BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

DOCKET NO. 08-WSEE-1041-RTS

DIRECT TESTIMONY
WESTAR ENERGY, INC.

VOLUME V

BEFORE THE STATE CORPORATION COMMISSION

OF THE STATE OF KANSAS

DIRECT TESTIMONY

OF

JOHN J. SPANOS

WESTAR ENERGY

DOCKET NO. 08-WSEE-1041-RTS

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A. Gannett Fleming, Inc. (Gannett Fleming). I am Vice President of the Valuation and Rate Division.

Q. PLEASE DESCRIBE YOUR EDUCATION AND BUSINESS EXPERIENCE.

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

I have been associated with the firm since college graduation in 1986. The Valuation and Rate Division of Gannett

Fleming provides depreciation consulting services to utility companies in the United States and Canada. As Vice President of Gannett Fleming's Valuation and Rate Division, I am responsible for conducting depreciation, valuation and original cost studies, determining service life and salvage estimates, conducting field reviews, presenting recommended depreciation rates to clients, and supporting such rates before state and federal regulatory agencies.

Q. DO YOU BELONG TO ANY PROFESSIONAL SOCIETIES?

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

Q. DO YOU HOLD ANY SPECIAL CERTIFICATION AS A DEPRECIATION EXPERT?

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

Q. PLEASE OUTLINE YOUR EXPERIENCE IN THE FIELD OF DEPRECIATION.

A. 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.

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, 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, 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.

Q. HAVE YOU SUBMITTED TESTIMONY TO ANY STATE UTILITY COMMISSIONS ON THE SUBJECT OF UTILITY PLANT DEPRECIATION?

A. Yes. I have submitted testimony to the Pennsylvania Public Utility Commission, the Commonwealth of Kentucky Public Service Commission, the Public Utilities Commission of Ohio, the Nevada Public Utility Commission, the Public Utilities Board of New Jersey, the Missouri Public Service Commission, the Massachusetts Department of Telecommunications and Energy, the Alberta Energy & Utility Board, the Idaho Public Utility Commission, the Louisiana Public Service Commission, the State Corporation Commission of Kansas, the Oklahoma Corporate Commission, the Public Service Commission of South Carolina, Railroad Commission of Texas-Gas Services Division, the New York Public Service Commission, Illinois Commerce Commission, the Indiana

Utility Regulatory Commission, the California Public Utilities Commission, the Federal Energy Regulatory Commission ("FERC"), the Arkansas Public Service Commission, the Public Utility Commission of Texas, The Tennessee Regulatory Commission, the Regulatory Commission of Alaska, and the North Carolina Utilities Commission.

Q. HAVE YOU RECEIVED ANY ADDITIONAL EDUCATION RELATING TO UTILITY PLANT DEPRECIATION?

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

Q. WHAT IS THE PURPOSE OF YOUR PREFILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. I was asked to recommend depreciation rates for Westar Energy's (Company) steam generating units and an initial depreciation rate for use in the new wind generation facilities currently under construction. I am sponsoring Exhibit JJS-1 stating the results of my depreciation analysis related to Westar North and Westar

South's electric plant as of December 31, 2007 (the "2007 Depreciation Study" or "Depreciation Study").

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. My testimony will explain the methods and procedures of the Depreciation Study and sets forth the annual depreciation rates as of December 31, 2007, for steam and wind generation. Exhibit JJS-1 sets forth detailed methods, procedures and results of the Depreciation Study as of December 31, 2007. My Depreciation Study will be explained in Part II of my testimony.

Q. WHAT ARE THE PRINCIPAL CONCLUSIONS OF YOUR STUDY AND THE BASES FOR THEM?

A. The principal conclusions of the study are depreciation accrual rates by steam and wind generation account for Westar South and Westar North. Generally, my recommended rates are based on a combination of my review of historic data, my review of Westar's operating maintenance practices and the application of informed engineering judgment. Overall, interim survivor curves and the life spans for production facilities are basically the same as the lives currently being used.

