION

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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION AS OF DECEMBER 31, 2008

	R	ROBABLE	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	BOOK	FUTURE		CRUAL	COMPOSITE REMAINING
	ACCOUNT	DATE	CURVE	PERCENT	DECEMBER 31, 2008	RESERVE	ACCRUALS	AMOUNT	RATE (9)=(8)/(5)	(10)=(7)/(8)
	(1)	(2)	(3)	(4)	(5)	(6) -	(7)	(8)	(3)-(0)/(3)	{10 <i>/~(7 P</i> (4)
393.00	STORES EQUIPMENT									
	FULLY ACCRUED		FULLY AC	CRUED	100.658.42	100,658	0	0		•
	AMORTIZABLE		25-SQ **	0	263,301 91	146,352	116,952	10,532	4 00	11.1
	TOTAL STORES EQUIPMENT				363.960 33	247,010	116,952	10,532		
394.00										
534.00	TOOLS, SHOP AND GARAGE EQUIPMENT						_	•		
	FULLY ACCRUED AMORTIZABLE		FULLY AC		684,368 92	684,369	0	0 69,812	5 00	10 6
	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT		20-50 **	0	1.396,414.38	<u>657,960</u> 1,342,329	<u> </u>	69.812	3.00	10.0
	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT				2,060,783.30	1,342,329	738,438	09,012		
395.00	LABORATORY EQUIPMENT									
	FULLY ACCRUED		FULLY AC	CRUED	475,056.85	475,057	0	0	-	
	AMORTIZABLE		20-SQ **	0	2,402,042.84	1,305,375	1,096,669	119,988	5.00	9.1
	TOTAL LABORATORY EQUIPMENT				2,877,099.69	1,780,432	1,096,669	119,988		
396.00	POWER OPERATED EQUIPMENT		13-L2	15	7,657,842.08	1,813,364	4,695,802	485,900	6.35	9.7
397 00	COMMUNICATION EQUIPMENT									
	FULLY ACCRUED		FULLY AC	CRUED	10,198,112,56	10,198,113	0	o	-	
	AMORTIZABLE		15-SQ **	0	43,454,369.87	19,109,997	24 344,373	2,898,312	6 67	84
	TOTAL COMMUNICATION EQUIPMENT		10.00	•	53,652,482.43	29,308,110	24,344,373	2 898 312	0.07	
398 00	MISCELLANEOUS EQUIPMENT									
	FULLY ACCRUED		FULLY AC		35,395 90	35.396	0	0	-	
	AMORTIZABLE TOTAL MISCELLANEOUS EQUIPMENT		20-5Q **	0	212,896.50	61,969	150,928	10,638	5.00	14 2
	TOTAL MISUELLANEOUS EQUIPMENT				248,292.40	97.365	150,926	10.638		
TOTAL GEI	NERAL PLANT				127,485,112.34	65,943,020	69,780,822	6,262,251	4.91	11.1
TOTAL DEF	RECIABLE PLANT				2,973,049,585.78	1,536,289,282	1,780,389,680	69,175,975	2.33	25.7
UNRECOVE	RED RESERVE ADJUSTMENT FOR AMORTIZATION ACCOUNT	'e								
391 00	OFFICE FURNITURE AND EQUIPMENT	~				208.804		(20,880) ***		
391 01	OFFICE FURNITURE AND EQUIPMENT - WOLF CREEK					148,437		(14,544) ***		
391.02	COMPUTER EQUIPMENT									
393.00	STORES EQUIPMENT					(33,921)		3,392 ***		
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT					74,701		(7,470) ***		
395.00	LABORATORY EQUIPMENT					(162,352)		16,235		
395.00						(184,629)		18,463		
398.00	MISCELLANEOUS EQUIPMENT					(18,430.227)		1,843,023 ***		
130.00						(39.846)		3,985		
TOTAL UNI	RECOVERED RESERVE ADJUSTMENT FOR AMORTIZATION AC	COUNTS				(18,421,033)		1,842,103		
TOTAL ELE					2,973,049,585.78	1,517,868,249	1,780,389,680	71,018,078		

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CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.
 ** ACCOUNTS USING AMORTIZATION ACCOUNTING
 *** ANNUAL DEPRECIATION RATES FOR IATAN 2 WILL BE AS FOLLOWS: ACCOUNT 311, 2,56%
 ACCOUNT 312, 2,77% ACCOUNT 312, 2,77% ACCOUNT 315, 2,86% ACCOUNT 315, 2,85%

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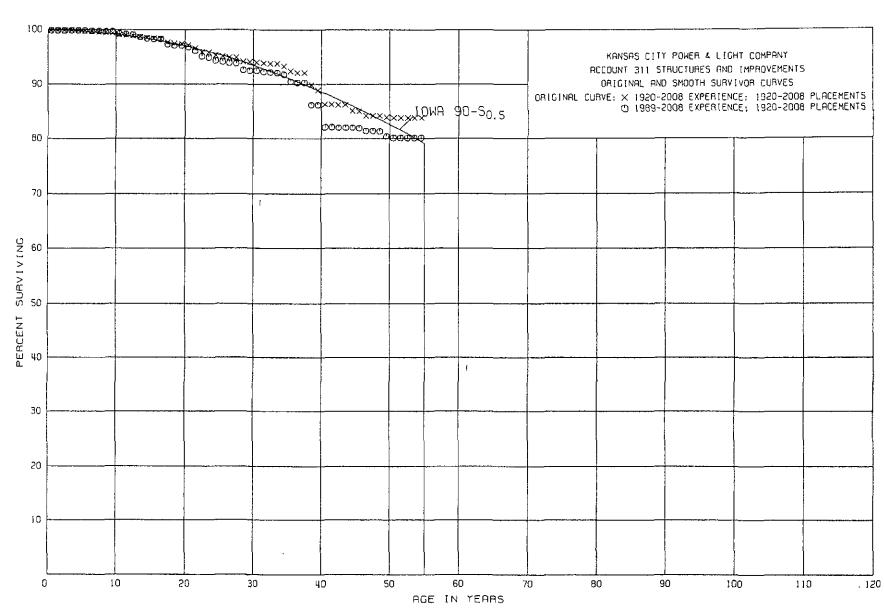
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SERVICE LIFE STATISTICS

