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Witness: John J. Spanos
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Sponsoring Party: KCP&L Greater Missouri
Operations 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

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**Kansas City, Missouri
June 2010**

KCP&L Exhibit No. GMO38
Date 2/4/11 Reporter LMB
File No. ER-2010-0356

DIRECT TESTIMONY

OF

JOHN J. SPANOS

Case No. ER-2010-_____

1 **Q. Please state your name and business address.**

2 A. John J. Spanos, 207 Senate Avenue, Camp Hill, Pennsylvania, 17011.

3 **Q. On whose behalf are you testifying?**

4 A. I have been retained by Kansas City Power & Light Company ("KCP&L") to testify
5 on behalf of KCP&L Greater Missouri Operations Company ("GMO" or the
6 "Company").

7 **Q. Please state your educational background and describe your professional
8 training and experience.**

9 A. I have Bachelor of Science degrees in Industrial Management and Mathematics from
10 Carnegie-Mellon University and a Master of Business Administration from York
11 College of Pennsylvania.

12 **Q. By whom and in what capacity have you been employed?**

13 A. I am employed by Gannett Fleming as Vice President of the Valuation and Rate
14 Division, which provides depreciation consulting services to utility companies in the
15 United States and Canada. I am responsible for conducting depreciation, valuation
16 and original cost studies, determining service life and salvage estimates, conducting
17 field reviews, presenting recommended depreciation rates to clients, and supporting
18 such rates before state and federal regulatory agencies. I have been associated with
19 the firm since college graduation in 1986.

1 **Q. Do you belong to any professional societies?**

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

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

5 A. Yes. The Society of Depreciation Professionals has established national standards for
6 depreciation professionals. The Society administers an examination to become
7 certified in this field. I passed the certification exam in September 1997, and was
8 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.

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

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

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

20 A. Yes. I have submitted testimony to the Pennsylvania Public Utility Commission; the
21 Commonwealth of Kentucky Public Service Commission; the Public Utilities
22 Commission of Ohio; the Nevada Public Utility Commission; the Public Utilities
23 Board of New Jersey; the Missouri Public Service Commission; the Massachusetts
24 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
5 Commission; the Indiana Utility Regulatory Commission; the California Public
6 Utilities Commission; the Federal Energy Regulatory Commission (“FERC”); the
7 Arkansas Public Service Commission; the Public Utility Commission of Texas;
8 District of Columbia, Delaware Public Service Commission, Maryland Public Service
9 Commission; Washington Utilities and Transportation Commission; the Tennessee
10 Regulatory Commission; the Regulatory Commission of Alaska; and the North
11 Carolina Utilities Commission.

12 **Q. What is the purpose of your testimony?**

13 A. I am sponsoring Schedules JJS2010-1, JJS2010-2, and JJS2010-3 stating the results
14 of my depreciation studies for GMO electric plant as of December 31, 2008 (the
15 “2008 Depreciation Studies” or “Depreciation Studies”). I am also sponsoring
16 Schedule JJS2010-4 which are future depreciation rates for Iatan Unit 2.

17 **Q. Would you please summarize your testimony?**

18 A. My testimony will explain the methods and procedures of the Depreciation Studies
19 and set forth the annual depreciation rates as of December 31, 2008. Schedules
20 JJS2010-1, JJS2010-2, and JJS2010-3 contain the reports which set forth detailed
21 methods, procedures and results of the Depreciation Studies as of December 31,
22 2008. These reports will be explained in Part II of my testimony.

1 **Q. What are the principal conclusions of your studies and the bases for them?**

2 A. The principal conclusions of the studies are depreciation accrual rates by account for
3 GMO. Overall, the proposed rates are determined based on the remaining life method
4 and the utilization of the life span procedure for production facilities. The average
5 service lives and net salvage percents for transmission and distribution accounts are
6 generally the same.

7 **Q. Please describe the contents of your reports.**

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

15 Schedule JJS2010-1 represents the results for GMO – MPS Jurisdiction. The
16 table on pages III-4 through III-9 of the report presents the estimated survivor curve,
17 the net salvage percent, the original cost as of December 31, 2008, the book reserve
18 and the calculated annual depreciation accrual and rate for each account or
19 subaccount. The section beginning on page III-10 of the report presents the results of
20 the retirement rate analyses prepared as the historical bases for the service life
21 estimates. The section beginning on page III-198 of Schedule JJS2010-1 presents the
22 results of the salvage analysis. The section beginning on page III-250 of Schedule
23 JJS2010-1 presents the depreciation calculations related to surviving original cost as
24 of December 31, 2008.

1 Similarly, Schedule JJS2010-2 sets forth the results for GMO – L&P
2 Jurisdiction, and Schedule JJS2010-3 sets forth the results for GMO – ECORP. Each
3 of these reports are organized in the same fashion.

4 **II. METHODS USED IN DEPRECIATION STUDY**

5 **Q. Please define the concept of depreciation.**

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

13 **Q. In preparing the depreciation studies, did you follow generally accepted
14 practices in the field of depreciation and valuation?**

15 A Yes.

16 **Q. Please identify the depreciation method that you used.**

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

22 **Q. What are your recommended annual depreciation accrual rates for GMO?**

23 A. My recommended annual depreciation accrual rates as of December 31, 2008 are set
24 forth on pages III-4 through III-9 of Schedule JJS2010-1 for MPS Jurisdiction, pages

1 III-4 through III-8 of Schedule JJS2010-2 for L&P Jurisdiction, and page III-4 of
2 Schedule JJS2010-3 for ECORP.

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

4 A. I did this in two phases. In the first phase, I estimated the service life and net salvage
5 characteristics for each depreciable group, that is, each plant account or subaccount
6 identified as having similar characteristics. In the second phase, I calculated the
7 composite remaining lives and annual depreciation accrual rates based on the service
8 life and net salvage estimates determined in the first phase.

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

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

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

21 A. Each jurisdiction had a different range of historical data available to analyze.
22 Therefore, I analyzed the Company's accounting entries that record plant transactions
23 during the periods 1960 through 2008 for the MPS Jurisdiction, 1979 through 2008
24 for the L&P Jurisdiction, and 1999 through 2008 for ECORP. The transactions

1 included additions, retirements, transfers and the related balances. The Company
2 records also included surviving dollar value by year installed for each plant account
3 as of December 31, 2008.

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

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

9 **Q. Would you explain how you used the retirement rate method to analyze GMO's**
10 **service life data?**

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

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

22 A. Iowa-type curves are a widely used group of generalized survivor curves that contain
23 the range of survivor characteristics usually experienced by utilities and other
24 industrial companies. The Iowa curves were developed at the Iowa State College

1 Engineering Experiment Station through an extensive process of observing and
2 classifying the ages at which various types of property used by utilities and other
3 industrial companies had been retired.

4 Iowa-type curves are used to smooth and extrapolate original survivor curves
5 determined by the retirement rate method. The Iowa curves and truncated Iowa
6 curves were used in this study to describe the forecasted rates of retirement based on
7 the observed rates of retirement and the outlook for future retirements. As I will
8 explain, the use of truncated curves is appropriate to reflect retirements of plant
9 components that may not be fully depreciated at the time a plant is retired.

10 The estimated survivor curve designations for each depreciable property
11 group indicate the average service life, the family within the Iowa system to which
12 the property group belongs, and the relative height of the mode. For example, the
13 Iowa 35-R2 indicates an average service life of thirty-five years; a right-moded, or R,
14 type curve (the mode occurs after average life for right-moded curves); and a
15 moderate height, 2, for the mode (possible modes for R type curves range from 1 to
16 5).

17 **Q. What approach did you use to estimate the lives of significant facilities**
18 **structures such as production plants?**

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

23 The interim survivor curves describe the rate of retirement related to the
24 replacement of elements of the facility, such as, for a building, the retirements of

1 plumbing, heating, doors, windows, roofs, etc., that occur during the life of the
2 facility. The probable retirement date provides the rate of final retirement for each
3 year of installation for the facility by truncating the interim survivor curve for each
4 installation year at its attained age at the date of probable retirement. The use of
5 interim survivor curves truncated at the date of probable retirement provides a
6 consistent method for estimating the lives of the several years of installation for a
7 particular facility inasmuch as a single concurrent retirement for all years of
8 installation will occur when it is retired.

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

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

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

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

1 **Q. Did you physically observe GMO's plants and equipment as part of your**
2 **depreciation study?**

3 A. Yes. I made a field review of GMO's property on August 17-19, 2009 to observe
4 representative portions of plant. Field reviews are conducted to become familiar with
5 Company operations and obtain an understanding of the function of the plant and
6 information with respect to the reasons for past retirements and the expected future
7 causes of retirements. This knowledge, as well as information from other discussions
8 with management, was incorporated in the interpretation and extrapolation of the
9 statistical analyses.

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

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

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

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

23 Inasmuch as depreciation expense is the loss in service value of an asset
24 during a defined period, *e.g.*, one year, it must include a ratable portion of both the

1 original cost and the net salvage. That is, the net salvage related to an asset should be
2 incorporated in the cost of service during the same period as its original cost so that
3 customers receiving service from the asset pay rates that include a portion of both
4 elements of the asset's service value, the original cost and the net salvage value.

5 For example, the full recovery of the service value of a \$500 line transformer
6 will include not only the \$500 of original cost, but also, on average, \$100 to remove
7 the transformer at the end of its life and \$25 in salvage value. In this example, the net
8 salvage component is negative \$75 ($\$25 - \100), and the net salvage percent is
9 negative 15% ($(\$25 - \$100)/\$500$).

10 **Q. Please describe how you estimated net salvage percentages.**

11 A. Each jurisdiction had a different range of historical data available to analyze,
12 therefore, I estimated the net salvage percentages based on judgment that, for most
13 accounts, incorporated analyses of the historical data for the period 1985 through
14 2008 for MPS jurisdiction, 1980 through 2008 for L&P jurisdiction and 1999 through
15 2008 for ECORP, and considered estimates for other electric companies. In the
16 historical analyses, the net salvage, cost of removal and gross salvage amounts were
17 expressed as percents of the original cost retired. These percents were calculated on
18 annual and three-year moving average bases for their respective periods of analyses.

19 **Q. Please describe the second phase of the process that you used in the depreciation
20 study in which you calculated composite remaining lives and annual
21 depreciation accrual rates.**

22 A. After I estimated the service life and net salvage characteristics for each depreciable
23 property group, I calculated the annual depreciation accrual rates for each group
24 based on the straight line remaining life method, using remaining lives weighted

1 consistent with the average service life procedure. The annual depreciation accrual
2 rates were developed as of December 31, 2008.

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

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

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

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

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

22 A. I will use MPS jurisdiction Account 368.00, Line Transformers, as an example
23 because it is one of the largest depreciable groups and represents approximately nine
24 percent of depreciable plant for MPS Jurisdiction.

1 The retirement rate method was used to analyze the survivor characteristics of
2 this property group. Aged plant accounting data were compiled from 1960 through
3 2008 and analyzed for periods that best represent the overall service life of this
4 property. The life table for the 1960-2008 experience band is presented on pages III-
5 143 and III-144 of Schedule JJS2010-1. The life table displays the retirement and
6 surviving ratios of the aged plant data exposed to retirement by age interval. For
7 example, page III-143 shows \$975,957 retired during age interval 0.5-1.5 with
8 \$155,600,728 exposed to retirement at the beginning of the interval. Consequently,
9 the retirement ratio is 0.0063 ($\$975,957/\$155,600,728$) and the surviving ratio is
10 0.9937 ($1-.0063$). The percent surviving at age 0.5 of .9937 percent is multiplied by
11 the survivor ratio of 99.43 to derive the percent surviving at age 1.5 of 98.80 percent.
12 This process continues for the remaining age intervals for which plant was exposed to
13 retirement during the period 1960-2008. The resultant life table, or original survivor
14 curve, is plotted along with the estimated smooth survivor curve, the 35-R2 on page
15 III-142.

16 The net salvage percent is presented on pages III-234 and III-235 of Schedule
17 JJS2010-1. The percentage is based on the result of annual gross salvage minus the
18 cost to remove plant assets as compared to the original cost of plant retired during the
19 period 1985 through 2008. The 24-year period experienced negative \$2,393,883
20 ($\$2,046,476 - \$4,440,359$) in net salvage for \$17,722,613 plant retired. The result is
21 negative net salvage of 14 percent ($\$2,393,883/\$17,722,613$); however, the most
22 recent five-year period and the rolling three-year averages trend toward negative
23 fifteen and negative eighteen percent, respectively. Therefore, based on the statistics
24 and industry averages, negative fifteen percent was recommended.

1 My calculation of the annual depreciation related to original cost of MPS
2 jurisdiction Account 368.00, Line Transformers, at December 31, 2008, is presented
3 on pages III-334 and III-335 Schedule JJS2010-1. The calculation is based on the
4 35-R2 survivor curve, fifteen percent negative net salvage, the attained age, and the
5 allocated book reserve. The tabulation sets forth the installation year, the original
6 cost, calculated accrued depreciation, allocated book reserve, future accruals,
7 remaining life and annual accrual. These totals are brought forward to the table on
8 page III-7.

9 **Q. Have you made any adjustments to the accumulated depreciation amounts prior**
10 **to developing your depreciation accrual rates?**

11 A. Yes, I have. The reserve adjustments relate to the following: 1) proper amortization
12 rates for general plant accounts, and 2) the proper level of accumulated reserve for
13 ECORP assets.

14 **Q. Please describe amortization accounting.**

15 A. Amortization accounting is used for accounts with a large number of units, but small
16 asset values. In amortization accounting, units of property are capitalized in the same
17 manner as they are in depreciation accounting. However, depreciation accounting is
18 difficult for these assets because periodic inventories are required to properly reflect
19 plant in service. Consequently, retirements are recorded when a vintage is fully
20 amortized rather than as the units are removed from service. That is, there is no
21 dispersion of retirement. All units are retired when the age of the vintage reaches the
22 amortization period. Each plant account or group of assets is assigned a fixed period
23 which represents an anticipated life during which the asset will render service. For
24 example, in amortization accounting, assets that have a 20-year amortization period

1 will be fully recovered after 20 years of service and taken off the Company books, but
2 not necessarily removed from service. In contrast, assets that are taken out of service
3 before 20 years remain on the books until the amortization period for that vintage has
4 expired.

5 **Q. Amortization accounting is being implemented for which plant accounts?**

6 A. Amortization accounting is only appropriate for certain General Plant accounts.
7 These accounts are 391.01, 391.02, 391.04, 391.06, 393.0, 394.0, 395.0, 397.0, and
8 398.0, which represents slightly more than three percent of depreciable plant.

9 **Q. Has amortization accounting been accepted by regulatory commissions?**

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

15 **Q. Please explain the reserve adjustment for general plant.**

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

1 excess from the accumulated reserve amount is recovered over a 10-year amortization
2 period separately from the plant in service.

3 **Q. How does this adjustment improve recovery practices?**

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

8 **Q. Can you discuss the reserve allocation for ECORP?**

9 A. The ECORP adjustment relates to the level of accumulated depreciation of the current
10 plant in service. The reserve allocation was established through the review of plant
11 balances as of December 2008. A total of negative \$18.8 million accumulated
12 depreciation has been allocated to all the depreciable plant accounts.

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

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

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

19 A. Yes, there are. In the very near future the Iatan Unit 2 will be completed and placed
20 into service. These assets should have a depreciation rate in place when they come
21 on-line. Therefore, I have performed a calculation to establish rates for Accounts 311
22 through 316. These rates are set forth on page III-4 of Schedule JJS2010-3. The rates
23 are based on the same interim survivor curve and net salvage percent as those utilized

1 for comparable facilities in these accounts for GMO. The specific results by account
2 and the parameters used are set forth in Schedule JJS2010-4.

3 **Q. Does this conclude your testimony?**

4 **A.** Yes, it does.

APPENDIX A

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.

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; Missouri-

American 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.

GREATER MISSOURI OPERATIONS - MPS JURISDICTION
KANSAS CITY, MISSOURI

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO ELECTRIC PLANT

AS OF DECEMBER 31, 2008

GREATER MISSOURI OPERATIONS - MPS JURISDICTION
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



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Harrisburg, PA 17106-7100
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May 18, 2010

Greater Missouri Operations - MPS Jurisdiction
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Kansas City, MO 64105

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Attention Mr. Tim M. Rush
Director, Regulatory Affairs

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Greater Missouri Operations - MPS Jurisdiction 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. SPANOS
Vice President
Valuation and Rate Division

JJS:krm

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PART III. RESULTS OF STUDY, cont.

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PART I. INTRODUCTION

GREATER MISSOURI OPERATIONS - MPS JURISDICTION

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 Greater Missouri Operations - MPS Jurisdiction ("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

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.

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

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.

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 Iowa 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.