II. METHODS USED IN DEPRECIATION STUDY

Q. PLEASE DEFINE THE CONCEPT OF DEPRECIATION.

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

Q. IN PREPARING THE DEPRECIATION STUDY, DID YOU FOLLOW GENERALLY ACCEPTED PRACTICES IN THE FIELD OF DEPRECIATION AND VALUATION?

A. Yes.

Q. PLEASE DESCRIBE THE CONTENTS OF YOUR REPORT.

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

The tables on pages III-4, III-5, III-6 and III-7 of Exhibit JJS-1 presents the estimated survivor curve, the net salvage percent, the original cost as of December 31, 2007, the book reserve and the calculated annual depreciation accrual and rate for each account or subaccount. The section beginning on page III-8 of the report presents the results of the retirement rate analyses prepared as the historical bases for the service life estimates. The section beginning on page III-54 of Exhibit JJS-1 presents the results of the salvage analysis. The section beginning on page III-73 of Exhibit JJS-1 presents the depreciation calculations related to surviving original cost as of December 31, 2007.

Q. PLEASE IDENTIFY THE DEPRECIATION METHOD THAT YOU USED.

A. I used the straight line remaining life method of depreciation, with the average service life procedure. This is the method the Commission adopted for Westar in its most recent rate proceeding. This method of depreciation aims to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit or group of assets in a systematic and rational manner.

Q. DID YOU REVIEW PRIOR COMMISSION ORDERS ON WESTAR ENERGY'S DEPRECIATION ACCRUAL RATES?

A. Yes, and I reviewed the Kansas Court of Appeals decision following the most recent rate review.

Q. WHAT ARE YOUR RECOMMENDED ANNUAL DEPRECIATION ACCRUAL RATES FOR WESTAR SOUTH AND WESTAR NORTH?

A. My recommended annual depreciation accrual rates as of December 31, 2007, for Westar South are set forth on pages III-4 and III-5 of Exhibit JJS-1 and for Westar North on pages III-6 and III-7 of Exhibit JJS-1.

Q. HOW DID YOU DETERMINE THE RECOMMENDED ANNUAL DEPRECIATION ACCRUAL RATES?

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

Q. PLEASE DESCRIBE THE FIRST PHASE OF THE DEPRECIATION STUDY, IN WHICH YOU ESTIMATED THE SERVICE LIFE AND NET SALVAGE CHARACTERISTICS FOR EACH DEPRECIABLE GROUP.

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

Q. WHAT HISTORIC DATA DID YOU ANALYZE FOR THE PURPOSE OF ESTIMATING SERVICE LIFE CHARACTERISTICS?

A. I analyzed the Company's accounting entries that record plant transactions during the 18-year period 1990 through 2007. The transactions included additions, retirements, transfers and the related balances. The Company records also included surviving dollar value by year installed for each plant account as of December 31, 2007.

Q. WHAT METHOD DID YOU USE TO ANALYZE THIS SERVICE LIFE DATA?

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

Q. WOULD YOU EXPLAIN HOW YOU USED THE RETIREMENT RATE METHOD TO ANALYZE WESTAR'S SERVICE LIFE DATA?

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

Q. WHAT IS AN "IOWA-TYPE SURVIVOR CURVE" AND HOW DID YOU USE SUCH CURVES TO ESTIMATE THE SERVICE LIFE CHARACTERISTICS FOR EACH PROPERTY GROUP?

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

Iowa-type curves are used to smooth and extrapolate original survivor curves determined by the retirement rate method.

The Iowa curves and truncated Iowa curves were used in this study to describe the forecasted rates of retirement based on the observed rates of retirement and the outlook for future retirements. As I will explain, the use of truncated curves is appropriate to reflect retirements of plant components that may not be fully depreciated at the time a plant is retired.

The estimated survivor curve designations for each depreciable property group indicate the average service life, the family within the Iowa system to which the property group belongs, and the relative height of the mode. For example, the Iowa 50-R1 indicates an average service life of 50 years; a right-moded, or R, type curve (the mode occurs after average life for right-moded curves); and a low height, 1, for the mode (possible modes for R type curves range from 1 to 5).