Schedule JJS2010-1

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ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT	BAND 1920-2008	म	XPERIENC	E BAND	1920-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	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	119,790,809 120,512,813 120,691,606 117,080,948 116,498,056 115,624,606 111,757,466 109,606,596 94,634,074 92,294,434	58,394 4,131 9,617 11,760 29,613 133,258 148,230 94,107 45,529 149,617	0.0005 0.0001 0.0001 0.0003 0.0012 0.0013 0.0009 0.0005 0.0016	0.9995 1.0000 0.9999 0.9997 0.9988 0.9987 0.9987 0.9991 0.9995 0.9984	100.00 99.95 99.95 99.94 99.93 99.90 99.78 99.65 99.56 99.51
9.5	91,805,353	222,997	0.0024	0.9976	99.35
10.5	90,146,629	70,253	0.0008	0.9992	99.11
11.5	86,136,392	86,652	0.0010	0.9990	99.03
12.5	81,097,782	220,537	0.0027	0.9973	98.93
13.5	79,862,741	162,892	0.0020	0.9980	98.66
14.5	74,674,805	54,296	0.0007	0.9993	98.46
15.5	69,462,121	35,271	0.0005	0.9995	98.39
16.5	67,321,504	467,301	0.0069	0.9931	98.34
17.5	64,901,939	100,960	0.0016	0.9984	97.66
18.5	64,039,685	45,478	0.0007	0.9993	97.50
19.5	63,298,737	172,416	0.0027	0.9973	97.43
20.5	62,707,355	392,918	0.0063	0.9937	97.17
21.5	62,040,870	439,300	0.0071	0.9929	96.56
22.5	57,475,534	69,592	0.0012	0.9988	95.87
23.5	57,063,806	273,677	0.0048	0.9952	95.75
24.5	56,415,414	103,827	0.0018	0.9982	95.29
25.5	54,145,029	114,430	0.0021	0.9979	95.12
26.5	53,663,732	20,496	0.0004	0.9996	94.92
27.5	53,489,694	417,761	0.0078	0.9922	94.88
28.5	32,955,730	31,374	0.0010	0.9990	94.14
29.5	30,892,645	32,718	0.0011	0.9989	94.05
30.5	30,181,653	23,640	0.0008	0.9992	93.95
31.5	24,987,521	26,824	0.0011	0.9989	93.87
32.5	24,766,287	5,281	0.0002	0.9998	93.77
33.5	19,437,897	94,397	0.0049	0.9951	93.75
34.5	19,177,617	182,307	0.0095	0.9905	93.29
35.5	10,839,243	36,750	0.0034	0.9966	92.40
36.5	10,749,527	3,710	0.0003	0.9997	92.09
37.5	10,201,385	240,674	0.0236	0.9764	92.06
38.5	9,881,036	114,230	0.0116	0.9884	89.89

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1920-2008		EXPERIEN	CE BAND	1920-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	9,439,922 9,046,951 8,979,622 8,920,104 8,807,354 8,262,017 8,265,204 8,060,758 8,026,718 7,965,661	268,688 5,901 4,861 1,079 113,641 15,207 70,898 3,289 '3,281 26,813	0.0285 0.0007 0.0005 0.0129 0.0018 0.0086 0.0004 0.0004 0.0034	0.9715 0.9993 0.9995 0.9999 0.9871 0.9982 0.9914 0.9996 0.9996 0.9966	88.85 86.26 86.22 86.21 85.10 84.95 84.22 84.19 84.16
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	7,965,025 5,567,415 5,516,785 5,503,817 5,262,627 5,033,012 4,402,746 3,493,809 3,380,865 3,360,597	9,372 330 181 1,058	0.0012 0.0000 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0003 0.0000	0.9988 1.0000 0.9999 1.0000 1.0000 1.0000 1.0000 0.9997 1.0000	83.87 83.77 83.76 83.76 83.76 83.76 83.76 83.76 83.76 83.76 83.76
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	3,413,222 2,104,037 2,059,713 149,542 149,542 149,542 149,542 149,542 149,542 149,542 150,052 146,168	933 3,884	0.0000 0.0004 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0259 0.0000	1.0000 0.9996 1.0000 1.0000 1.0000 1.0000 1.0000 0.9741 1.0000	83.73 83.70 83.70 83.70 83.70 83.70 83.70 83.70 83.70 83.70 83.70
69.5 70.5 71.5 72.5 73.5 74.5 75.5	141,817 141,817 141,817 141,817 141,158 141,158 141,158	659	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0046\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 0.9954 1.0000 1.0000 1.0000	81.53 81.53 81.53 81.53 81.15 81.15 81.15

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ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT	BAND 1920-2008		EXPERIEN	CE BAND	1989-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	55,659,914 54,685,381 55,147,655 56,410,884 56,208,289 55,842,494 54,598,784 52,910,163 38,246,432 56,720,622	1,766 4,423 4,730 72,786 5,026 33,737 32,177 29,845	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0001\\ 0.0001\\ 0.0013\\ 0.0001\\ 0.0006\\ 0.0008\\ 0.0005\end{array}$	1.0000 1.0000 0.9999 0.9999 0.9987 0.9999 0.9999 0.9994 0.9992 0.9995	100.00 100.00 100.00 99.99 99.98 99.85 99.85 99.84 99.78 99.70
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	56,543,426 55,705,239 53,605,178 49,029,927 47,887,395 42,785,699 46,003,313 44,136,470 42,127,484 41,269,868	190,876 56,144 70,768 208,053 130,668 37,704 1,320 444,267 88,613 23,737	$\begin{array}{c} 0.0034\\ 0.0010\\ 0.0013\\ 0.0042\\ 0.0027\\ 0.0009\\ 0.0000\\ 0.0101\\ 0.0021\\ 0.0006\end{array}$	0.9966 0.9990 0.9987 0.9958 0.9973 0.9991 1.0000 0.9899 0.9979 0.9994	99.65 99.31 99.21 99.08 98.66 98.39 98.30 98.30 98.30 97.31 97.11
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	41,008,973 40,531,507 40,028,217 35,499,952 35,121,673 34,878,287 32,638,389 32,349,247 32,226,184 11,892,188	120,351 274,826 424,187 63,387 227,738 89,718 57,571 18,090 411,485 14,892	0.0029 0.0068 0.0106 0.0018 0.0065 0.0026 0.0018 0.0006 0.0128 0.0013	0.9971 0.9932 0.9894 0.9982 0.9935 0.9974 0.9982 0.9994- 0.9872 0.9987	97.05 96.77 96.11 95.09 94.92 94.30 94.05 93.88 93.82 92.62
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	11,662,166 13,684,817 11,799,043 11,652,663 11,600,301 11,445,784 3,806,463 3,785,294 3,547,664 3,309,405	23,285 24,704 3,093 42,227 163,156 6,015 707 160,439	$\begin{array}{c} 0.0000\\ 0.0017\\ 0.0021\\ 0.0003\\ 0.0036\\ 0.0143\\ 0.0016\\ 0.0002\\ 0.0452\\ 0.0000\end{array}$	1.0000 0.9983 0.9979 0.9997 0.9964 0.9857 0.9984 0.9998 0.9548 1.0000	92.50 92.30 92.34 92.15 92.12 91.79 90.48 90.34 90.32 86.24

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1920-2008		EXPERIEN	CE BAND	1989-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	3,017,810 2,874,024 2,850,369 2,831,618 2,817,283 2,536,976 2,577,864 2,560,404 2,550,489 2,500,783	144,345 4,223 1,079 776 559 16,429 837 3,281 26,813	$\begin{array}{c} 0.0478 \\ 0.0000 \\ 0.0015 \\ 0.0004 \\ 0.0003 \\ 0.0002 \\ 0.0064 \\ 0.0003 \\ 0.0013 \\ 0.0107 \end{array}$	0.9522 1.0000 0.9985 0.9996 0.9997 0.9998 0.9936 0.9997 0.9987 0.9987	86.24 82.12 82.12 82.00 81.97 81.95 81.93 81.41 81.39 81.28
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	2,456,352 87,911 43,429 45,370 46,427 46,576 46,576 14,984 14,984 4,500	9,372 181 1,058	$\begin{array}{c} 0.0038\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0039\\ 0.0000\\ 0.0706\\ 0.0000\\ 0.0000\end{array}$	0.9962 1.0000 1.0000 1.0000 1.0000 1.0000 0.9961 1.0000 0.9294 1.0000	80.41 80.10 80.10 80.10 80.10 80.10 80.10 79.79 79.79 79.79
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	146,591 146,591 145,658 145,658 149,542 149,542 149,542 149,542 149,393 146,168	933 3,884	$\begin{array}{c} 0.0000\\ 0.0064\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0260\\ 0.0000\\ 0.0000\end{array}$	1.0000 0.9936 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9740 1.0000	74.16 74.16 73.69 73.69 73.69 73.69 73.69 73.69 73.69 73.69 73.69
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5	141,817 141,817 141,817 141,817 141,158 141,158 141,158	659	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0046\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 0.9954 1.0000 1.0000 1.0000	71.7771.7771.7771.7771.4471.4471.4471.44