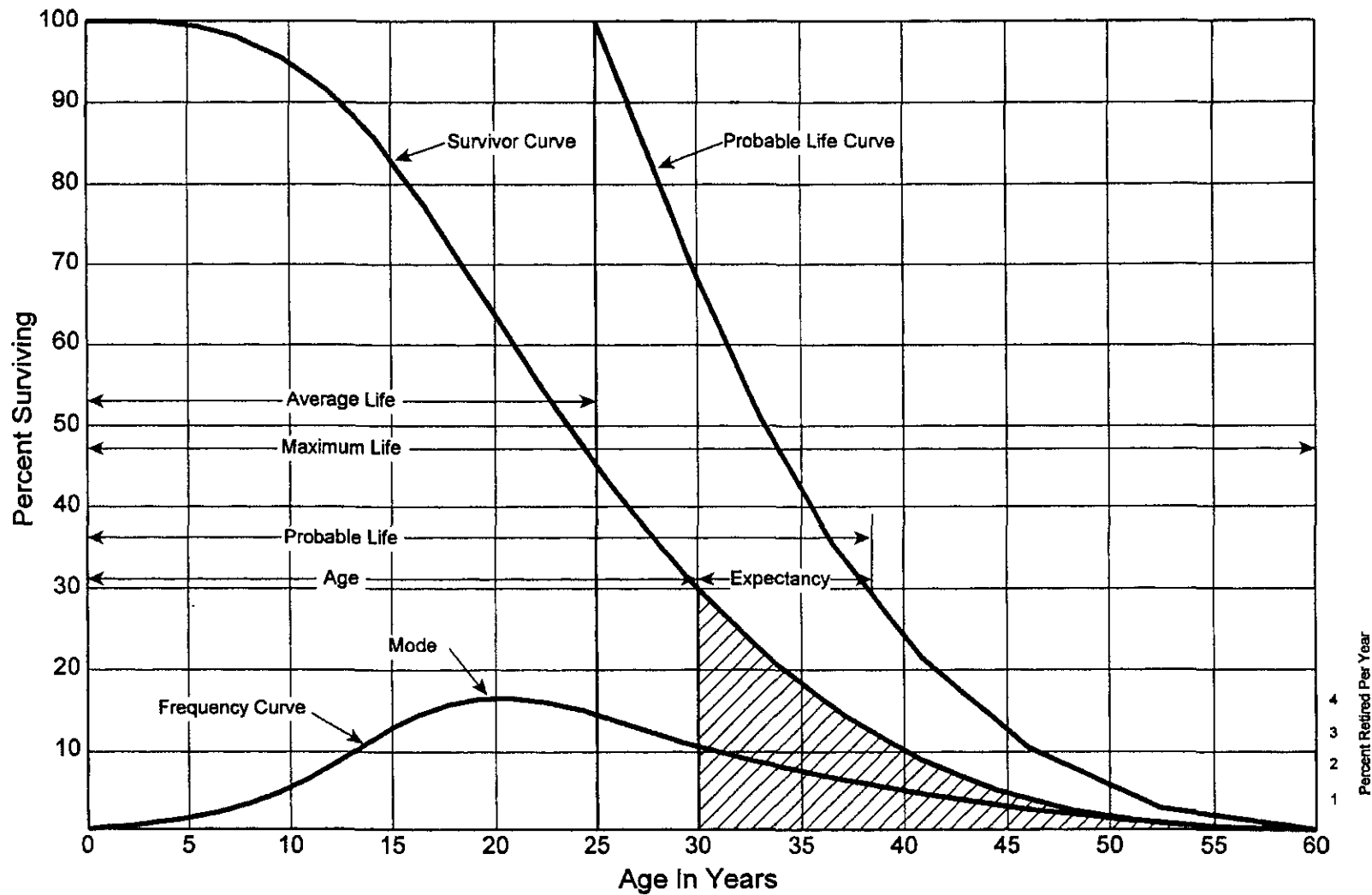


Figure 1. A Typical Survivor Curve and Derived Curves

Iowa Type Curves. 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 Iowa curves were developed at the Iowa 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

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

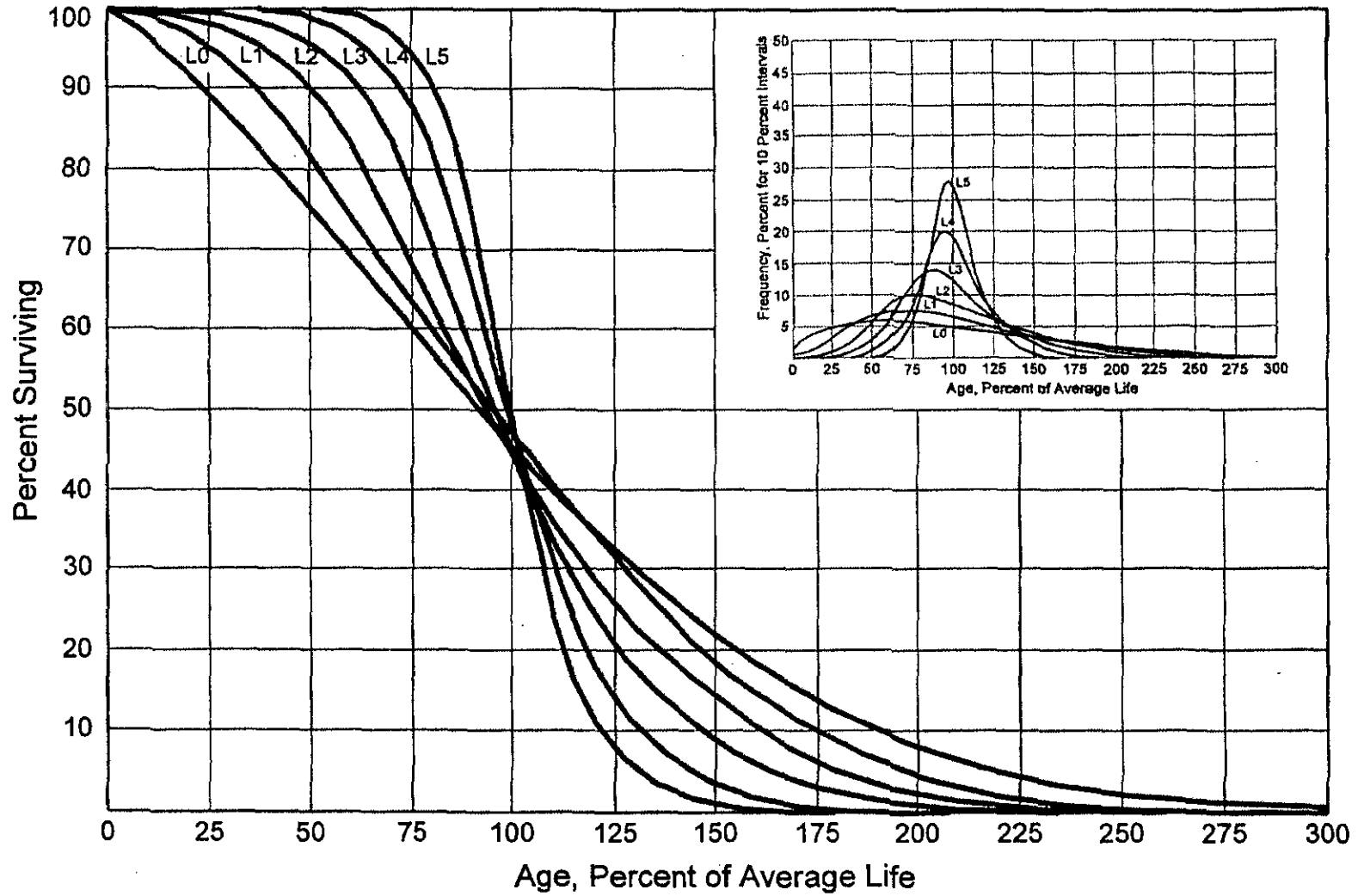


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

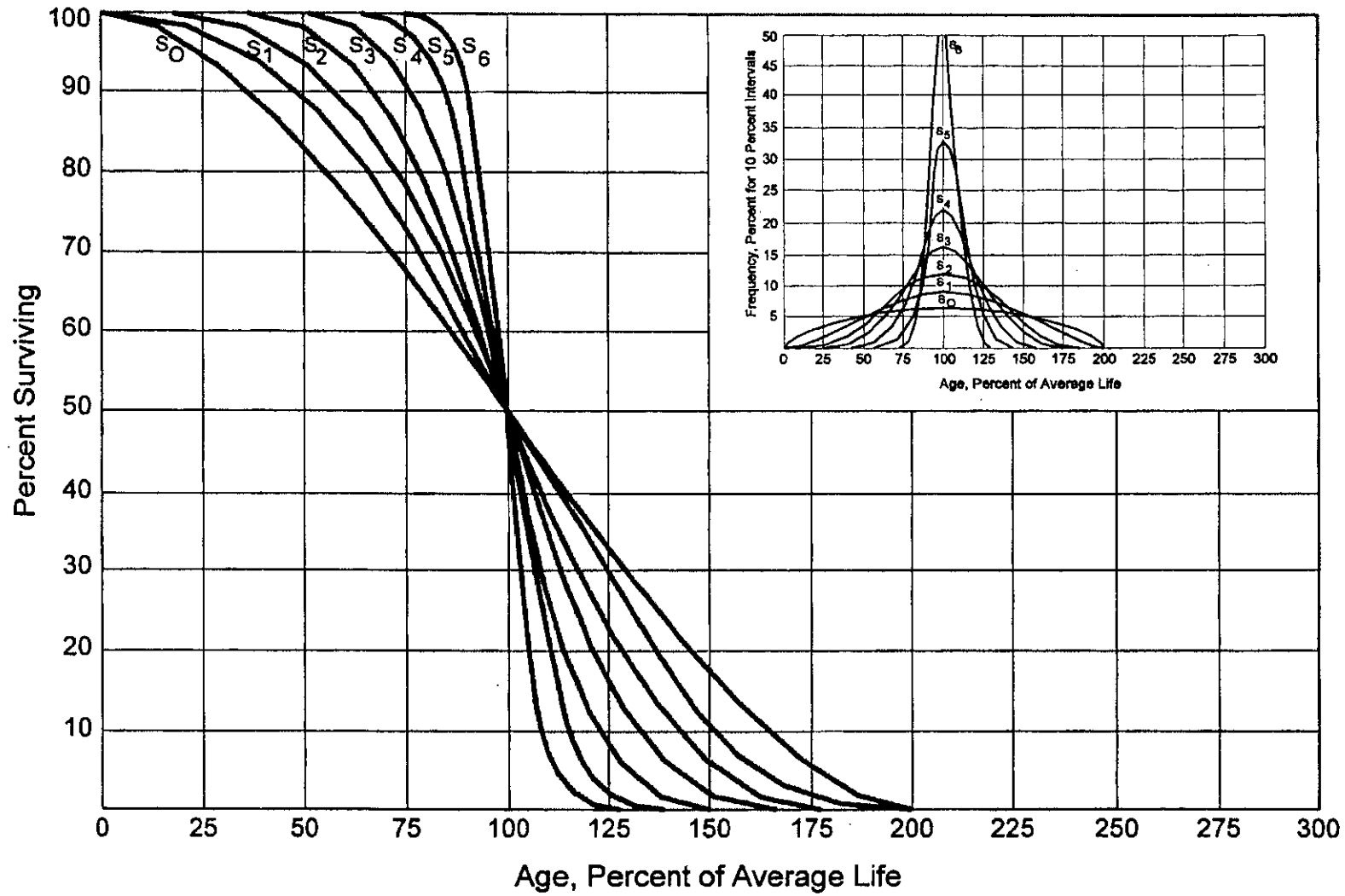


Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

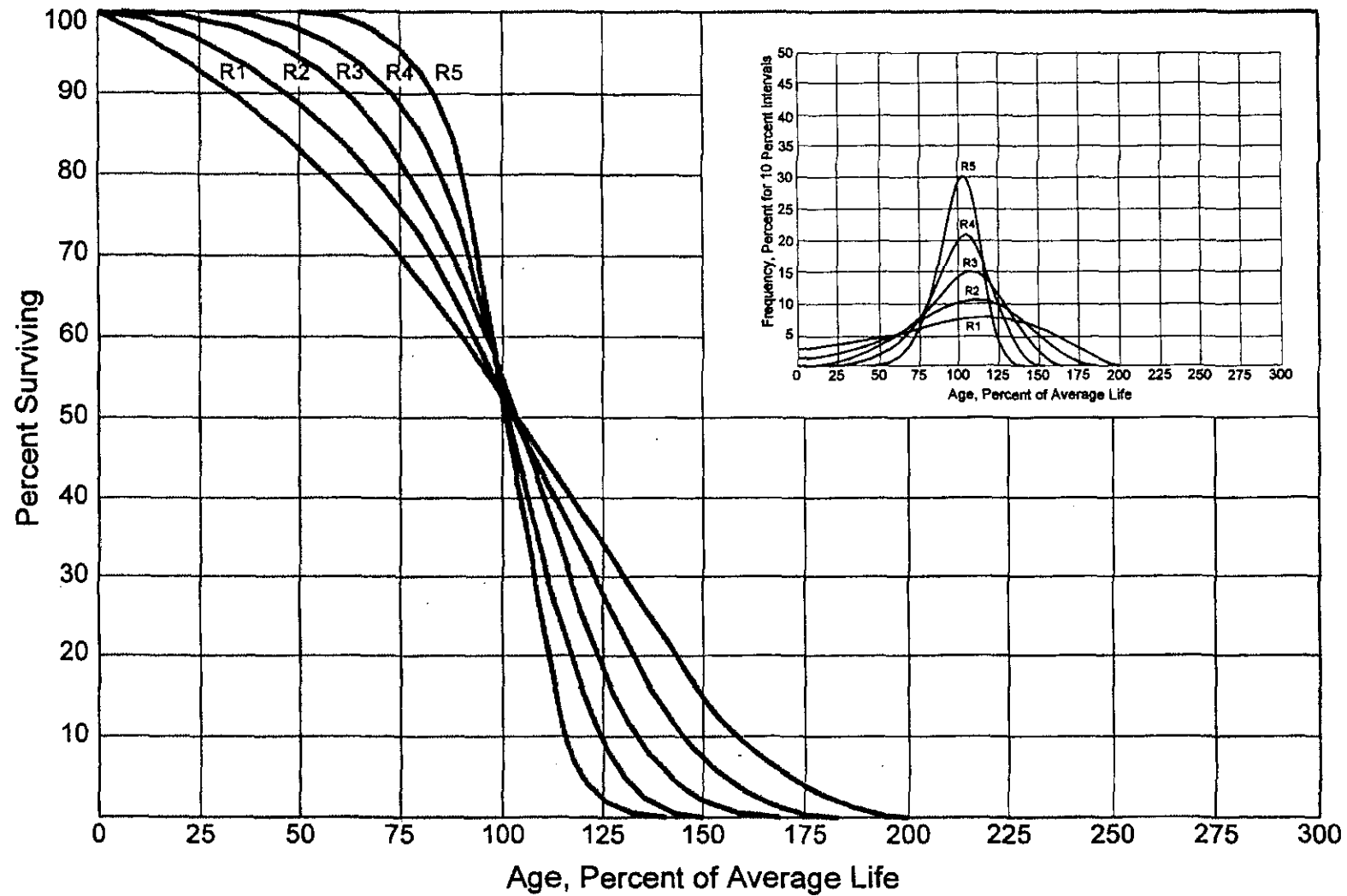


Figure 4. Right Modal or "R" Iowa Type Survivor Curves

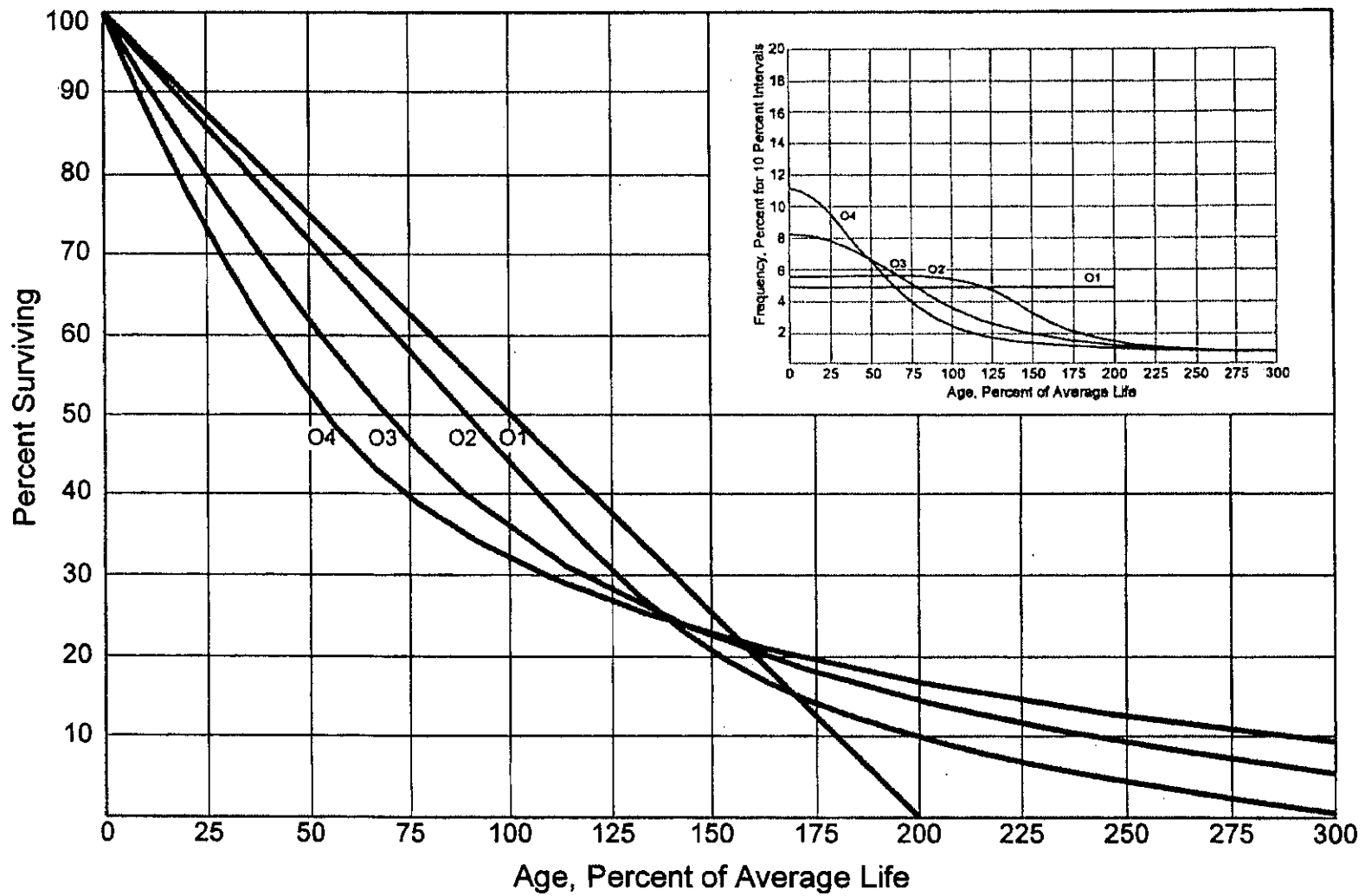


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

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.

⁴Winfrey, Robley, Supra Note 1.