Q. WHAT APPROACH DID YOU USE TO ESTIMATE THE LIVES OF SIGNIFICANT FACILITIES STRUCTURES SUCH AS PRODUCTION PLANTS?

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

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

Q. HAS GANNETT FLEMING USED THIS APPROACH IN OTHER PROCEEDINGS?

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

Q. WHAT ARE THE BASES FOR THE PROBABLE RETIREMENT YEARS THAT YOU HAVE ESTIMATED FOR EACH FACILITY?

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

Q. HAVE YOU PHYSICALLY OBSERVED WESTAR NORTH AND SOUTH'S PLANTS AS PART OF YOUR DEPRECIATION STUDIES?

A. Yes. I made field reviews of Westar North and South's property in October 2004 and April 2008 to update my reviews on a representative portion of the plant. Field reviews are conducted to become familiar with Company operations and obtain an understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements. This knowledge as well as information from other discussions with management was incorporated in the interpretation and extrapolation of the statistical analyses.

Q. HOW DID YOUR EXPERIENCE IN DEVELOPMENT OF OTHER DEPRECIATION STUDIES AFFECT YOUR WORK IN THIS CASE?

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

Q. WOULD YOU PLEASE EXPLAIN THE CONCEPT OF "NET SALVAGE"?

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

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

For example, the full recovery of the service value of a $10,000 feed pump will include not only the $10,000 of original cost, but also, on average, $4,000 to remove the pump at the end of its life and $500 in salvage value. In this example, the net salvage component is negative $3,500 ($500 - $4,000), and the net salvage percent is negative 35% (($500 - $4,000)/$10,000).

Q. PLEASE DESCRIBE HOW YOU ESTIMATED NET SALVAGE PERCENTAGES.

A. I estimated the net salvage percentages based on judgment that, for most accounts, incorporated analyses of the historical data for the period 1982 through 2007 for Westar South and1990 through 2007 for Westar North and considered estimates for other electric companies. In the historical analyses, the net salvage, cost of removal and gross salvage amounts were expressed as percents of the original cost retired. These percents were calculated on annual and three-year moving average bases for the 1982 to 2007 period for Westar South and 1990 to 2007 period for Westar North.

Q. DID YOU FACTOR IN TERMINAL NET SALVAGE IN YOUR RECOMMENDED NET SALVAGE PERCENTAGES?

A. No.

Q. PLEASE DESCRIBE THE SECOND PHASE OF THE PROCESS THAT YOU USED IN THE DEPRECIATION STUDY IN WHICH

YOU CALCULATED COMPOSITE REMAINING LIVES AND ANNUAL DEPRECIATION ACCRUAL RATES.

A. After I estimated the service life and net salvage characteristics for each depreciable property group, I calculated the annual depreciation accrual rates for each group based on the straight line remaining life method, using remaining lives weighted consistent with the average service life procedure. The annual depreciation accrual rates were developed as of December 31, 2007.

Q. PLEASE DESCRIBE THE STRAIGHT LINE REMAINING LIFE METHOD OF DEPRECIATION.

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

Q. PLEASE DESCRIBE THE AVERAGE SERVICE LIFE PROCEDURE FOR CALCULATING REMAINING LIFE ACCRUAL RATES.

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

Q. PLEASE USE AN EXAMPLE TO ILLUSTRATE THE DEVELOPMENT OF THE ANNUAL DEPRECIATION ACCRUAL RATE FOR A PARTICULAR GROUP OF PROPERTY IN YOUR DEPRECIATION STUDIES.

A. I will use Account 3120, Boiler Plant Equipment, as an example because it is one of the largest depreciable groups and represents 39% of depreciable plant for Westar South and North.