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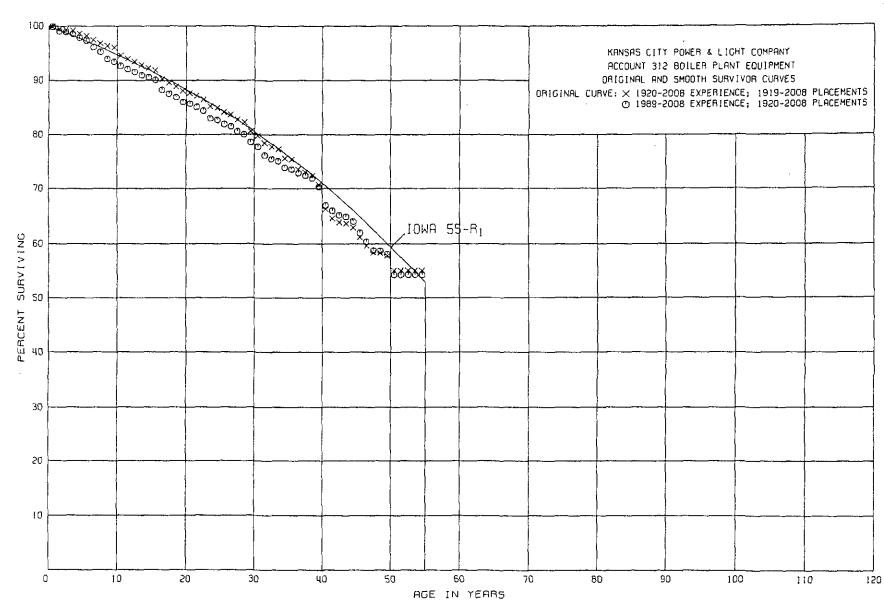
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PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1989-2008

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ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1919-2008 EXPERIENCE BAND 1920-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	5 RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
$\begin{array}{ccc} 0.5 & 1 \\ 1.5 & 1 \\ 2.5 & 1 \end{array}$,198,982,267 ,143,667,677 ,064,293,815 ,019,847,020 ,016,677,320 994,931,901 981,981,720 947,808,043 676,705,291 622,962,703	134,356 5,861,658 1,241,877 2,144,099 4,713,327 3,571,027 8,790,502 5,233,107 3,566,571 2,038,764	$\begin{array}{c} 0.0001 \\ 0.0051 \\ 0.0021 \\ 0.0021 \\ 0.0036 \\ 0.0090 \\ 0.0055 \\ 0.0053 \\ 0.0033 \end{array}$	0.9999 0.9949 0.9988 0.9979 0.9954 0.9964 0.9910 0.9945 0.9947 0.9967	100.00 99.99 99.48 99.36 99.15 98.69 98.33 97.45 96.91 96.40
9.510.511.512.513.514.515.516.517.518.5	613,050,373 593,636,435 569,093,942 553,821,959 539,687,181 527,104,828 496,472,801 481,407,051 466,675,403 456,520,271	9,777,321 3,716,095 2,598,009 3,449,354 3,681,644 2,588,910 8,561,339 3,586,140 3,907,374 4,007,405	$\begin{array}{c} 0.0159 \\ 0.0063 \\ 0.0046 \\ 0.0062 \\ 0.0068 \\ 0.0049 \\ 0.0172 \\ 0.0074 \\ 0.0084 \\ 0.0088 \end{array}$	0.9841 0.9937 0.9954 0.9938 0.9932 0.9951 0.9828 0.9926 0.9916 0.9912	96.08 94.55 93.95 93.52 92.94 92.31 91.86 90.28 89.61 88.86
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	445,883,111 441,434,222 405,386,663 398,322,531 389,547,088 387,565,066 370,642,099 366,581,258 360,632,029 222,193,050	1,759,535 2,957,725 3,017,926 6,157,372 1,456,909 3,568,726 1,624,228 4,170,003 2,131,139 4,477,299	0.0039 0.0067 0.0074 0.0155 0.0037 0.0092 0.0044 0.0114 0.0059 0.0202	0.9961 0.9933 0.9926 0.9845 0.9963 0.9908 0.9956 0.9886 0.9941 0.9798	88.08 87.74 87.15 86.51 85.17 84.85 84.07 83.70 82.75 82.26
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	211,484,582 186,680,002 102,296,724 98,517,754 89,292,169 83,738,901 43,147,696 39,519,501 39,150,224 38,798,947	2,026,574 3,203,325 899,970 625,417 1,920,147 299,976 1,012,773 295,067 339,589 935,491	$\begin{array}{c} 0.0096 \\ 0.0172 \\ 0.0088 \\ 0.0063 \\ 0.0215 \\ 0.0036 \\ 0.0235 \\ 0.0075 \\ 0.0087 \\ 0.0241 \end{array}$	0.9904 0.9828 0.9912 0.9937 0.9785 0.9964 0.9765 0.9925 0.9913 0.9759	80.60 79.83 78.46 77.77 77.28 75.62 75.35 73.58 73.03 72.39



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ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1919-2008

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EXPERIENCE BAND 1920-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS 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	36,185,637 33,052,283 32,080,524 31,533,892 31,228,570 19,342,945 17,931,652 17,469,035 17,053,871 10,293,514	2,219,087 838,871 354,621 131,471 388,130 527,087 433,574 377,400 25,049 88,394	0.0613 0.0254 0.0111 0.0042 0.0124 0.0272 0.0242 0.0216 0.0015 0.0086	0.9387 0.9746 0.9889 0.9958 0.9876 0.9728 0.9758 0.9784 0.9985 0.9914	70.65 66.32 64.64 63.92 63.65 62.86 61.15 59.67 58.38 58.29
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	10,113,815 2,842,633 2,818,655 2,810,343 2,233,706 1,774,287 1,446,070 1,128,454 1,118,930 1,119,238	471,439 1,082	$\begin{array}{c} 0.0466 \\ 0.0004 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \end{array}$	$\begin{array}{c} 0.9534 \\ 0.9996 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \end{array}$	57.79 55.08
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	350,426 103,859 96,293 120,443 120,443 120,443 120,443 120,443 120,443 120,443 120,443 120,443		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000	55.08 55.08 55.08 55.08
69.5 70.5 71.5 72.5 73.5 74.5	120,443 120,443 120,443 120,443 120,443	120,443	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 1.0000\\ \end{array}$		