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

⁶Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. 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 experience band, 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 placement band. 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

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

Experience Band 1999-2008

Placement Band 1994-2008

Year Placed (1)	Retirements, Thousands of Dollars										Total During Age Interval (12)	Age Interval (13)
	During Year											
	1999 (2)	2000 (3)	2001 (4)	2002 (5)	2003 (6)	2004 (7)	2005 (8)	2006 (9)	2007 (10)	2008 (11)		
1994	10	11	12	13	14	16	23	24	25	26	26	13½-14½
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	10½-11½
1998	9	10	11	12	13	14	16	17	19	20	93	9½-10½
1999	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2000		5	11	12	13	14	15	16	18	20	113	7½-8½
2001			6	12	13	15	16	17	19	19	124	6½-7½
2002				6	13	15	16	17	19	19	131	5½-6½
2003					7	14	16	17	19	20	143	4½-5½
2004						8	18	20	22	23	146	3½-4½
2005							9	20	22	25	150	2½-3½
2006								11	23	25	151	1½-2½
2007									11	24	153	½-1½
2008										13	80	0-½
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>	

II-12

Schedule JJS2010-1

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

Experience Band 1999-2008

Placement Band 1994 -2008

Year Placed	Acquisitions, Transfers and Sales, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1994	-	-	-	-	-	-	60 ^a	-	-	-	-	13½-14½
1995	-	-	-	-	-	-	-	-	-	-	-	12½-13½
1996	-	-	-	-	-	-	-	-	-	-	-	11½-12½
1997	-	-	-	-	-	-	-	(5) ^b	-	-	60	10½-11½
1998	-	-	-	-	-	-	-	6 ^a	-	-	-	9½-10½
1999	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2000	-	-	-	-	-	-	-	-	-	-	6	7½-8½
2001	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2002	-	-	-	-	-	-	-	(12) ^b	-	-	-	5½-6½
2003	-	-	-	-	-	-	-	-	22 ^a	-	-	4½-5½
2004	-	-	-	-	-	-	-	(19) ^b	-	-	10	3½-4½
2005	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2006	-	-	-	-	-	-	-	-	-	(102) ^c	(121)	1½-2½
2007	-	-	-	-	-	-	-	-	-	-	-	½-1½
2008	-	-	-	-	-	-	-	-	-	-	-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

^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 4½-5½ 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 2003 installations. Thus, the total amount of 143 for age interval 4½-5½ 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 exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year.

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

Year Placed (1)	Exposures, Thousands of Dollars										Total at Beginning of Age Interval (12)	Age Interval (13)
	Annual Survivors at the Beginning of the Year											
	1999 (2)	2000 (3)	2001 (4)	2002 (5)	2003 (6)	2004 (7)	2005 (8)	2006 (9)	2007 (10)	2008 (11)		
1994	255	245	234	222	209	195	239	216	192	167	167	13½-14½
1995	279	268	256	243	228	212	194	174	153	131	323	12½-13½
1996	307	296	284	271	257	241	224	205	184	162	531	11½-12½
1997	338	330	321	311	300	289	276	262	242	226	823	10½-11½
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	8½-9½
2000		460 ^a	455	444	432	419	405	390	374	356	1,952	7½-8½
2001			510 ^a	504	492	479	464	448	431	412	2,463	6½-7½
2002				580 ^a	574	561	546	530	501	482	3,057	5½-6½
2003					660 ^a	653	639	623	628	609	3,789	4½-5½
2004						750 ^a	742	724	685	663	4,332	3½-4½
2005							850 ^a	841	821	799	4,955	2½-3½
2006								960 ^a	949	926	5,719	1½-2½
2007									1,080 ^a	1,069	6,579	½-1½
2008										1,220 ^a	7,490	0-½
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 2004 are calculated in the following manner:

Exposures at age 0	= amount of addition	= \$750,000
Exposures at age ½	= \$750,000 - \$ 8,000	= \$742,000
Exposures at age 1½	= \$742,000 - \$18,000	= \$724,000
Exposures at age 2½	= \$724,000 - \$20,000 - \$19,000	= \$685,000
Exposures at age 3½	= \$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 retirement schedule. 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)

Age at Beginning of Interval (1)	Exposures at Beginning of Age Interval (2)	Retirements During Age Interval (3)	Retirement Ratio (4)	Survivor Ratio (5)	Percent Surviving at Beginning of Age Interval (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>	<u>26</u>	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 4½	=	3,789,000	
Retirements from age 4½ to 5½	=	143,000	
Retirement Ratio	=	$143,000 \div 3,789,000$	= 0.0377
Survivor Ratio	=	$1.000 - 0.0377$	= 0.9623
Percent surviving at age 5½	=	$(88.15) \times (0.9623)$	= 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.

Smoothing the Original Survivor Curve. 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.

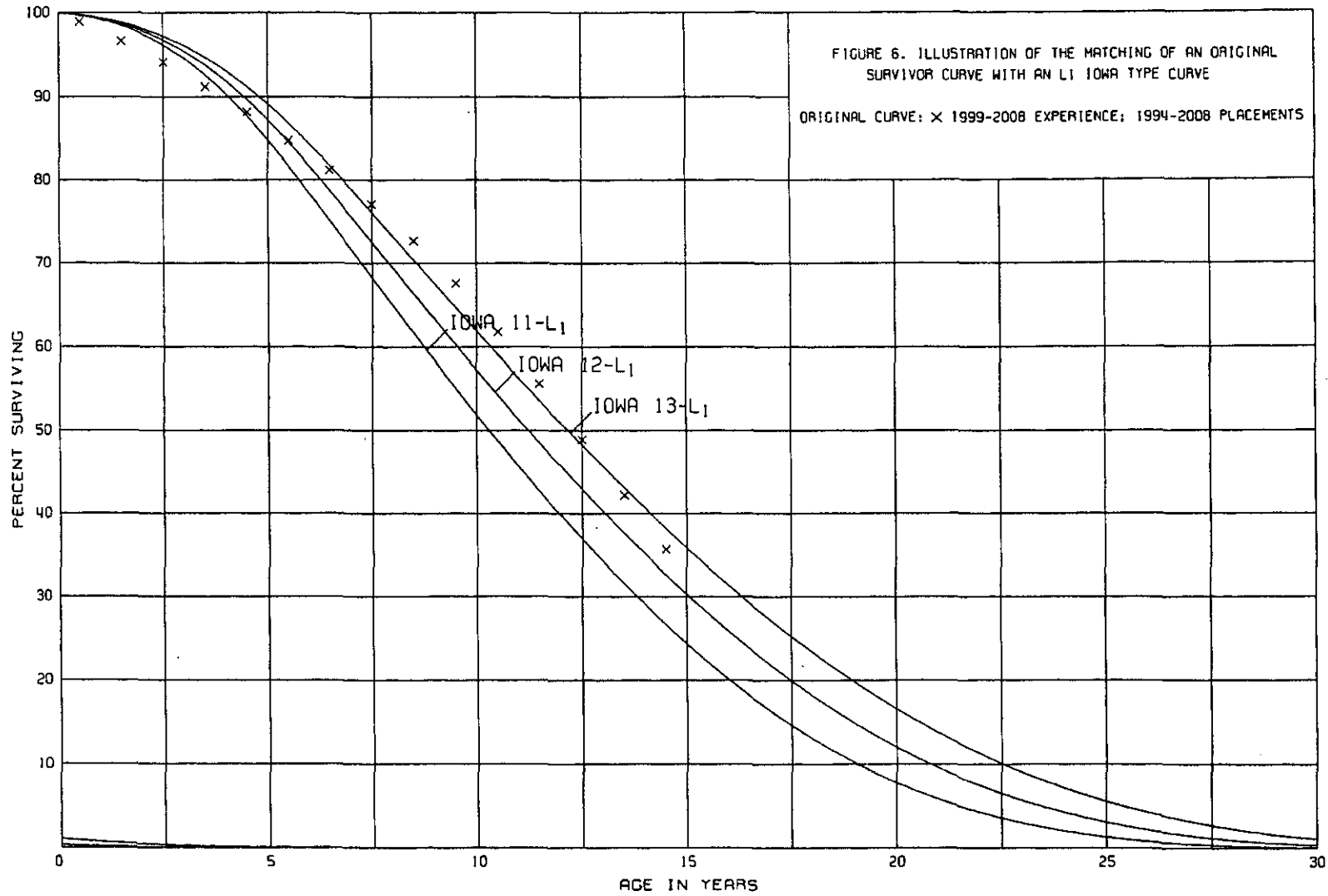
The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures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

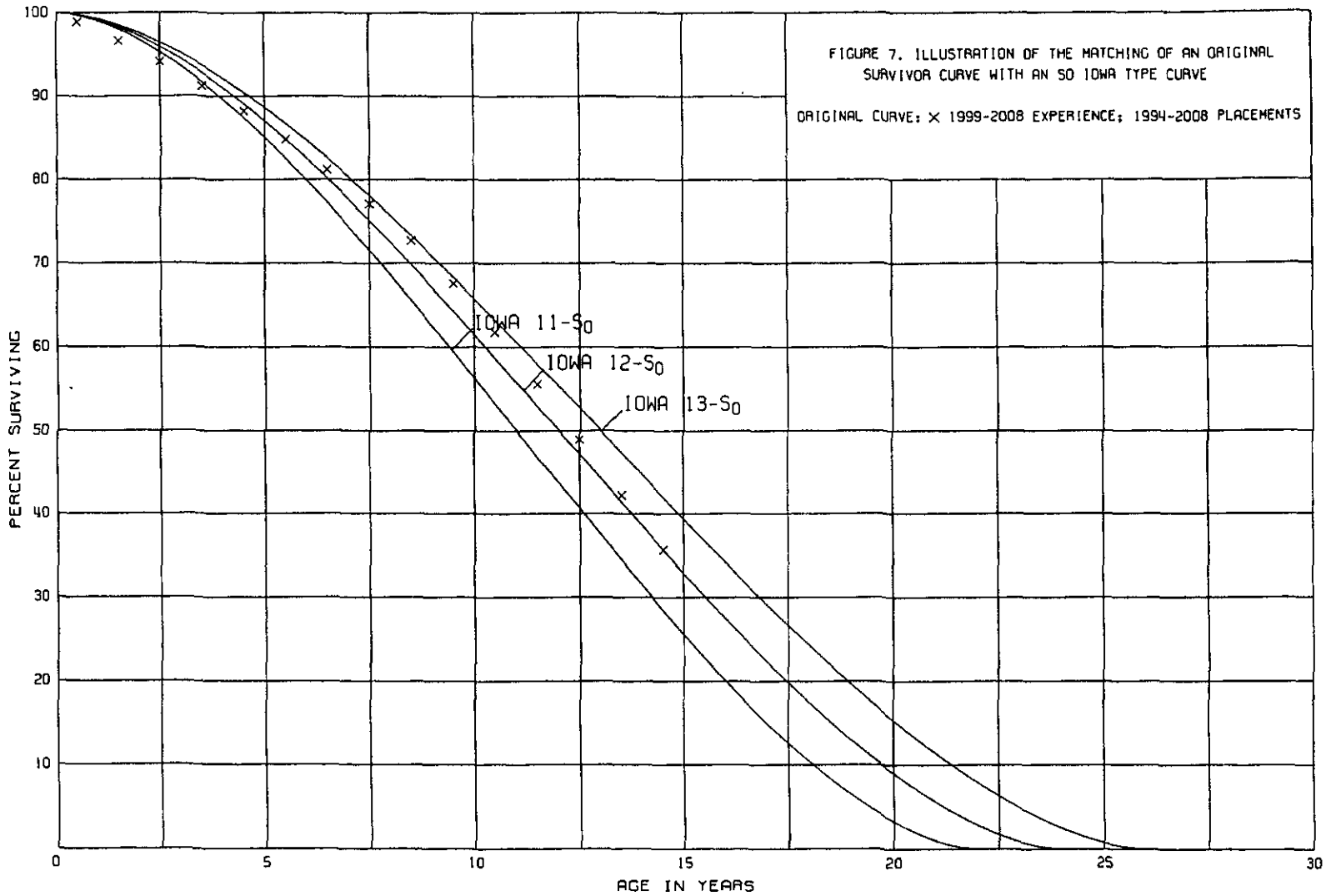
developed in Table 4 is compared with the L, S, and R lowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best 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 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.

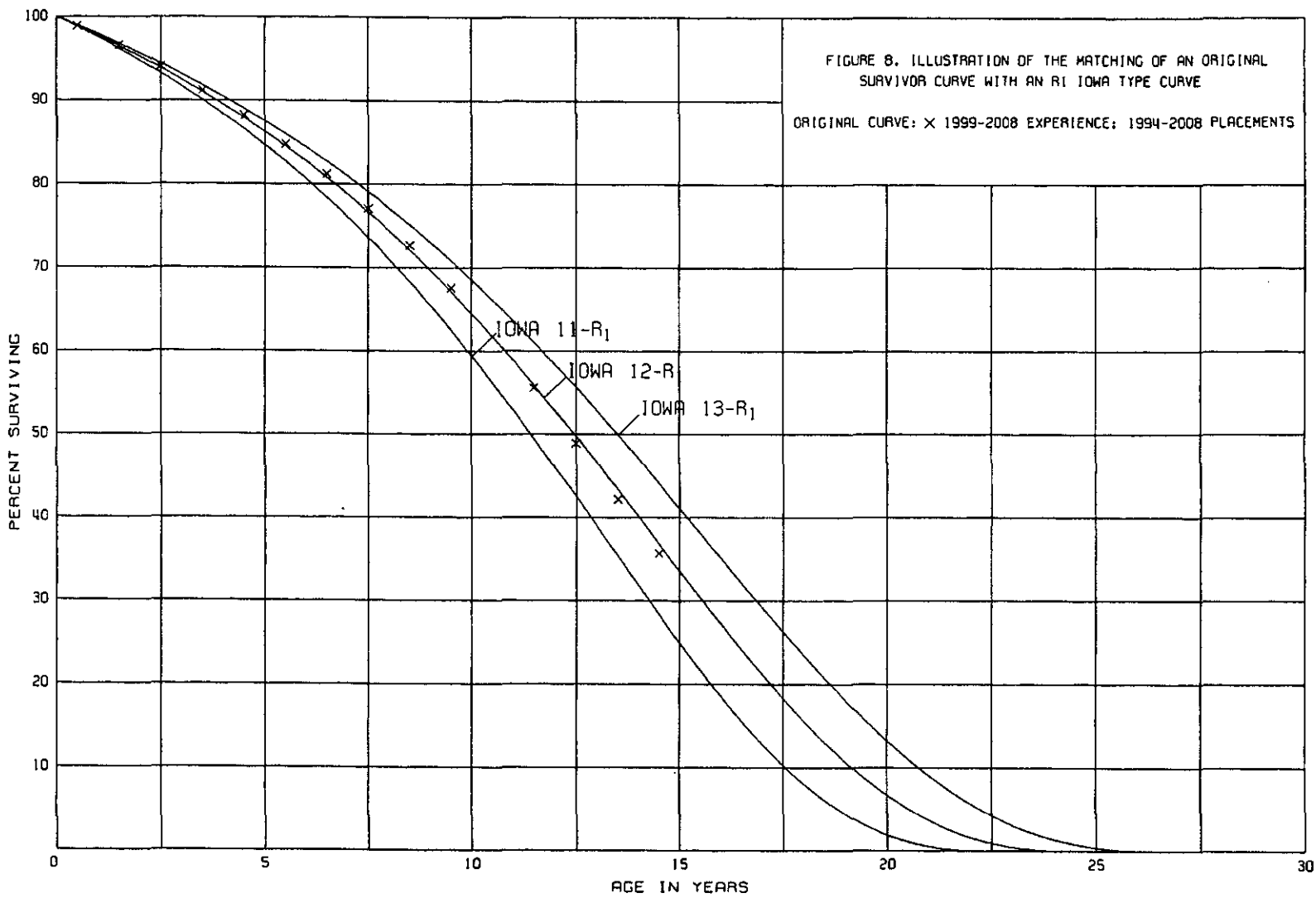
Field Trips

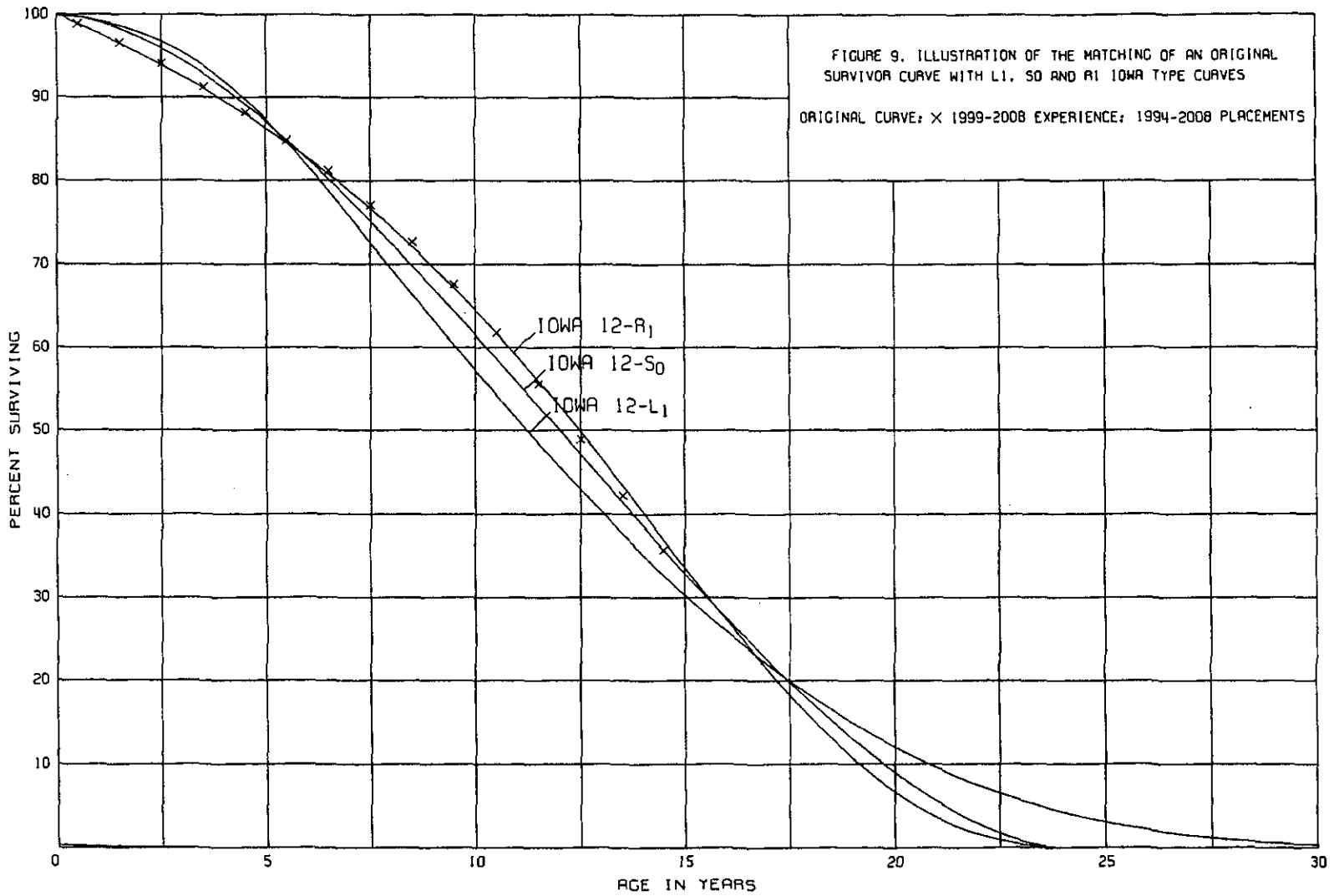
In order to be familiar with the operation of the Company and to observe representative portions of the plant, field trips were conducted. A sampling of major facilities was selected to best represent the various assets in service. Aside from the obtained knowledge of age, type and condition of each 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:









August 17-19, 2009

Sibley Generating Station
Sibley 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 26 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 89 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-10.