The retirement rate method was used to analyze the survivor characteristics of this property group for both Westar South and North. Aged plant accounting data were compiled from 1982 through 2007 and analyzed for periods that best represent the overall service life of this property. The life tables for the 1982-2007 and 1990-2007 experience bands are presented on pages III-14 through III-19 of Exhibit JJS-1. The life tables display the retirement and surviving ratios of the aged plant data exposed to retirement by age interval. For example, page III-14 shows $393,930 retired during age interval 0.5-1.5 with $539,820,733 exposed to retirement at the beginning of the interval. Consequently, the retirement ratio is 0.0007 ($393,930/$539,820,733) and the surviving ratio is 0.9993 (1-.0007). The percent surviving at age 0.5 of .9993 percent is multiplied by the survivor ratio of 100.00 to derive the percent surviving at age 1.5 of 99.93 percent. This process continues for the remaining age intervals for which plant was exposed to retirement during the period 1982-2007. The resultant life table as well as the 1990-2007 life table, or original survivor curves, are plotted along with the estimated smooth survivor curve, the 50-R1 on page III-13.

The net salvage percent is presented on pages III-57 and III-58 of Exhibit JJS-1 for Westar South and on page III-68 for Westar North. The percentage is based on the result of annual gross salvage minus the cost to remove plant assets as compared to the original cost of plant retired during the period 1984 through 2007 for Westar South. The analysis for Westar North is set forth on page III-68, however, informed judgment was the primary basis for the net salvage percent. The 24-year period for Westar South experienced negative $19,012,018 ($2,012,476 – $21,024,494) in net salvage for $53,459,477 plant retired. The result is negative net salvage of 36 percent (-$19,012,018/$53,459,477), however, the most recent five-year period and the rolling three-year averages trend toward fifty percent. Therefore, based on historical data and judgment, negative 35 percent was recommended.

My calculation of the annual depreciation related to original cost of Account 3120, Boiler Plant Equipment, at December 31, 2007, is presented on pages III-81 through III-87 Exhibit JJS-1 for Westar South and on pages III-122 through III-127 for Westar North. The calculation is based on the 50-R1 survivor curve, 35% negative net salvage, the attained age, and the allocated book reserve. The tabulation sets forth the installation year, the original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual. These totals are brought forward to the table on page III-4 of Exhibit JJS-1 for Westar South and page III-6 for Westar North.

Q. THANK YOU.

Gannett Fleming

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May 22, 2008

VIA FEDERAL-EXPRESS

08-WSEE-1041-RTS

Mr. Dick Rohlfs
Director, Retail Rates
Westar Energy, Inc.
818 S. Kansas Avenue
Topeka, KS 66601

Dear Dick:

Enclosed is one (1) unbound copy of our report titled, "Depreciation Study - Calculated Annual Depreciation Accruals Related to Electric Plant as of December 31, 2007", prepared for Westar Energy, Inc.

Very truly yours,

John J. Spanos

JOHN J. SPANOS
Vice President
Valuation and Rate Division

JJS:krm

Enclosure

WESTAR ENERGY, INC.

TOPEKA, KANSAS

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2007

Gannett Fleming
Valuation and Rate Division

Harrisburg, Pennsylvania | Calgary, Alberta | Valley Forge, Pennsylvania

WESTAR ENERGY, INC.

Topeka, Kansas

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO ELECTRIC PLANT

AS OF DECEMBER 31, 2007

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania

Gannett Fleming

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May 22, 2008

Westar Energy, Inc.
818 S. Kansas Avenue
Topeka, KS 66601

Attention Mr. Dick Rohlfs
Director, Retail Rates

Ladies & Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant, and specifically steam and wind generation of Westar North and South as of December 31, 2007. 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

Project No. 048849.000

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PART III. RESULTS OF STUDY, cont.

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PART I. INTRODUCTION

WESTAR ENERGY, INC.

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO ELECTRIC PLANT
AS OF DECEMBER 31, 2007

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for Westar South and Westar North ("Company") as applied to electric plant in service as of December 31, 2007. 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 2007; 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 and salvage studies 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 remaining lives and annual accruals.

BASIS OF STUDY

Depreciation

For all accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. 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 probable future. 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 2007 from the Company's plant accounting 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 function, 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 field trips and 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. The life span technique was used for certain facilities. In this technique, an average date of final retirement was estimated for each such facility, and the estimated survivor curves applied to each vintage were truncated at ages coinciding with the dates of final retirement.

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 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.