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ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENI	BAND 1920-2008	EAPER	TENCE BAND	1989-2008
AGE AT	EXPOSURES AT	RETIREMENTS		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE RET		BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL RAT		INTERVAL
0.0	672,831,627	7,972 0.00	0870.99130120.99880390.99610770.99230450.99550300.98700920.99080350.9865	100.00
0.5	632,043,998	5,491,719 0.00		100.00
1.5	560,071,748	670,747 0.00		99.13
2.5	528,409,381	2,051,268 0.00		99.01
3.5	517,250,078	3,997,859 0.00		98.62
4.5	496,359,183	2,252,861 0.00		97.86
5.5	501,054,402	6,500,710 0.01		97.42
6.5	474,624,169	4,363,514 0.00		96.15
7.5	215,259,231	2,916,491 0.01		95.27
8.5	307,825,019	1,509,093 0.00		93.98
9.5	306,015,080	2,683,640 0.00	0690.99310470.99530650.99350450.99550620.9938080.98020730.99270890.9911	93.52
10.5	325,087,981	2,252,543 0.00		92.70
11.5	388,444,379	1,814,048 0.00		92.06
12.5	379,457,603	2,478,992 0.00		91.63
13.5	367,693,782	1,644,823 0.00		91.03
14.5	361,163,451	2,241,670 0.00		90.62
15.5	386,596,195	7,636,411 0.01		90.06
16.5	376,202,076	2,757,438 0.00		88.28
17.5	364,578,163	3,249,421 0.00		87.64
18.5	355,520,222	3,327,490 0.00		86.86
19.5	374,605,945	1,498,133 0.00	0670.99330840.99160710.98290310.9969010.98990400.99600220.98780610.9939	86.04
20.5	370,618,544	2,495,149 0.00		85.70
21.5	335,568,591	2,820,682 0.00		85.13
22.5	328,778,288	5,632,048 0.01		84.41
23.5	320,730,187	980,280 0.00		82.97
24.5	332,473,561	3,371,245 0.01		82.71
25.5	316,251,704	1,265,828 0.00		81.87
26.5	312,697,367	3,815,382 0.01		81.54
27.5	307,240,538	1,873,279 0.00		80.55
28.5	177,899,099	3,301,010 0.01		80.06
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	173,665,190 159,912,686 80,960,014 78,701,532 77,578,952 72,805,995 34,275,443 32,780,164 32,515,270 32,295,415	$\begin{array}{ccccccc} 1,832,003 & 0.01 \\ 3,149,128 & 0.01 \\ 769,016 & 0.00 \\ 473,506 & 0.00 \\ 1,234,930 & 0.01 \\ 241,385 & 0.00 \\ 327,215 & 0.00 \\ 253,746 & 0.00 \\ 224,203 & 0.00 \\ 693,129 & 0.02 \end{array}$.970.9803.950.9905.600.9940.590.9841.330.9967.950.9905.770.9923.690.9931	78.57 77.75 76.22 75.50 75.05 73.86 73.62 72.92 72.36 71.86

PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1989-2008

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

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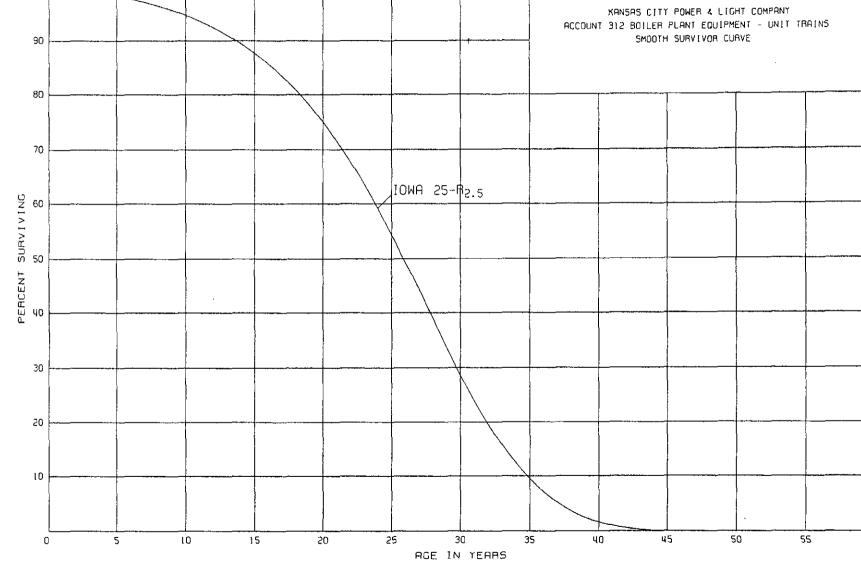
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PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1989-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	29,934,004 28,458,589 28,059,782 27,680,642 27,457,128 15,898,507 14,883,922 14,482,021 14,071,118 7,329,219	1,470,159357,911353,149130,228370,782512,636375,984377,40025,04976,453	$\begin{array}{c} 0.0491 \\ 0.0126 \\ 0.0126 \\ 0.0047 \\ 0.0135 \\ 0.0322 \\ 0.0253 \\ 0.0261 \\ 0.0018 \\ 0.0104 \end{array}$	0.9509 0.9874 0.9953 0.9865 0.9678 0.9747 0.9739 0.9982 0.9896	70.32 66.87 65.20 64.89 64.01 61.95 60.38 58.80 58.69
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	7,223,359 1 1,696 1 182 1,152 42 9,084 12,301 13,369	471,385	$\begin{array}{c} 0.0653 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \end{array}$	$\begin{array}{c} 0.9347 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \\ 1.0000 \end{array}$	58.08 54.29 54.29 54.29 54.29 54.29 54.29 54.29 54.29 54.29 54.29 54.29 54.29
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	16,001 120,443		0.0000	1.0000	54.29 54.29
69.5 70.5 71.5 72.5 73.5 74.5	120,443 120,443 120,443 120,443 120,443	120,443	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 1.0000\\ 1.0000\end{array}$		

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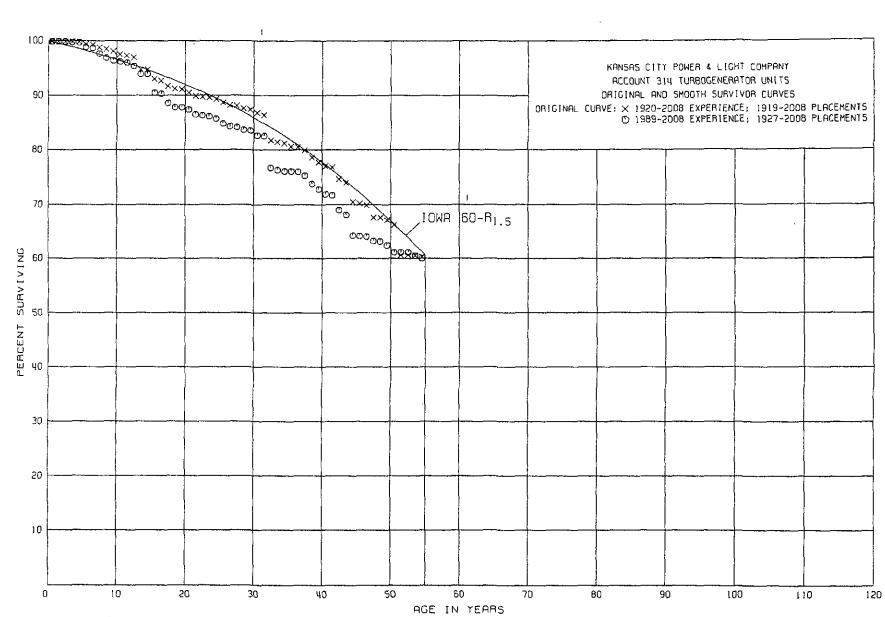
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ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1919-2008 EXPERIENCE BAND 1920-2008