STEAM PRODUCTION PLANT

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

OTHER PRODUCTION PLANT

343.00 Prime Movers
344.00 Generators

TRANSMISSION PLANT

353.00 Station Equipment
355.00 Poles and Fixtures
356.00 Overhead Conductors and Devices

DISTRIBUTION PLANT

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

GENERAL PLANT

390.00	Structures and Improvements
392.00	Transportation Equipment - Autos
392.01	Transportation Equipment - Light Trucks
392.02	Transportation Equipment - Heavy Trucks
392.04	Transportation Equipment - Trailers
392.05	Transportation Equipment - Medium 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 1960 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 1960 through 2008 and 1989 through 2008. The Iowa 35-R2 is a reasonable fit of the stub original survivor curve for Line Transformers. The 35-year service life is within the typical service life range of 30 to 45 years for line transformers. The 35-year life reflects the Company's plans to replace transformers 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 Greater Missouri Operations - MPS Jurisdiction 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 base-load units is 57 to 62 years, which is within the typical range of life spans for such units. The 57 to 62-year life span estimate applies to all the steam units. The typical range of life spans for other production units is 25-45 years. Almost all of the units within this category have life spans within the 30-35 year range from initial construction or rehabilitation date.

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

<u>Depreciable Group</u>	<u>Major Year in Service</u>	<u>Probable Retirement Year</u>	<u>Life Span</u>
Steam Production Plant			
Jeffrey Energy Center Unit 1	1978	2040	62
Jeffrey Energy Center Unit 2	1980	2040	60
Jeffrey Energy Center Unit 3	1983	2040	57
Sibley Unit 1	1960	2020	60
Sibley Unit 2	1962	2020	58
Sibley Unit 3	1969	2030	61
Other Production Plant			
Greenwood Unit 1	1975,2000	2030	55,30
Greenwood Unit 2	1975,2000	2030	55,30
Greenwood Unit 3	1977,2001	2030	53,29
Greenwood Unit 4	1979,2000	2030	51,30
Nevada	1974,1998	2030	56,32
Ralph Green	1981,1994	2030	49,36
South Harbor Unit 1	2005	2040	35
South Harbor Unit 2	2005	2040	35
South Harbor Unit 3	2005	2040	35
KCI	1971	2030	59
Crossroads Unit 1	2002	2037	35
Crossroads Unit 2	2002	2037	35
Crossroads Unit 3	2002	2037	35
Crossroads Unit 4	2002	2037	35

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.

Salvage Analysis

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 1985 through 2008 for electric plant were analyzed. The analyses contributed significantly toward the net salvage estimates for 24 plant accounts, representing 77 percent of the depreciable plant, as follows:

Steam Production Plant

- 311.00 Structures and Improvements
- 312.00 Boiler Plant Equipment
- 314.00 Turbogenerator Units

Other Production Plant

- 344.00 Generators
- 345.00 Accessory Electric Equipment

Transmission Plant

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

Distribution Plant

- 364.00 Poles, Towers and Fixtures
- 365.00 Overhead Conductors and Devices
- 366.00 Underground Conduit
- 367.00 Underground Conductors and Devices
- 368.00 Line Transformers
- 369.02 Services - Underground
- 370.00 Meters
- 371.00 Installations on Customers' Premises
- 373.00 Street Lighting and Signal Systems

General Plant

390.00 Structures and Improvements
392.00 Transportation Equipment - Combined
396.00 Power Operated Equipment

Account 365.00, Overhead Conductors and Devices, 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 1985 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 1985-1987 through 2006-2008 periods were computed to smooth the annual amounts.

Cost of removal has fluctuated quite a bit during the entire twenty-four year period. The primary cause of the high levels of cost of removal was the required effort needed to take down the conductor. Cost of removal for the most recent five years averaged 47 percent.

Gross salvage has varied throughout the period but has decreased as a percentage of retirements recently due to less copper being removed. The most recent five-year average of 8 percent gross salvage reflects recent trends of less salvage value.

The net salvage percent based on the overall period 1985 through 2008 is 33 percent negative net salvage and based on the most recent five-year period is 39 percent. The range of estimates made by other electric companies for overhead conductors and devices is negative 20 to negative 50 percent. The net salvage estimate for conductor is negative 35 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 23 percent of plant were based on judgment incorporating estimates of previous studies of this and other electric utilities.

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:

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

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:

$$\text{Ratio} = \left(1 - \frac{\text{Average Remaining Life Expectancy}}{\text{Average Service Life}}\right) (1 - \text{Net Salvage, Percent}).$$

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.

Single Unit of Property

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:

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

The accrued depreciation is:

$$\$1,000 \left(1 - \frac{6}{10}\right) = \$400.$$

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.

Remaining Life Annual Accruals. 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.

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

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

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 in service. The accounts and their amortization periods are as follows:

<u>Account</u>	<u>Amortization Period, Years</u>
ELECTRIC PLANT	
391.01 Office Furniture and Equipment	20
391.02 Computer Equipment	5
391.04 Software	7
393.00 Stores Equipment	25
394.00 Tools, Shop and Garage Equipment	20
395.00 Laboratory Equipment	20
397.00 Communication Equipment	15

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

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.

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-9 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.

KCP&L - GREATER MISSOURI OPERATIONS
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SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUALS AS OF DECEMBER 31, 2008

ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2008 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (10)=(7)/(8)
							AMOUNT (8)	RATE (9)=(8)/(5)	
STEAM PRODUCTION PLANT									
311.00	STRUCTURES AND IMPROVEMENTS								
	2040	75-R2.5	(20)	6,303,376.42	4,778,411	2,785,641	96,841	1.54	28.8
	2040	75-R2.5	(20)	4,759,835.62	3,506,656	2,205,147	78,207	1.60	28.9
	2040	75-R2.5	(20)	5,549,649.91	3,865,952	2,793,829	95,588	1.72	29.2
	2040	75-R2.5	(20)	2,066,274.50	1,053,143	1,426,388	47,536	2.30	30.0
	2020	75-R2.5	(20)	3,842,182.34	4,239,579	371,039	32,608	0.85	11.4
	2020	75-R2.5	(20)	1,410,979.67	1,399,178	293,997	25,835	1.83	11.4
	2030	75-R2.5	(20)	11,727,775.65	10,629,653	3,443,676	168,839	1.44	20.4
	2030	75-R2.5	(20)	22,540,354.68	12,786,163	14,252,265	678,365	3.01	21.0
	TOTAL STRUCTURES AND IMPROVEMENTS			58,200,428.79	42,268,735	27,571,762	1,221,818	2.10	22.8
312.00	BOILER PLANT EQUIPMENT								
	2040	50-S1	(30)	15,719,247.45	9,581,470	10,853,550	471,388	3.00	23.0
	2040	50-S1	(30)	19,461,640.25	11,551,187	13,748,946	587,704	3.02	23.4
	2040	50-S1	(30)	24,047,477.23	13,856,760	17,404,958	730,987	3.04	23.8
	2040	50-S1	(30)	1,646,008.00	300,333	1,842,679	84,343	3.90	28.6
	2020	50-S1	(30)	31,442,616.71	19,642,708	21,232,585	1,918,391	6.10	11.1
	2020	50-S1	(30)	18,109,352.34	12,997,449	10,544,708	963,247	5.32	11.0
	2030	50-S1	(30)	89,369,208.64	47,017,855	69,182,116	3,820,066	4.05	19.1
	2030	50-S1	(30)	24,138,829.71	12,516,693	18,863,786	977,890	4.05	19.3
	TOTAL BOILER PLANT EQUIPMENT			223,936,381.23	127,464,455	163,652,837	9,333,996	4.17	17.5
312.02	BOILER PLANT EQUIPMENT - POLLUTION CONTROL EQUIPMENT								
	2040	50-S1	(30)	293,622.46	14,030	367,679	12,634	4.30	29.1
	2040	50-S1	(30)	887,866.74	62,206	1,062,022	38,088	4.29	28.7
	2040	50-S1	(30)	134,352.87	3,724	170,934	5,818	4.33	29.4
	2040	50-S1	(30)	890,300.18	61,010	1,096,380	38,137	4.28	28.8
	2020	50-S1	(30)	689,123.37	129,710	768,151	67,833	9.84	11.3
	2020	50-S1	(30)	662,659.62	124,785	736,673	65,224	9.84	11.3
	2030	50-S1	(30)	342,213.23	45,754	399,123	19,670	5.75	20.3
	2030	50-S1	(30)	517,343.62	7,138	665,409	31,698	6.13	21.0
	TOTAL BOILER PLANT EQUIPMENT - POLLUTION CONTROL EQUIPMENT			4,417,482.11	448,357	5,284,371	279,102	6.32	19.0
314.00	TURBOGENERATOR UNITS								
	2040	48-S0.5	(15)	5,312,144.60	2,000,681	4,108,288	162,122	3.05	25.3
	2040	48-S0.5	(15)	5,255,624.79	2,293,959	3,750,008	153,398	2.92	24.5
	2040	48-S0.5	(15)	5,741,307.92	2,521,160	4,081,343	169,961	2.91	24.4
	2040	48-S0.5	(15)	1,258,495.54	597,709	849,560	35,549	2.82	23.9
	2040	48-S0.5	(15)	976,564.54	128,835	994,214	36,502	3.64	28.0
	2020	48-S0.5	(15)	13,850,008.09	9,201,812	6,725,697	627,020	4.53	10.7
	2020	48-S0.5	(15)	10,922,138.17	6,900,601	5,659,859	523,908	4.80	10.8
	2030	48-S0.5	(15)	34,518,021.96	15,383,998	24,311,734	1,287,864	3.73	18.9
	2030	48-S0.5	(15)	311,538.00	135,666	222,603	11,703	3.78	19.0
	TOTAL TURBOGENERATOR UNITS			78,145,843.61	39,164,411	50,703,306	3,004,027	3.84	16.9
315.00	ACCESSORY ELECTRIC EQUIPMENT								
	2040	50-S0.5	(10)	2,147,464.10	1,292,479	1,069,730	44,027	2.05	24.3
	2040	50-S0.5	(10)	1,582,775.60	984,828	756,225	31,547	1.99	24.0
	2040	50-S0.5	(10)	2,384,388.28	1,470,502	1,152,325	47,930	2.01	24.0
	2040	50-S0.5	(10)	408,855.52	134,900	314,842	11,595	2.84	27.2
	2020	50-S0.5	(10)	1,903,730.54	1,703,557	456,545	41,866	2.13	10.9
	2020	50-S0.5	(10)	1,817,264.02	1,510,331	488,680	44,707	2.46	10.9
	2030	50-S0.5	(10)	10,038,283.62	5,993,359	5,048,752	262,473	2.61	19.2
	2030	50-S0.5	(10)	3,727,343.96	2,414,779	1,885,289	89,704	2.41	18.8
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			24,070,105.62	15,504,736	10,972,378	573,846	2.38	19.1

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AND CALCULATED ANNUAL DEPRECIATION ACCRUALS AS OF DECEMBER 31, 2008

ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2008 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (10)=(7)/(8)
							AMOUNT (8)	RATE (9)=(8)/(5)	
316 00 MISCELLANEOUS POWER PLANT EQUIPMENT									
JEFFREY ENERGY CENTER UNIT 1	2040	50-R2	(10)	277,867.26	108,247	197,410	7,407	2.67	26.7
JEFFREY ENERGY CENTER UNIT 2	2040	50-R2	(10)	356,061.52	163,001	228,688	8,932	2.51	25.6
JEFFREY ENERGY CENTER UNIT 3	2040	50-R2	(10)	83,324.92	43,580	48,077	1,945	2.33	24.7
JEFFREY ENERGY CENTER COMMON	2040	50-R2	(10)	1,595,512.93	310,125	1,444,941	50,574	3.17	28.6
SIBLEY UNIT 1	2020	50-R2	(10)	77,494.48	16,165	69,046	6,109	7.89	11.3
SIBLEY UNIT 2	2020	50-R2	(10)	98,196.62	49,264	58,752	5,253	5.35	11.2
SIBLEY UNIT 3	2030	50-R2	(10)	313,389.38	209,484	135,253	7,686	2.45	17.6
SIBLEY COMMON	2030	50-R2	(10)	158,133.89	100,530	74,517	4,078	2.56	18.3
TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT				2,960,951.00	1,000,376	2,256,674	91,984	3.11	24.5
TOTAL STEAM PRODUCTION PLANT				391,731,192.36	225,851,070	260,451,348	14,504,776	3.70	18.0
OTHER PRODUCTION PLANT									
341 00 STRUCTURES AND IMPROVEMENTS									
GREENWOOD UNIT 1	2030	60-R1	(5)	765,454.01	123,368	680,359	33,699	4.40	20.2
GREENWOOD UNIT 2	2030	60-R1	(5)	143,913.12	12,411	138,698	6,843	4.75	20.3
GREENWOOD UNIT 3	2030	60-R1	(5)	590,743.10	120,621	499,660	24,607	4.20	20.1
GREENWOOD UNIT 4	2030	60-R1	(5)	65,804.22	11,299	57,795	2,804	4.35	20.2
GREENWOOD ENERGY CENTER	2030	60-R1	(5)	1,251,726.57	249,198	1,065,115	53,018	4.24	20.1
NEVADA PLANT	2030	60-R1	(5)	297,861.96	45,771	266,985	13,221	4.44	20.2
RALPH GREEN PLANT	2030	60-R1	(5)	990,254.85	308,150	731,618	38,710	3.71	19.9
RALPH GREEN PLANT COMMON	2030	60-R1	(5)	298,572.34	41,752	271,749	13,438	4.50	20.2
SOUTH HARPER UNIT 1	2040	60-R1	(5)	975,398.98	72,337	951,832	33,209	3.40	28.7
SOUTH HARPER UNIT 2	2040	60-R1	(5)	974,516.85	72,325	950,916	33,178	3.40	28.7
SOUTH HARPER UNIT 3	2040	60-R1	(5)	975,889.80	72,342	952,342	33,227	3.40	28.7
SOUTH HARPER COMMON	2040	60-R1	(5)	6,861,932.04	554,889	6,650,140	232,179	3.38	28.6
KCI PLANT	2030	60-R1	(5)	429,851.87	138,374	312,989	15,863	3.69	19.7
CROSSROADS UNIT 1	2037	60-R1	(5)	2,084,404.48	193,652	1,994,973	76,612	3.68	26.0
CROSSROADS UNIT 2	2037	60-R1	(5)	2,084,404.48	193,652	1,994,973	76,612	3.58	26.0
CROSSROADS UNIT 3	2037	60-R1	(5)	2,084,404.47	193,652	1,994,973	76,612	3.68	26.0
CROSSROADS UNIT 4	2037	60-R1	(5)	2,084,404.47	193,651	1,994,974	76,612	3.68	26.0
TOTAL STRUCTURES AND IMPROVEMENTS				22,959,537.53	2,597,444	21,510,073	838,704	3.65	25.7
342 00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES									
GREENWOOD UNIT 1	2030	45-R2	(10)	1,037,022.68	286,793	843,932	41,547	4.01	20.3
GREENWOOD UNIT 2	2030	45-R2	(10)	267,016.34	67,310	228,408	11,119	4.16	20.4
GREENWOOD UNIT 3	2030	45-R2	(10)	1,186,979.38	256,745	1,048,933	51,368	4.33	20.4
GREENWOOD UNIT 4	2030	45-R2	(10)	323,512.94	28,159	327,705	15,929	4.92	20.6
GREENWOOD ENERGY CENTER	2030	45-R2	(10)	550,731.02	402,637	203,167	10,887	1.98	18.7
NEVADA PLANT	2030	45-R2	(10)	757,108.17	201,229	631,590	31,040	4.10	20.4
RALPH GREEN PLANT	2030	45-R2	(10)	62,614.13	37,546	31,330	1,613	2.58	19.4
RALPH GREEN PLANT COMMON	2030	45-R2	(10)	380,166.78	37,095	381,088	18,526	4.87	20.6
SOUTH HARPER UNIT 1	2040	45-R2	(10)	400,000.35	61,308	378,692	13,250	3.31	28.6
SOUTH HARPER UNIT 2	2040	45-R2	(10)	400,000.35	61,308	378,692	13,250	3.31	28.6
SOUTH HARPER UNIT 3	2040	45-R2	(10)	400,000.35	61,308	378,692	13,250	3.31	28.6
SOUTH HARPER COMMON	2040	45-R2	(10)	2,804,627.12	425,303	2,659,787	93,042	3.32	28.6
KCI PLANT	2030	45-R2	(10)	157,613.27	99,368	74,008	3,833	2.43	19.3
CROSSROADS UNIT 1	2037	45-R2	(10)	612,458.20	100,470	573,234	22,193	3.62	25.8
CROSSROADS UNIT 2	2037	45-R2	(10)	612,458.19	100,470	573,234	22,193	3.62	25.8
CROSSROADS UNIT 3	2037	45-R2	(10)	612,458.19	100,470	573,234	22,193	3.62	25.8
CROSSROADS UNIT 4	2037	45-R2	(10)	612,458.19	100,470	573,234	22,193	3.62	25.8
TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES				11,177,225.65	2,437,987	9,856,960	407,426	3.65	24.2