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AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS 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	282,311,102 281,484,361 278,051,728 267,400,200 250,871,302 248,467,406 240,192,734 234,854,061 180,502,898 162,879,223	140,579 14,039 90,766 156,935 258,346 933,699 276,696 1,036,560 583,711 618,445	$\begin{array}{c} 0.0005\\ 0.0000\\ 0.0003\\ 0.0006\\ 0.0010\\ 0.0038\\ 0.0012\\ 0.0044\\ 0.0032\\ 0.0038\\ 0.0038\end{array}$	0.9995 1.0000 0.9997 0.9994 0.9990 0.9962 0.9988 0.9956 0.9968 0.9968	100.00 99.95 99.95 99.86 99.76 99.38 99.26 98.82 98.82
9.5	161,866,375	1,065,660311,586502,6983,701,09836,2762,772,164423,6201,601,078807,82360,511	0.0066	0.9934	98.13
10.5	159,882,685		0.0019	0.9981	97.48
11.5	159,245,033		0.0032	0.9968	97.29
12.5	158,250,927		0.0234	0.9766	96.98
13.5	153,139,159		0.0002	0.9998	94.71
14.5	153,371,697		0.0181	0.9819	94.69
15.5	149,460,405		0.0028	0.9972	92.98
16.5	144,163,445		0.0111	0.9889	92.72
17.5	137,974,741		0.0059	0.9941	91.69
18.5	136,661,717		0.0004	0.9996	91.15
19.5	132,492,577	828,671	0.0063	0.9937	91.11
20.5	131,453,841	914,352	0.0070	0.9930	90.54
21.5	130,349,571	258,034	0.0020	0.9980	89.91
22.5	128,960,423	195,721	0.0015	0.9985	89.73
23.5	128,578,064	367,720	0.0029	0.9971	89.60
24.5	127,786,545	983,510	0.0077	0.9923	89.34
25.5	123,380,810	680,449	0.0055	0.9945	88.65
26.5	-122,638,173	132,853	0.0011	0.9989	88.16
27.5	120,793,583	604,895	0.0050	0.9950	88.06
28.5	82,661,945	162,892	0.0020	0.9980	87.62
29.5	80,704,733	616,451	0.0076	0.9924	87.44
30.5	79,998,889	386,574	0.0048	0.9952	86.78
31.5	62,191,540	3,336,752	0.0537	0.9463	86.36
32.5	58,799,017	245,278	0.0042	0.9958	81.72
33.5	53,091,365	120,199	0.0023	0.9977	81.38
34.5	52,839,202	383,127	0.0073	0.9927	81.19
35.5	41,420,481	37,518	0.0009	0.9991	80.60
36.5	40,345,010	327,708	0.0081	0.9919	80.53
37.5	39,958,017	626,119	0.0157	0.9843	79.88
38.5	39,122,572	450,146	0.0115	0.9885	78.63

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ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1919-2008 EXPERIENCE BAND 1920-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	26,071,802 25,807,374 25,718,790 24,229,937 23,802,145 17,139,720 17,042,487 16,833,427 16,277,785 12,067,091	234,717 72,040 705,468 229,182 1,124,572 68,978 88,692 535,519 22,324 78,644	0.0090 0.028 0.0274 0.0095 0.0472 0.0040 0.0052 0.0318 0.0014 0.0065	0.9910 0.9972 0.9726 0.9905 0.9528 0.9960 0.9948 0.9682 0.9986 0.9935	77.73 77.03 76.81 74.71 74.00 70.51 70.23 69.86 67.64 67.55
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5	11,966,022 5,934,762 5,418,831 5,462,807 5,414,768 5,371,735 4,110,931 2,668,186 1,881,992 2,645,297 2,638,530	155,932 501,416 3,769 10,555 13,838 41,615 1,017,717 165 1,730 3,665	0.0130 0.0845 0.0007 0.0019 0.0026 0.0077 0.2476 0.0001 0.0009 0.0014 0.0004	0.9870 0.9155 0.9993 0.9981 0.9974 0.9923 0.7524 0.9999 0.9999 0.9991 0.9986	67.11 66.24 60.64 60.60 60.48 60.32 59.86 45.04 45.04 45.00 44.94
60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	1,560,792 1,530,926 784,224 784,224 784,160 783,127 782,043 782,043 782,043	28,386 26 64 1,033 1,084 8,128	0.0182 0.0000 0.0001 0.0013 0.0014 0.0000 0.0000 0.0104	0.9818 1.0000 1.0000 0.9999 0.9987 0.9986 1.0000 1.0000 0.9896	$\begin{array}{r} 44.92 \\ 44.10 \\ 44.10 \\ 44.10 \\ 44.00 \\ 44.04 \\ 43.98 \\ 43.98 \\ 43.98 \\ 43.98 \end{array}$
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	773,915 773,915 773,915 773,670 773,670 771,885 9,044 4,537 4,537	245 1,784 762,841 4,507 4,537	0.0000 0.0003 0.0000 0.0023 0.9883 0.4983 0.0000 1.0000	1.0000 1.0000 0.9997 1.0000 0.9977 0.0117 0.5017 1.0000 0.0000	$\begin{array}{r} 43.52\\ 43.52\\ 43.52\\ 43.51\\ 43.51\\ 43.41\\ 0.51\\ 0.26\\ 0.26\\ 0.00\\ \end{array}$



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Schedule JJS2010-1

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENI	BAND 1927-2008	1	SAPERIEN	CE BAIND	1989-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS 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	138,990,011 137,265,143 133,585,720 125,189,445 108,552,644 106,569,026 102,716,828 97,567,952 43,531,008 65,617,327	84,084 16,158 144,374 104,989 843,806 227,636 1,014,249 363,871 298,507	$\begin{array}{c} 0.0006\\ 0.0000\\ 0.0001\\ 0.0012\\ 0.0010\\ 0.0079\\ 0.0022\\ 0.0104\\ 0.0084\\ 0.0045 \end{array}$	0.9994 1.0000 0.9999 0.9988 0.9990 0.9921 0.9978 0.9896 0.9916 0.9955	100.00 99.94 99.93 99.81 99.71 98.92 98.70 97.67 96.85
9.5	65,002,929	177,896	0.0027	0.9973	96.41
10.5	63,600,494	123,393	0.0019	0.9981	96.15
11.5	80,922,356	490,215	0.0061	0.9939	95.97
12.5	80,149,561	1,253,471	0.0156	0.9844	95.38
13.5	77,552,143	2,840	0.0000	1.0000	93.89
14.5	76,728,201	2,739,758	0.0357	0.9643	93.89
15.5	87,680,589	261,624	0.0030	0.9970	90.54
16.5	85,427,233	1,547,239	0.0181	0.9819	90.27
17.5	79,543,544	788,023	0.0099	0.9901	88.64
18.5	78,117,454	194	0.0000	1.0000	87.76
19.5	89,277,753	376,633	$\begin{array}{c} 0.0042 \\ 0.0101 \\ 0.0027 \\ 0.0022 \\ 0.0041 \\ 0.0105 \\ 0.0069 \\ 0.0015 \\ 0.0066 \\ 0.0013 \end{array}$	0.9958	87.76
20.5	88,700,542	898,973		0.9899	87.39
21.5	87,805,412	237,241		0.9973	86.51
22.5	86,447,211	189,801		0.9978	86.28
23.5	86,277,502	355,365		0.9959	86.09
24.5	92,691,784	974,022		0.9895	85.74
25.5	88,047,802	604,570		0.9931	84.84
26.5	87,441,303	129,061		0.9985	84.25
27.5	87,159,197	573,632		0.9934	84.12
28.5	55,182,215	73,375		0.9987	83.56
29.5	55,105,266	588,223	0.0107	0.9893	83.45
30.5	61,048,754	64,813	0.0011	0.9989	82.56
31.5	47,623,185	3,331,620	0.0700	0.9300	82.47
32.5	44,260,165	239,288	0.0054	0.9946	76.70
33.5	43,960,209	107,168	0.0024	0.9976	76.29
34.5	43,817,903	8,946	0.0002	0.9998	76.11
35.5	33,273,612	36,862	0.0011	0.9989	76.09
36.5	33,278,586	327,319	0.0098	0.9989	76.01
37.5	32,984,893	625,902	0.0190	0.9810	75.27
38.5	32,189,143	449,851	0.0140	0.9860	73.84