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

ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2008 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL AMOUNT (8)	RATE (9)-(8)/(5)	COMPOSITE REMAINING LIFE (10)/(7)/(8)
343.00									
PRIME MOVERS									
GREENWOOD UNIT 1	2030	25-S0.5	(5)	8,301,459.58	2,292,782	6,838,856	427,510	5.15	16.0
GREENWOOD UNIT 2	2030	25-S0.5	(5)	8,404,161.34	2,894,311	7,660,286	462,201	5.50	15.8
GREENWOOD UNIT 3	2030	25-S0.5	(5)	6,804,458.42	1,711,788	5,787,117	354,469	5.21	16.3
GREENWOOD UNIT 4	2030	25-S0.5	(5)	9,037,326.44	2,211,892	7,725,387	472,876	5.23	16.4
GREENWOOD ENERGY CENTER	2030	25-S0.5	(5)	594,036.67	79,327	941,112	30,903	5.23	17.5
JEFFREY ENERGY CENTER - WIND	2030	25-S0.5	(5)	192,530.46	170,428	303,568	16,935	8.80	1.0
NEVADA PLANT	2030	25-S0.5	(5)	933,801.35	300,374	669,066	45,872	4.90	14.8
RALPH GREEN PLANT	2030	25-S0.5	(5)	5,080,616.28	1,305,368	3,682,911	25,938	5.00	14.7
RALPH GREEN PLANT COMMON	2030	25-S0.5	(5)	271,316.41	1,305,368	3,682,911	15,848	5.84	18.4
SOUTH HARPER UNIT 1	2040	25-S0.5	(5)	22,363,497.26	3,108,368	21,497,382	1,038,670	4.63	20.7
SOUTH HARPER UNIT 2	2040	25-S0.5	(5)	22,363,497.26	3,108,368	21,497,382	1,038,670	4.63	20.7
SOUTH HARPER UNIT 3	2040	25-S0.5	(5)	22,363,497.26	3,108,368	21,497,382	1,038,670	4.63	20.7
SOUTH HARPER COMMON	2040	25-S0.5	(5)	1,544,108.59	188,738	1,311,848	71,776	4.65	21.1
KCI PLANT	2030	25-S0.5	(5)	497,181.10	122,377	370,199	2,976	5.11	16.6
KCI UNIT 2	2030	25-S0.5	(5)	17,709,960	3,706,818	16,505,612	802,439	4.91	18.3
CROSSROADS UNIT 1	2037	25-S0.5	(5)	18,375,027.28	3,706,818	16,505,612	802,439	4.91	18.3
CROSSROADS UNIT 2	2037	25-S0.5	(5)	18,375,027.28	3,706,818	16,505,612	802,439	4.91	18.3
CROSSROADS UNIT 3	2037	25-S0.5	(5)	18,375,027.28	3,706,818	16,505,612	802,439	4.91	18.3
CROSSROADS UNIT 4	2037	25-S0.5	(5)	18,375,027.28	3,706,818	16,505,612	802,439	4.91	18.3
TOTAL PRIME MOVERS				183,240,830.78	35,938,874	165,626,038	8,828,152	4.87	18.6
344.00									
GENERATORS									
GREENWOOD UNIT 1	2030	35-S0.5	(5)	2,408,029.09	970,972	1,657,458	84,985	3.53	19.3
GREENWOOD UNIT 2	2030	35-S0.5	(5)	2,381,588.28	1,068,945	1,399,721	77,673	3.26	19.3
GREENWOOD UNIT 3	2030	35-S0.5	(5)	2,800,127.38	540,045	2,400,689	124,317	4.44	17.9
GREENWOOD UNIT 4	2030	35-S0.5	(5)	1,651,910.88	495,034	1,459,481	65,752	3.98	18.9
GREENWOOD ENERGY CENTER	2030	35-S0.5	(5)	1,441,759.15	50,200	1,463,581	73,786	5.17	19.6
NEVADA PLANT	2030	35-S0.5	(5)	6,111,710.73	353,513	288,783	16,017	2.77	17.1
RALPH GREEN PLANT	2030	35-S0.5	(5)	6,395,295.28	3,868,647	2,466,413	169,238	2.65	16.8
SOUTH HARPER UNIT 1	2040	35-S0.5	(5)	5,750,000.01	842,481	5,095,018	200,870	3.49	26.4
SOUTH HARPER UNIT 2	2040	35-S0.5	(5)	5,750,000.15	842,481	5,095,018	200,870	3.49	26.4
SOUTH HARPER UNIT 3	2040	35-S0.5	(5)	5,750,000.27	842,481	5,095,018	200,870	3.49	26.4
KCI PLANT	2030	35-S0.4	(5)	1,620,963.87	1,224,103	277,888	30,821	1.90	18.5
KCI UNIT 1	2030	35-S0.4	(5)	44,665.33	18,912	27,882	1,551	3.44	18.2
KCI UNIT 2	2030	35-S0.5	(5)	39,892.05	18,972	24,000	1,377	3.44	18.2
CROSSROADS UNIT 1	2037	35-S0.5	(5)	4,593,756.82	926,730	3,898,715	171,359	3.73	22.7
CROSSROADS UNIT 2	2037	35-S0.5	(5)	4,593,756.82	926,730	3,898,715	171,359	3.73	22.7
CROSSROADS UNIT 3	2037	35-S0.5	(5)	4,593,756.82	926,730	3,898,715	171,359	3.73	22.7
CROSSROADS UNIT 4	2037	35-S0.5	(5)	4,593,756.82	926,730	3,898,715	171,359	3.73	22.7
TOTAL GENERATORS				55,020,975.63	15,178,794	42,592,231	1,833,911	3.51	22.0
345.00									
ACCESSORY ELECTRIC EQUIPMENT									
GREENWOOD UNIT 1	2030	45-R2.5	(10)	3,547,231.25	692,603	3,200,351	155,892	4.38	20.6
GREENWOOD UNIT 2	2030	45-R2.5	(10)	1,858,264.28	251,799	1,603,263	86,935	4.66	20.7
GREENWOOD UNIT 3	2030	45-R2.5	(10)	1,669,619.07	481,028	1,315,773	67,224	4.03	20.5
GREENWOOD UNIT 4	2030	45-R2.5	(10)	412,891.85	114,159	340,032	16,832	4.03	20.4
GREENWOOD ENERGY CENTER	2030	45-R2.5	(10)	448,316.03	152,419	340,710	16,932	3.77	20.2
NEVADA PLANT	2030	45-R2.5	(10)	466,948.98	226,754	288,887	14,802	3.17	19.4
RALPH GREEN PLANT	2030	45-R2.5	(10)	1,324,137.89	661,791	759,761	42,902	3.20	18.7
SOUTH HARPER UNIT 1	2040	45-R2.5	(10)	4,609,639.51	531,928	4,538,678	155,647	3.38	20.2
SOUTH HARPER UNIT 2	2040	45-R2.5	(10)	4,609,639.73	531,928	4,538,678	155,647	3.38	20.2
SOUTH HARPER UNIT 3	2040	45-R2.5	(10)	4,609,639.77	531,928	4,538,678	155,647	3.38	20.2
SOUTH HARPER COMMON	2040	45-R2.5	(10)	3,949,989.76	455,807	3,889,183	133,974	3.38	20.2
KCI PLANT	2030	45-R2.5	(10)	687,297.00	483,635	272,381	17,287	2.52	19.8
KCI UNIT 1	2030	45-R2.5	(10)	11,018.23	5,460	8,680	444	3.12	19.4
KCI UNIT 2	2030	45-R2.5	(10)	12,969.76	6,135	8,131	417	3.22	19.5

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ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2008 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (10)=(7)/(8)
							AMOUNT (8)	RATE (9)=(6)/(5)	
345. cont.									
CROSSROADS UNIT 1	2037	45-R2.5	(10)	2,888,888.76	437,097	2,740,682	104,129	3.60	26.3
CROSSROADS UNIT 2	2037	45-R2.5	(10)	2,888,888.76	437,096	2,740,682	104,129	3.60	26.3
CROSSROADS UNIT 3	2037	45-R2.5	(10)	2,888,888.76	437,096	2,740,682	104,129	3.60	26.3
CROSSROADS UNIT 4	2037	45-R2.5	(10)	2,888,888.76	437,096	2,740,682	104,129	3.60	26.3
TOTAL ACCESSORY ELECTRIC EQUIPMENT				39,783,356.25	6,955,754	36,905,953	1,435,510	3.61	25.7
346.00									
MISCELLANEOUS POWER PLANT EQUIPMENT									
JEFFREY ENERGY CENTER - WIND	2009	32-S2	0	5,219.75	661	4,559	4,559	87.34	1.0
RALPH GREEN PLANT	2030	32-S2	0	20,000.00	3,497	16,503	1,041	5.21	15.9
SOUTH HARPER COMMON	2040	32-S2	0	129,870.44	5,708	124,163	4,808	3.70	25.8
CROSSROADS UNIT 1	2037	32-S2	0	1,039,467.37	197,007	842,460	36,934	3.55	22.8
CROSSROADS UNIT 2	2037	32-S2	0	1,039,467.37	197,007	842,460	36,934	3.55	22.8
CROSSROADS UNIT 3	2037	32-S2	0	1,039,467.36	197,006	842,461	36,934	3.55	22.8
CROSSROADS UNIT 4	2037	32-S2	0	1,039,467.38	197,006	842,461	36,934	3.55	22.8
TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT				4,312,959.65	797,892	3,515,067	158,144	3.67	22.2
TOTAL OTHER PRODUCTION PLANT				316,494,895.49	63,807,745	280,006,322	13,701,847	4.33	20.4
TRANSMISSION PLANT									
352.00									
STRUCTURES AND IMPROVEMENTS		60-R3	(5)	6,462,752.67	1,540,738	5,245,152	107,035	1.68	49.0
353.00									
STATION EQUIPMENT		58-R2	(10)	86,919,875.80	30,543,486	76,069,505	1,649,127	1.70	46.1
354.00									
TOWERS AND FIXTURES		55-R3	(20)	323,639.04	303,142	85,225	2,997	0.93	28.4
355.00									
POLES AND FIXTURES		53-S0.5	(60)	89,877,253.09	21,336,995	90,465,608	2,158,006	3.09	41.9
356.00									
OVERHEAD CONDUCTORS AND DEVICES		62-R2.5	(50)	47,022,676.27	20,748,537	49,785,479	1,109,755	2.36	44.9
358.00									
UNDERGROUND CONDUCTOR AND DEVICES		50-R3	0	58,426.33	48,256	10,170	427	0.73	23.8
TOTAL TRANSMISSION PLANT				220,664,723.20	74,521,134	221,661,139	5,027,347	2.28	44.1
DISTRIBUTION PLANT									
361.00									
STRUCTURES AND IMPROVEMENTS		60-R3	(5)	8,505,443.00	1,763,812	7,166,902	145,580	1.71	49.2
362.00									
STATION EQUIPMENT		50-R1	(10)	103,534,351.51	28,024,413	85,863,371	2,036,310	1.97	42.2
364.00									
POLES, TOWERS AND FIXTURES		47-R4	(75)	133,789,715.58	65,836,039	168,295,965	5,677,947	4.24	29.6
365.00									
OVERHEAD CONDUCTORS AND DEVICES		58-R1.5	(35)	93,221,154.32	29,438,481	96,410,079	2,054,270	2.20	46.9
366.00									
UNDERGROUND CONDUIT		60-S1	(20)	40,508,133.48	7,386,890	41,222,873	818,004	2.02	50.4
367.00									
UNDERGROUND CONDUCTORS AND DEVICES		50-S1.5	(15)	96,716,738.86	29,503,991	81,720,258	2,105,623	2.18	38.8
368.00									
LINE TRANSFORMERS		35-R2	(15)	147,755,520.79	53,233,448	116,685,399	4,667,226	3.16	25.0
368.01									
SERVICES - OVERHEAD		57-R4	(100)	14,275,016.04	11,720,933	18,829,098	466,208	3.27	36.1
368.02									
SERVICES - UNDERGROUND		38-R5	(25)	49,539,256.41	23,913,724	38,010,346	1,335,328	3.10	24.8
370.00									
METERS		45-R2.5	(5)	25,444,957.80	12,483,829	14,233,381	459,456	1.81	31.0
370.01									
METERS - LOAD RESEARCH METERS		16-S4	0	2,038,114.21	2,270,641	(232,527)	0	-	-
371.00									
INSTALLATIONS ON CUSTOMERS' PREMISES		29-R1.5	(20)	14,357,915.93	8,248,716	8,980,785	416,118	2.60	21.6
373.00									
STREET LIGHTING AND SIGNAL SYSTEMS		26-S0	(5)	27,734,720.49	8,343,381	29,778,079	1,109,469	4.00	16.7
TOTAL DISTRIBUTION PLANT				757,421,038.42	282,168,298	695,964,009	21,491,525	2.84	32.4
GENERAL PLANT									
390.00									
STRUCTURES AND IMPROVEMENTS		45-R2.5	(10)	13,830,268.90	3,863,174	11,550,118	423,168	3.06	27.3
OFFICE FURNITURE AND EQUIPMENT									
391.01									
OFFICE FURNITURE AND EQUIPMENT									
FULLY ACCRUED				273,578.83	273,579	0	0	-	-
AMORTIZED		20-S0	0	1,700,639.57	1,212,257	488,383	85,026	5.00	5.7
TOTAL OFFICE FURNITURE AND EQUIPMENT				1,974,218.40	1,485,836	488,383	85,026		
391.02									
COMPUTERS									
FULLY ACCRUED				1,330,322.06	1,330,322	0	0	-	-
AMORTIZED		5-S0	0	1,167,445.21	432,515	734,930	233,488	20.00	3.2
TOTAL COMPUTERS				2,497,767.27	1,762,837	734,930	233,488		

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ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2008	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE	COMPOSITE REMAINING LIFE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
391 04 SOFTWARE									
FULLY ACCRUED				187,446.12	187,446	0	0		
AMORTIZED		7-SQ	0	509,612.76	125,200	384,413	72,833	14.29	5.3
TOTAL SOFTWARE				697,058.87	312,646	384,413	72,833		
TOTAL OFFICE FURNITURE AND EQUIPMENT				5,169,044.54	3,561,319	1,607,726	391,347		
TRANSPORTATION EQUIPMENT									
392.00 AUTOS		9-S3	10	140,136.56	73,432	52,690	8,893	6.35	5.9
392.01 LIGHT TRUCKS		9-S3	10	804,789.84	65,409	658,871	123,362	15.33	5.3
392.02 HEAVY TRUCKS		12-L3	10	4,882,973.97	718,829	3,675,848	613,512	12.56	6.0
392.04 TRAILERS		17-R2	10	628,347.21	554,000	11,516	748	0.12	15.4
392.05 MEDIUM TRUCKS		10-S3	10	5,154,708.42	410,004	4,229,233	558,372	10.83	7.6
TOTAL TRANSPORTATION EQUIPMENT				11,610,956.10	1,821,704	8,628,158	1,304,887	11.24	6.6
393.00 STORES EQUIPMENT									
FULLY ACCRUED				43,111.86	43,112	0	0		
AMORTIZED		25-SQ	0	56,585.90	44,120	12,465	2,261	4.00	5.5
TOTAL STORES EQUIPMENT				99,697.86	87,232	12,465	2,261		
394.00 TOOLS, SHOP AND GARAGE EQUIPMENT									
FULLY ACCRUED				1,181,800.12	1,181,890	0	0		
AMORTIZED		20-SQ	0	3,190,857.52	1,418,700	1,772,157	159,456	5.00	11.1
TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT				4,372,747.64	2,600,590	1,772,157	159,456		
395.00 LABORATORY EQUIPMENT									
FULLY ACCRUED				449,640.89	449,641	0	0		7.3
AMORTIZED		20-SQ	0	1,612,681.89	1,027,925	584,736	80,582	5.00	
TOTAL LABORATORY EQUIPMENT				2,062,302.78	1,477,566	584,736	80,582		
396.00 POWER OPERATED EQUIPMENT		22-S1.5	10	4,054,205.81	2,273,403	1,375,381	88,536	2.18	15.5
397.00 COMMUNICATION EQUIPMENT									
FULLY ACCRUED				6,777,844.00	6,777,844	0	0		
AMORTIZED		15-SQ	0	3,424,281.87	1,032,725	2,391,567	228,279	6.67	10.5
TOTAL COMMUNICATION EQUIPMENT				10,202,135.87	7,810,569	2,391,567	228,279		
TOTAL GENERAL PLANT				51,401,359.50	23,295,557	27,922,309	2,878,516	5.21	10.4
TOTAL DEPRECIABLE PLANT				1,737,713,208.97	669,643,804	1,486,005,127	57,404,011	3.30	25.9
UNRECOVERED RESERVE ADJUSTMENT FOR AMORTIZATION									
OFFICE FURNITURE AND EQUIPMENT									
391 01 OFFICE FURNITURE AND EQUIPMENT					(18,250)		1,825 **		
391 02 COMPUTERS					(974,634)		97,463 **		
391 04 SOFTWARE					(100,969)		10,097 **		
393 00 STORES EQUIPMENT					(1,706)		171 **		
394 00 TOOLS, SHOP AND GARAGE EQUIPMENT					568,867		(56,887) **		
395 00 LABORATORY EQUIPMENT					(100,125)		10,013 **		
397 00 COMMUNICATION EQUIPMENT					(358,505)		35,851 **		
TOTAL UNRECOVERED RESERVE ADJUSTMENT FOR AMORTIZATION					(985,322)		98,532		
NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED									
301.00 ORGANIZATION				21,663.87	6,780				
303.00 MISCELLANEOUS INTANGIBLE PLANT				22,110,255.24	3,288,911				
310.00 LAND				683,970.36					
340.00 LAND				3,845,132.23					

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Schedule JJS2010-1

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

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

ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2008 (5)	BOOK RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (10)=(7)/(8)
							AMOUNT (8)	RATE (9)=(8)/(5)	
350.00	LAND			2,273,234.49					
350.04	LAND RIGHTS			12,308,051.06	2,740,155				
360.00	LAND			4,937,259.41					
360.01	LAND RIGHTS			276,030.63	3,710				
360.02	LAND LEASED			22,228.32	4,939				
389.00	LAND			996,053.52					
390.05	STRUCTURES AND IMPROVEMENTS - LEASEHOLD IMPROVEMENTS			37,570.78	37,570				
398.00	MISCELLANEOUS EQUIPMENT			(52,285.18)	137,338				
TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED				47,439,163.13	6,219,403				
PLANT HELD FOR FUTURE USE									
311.00	STRUCTURES AND IMPROVEMENTS			167,645.85					
312.00	BOILER PLANT EQUIPMENT			(10.42)					
314.00	TURBOGENERATOR UNITS			1,057,261.78					
315.00	ACCESSORY ELECTRIC EQUIPMENT			(407.68)	(3)				
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT			(88.20)	(1)				
341.00	STRUCTURES AND IMPROVEMENTS - SEDALIA			1,079.15					
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES - SEDALIA			1,079.15					
343.00	PRIME MOVERS - SEDALIA			1,079.15					
344.00	GENERATORS - SEDALIA			647.49					
345.00	ACCESSORY ELECTRIC EQUIPMENT - SEDALIA			647.49					
346.00	MISCELLANEOUS PLANT EQUIPMENT - SEDALIA			572.94					
TOTAL PLANT HELD FOR FUTURE USE				1,229,506.70	(4)				
TOTAL ELECTRIC PLANT				1,786,351,876.80	874,877,881	1,486,005,127	57,502,543		

* Curve shown is interim survivor curve. Each facility in the account is assigned an individual probable retirement year.
** 10-Year amortization of unrecovered reserve related to implementation of amortization accounting.

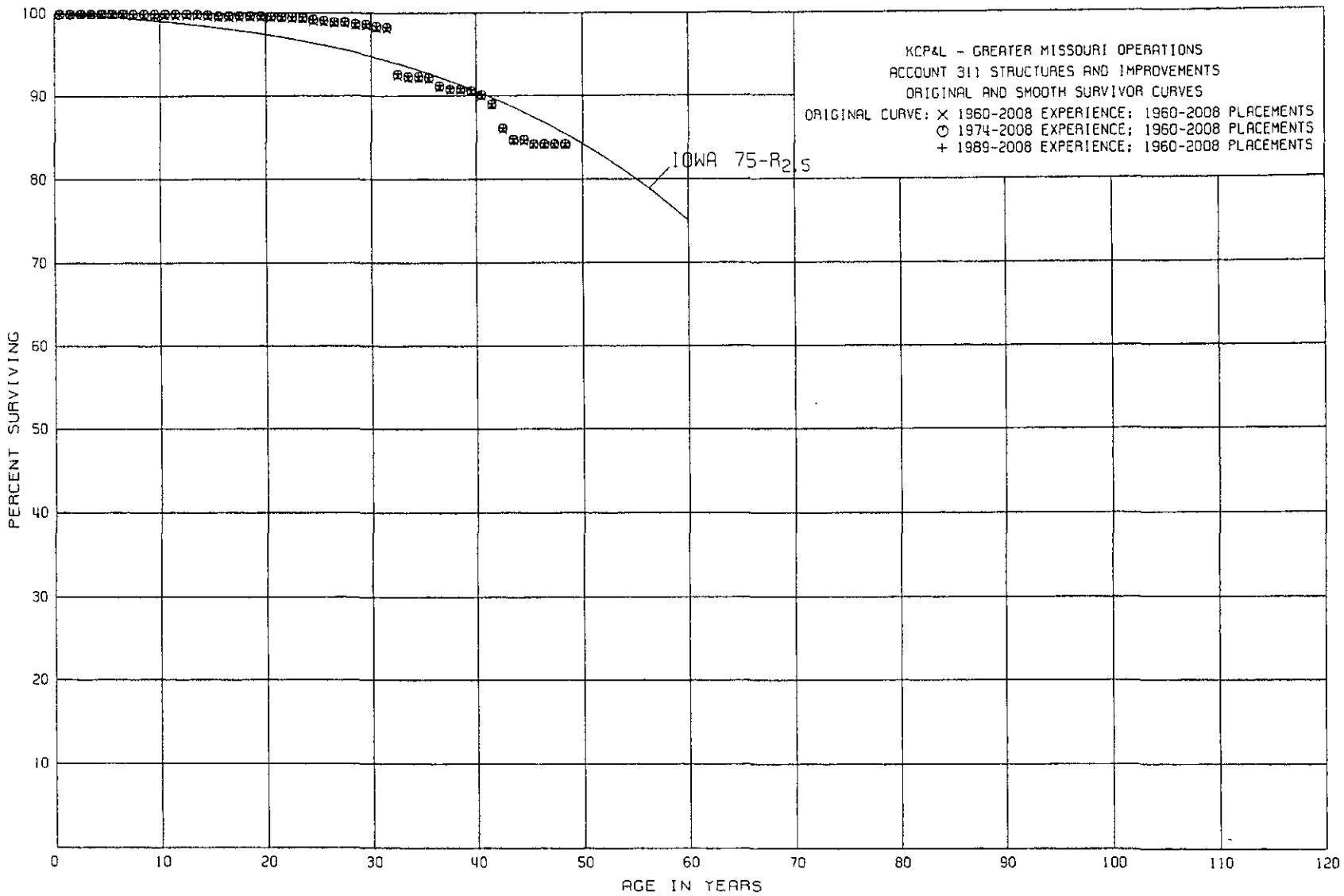
Note: New additions for account 398.00 will have an annual depreciation rate of 5.00%

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SERVICE LIFE STATISTICS

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Schedule JSS2010-1



KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1960-2008

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	62,646,479		0.0000	1.0000	100.00
0.5	61,949,951		0.0000	1.0000	100.00
1.5	60,610,908	2,148	0.0000	1.0000	100.00
2.5	60,393,078		0.0000	1.0000	100.00
3.5	59,986,953	7,263	0.0001	0.9999	100.00
4.5	59,550,822	9,124	0.0002	0.9998	99.99
5.5	59,496,234	57,305	0.0010	0.9990	99.97
6.5	58,277,728	93,163	0.0016	0.9984	99.87
7.5	57,564,619	281	0.0000	1.0000	99.71
8.5	53,634,596		0.0000	1.0000	99.71
9.5	50,067,428	819	0.0000	1.0000	99.71
10.5	50,102,617	5,020	0.0001	0.9999	99.71
11.5	50,659,958		0.0000	1.0000	99.70
12.5	49,970,116	11,730	0.0002	0.9998	99.70
13.5	49,856,789	42,773	0.0009	0.9991	99.68
14.5	49,677,073	29,001	0.0006	0.9994	99.59
15.5	39,917,783	2,232	0.0001	0.9999	99.53
16.5	37,021,337	4,157	0.0001	0.9999	99.52
17.5	37,003,433	7,956	0.0002	0.9998	99.51
18.5	35,139,707	3,647	0.0001	0.9999	99.49
19.5	32,332,671	27,282	0.0008	0.9992	99.48
20.5	31,992,247	8,265	0.0003	0.9997	99.40
21.5	31,200,514	8,125	0.0003	0.9997	99.37
22.5	29,313,931	24,447	0.0008	0.9992	99.34
23.5	29,045,808	78,727	0.0027	0.9973	99.26
24.5	28,903,930	15,706	0.0005	0.9995	98.99
25.5	23,665,070	41,987	0.0018	0.9982	98.94
26.5	23,303,711	3,488	0.0001	0.9999	98.76
27.5	22,961,473	55,206	0.0024	0.9976	98.75
28.5	18,457,386	5,369	0.0003	0.9997	98.51
29.5	18,424,663	51,099	0.0028	0.9972	98.48
30.5	12,473,560	14,898	0.0012	0.9988	98.20
31.5	12,410,192	717,424	0.0578	0.9422	98.08
32.5	11,661,173	37,007	0.0032	0.9968	92.41
33.5	11,519,020	382	0.0000	1.0000	92.11
34.5	11,512,051	11,702	0.0010	0.9990	92.11
35.5	11,441,937	122,664	0.0107	0.9893	92.02
36.5	11,303,126	43,259	0.0038	0.9962	91.04
37.5	11,259,867		0.0000	1.0000	90.69
38.5	11,022,554	27,880	0.0025	0.9975	90.69

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1960-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,856,465	16,912	0.0059	0.9941	90.46
40.5	2,838,516	33,623	0.0118	0.9882	89.93
41.5	2,804,893	93,357	0.0333	0.9667	88.87
42.5	2,711,536	42,086	0.0155	0.9845	85.91
43.5	2,665,616	1,562	0.0006	0.9994	84.58
44.5	2,544,036	13,244	0.0052	0.9948	84.53
45.5	2,530,792		0.0000	1.0000	84.09
46.5	1,848,310		0.0000	1.0000	84.09
47.5	1,848,310		0.0000	1.0000	84.09
48.5					84.09

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1974-2008

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	50,112,267		0.0000	1.0000	100.00
0.5	49,498,777		0.0000	1.0000	100.00
1.5	48,180,732	2,148	0.0000	1.0000	100.00
2.5	47,962,902		0.0000	1.0000	100.00
3.5	47,804,687	7,263	0.0002	0.9998	100.00
4.5	56,345,082	8,954	0.0002	0.9998	99.98
5.5	56,290,664	56,881	0.0010	0.9990	99.96
6.5	55,074,001	1,043	0.0000	1.0000	99.86
7.5	54,458,793		0.0000	1.0000	99.86
8.5	50,532,885		0.0000	1.0000	99.86
9.5	46,965,717	819	0.0000	1.0000	99.86
10.5	47,000,906	5,020	0.0001	0.9999	99.86
11.5	48,362,180		0.0000	1.0000	99.85
12.5	47,794,992	114	0.0000	1.0000	99.85
13.5	49,856,789	42,773	0.0009	0.9991	99.85
14.5	49,677,073	29,001	0.0006	0.9994	99.76
15.5	39,917,783	2,232	0.0001	0.9999	99.70
16.5	37,021,337	4,157	0.0001	0.9999	99.69
17.5	37,003,433	7,956	0.0002	0.9998	99.68
18.5	35,139,707	3,647	0.0001	0.9999	99.66
19.5	32,332,671	27,282	0.0008	0.9992	99.65
20.5	31,992,247	8,265	0.0003	0.9997	99.57
21.5	31,200,514	8,125	0.0003	0.9997	99.54
22.5	29,313,931	24,447	0.0008	0.9992	99.51
23.5	29,045,808	78,727	0.0027	0.9973	99.43
24.5	28,903,930	15,706	0.0005	0.9995	99.16
25.5	23,665,070	41,987	0.0018	0.9982	99.11
26.5	23,303,711	3,488	0.0001	0.9999	98.93
27.5	22,961,473	55,206	0.0024	0.9976	98.92
28.5	18,457,386	5,369	0.0003	0.9997	98.68
29.5	18,424,663	51,099	0.0028	0.9972	98.65
30.5	12,473,560	14,898	0.0012	0.9988	98.37
31.5	12,410,192	717,424	0.0578	0.9422	98.25
32.5	11,661,173	37,007	0.0032	0.9968	92.57
33.5	11,519,020	382	0.0000	1.0000	92.27
34.5	11,512,051	11,702	0.0010	0.9990	92.27
35.5	11,441,937	122,664	0.0107	0.9893	92.18
36.5	11,303,126	43,259	0.0038	0.9962	91.19
37.5	11,259,867		0.0000	1.0000	90.84
38.5	11,022,554	27,880	0.0025	0.9975	90.84

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1974-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,856,465	16,912	0.0059	0.9941	90.61
40.5	2,838,516	33,623	0.0118	0.9882	90.08
41.5	2,804,893	93,357	0.0333	0.9667	89.02
42.5	2,711,536	42,086	0.0155	0.9845	86.06
43.5	2,665,616	1,562	0.0006	0.9994	84.73
44.5	2,544,036	13,244	0.0052	0.9948	84.68
45.5	2,530,792		0.0000	1.0000	84.24
46.5	1,848,310		0.0000	1.0000	84.24
47.5	1,848,310		0.0000	1.0000	84.24
48.5					84.24

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1989-2008		
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	25,936,607		0.0000	1.0000	100.00
0.5	29,143,020		0.0000	1.0000	100.00
1.5	28,893,804		0.0000	1.0000	100.00
2.5	30,555,300		0.0000	1.0000	100.00
3.5	30,427,720		0.0000	1.0000	100.00
4.5	30,378,464		0.0000	1.0000	100.00
5.5	35,551,103	50,417	0.0014	0.9986	100.00
6.5	34,750,549	1,043	0.0000	1.0000	99.86
7.5	34,474,515		0.0000	1.0000	99.86
8.5	34,968,164		0.0000	1.0000	99.86
9.5	31,452,956	819	0.0000	1.0000	99.86
10.5	37,418,804	4,770	0.0001	0.9999	99.86
11.5	37,983,633		0.0000	1.0000	99.85
12.5	37,318,903	114	0.0000	1.0000	99.85
13.5	37,441,193	15,502	0.0004	0.9996	99.85
14.5	37,300,006	29,001	0.0008	0.9992	99.81
15.5	27,616,491	2,232	0.0001	0.9999	99.73
16.5	24,744,574	3,986	0.0002	0.9998	99.72
17.5	24,726,841		0.0000	1.0000	99.70
18.5	23,116,194	3,647	0.0002	0.9998	99.70
19.5	29,270,796	18,030	0.0006	0.9994	99.68
20.5	28,939,624	8,265	0.0003	0.9997	99.62
21.5	28,149,310	4,894	0.0002	0.9998	99.59
22.5	26,271,739	24,447	0.0009	0.9991	99.57
23.5	26,007,125	78,727	0.0030	0.9970	99.48
24.5	25,865,247	15,706	0.0006	0.9994	99.18
25.5	20,626,387	41,987	0.0020	0.9980	99.12
26.5	21,057,474	3,488	0.0002	0.9998	98.92
27.5	20,837,890	27,333	0.0013	0.9987	98.90
28.5	18,457,386	5,369	0.0003	0.9997	98.77
29.5	18,424,663	51,099	0.0028	0.9972	98.74
30.5	12,473,560	14,898	0.0012	0.9988	98.46
31.5	12,410,192	717,424	0.0578	0.9422	98.34
32.5	11,661,173	37,007	0.0032	0.9968	92.66
33.5	11,519,020	382	0.0000	1.0000	92.36
34.5	11,512,051	11,702	0.0010	0.9990	92.36
35.5	11,441,937	122,664	0.0107	0.9893	92.27
36.5	11,303,126	43,259	0.0038	0.9962	91.28
37.5	11,259,867		0.0000	1.0000	90.93
38.5	11,022,554	27,880	0.0025	0.9975	90.93

KCP&L - GREATER MISSOURI OPERATIONS
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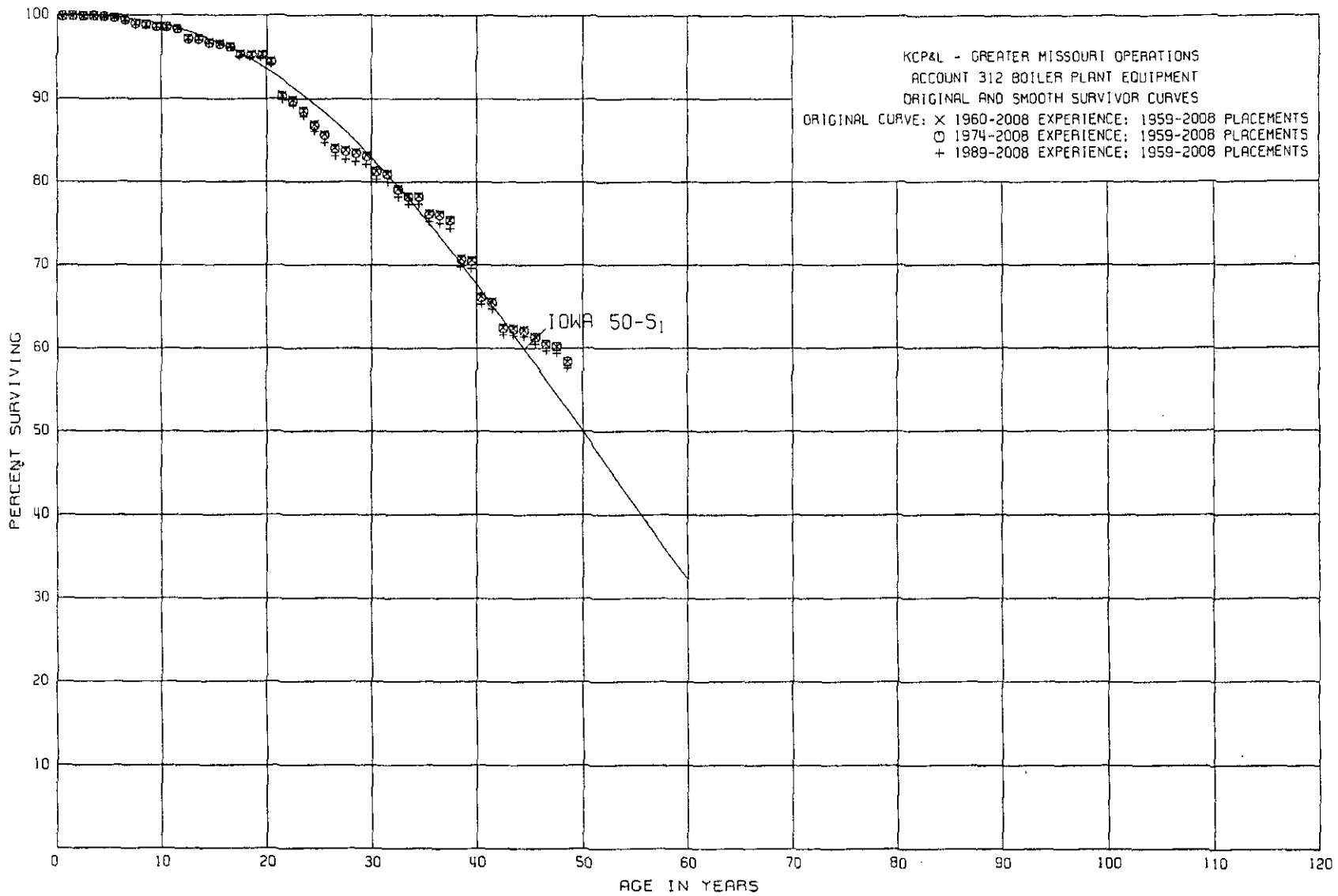
ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1989-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,856,465	16,912	0.0059	0.9941	90.70
40.5	2,838,516	33,623	0.0118	0.9882	90.16
41.5	2,804,893	93,357	0.0333	0.9667	89.10
42.5	2,711,536	42,086	0.0155	0.9845	86.13
43.5	2,665,616	1,562	0.0006	0.9994	84.79
44.5	2,544,036	13,244	0.0052	0.9948	84.74
45.5	2,530,792		0.0000	1.0000	84.30
46.5	1,848,310		0.0000	1.0000	84.30
47.5	1,848,310		0.0000	1.0000	84.30
48.5					84.30