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ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

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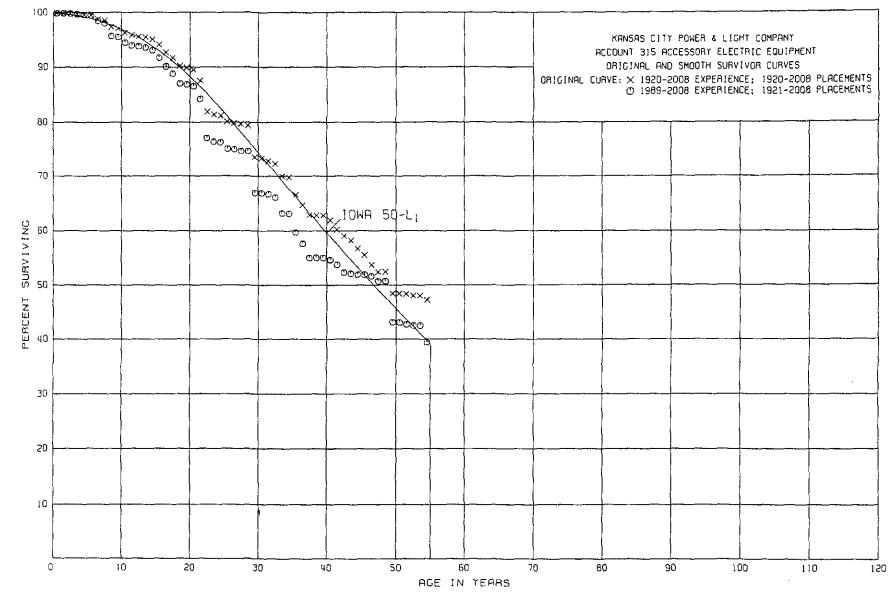
PLACEMENT BAND 1927-2008 EXPERIENCE BAND 1989-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	19,153,300 18,902,075 18,832,100 18,121,347 17,698,999 11,600,403 11,559,018 11,540,750 11,394,067 7,183,871	230,319 72,036 704,234 227,803 1,011,651 31,211 5,208 145,715 22,324 75,299	0.0120 0.0038 0.0374 0.0126 0.0572 0.0027 0.0005 0.0126 0.0020 0.0105	0.9880 0.9962 0.9626 0.9874 0.9428 0.9973 0.9995 0.9874 0.9980 0.9895	72.81 71.94 71.67 68.99 68.12 64.22 64.05 64.02 63.21 63.08
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5	7,151,886 1,132,116 1,131,303 1,185,732 1,139,387 1,127,316 1,084,568 66,852 26,009 873,053 867,539	147,74690536910,5559,30341,6151,017,7171651,7303,665	0.0207 0.0008 0.0003 0.0089 0.0082 0.0369 0.9384 0.0025 0.0665 0.0042	0.9793 0.9992 0.9997 0.9911 0.9631 0.0616 0.9975 0.9335 0.9958 0.9989	62.42 61.13 61.08 61.06 60.52 60.02 57.81 3.56 3.55 3.31 3.30
60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	808,099 784,250 784,224 784,224 784,160 783,127 782,043 782,043	28,386 26 64 1,033 1,084 8,128	0.0351 0.0000 0.0000 0.0001 0.0013 0.0014 0.0000 - 0.0000 0.0104	0.9649 1.0000 1.0000 0.9999 0.9987 0.9986 1.0000 1.0000 0.9896	3.30 3.18 3.18 3.18 3.18 3.18 3.18 3.18 3.18
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	773,915 773,915 773,915 773,670 773,670 771,885 9,044 4,537 4,537	245 1,784 762,841 4,507 4,537	$\begin{array}{c} 0.0000\\ 0.0003\\ 0.0003\\ 0.0000\\ 0.0023\\ 0.9883\\ 0.4983\\ 0.0000\\ 1.0000\\ \end{array}$	$\begin{array}{c} 1.0000\\ 1.0000\\ 0.9997\\ 1.0000\\ 0.9977\\ 0.0117\\ 0.5017\\ 1.0000\\ 0.0000\\ \end{array}$	3.15 3.15 3.15 3.15 3.15 3.14 0.04 0.02 0.02 0.00

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ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1920-2008

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AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	165,900,864	89,584	0.0005	0.9995	100.00
0.5	164,702,225	26,472	0.0002	0.9998	99.95
1.5	162,657,330	283,923	0.0017	0.9983	99.93
2.5	159,967,193	82,776	0.0005	0.9995	99.76
3.5	159,236,133	138,957	0.0009	0.9991	99.71
4.5	156,775,297	268,490	0.0017	0.9983	99.62
5.5	155,123,729	941,639	0.0061	0.9939	99.45
6.5	144,522,984	390,980	0.0027	0.9973	98.84
7.5	101,134,895	1,235,674	0.0122	0.9878	98.57
8.5	81,878,199	255,347	0.0031	0.9969	97.37
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	79,711,081 75,177,464 69,807,185 68,928,235 68,454,469 66,752,169 57,252,220 55,378,460 53,460,314 51,869,888	636,089 289,667 199,466 116,148 272,202 675,060 870,664 616,910 844,928 198,306	0.0080 0.0039 0.0029 0.0017 0.0040 0.0101 0.0152 0.0111 0.0158 0.0038	0.9920 0.9961 0.9971 0.9983 0.9960 0.9899 0.9848 0.9889 0.9842 0.9842 0.9962	97.07 96.29 95.91 95.63 95.47 95.09 94.13 92.70 91.67 90.22
19.5	50,565,535	245,189	$\begin{array}{c} 0.0048\\ 0.0215\\ 0.0647\\ 0.0064\\ 0.0023\\ 0.0131\\ 0.0020\\ 0.0032\\ 0.0032\\ 0.0040\\ 0.0741 \end{array}$	0.9952	89.88
20.5	49,659,304	1,068,007		0.9785	89.45
21.5	47,908,604	3,101,497		0.9353	87.53
22.5	44,456,505	286,156		0.9936	81.87
23.5	44,055,429	103,205		0.9977	81.35
24.5	44,039,462	578,735		0.9869	81.16
25.5	43,267,554	85,465		0.9980	80.10
26.5	43,029,565	135,741		0.9968	79.94
27.5	42,836,514	169,270		0.9960	79.68
28.5	29,017,688	2,150,402		0.9259	79.36
29.5	25,741,176	48,439	$\begin{array}{c} 0.0019\\ 0.0069\\ 0.0079\\ 0.0316\\ 0.0019\\ 0.0461\\ 0.0293\\ 0.0278\\ 0.0014\\ 0.0001\end{array}$	0.9981	73.48
30.5	24,898,550	171,057		0.9931	73.34
31.5	16,940,502	133,649		0.9921	72.83
32.5	14,333,243	452,701		0.9684	72.25
33.5	12,723,333	23,764		0.9981	69.97
34.5	12,468,820	574,723		0.9539	69.84
35.5	6,643,067	194,408		0.9707	66.62
36.5	5,478,825	152,079		0.9722	64.67
37.5	5,275,722	7,508		0.9986	62.87
38.5	5,287,957	338		0.9999	62.78

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ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1920-2008 RETIREMENTS AGE AT EXPOSURES AT PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 5,196,399 74,087 39.5 0.0143 0.9857 62.77 40.5 5,034,681 137,045 0.0272 0.9728 61.87 41.5 4,880,876 93,813 0.0192 0.9808 60.19 42.5 4,478,597 64,675 0.0144 0.9856 59.03 43.5 4,397,105 115,804 0.0263 0.9737 58.18 44.5 3,079,178 61,734 0.0200 0.9800 56.65 45.5 3,028,650 98,679 0.0326 0.9674 55.52 2,925,319 70,254 46.5 0.0240 0.9760 53.71 47.5 2,850,936 458 0.0002 0.9998 52.42 48.5 2,222,953 170,120 0.0765 0.9235 52.41 49.5 1,969,929 0.0000 1.0000 48.40 1,206,482 50.5 2,248 0.0019 0.9981 48.40 1,201,357 8,234 51.5 0.0069 0.9931 48.31 0.9999 52.5 1,225,338 97 0.0001 47.98 1,154,473 53.5 18,662 0.0162 0.9838 47.98 54.5 1,099,550 46,016 0.04180.9582 47.20 55.5 760,881 129,231 0.1698 0.8302 45.23 564,284 2.327 0.0041 0.9959 37.55 56.5 57. 58. 59. 60.