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Schedule JSS2010-1



KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2008

EXPERIENCE BAND 1960-2008

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	256,748,294	30,000	0.0001	0.9999	100.00
0.5	238,291,241	1,619	0.0000	1.0000	99.99
1.5	234,628,002	48,274	0.0002	0.9998	99.99
2.5	228,863,077	21,994	0.0001	0.9999	99.97
3.5	225,055,531	369,041	0.0016	0.9984	99.96
4.5	219,246,184	148,822	0.0007	0.9993	99.80
5.5	223,648,336	626,625	0.0028	0.9972	99.73
6.5	211,532,021	749,232	0.0035	0.9965	99.45
7.5	223,286,310	399,928	0.0018	0.9982	99.10
8.5	210,366,668	525,707	0.0025	0.9975	98.92
9.5	202,110,427	122,603	0.0006	0.9994	98.67
10.5	196,205,041	460,839	0.0023	0.9977	98.61
11.5	193,323,031	2,131,850	0.0110	0.9890	98.38
12.5	186,876,891	157,730	0.0008	0.9992	97.30
13.5	179,141,452	821,215	0.0046	0.9954	97.22
14.5	176,468,454	316,798	0.0018	0.9982	96.77
15.5	145,509,361	476,896	0.0033	0.9967	96.60
16.5	136,406,849	1,292,000	0.0095	0.9905	96.28
17.5	134,998,025	86,410	0.0006	0.9994	95.37
18.5	102,287,872	62,622	0.0006	0.9994	95.31
19.5	102,005,631	837,539	0.0082	0.9918	95.25
20.5	100,629,683	4,348,318	0.0432	0.9568	94.47
21.5	95,951,495	567,909	0.0059	0.9941	90.39
22.5	95,132,056	1,312,200	0.0138	0.9862	89.86
23.5	94,031,874	1,813,298	0.0193	0.9807	88.62
24.5	90,017,970	1,306,063	0.0145	0.9855	86.91
25.5	67,252,579	1,193,884	0.0178	0.9822	85.65
26.5	66,012,966	290,918	0.0044	0.9956	84.13
27.5	65,351,347	191,806	0.0029	0.9971	83.76
28.5	49,035,876	207,291	0.0042	0.9958	83.52
29.5	47,277,622	1,042,335	0.0220	0.9780	83.17
30.5	32,198,099	148,808	0.0046	0.9954	81.34
31.5	31,589,759	682,858	0.0216	0.9784	80.97
32.5	30,653,648	345,136	0.0113	0.9887	79.22
33.5	27,905,999		0.0000	1.0000	78.32
34.5	27,832,027	750,452	0.0270	0.9730	78.32
35.5	26,842,942	55,064	0.0021	0.9979	76.21
36.5	26,572,212	215,801	0.0081	0.9919	76.05
37.5	26,235,790	1,611,518	0.0614	0.9386	75.43
38.5	24,096,924	73,193	0.0030	0.9970	70.80

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2008			EXPERIENCE BAND 1960-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,687,571	292,233	0.0623	0.9377	70.59
40.5	4,395,338	41,697	0.0095	0.9905	66.19
41.5	4,337,915	203,696	0.0470	0.9530	65.56
42.5	4,134,219	8,858	0.0021	0.9979	62.48
43.5	4,113,089	9,860	0.0024	0.9976	62.35
44.5	4,103,229	56,035	0.0137	0.9863	62.20
45.5	4,047,194	53,369	0.0132	0.9868	61.35
46.5	2,096,589	10,779	0.0051	0.9949	60.54
47.5	2,085,810	62,466	0.0299	0.9701	60.23
48.5					58.43

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2008

EXPERIENCE BAND 1974-2008

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	215,584,501	30,000	0.0001	0.9999	100.00
0.5	199,755,549	1,619	0.0000	1.0000	99.99
1.5	196,619,035	48,274	0.0002	0.9998	99.99
2.5	191,726,258	21,717	0.0001	0.9999	99.97
3.5	188,522,570	367,945	0.0020	0.9980	99.96
4.5	211,950,925	142,624	0.0007	0.9993	99.76
5.5	216,366,249	626,625	0.0029	0.9971	99.69
6.5	204,301,669	727,869	0.0036	0.9964	99.40
7.5	216,077,731	392,228	0.0018	0.9982	99.04
8.5	203,403,996	518,530	0.0025	0.9975	98.86
9.5	195,174,896	122,603	0.0006	0.9994	98.61
10.5	189,269,510	460,839	0.0024	0.9976	98.55
11.5	189,777,647	2,131,850	0.0112	0.9888	98.31
12.5	183,335,297	146,998	0.0008	0.9992	97.21
13.5	179,137,293	821,215	0.0046	0.9954	97.13
14.5	176,468,454	316,798	0.0018	0.9982	96.68
15.5	145,509,361	476,896	0.0033	0.9967	96.51
16.5	136,406,849	1,292,000	0.0095	0.9905	96.19
17.5	134,998,025	86,410	0.0006	0.9994	95.28
18.5	102,287,872	62,622	0.0006	0.9994	95.22
19.5	102,005,631	837,539	0.0082	0.9918	95.16
20.5	100,629,683	4,348,318	0.0432	0.9568	94.38
21.5	95,951,495	567,909	0.0059	0.9941	90.30
22.5	95,132,056	1,312,200	0.0138	0.9862	89.77
23.5	94,031,874	1,813,298	0.0193	0.9807	88.53
24.5	90,017,970	1,306,063	0.0145	0.9855	86.82
25.5	67,252,579	1,193,884	0.0178	0.9822	85.56
26.5	66,012,966	290,918	0.0044	0.9956	84.04
27.5	65,351,347	191,806	0.0029	0.9971	83.67
28.5	49,035,876	207,291	0.0042	0.9958	83.43
29.5	47,277,622	1,042,335	0.0220	0.9780	83.08
30.5	32,198,099	148,808	0.0046	0.9954	81.25
31.5	31,589,759	682,858	0.0216	0.9784	80.88
32.5	30,653,648	345,136	0.0113	0.9887	79.13
33.5	27,905,999		0.0000	1.0000	78.24
34.5	27,832,027	750,452	0.0270	0.9730	78.24
35.5	26,842,942	55,064	0.0021	0.9979	76.13
36.5	26,572,212	215,801	0.0081	0.9919	75.97
37.5	26,235,790	1,611,518	0.0614	0.9386	75.35
38.5	24,096,924	73,193	0.0030	0.9970	70.72

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2008

EXPERIENCE BAND 1974-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,687,571	292,233	0.0623	0.9377	70.51
40.5	4,395,338	41,697	0.0095	0.9905	66.12
41.5	4,337,915	203,696	0.0470	0.9530	65.49
42.5	4,134,219	8,858	0.0021	0.9979	62.41
43.5	4,113,089	9,860	0.0024	0.9976	62.28
44.5	4,103,229	56,035	0.0137	0.9863	62.13
45.5	4,047,194	53,369	0.0132	0.9868	61.28
46.5	2,096,589	10,779	0.0051	0.9949	60.47
47.5	2,085,810	62,466	0.0299	0.9701	60.16
48.5					58.36

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2008 EXPERIENCE BAND 1989-2008

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	138,587,449	30,000	0.0002	0.9998	100.00
0.5	124,924,350		0.0000	1.0000	99.98
1.5	125,897,884	42,476	0.0003	0.9997	99.98
2.5	120,358,358	11,229	0.0001	0.9999	99.95
3.5	119,405,733	329,653	0.0028	0.9972	99.94
4.5	115,092,509	49,792	0.0004	0.9996	99.66
5.5	143,284,304	572,873	0.0040	0.9960	99.62
6.5	131,871,631	605,443	0.0046	0.9954	99.22
7.5	144,257,980	220,382	0.0015	0.9985	98.76
8.5	149,580,977	217,199	0.0015	0.9985	98.61
9.5	144,669,113	50,436	0.0003	0.9997	98.46
10.5	154,520,793	241,061	0.0016	0.9984	98.43
11.5	152,295,362	1,904,142	0.0125	0.9875	98.27
12.5	146,295,771	119,795	0.0008	0.9992	97.04
13.5	138,821,003	322,514	0.0023	0.9977	96.96
14.5	136,846,794	253,031	0.0018	0.9982	96.74
15.5	108,533,270	429,986	0.0040	0.9960	96.57
16.5	99,986,645	1,223,747	0.0122	0.9878	96.18
17.5	99,490,955	79,063	0.0008	0.9992	95.01
18.5	67,383,502	54,362	0.0008	0.9992	94.93
19.5	95,466,551	767,890	0.0080	0.9920	94.85
20.5	94,167,226	4,335,912	0.0460	0.9540	94.09
21.5	89,505,019	565,894	0.0063	0.9937	89.76
22.5	88,688,005	1,312,200	0.0148	0.9852	89.19
23.5	87,714,208	1,813,298	0.0207	0.9793	87.87
24.5	83,711,757	1,306,063	0.0156	0.9844	86.05
25.5	60,946,366	1,193,884	0.0196	0.9804	84.71
26.5	62,855,725	290,918	0.0046	0.9954	83.05
27.5	62,197,896	191,806	0.0031	0.9969	82.67
28.5	49,031,717	207,291	0.0042	0.9958	82.41
29.5	47,277,622	1,042,335	0.0220	0.9780	82.06
30.5	32,198,099	148,808	0.0046	0.9954	80.25
31.5	31,589,759	682,858	0.0216	0.9784	79.88
32.5	30,653,648	345,136	0.0113	0.9887	78.15
33.5	27,905,999		0.0000	1.0000	77.27
34.5	27,832,027	750,452	0.0270	0.9730	77.27
35.5	26,842,942	55,064	0.0021	0.9979	75.18
36.5	26,572,212	215,801	0.0081	0.9919	75.02
37.5	26,235,790	1,611,518	0.0614	0.9386	74.41
38.5	24,096,924	73,193	0.0030	0.9970	69.84

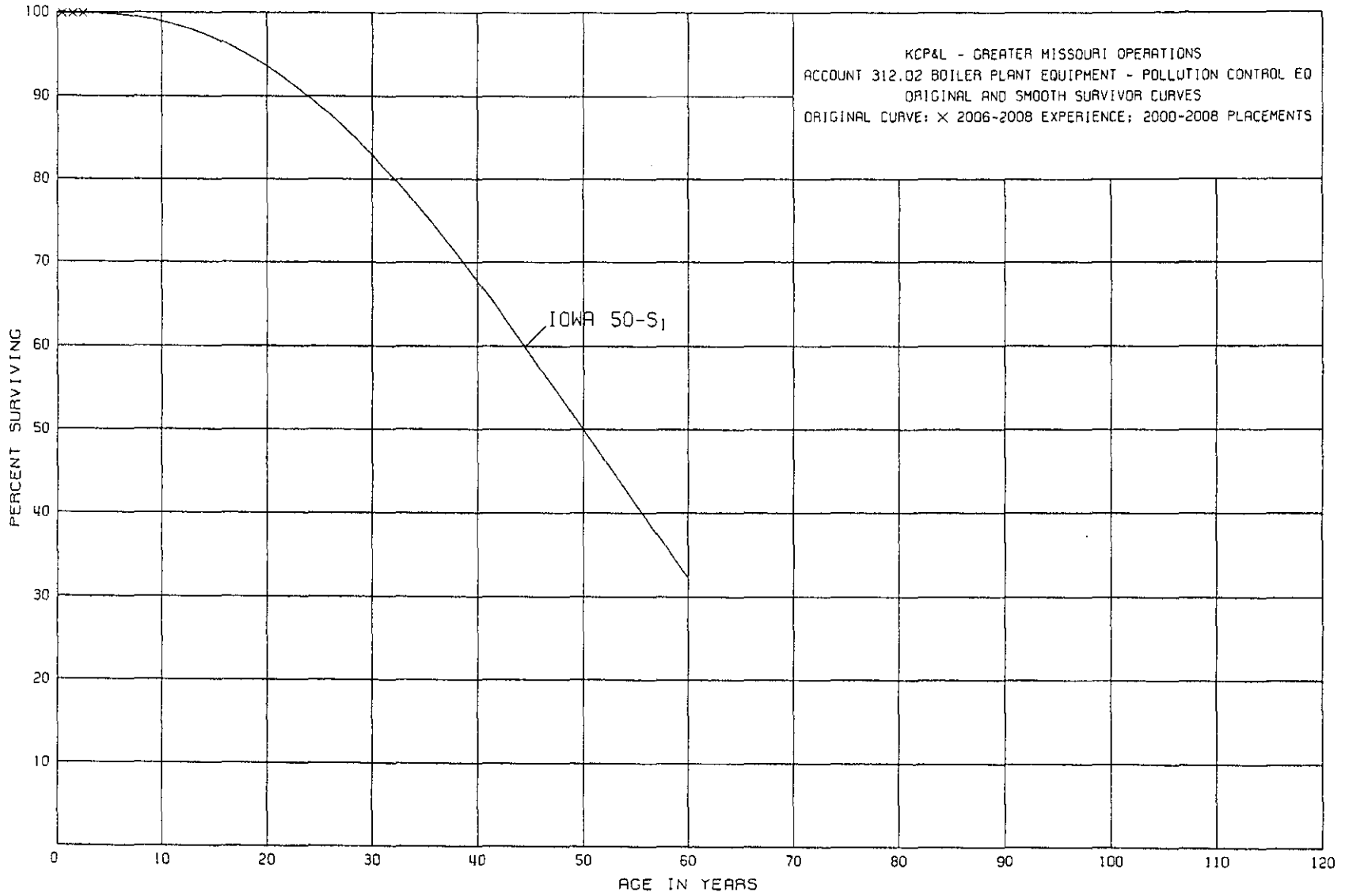
KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2008			EXPERIENCE BAND 1989-2008			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	4,687,571	292,233	0.0623	0.9377	69.63	
40.5	4,395,338	41,697	0.0095	0.9905	65.29	
41.5	4,337,915	203,696	0.0470	0.9530	64.67	
42.5	4,134,219	8,858	0.0021	0.9979	61.63	
43.5	4,113,089	9,860	0.0024	0.9976	61.50	
44.5	4,103,229	56,035	0.0137	0.9863	61.35	
45.5	4,047,194	53,369	0.0132	0.9868	60.51	
46.5	2,096,589	10,779	0.0051	0.9949	59.71	
47.5	2,085,810	62,466	0.0299	0.9701	59.41	
48.5					57.63	

KCP&L - GREATER MISSOURI OPERATIONS
ACCOUNT 312.02 BOILER PLANT EQUIPMENT - POLLUTION CONTROL EQ
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 2006-2008 EXPERIENCE; 2000-2008 PLACEMENTS



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Schedule JJS2010-1

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 312.02 BOILER PLANT EQUIPMENT - POLLUTION CONTROL EQ

ORIGINAL LIFE TABLE

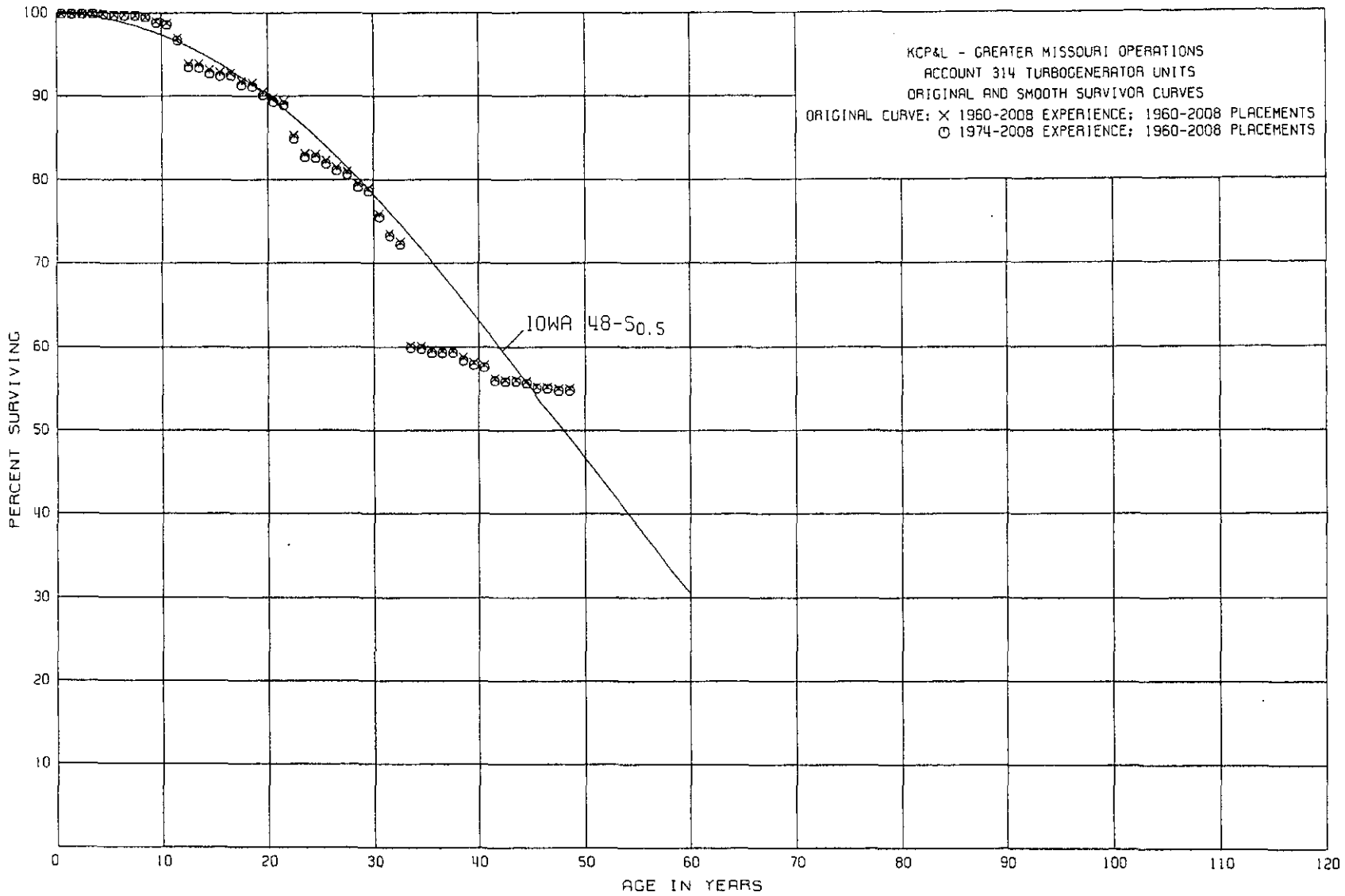
PLACEMENT BAND 2000-2008

EXPERIENCE BAND 2006-2008

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	923,001		0.0000	1.0000	100.00
0.5	333,525		0.0000	1.0000	100.00
1.5	12,105		0.0000	1.0000	100.00
2.5					100.00