56.5	564,284	2,321	0.0041	0.9959	37.55
57.5	478,497	2,841	0.0059	0.9941	37.40
58.5	616,084	727	0.0012	0.9988	37.18
5 9. 5	675,467	24,812	0.0367	0.9633	37.14
60.5	531,213	38,198	0.0719	0.9281	35.78
61.5	444,679	11,990	0.0270	0.9730	33.21
62.5	205,186		0.0000	1.0000	32.31
63.5	205,186		0.0000	1.0000	32.31
64.5	205,186	1,772	0.0086	0.9914	32.31
65.5	203,413		0.0000	1.0000	32.03
66.5	203,413	3,235	0.0159	0.9841	32.03
67.5	200,179	1,114	0.0056	0.9944	31.52
68.5	199,065	35,751	0.1796	0.8204	31.34
69.5	163,314	126	0.0008	0.9992	25.71
70.5	163,188		0.0000	1.0000	25.69
71.5	163,188	43	0.0003	0.9997	25.69
72.5	163,145	10,208	0.0626	0.9374	25.68
73.5	152,937	91	0.0006	0.9994	24.07
74.5	152,846	131,627	0.8612	0.1388	24.06
75.5	21,219	20,692	0.9752	0.0248	3.34
76.5	527		0.0000	1.0000	0.08
77.5	527		0.0000	1.0000	0.08
78.5	527		0.0000	1.0000	0.08



ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1920-2008 EXPERIENCE BAND 1920-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE RETMT INTERVAL RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5	527 527 527 527 527 527 527 527 527	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	$\begin{array}{c} 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\\ 1.0000\end{array}$	0.08 0.08 0.08 0.08 0.08 0.08 0.08 0.08

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT	BAND 1921-2008		EXPERIEN	CE BAND	1989-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	108,540,212 107,387,559 106,365,437 105,082,226 104,396,141 102,154,606 100,785,819 90,272,227 47,188,518 45,705,296	9,893 254,938 52,674 82,923 239,088 894,854 352,439 1,167,554 117,770	$\begin{array}{c} 0.0000\\ 0.0001\\ 0.0024\\ 0.0005\\ 0.0008\\ 0.0023\\ 0.0089\\ 0.0039\\ 0.0247\\ 0.0026\end{array}$	1.0000 0.9999 0.9976 0.9995 0.9992 0.9977 0.9911 0.9961 0.9753 0.9974	100.00 100.00 99.99 99.75 99.70 99.62 99.39 98.51 98.13 95.71
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	43,699,947 39,913,341 43,560,648 42,852,246 42,606,437 41,135,433 39,656,791 38,184,624 36,479,326 35,222,473	438,894 206,976 103,176 71,494 233,681 622,967 718,932 538,285 737,359 77,948	$\begin{array}{c} 0.0100\\ 0.0052\\ 0.0024\\ 0.0017\\ 0.0055\\ 0.0151\\ 0.0181\\ 0.0141\\ 0.0202\\ 0.0022\\ \end{array}$	0.9900 0.9948 0.9976 0.9983 0.9945 0.9849 0.9819 0.9859 0.9798 0.9978	95.46 94.51 94.02 93.79 93.63 93.12 91.71 90.05 88.78 86.99
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	38,117,434 37,888,358 36,153,990 32,772,848 32,415,057 34,244,975 33,519,163 33,380,293 33,271,341 20,737,765	$118,778 \\1,012,543 \\3,069,913 \\269,724 \\72,032 \\542,727 \\44,777 \\96,786 \\50,665 \\2,147,361$	0.0031 0.0267 0.0849 0.0082 0.0022 0.0158 0.0013 0.0029 0.0015 0.0015 0.1035	0.9969 0.9733 0.9151 0.9918 0.9978 0.9842 0.9987 0.9987 0.9971 0.9985 0.8965	86.80 86.53 84.22 77.07 76.44 76.27 75.06 74.96 74.74 74.63
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	18,523,332 19,091,756 12,171,357 9,629,335 9,285,794 9,083,032 3,481,852 3,293,983 3,129,977 3,158,223	13,524 44,203 105,114 424,590 14,274 496,699 123,874 147,917	0.0007 0.0023 0.0086 0.0441 0.0015 0.0547 0.0356 0.0449 0.0000 0.0000	0.9993 0.9977 0.9914 0.9559 0.9985 0.9453 0.9644 0.9551 1.0000 1.0000	66.91 66.86 66.71 66.14 63.22 63.13 59.68 57.56 54.98 54.98





ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1921-2008		EXPERIEN	CE BAND	1989-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	3,070,857 3,011,832 2,954,214 2,873,044 2,845,975 1,793,505 1,806,361 1,792,260 1,762,186 1,136,040	19,232 48,694 79,994 10,959 8,620 731 10,038 30,075 458 170,120	0.0063 0.0162 0.0271 0.0038 0.0030 0.0004 0.0056 0.0168 0.0003 0.1497	0.9937 0.9838 0.9729 0.9962 0.9970 0.9996 0.9944 0.9832 0.9997 0.8503	54.98 54.63 53.74 52.28 52.08 51.92 51.90 51.61 50.74 50.72
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	966,999 213,138 214,622 254,438 254,483 235,822 189,848 73,666 72,110 211,341	2,248 683 97 18,662 46,016 129,231 2,327 2,841 727	$\begin{array}{c} 0.0000\\ 0.0105\\ 0.0032\\ 0.0004\\ 0.0733\\ 0.1951\\ 0.6807\\ 0.0316\\ 0.0394\\ 0.0034 \end{array}$	1.0000 0.9895 0.9968 0.9996 0.9267 0.8049 0.3193 0.9684 0.9606 0.9966	$\begin{array}{r} 43.13\\ 43.13\\ 42.68\\ 42.54\\ 42.52\\ 39.40\\ 31.71\\ 10.13\\ 9.81\\ 9.42 \end{array}$
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	272,010 254,847 216,649 204,659 204,659 204,659 202,886 202,886 200,179 199,065	24,812 38,198 11,990 1,772 3,235 1,114 35,751	0.0912 0.1499 0.0553 0.0000 0.0000 0.0087 0.0000 0.0159 0.0056 0.1796	0.9088 0.8501 0.9447 1.0000 1.0000 0.9913 1.0000 0.9841 0.9944 0.8204	9.39 8.53 7.25 6.85 6.85 6.85 6.79 6.79 6.68 6.64
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	163,314 163,188 163,188 163,145 152,937 152,846 21,219 527 527 527	126 43 10,208 91 131,627 20,692	0.0008 0.0000 0.0626 0.0006 0.8612 0.9752 0.0000 0.0000 0.0000	0.9992 1.0000 0.9997 0.9374 0.9994 0.1388 0.0248 1.0000 1.0000 1.0000	5.45 5.45 5.45 5.11 5.11 0.71 0.02 0.02 0.02 0.02



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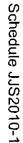
ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

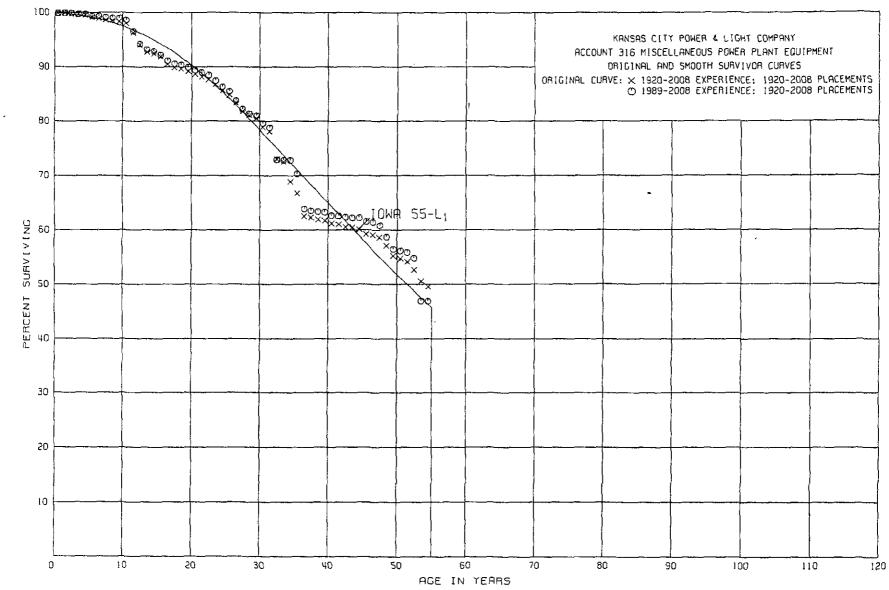
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PLACEMENT BAND 1921-2008 EXPERIENCE BAND 1989-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE RETMT INTERVAL RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5	527 527 527 527 527 527 527 527 527	0.000.0 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	0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02
86.5 87.5	527	0.0000	1.0000	$0.02 \\ 0.02$







ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

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PLACEMENT	BAND 1920-2008		EXPERIEN	CE BAND	1920-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGE INTERVAL		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	33,569,217 31,767,634 30,584,372 29,201,467 28,483,838 27,390,869 26,089,644 24,656,784 20,931,900 19,634,617	1,388 31,510 22,138 35,679 55,684 113,772 38,986 84,713 21,851 34,082	$\begin{array}{c} 0.0000\\ 0.0010\\ 0.0007\\ 0.0012\\ 0.0020\\ 0.0042\\ 0.0015\\ 0.0034\\ 0.0010\\ 0.0017\\ \end{array}$	1.0000 0.9990 0.9983 0.9988 0.9980 0.9958 0.9958 0.9985 0.9966 0.9990 0.9983	100.00 100.00 99.90 99.83 99.71 99.51 99.09 98.94 98.60 98.50
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	18,539,267 16,959,069 15,996,531 14,466,428 13,335,665 12,114,897 11,331,823 10,244,977 9,532,296 9,189,215	66,441 311,676 362,032 194,652 46,288 70,587 167,243 67,945 21,784 51,835	0.0036 0.0184 0.0226 0.0135 0.0035 0.0058 0.0148 0.0066 0.0023 0.0056	0.9964 0.9816 0.9774 0.9865 0.9965 0.9942 0.9852 0.9934 0.9977 0.9944	98.33 97.98 96.18 94.01 92.74 92.42 91.88 90.52 89.92 89.71
19.520.521.522.523.524.525.526.527.528.5	7,816,306 6,889,511 6,548,001 6,291,020 5,919,931 5,626,282 5,323,313 5,102,616 4,881,945 2,547,355	46,960 33,672 41,744 62,892 .74,048 51,370 99,327 94,408 42,021 19,014	0.0060 0.0049 0.0100 0.0125 0.0091 0.0187 0.0185 0.0086 0.0075	0.9940 0.9951 0.9936 0.9900 0.9875 0.9909 0.9813 0.9815 0.9914 0.9925	89.21 88.67 88.24 87.68 86.80 85.72 84.94 83.35 81.81 81.11
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,403,629 2,139,170 1,316,835 1,138,347 934,248 879,696 450,877 409,110 367,987 346,161	49,380 19,810 87,162 7,167 46,779 27,867 28,349 1,480 1,981 1,604	0.0205 0.0093 0.0662 0.0063 0.0501 0.0317 0.0629 0.0036 0.0054 0.0046	0.9795 0.9907 0.9338 0.9937 0.9499 0.9683 0.9371 0.9964 0.9946 0.9954	80.50 78.85 78.12 72.95 72.49 68.86 66.68 62.49 62.27 61.93

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1920-2008		EXPERIEN	CE BAND	1920-2008
AGE AT BEGIN OF	EXPOSURES AT BEGINNING OF	RETIREMENT DURING AGE		SURV	PCT SURV BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	325,925	2,243	0.0069	0.9931	61.65
40.5	321,487	1,213	0.0038	0.9962	61.22
41.5	321,528	2,511	0.0078	0.9922	60.99
42.5	324,990	286	0.0009	0.9991	60.51
43,5 44,5	323,647	2,139 4,000	0.0066	0.9934	60.46 60.06
44.5	272,362	4,000	$0.0147 \\ 0.0014$	0.9853 0.9986	59.18
46,5	267,971 264,325	2,075	0.0014	0.9921	59.10
47.5	262,895	6,994	0.0266	0.9921	58.63
48.5	213,062	6,611	0.0200	0.9690	57.07
10.5	215,002	0,011	0.0510	0.0090	57.07
49.5	204,664	1,895	0.0093	0.9907	55.30
50.5	108,447	1,174	0.0108	0.9892	54.79
51.5	103,668	2,878	0.0278	0.9722	54.20
52.5	103,057	4,081	0.0396	0.9604	52.69
53.5	86,862	1,973	0.0227	0.9773	50.60
54.5	81,840	-377	0.0046	0.9954	49.45
55.5	59,881	707	0.0118	0.9882	49.22
56.5	53,552	1,094	0.0204	0.9796	48.64
57.5	51,988	41	0.0008	0.9992	47.65
58.5	45,981	1,532	0.0333	0.9667	47.61
59.5	46,397	3,091	0.0666	0.9334	46.02
60.5	45,530	2,675	0.0588	0.9412	42.96
61.5	37,658	606	0.0161	0.9839	40.43
62.5	6,267	470	0.0750	0.9250	39.78
63.5	6,288	64	0.0102	0.9898	36.80
64.5	6,224	200	0.0321	0.9679	36.42
65.5	6,024		0.0000	1.0000	35.25
66.5	_ 6,024		0.0000	1.0000	35.25
67.5	6,173	100	0.0000	1.0000	35.25
68.5	6,173	108	0.0175	0.9825	35.25
69.5	6,173		0.0000	1.0000	34.63
70.5	6,173		0.0000	1.0000	34.63
71.5	6,173		0.0000	1.0000	34.63
72.5	6,173		0.0000	1.0000	34.63
73.5	6,173		0.0000	1.0000	34.63
74.5	6,024	2,649	0.4397	0.5603	34.63
75.5	3,375	3,375	1.0000	0.0000	19.40
76.5					0.00



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