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Schedule JJS2010-1



KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1960-2008

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	98,063,990	10,831	0.0001	0.9999	100.00
0.5	93,436,840	560	0.0000	1.0000	99.99
1.5	90,903,829		0.0000	1.0000	99.99
2.5	88,717,676	74,708	0.0008	0.9992	99.99
3.5	86,079,547	55,066	0.0006	0.9994	99.91
4.5	84,559,200	62,609	0.0007	0.9993	99.85
5.5	84,033,140	28,234	0.0003	0.9997	99.78
6.5	83,146,153	24,225	0.0003	0.9997	99.75
7.5	73,617,344	149,810	0.0020	0.9980	99.72
8.5	66,959,953	384,153	0.0057	0.9943	99.52
9.5	66,384,209	124,038	0.0019	0.9981	98.95
10.5	62,261,705	1,082,601	0.0174	0.9826	98.76
11.5	59,128,612	1,900,330	0.0321	0.9679	97.04
12.5	56,408,596	16,258	0.0003	0.9997	93.93
13.5	54,633,919	406,295	0.0074	0.9926	93.90
14.5	52,582,588	160,971	0.0031	0.9969	93.21
15.5	52,084,669	47,519	0.0009	0.9991	92.92
16.5	51,148,323	595,295	0.0116	0.9884	92.84
17.5	50,306,646	80,895	0.0016	0.9984	91.76
18.5	34,209,033	409,455	0.0120	0.9880	91.61
19.5	33,703,916	281,617	0.0084	0.9916	90.51
20.5	33,858,986	166,985	0.0049	0.9951	89.75
21.5	33,650,095	1,506,851	0.0448	0.9552	89.31
22.5	30,833,829	790,252	0.0256	0.9744	85.31
23.5	29,952,211	35,198	0.0012	0.9988	83.13
24.5	27,476,258	247,766	0.0090	0.9910	83.03
25.5	22,889,889	214,172	0.0094	0.9906	82.28
26.5	22,838,065	146,190	0.0064	0.9936	81.51
27.5	22,618,615	411,606	0.0182	0.9818	80.99
28.5	19,551,146	135,931	0.0070	0.9930	79.52
29.5	17,682,146	697,042	0.0394	0.9606	78.96
30.5	15,569,550	473,172	0.0304	0.9696	75.85
31.5	14,515,041	201,089	0.0139	0.9861	73.54
32.5	14,315,481	2,437,144	0.1702	0.8298	72.52
33.5	11,878,131	16,112	0.0014	0.9986	60.18
34.5	11,850,012	88,915	0.0075	0.9925	60.10
35.5	11,758,432	1,630	0.0001	0.9999	59.65
36.5	11,754,790	2,011	0.0002	0.9998	59.64
37.5	11,759,704	174,129	0.0148	0.9852	59.63
38.5	11,386,454	106,102	0.0093	0.9907	58.75

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1960-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,361,801	23,327	0.0053	0.9947	58.20
40.5	4,338,474	121,385	0.0280	0.9720	57.89
41.5	4,217,089	9,553	0.0023	0.9977	56.27
42.5	4,193,560		0.0000	1.0000	56.14
43.5	4,193,560	8,970	0.0021	0.9979	56.14
44.5	4,184,590	50,688	0.0121	0.9879	56.02
45.5	4,133,360		0.0000	1.0000	55.34
46.5	2,186,864	8,769	0.0040	0.9960	55.34
47.5	2,178,095		0.0000	1.0000	55.12
48.5					55.12

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1974-2008

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	80,655,286		0.0000	1.0000	100.00
0.5	76,083,467	560	0.0000	1.0000	100.00
1.5	73,559,487		0.0000	1.0000	100.00
2.5	72,209,635	74,708	0.0010	0.9990	100.00
3.5	70,165,074	55,066	0.0008	0.9992	99.90
4.5	78,800,688	62,609	0.0008	0.9992	99.82
5.5	78,281,150	28,234	0.0004	0.9996	99.74
6.5	77,394,936	24,225	0.0003	0.9997	99.70
7.5	67,866,127	149,810	0.0022	0.9978	99.67
8.5	61,287,302	384,153	0.0063	0.9937	99.45
9.5	60,712,507	124,038	0.0020	0.9980	98.82
10.5	56,590,003	1,082,601	0.0191	0.9809	98.62
11.5	55,973,081	1,900,330	0.0340	0.9660	96.74
12.5	53,255,077	16,258	0.0003	0.9997	93.45
13.5	54,633,919	406,295	0.0074	0.9926	93.42
14.5	52,582,588	160,971	0.0031	0.9969	92.73
15.5	52,084,669	47,519	0.0009	0.9991	92.44
16.5	51,148,323	595,295	0.0116	0.9884	92.36
17.5	50,306,646	80,895	0.0016	0.9984	91.29
18.5	34,209,033	409,455	0.0120	0.9880	91.14
19.5	33,703,916	281,617	0.0084	0.9916	90.05
20.5	33,858,986	166,985	0.0049	0.9951	89.29
21.5	33,650,095	1,506,851	0.0448	0.9552	88.85
22.5	30,833,829	790,252	0.0256	0.9744	84.87
23.5	29,952,211	35,198	0.0012	0.9988	82.70
24.5	27,476,258	247,766	0.0090	0.9910	82.60
25.5	22,889,889	214,172	0.0094	0.9906	81.86
26.5	22,838,065	146,190	0.0064	0.9936	81.09
27.5	22,618,615	411,606	0.0182	0.9818	80.57
28.5	19,551,146	135,931	0.0070	0.9930	79.10
29.5	17,682,146	697,042	0.0394	0.9606	78.55
30.5	15,569,550	473,172	0.0304	0.9696	75.46
31.5	14,515,041	201,089	0.0139	0.9861	73.17
32.5	14,315,481	2,437,144	0.1702	0.8298	72.15
33.5	11,878,131	16,112	0.0014	0.9986	59.87
34.5	11,850,012	88,915	0.0075	0.9925	59.79
35.5	11,758,432	1,630	0.0001	0.9999	59.34
36.5	11,754,790	2,011	0.0002	0.9998	59.33
37.5	11,759,704	174,129	0.0148	0.9852	59.32
38.5	11,386,454	106,102	0.0093	0.9907	58.44

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

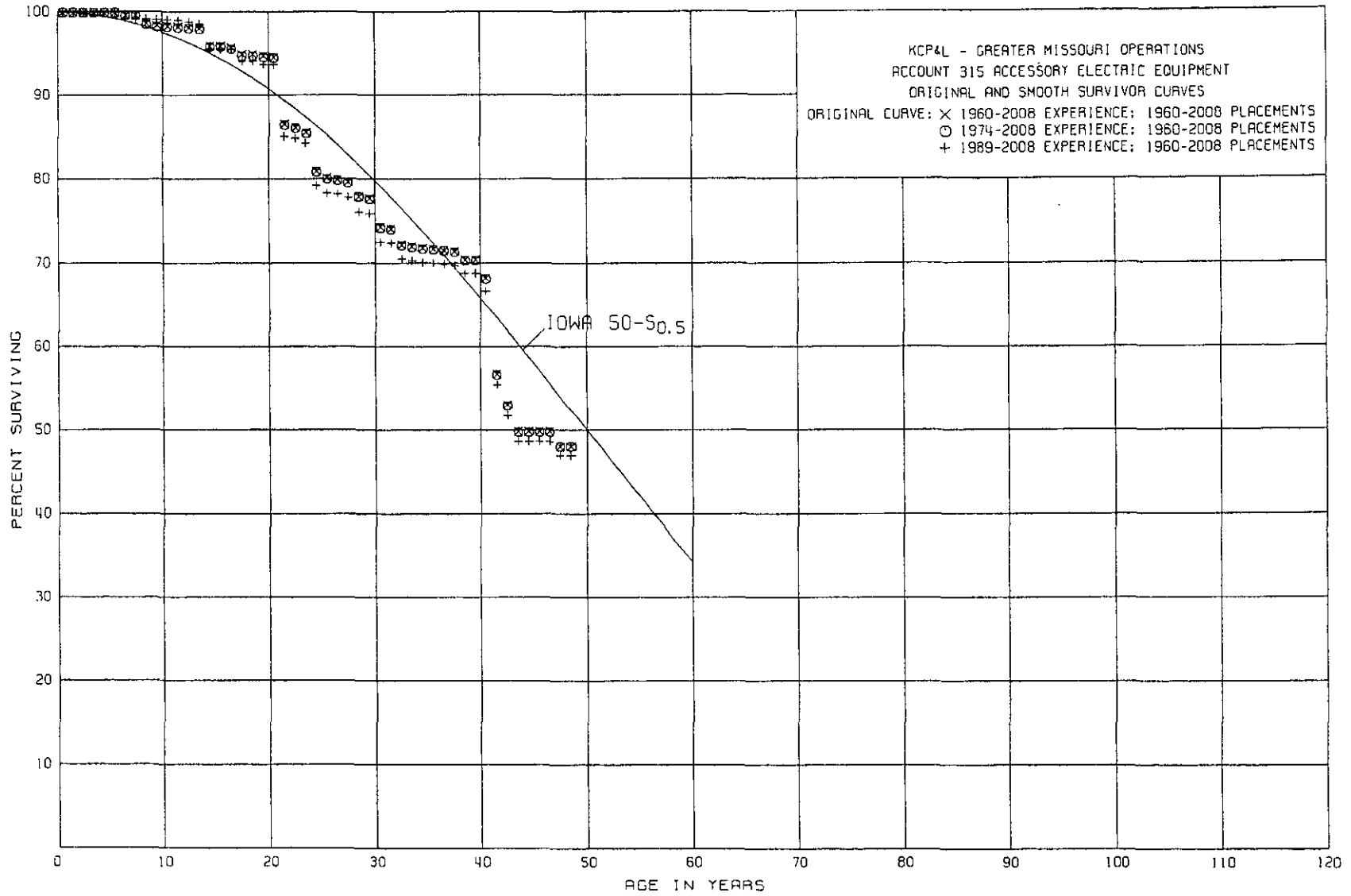
PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1974-2008

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,361,801	23,327	0.0053	0.9947	57.90
40.5	4,338,474	121,385	0.0280	0.9720	57.59
41.5	4,217,089	9,553	0.0023	0.9977	55.98
42.5	4,193,560		0.0000	1.0000	55.85
43.5	4,193,560	8,970	0.0021	0.9979	55.85
44.5	4,184,590	50,688	0.0121	0.9879	55.73
45.5	4,133,360		0.0000	1.0000	55.06
46.5	2,186,864	8,769	0.0040	0.9960	55.06
47.5	2,178,095		0.0000	1.0000	54.84
48.5					54.84

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KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1960-2008

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	27,686,997		0.0000	1.0000	100.00
0.5	23,621,813		0.0000	1.0000	100.00
1.5	23,524,150	4,000	0.0002	0.9998	100.00
2.5	23,362,253		0.0000	1.0000	99.98
3.5	22,961,487	12,442	0.0005	0.9995	99.98
4.5	22,741,649		0.0000	1.0000	99.93
5.5	22,407,974	73,030	0.0033	0.9967	99.93
6.5	21,802,758		0.0000	1.0000	99.60
7.5	22,606,335	236,571	0.0105	0.9895	99.60
8.5	22,184,266	44,117	0.0020	0.9980	98.55
9.5	21,358,332	6,273	0.0003	0.9997	98.35
10.5	21,043,768	16,490	0.0008	0.9992	98.32
11.5	20,579,434	23,010	0.0011	0.9989	98.24
12.5	20,539,307	28,541	0.0014	0.9986	98.13
13.5	21,799,508	459,135	0.0211	0.9789	97.99
14.5	21,341,704	1,292	0.0001	0.9999	95.92
15.5	17,914,248	48,367	0.0027	0.9973	95.91
16.5	17,583,093	146,663	0.0083	0.9917	95.65
17.5	17,436,396	1,050	0.0001	0.9999	94.86
18.5	14,666,940	30,610	0.0021	0.9979	94.85
19.5	14,482,976	19,070	0.0013	0.9987	94.65
20.5	14,449,731	1,225,232	0.0848	0.9152	94.53
21.5	13,113,951	57,925	0.0044	0.9956	86.51
22.5	13,044,451	88,163	0.0068	0.9932	86.13
23.5	13,008,120	703,439	0.0541	0.9459	85.54
24.5	12,353,210	130,310	0.0105	0.9895	80.91
25.5	10,105,177	15,995	0.0016	0.9984	80.06
26.5	10,089,182	44,567	0.0044	0.9956	79.93
27.5	9,999,130	205,878	0.0206	0.9794	79.58
28.5	8,517,631	27,369	0.0032	0.9968	77.94
29.5	7,514,042	329,721	0.0439	0.9561	77.69
30.5	6,054,873	15,750	0.0026	0.9974	74.28
31.5	6,032,477	153,368	0.0254	0.9746	74.09
32.5	5,941,665	21,416	0.0036	0.9964	72.21
33.5	5,879,606	14,975	0.0025	0.9975	71.95
34.5	5,814,548	4,488	0.0008	0.9992	71.77
35.5	5,805,274	14,018	0.0024	0.9976	71.71
36.5	5,808,049	10,470	0.0018	0.9982	71.54
37.5	5,990,424	82,198	0.0137	0.9863	71.41
38.5	5,650,337		0.0000	1.0000	70.43

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2008			EXPERIENCE BAND 1960-2008		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	905,393	28,676	0.0317	0.9683	70.43
40.5	876,717	147,654	0.1684	0.8316	68.20
41.5	729,063	48,260	0.0662	0.9338	56.72
42.5	694,779	41,971	0.0604	0.9396	52.97
43.5	652,808		0.0000	1.0000	49.77
44.5	652,808		0.0000	1.0000	49.77
45.5	636,015		0.0000	1.0000	49.77
46.5	396,886	13,976	0.0352	0.9648	49.77
47.5	382,910		0.0000	1.0000	48.02
48.5					48.02

KCP&L - GREATER MISSOURI OPERATIONS
MPS JURISDICTION

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2008

EXPERIENCE BAND 1974-2008

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	19,458,891		0.0000	1.0000	100.00
0.5	15,449,942		0.0000	1.0000	100.00
1.5	15,373,449	4,000	0.0003	0.9997	100.00
2.5	15,235,620		0.0000	1.0000	99.97
3.5	15,170,196	12,442	0.0008	0.9992	99.97
4.5	21,698,058		0.0000	1.0000	99.89
5.5	21,364,383	73,030	0.0034	0.9966	99.89
6.5	20,759,167		0.0000	1.0000	99.55
7.5	21,562,744	236,571	0.0110	0.9890	99.55
8.5	21,140,675	44,117	0.0021	0.9979	98.45
9.5	20,314,741	6,273	0.0003	0.9997	98.24
10.5	20,000,177	16,490	0.0008	0.9992	98.21
11.5	19,946,065	23,010	0.0012	0.9988	98.13
12.5	19,919,258	28,541	0.0014	0.9986	98.01
13.5	21,799,508	459,135	0.0211	0.9789	97.87
14.5	21,341,704	1,292	0.0001	0.9999	95.80
15.5	17,914,248	48,367	0.0027	0.9973	95.79
16.5	17,583,093	146,663	0.0083	0.9917	95.53
17.5	17,436,396	1,050	0.0001	0.9999	94.74
18.5	14,666,940	30,610	0.0021	0.9979	94.73
19.5	14,482,976	19,070	0.0013	0.9987	94.53
20.5	14,449,731	1,225,232	0.0848	0.9152	94.41
21.5	13,113,951	57,925	0.0044	0.9956	86.40
22.5	13,044,451	88,163	0.0068	0.9932	86.02
23.5	13,008,120	703,439	0.0541	0.9459	85.44
24.5	12,353,210	130,310	0.0105	0.9895	80.82
25.5	10,105,177	15,995	0.0016	0.9984	79.97
26.5	10,089,182	44,567	0.0044	0.9956	79.84
27.5	9,999,130	205,878	0.0206	0.9794	79.49
28.5	8,517,631	27,369	0.0032	0.9968	77.85
29.5	7,514,042	329,721	0.0439	0.9561	77.60
30.5	6,054,873	15,750	0.0026	0.9974	74.19
31.5	6,032,477	153,368	0.0254	0.9746	74.00
32.5	5,941,665	21,416	0.0036	0.9964	72.12
33.5	5,879,606	14,975	0.0025	0.9975	71.86
34.5	5,814,548	4,488	0.0008	0.9992	71.68
35.5	5,805,274	14,018	0.0024	0.9976	71.62
36.5	5,808,049	10,470	0.0018	0.9982	71.45
37.5	5,990,424	82,198	0.0137	0.9863	71.32
38.5	5,650,337		0.0000	1.0000	70.34