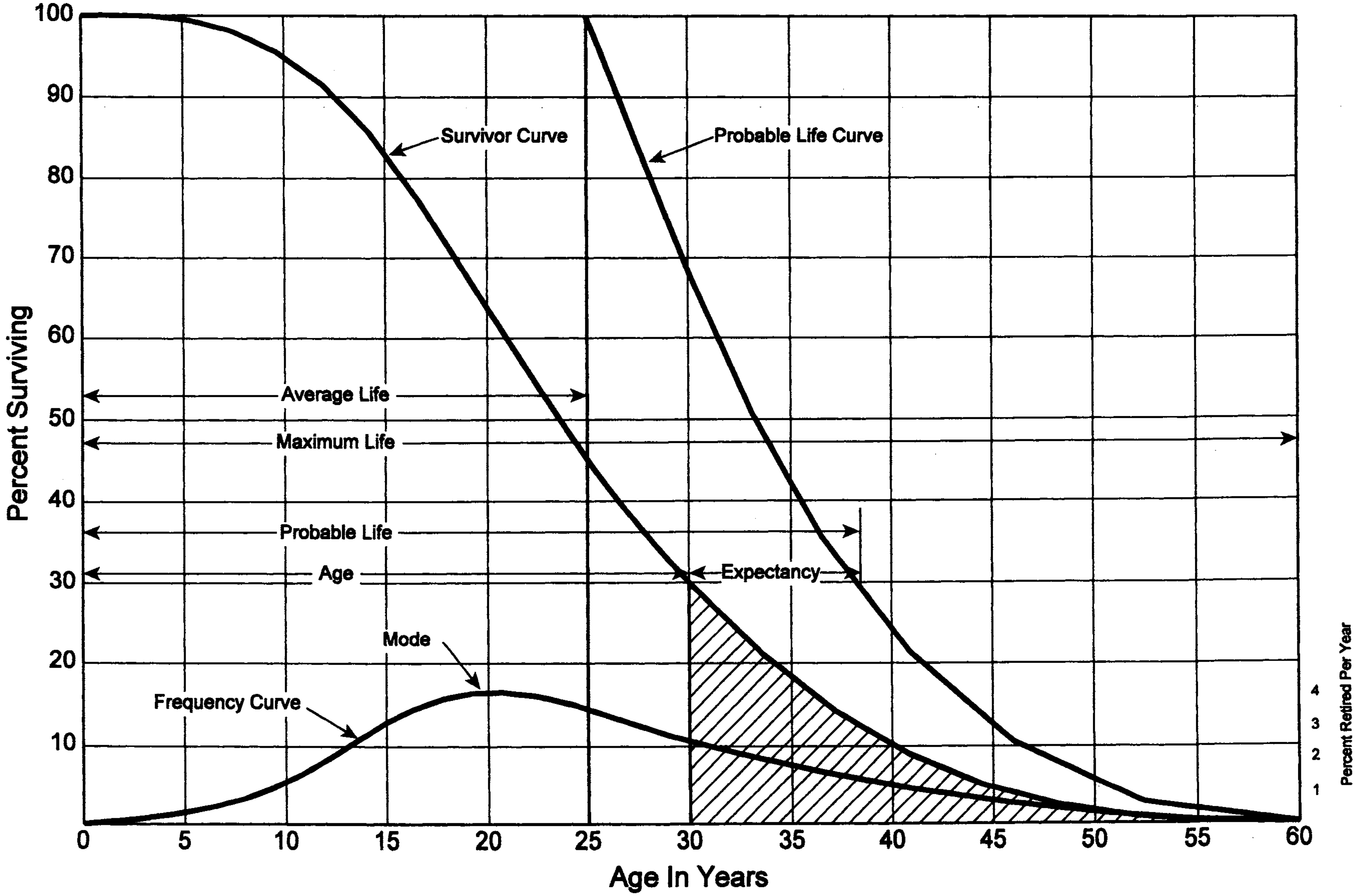

Figure 1. A Typical Survivor Curve and Derived Curves

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 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 curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded 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 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 numbers 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

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

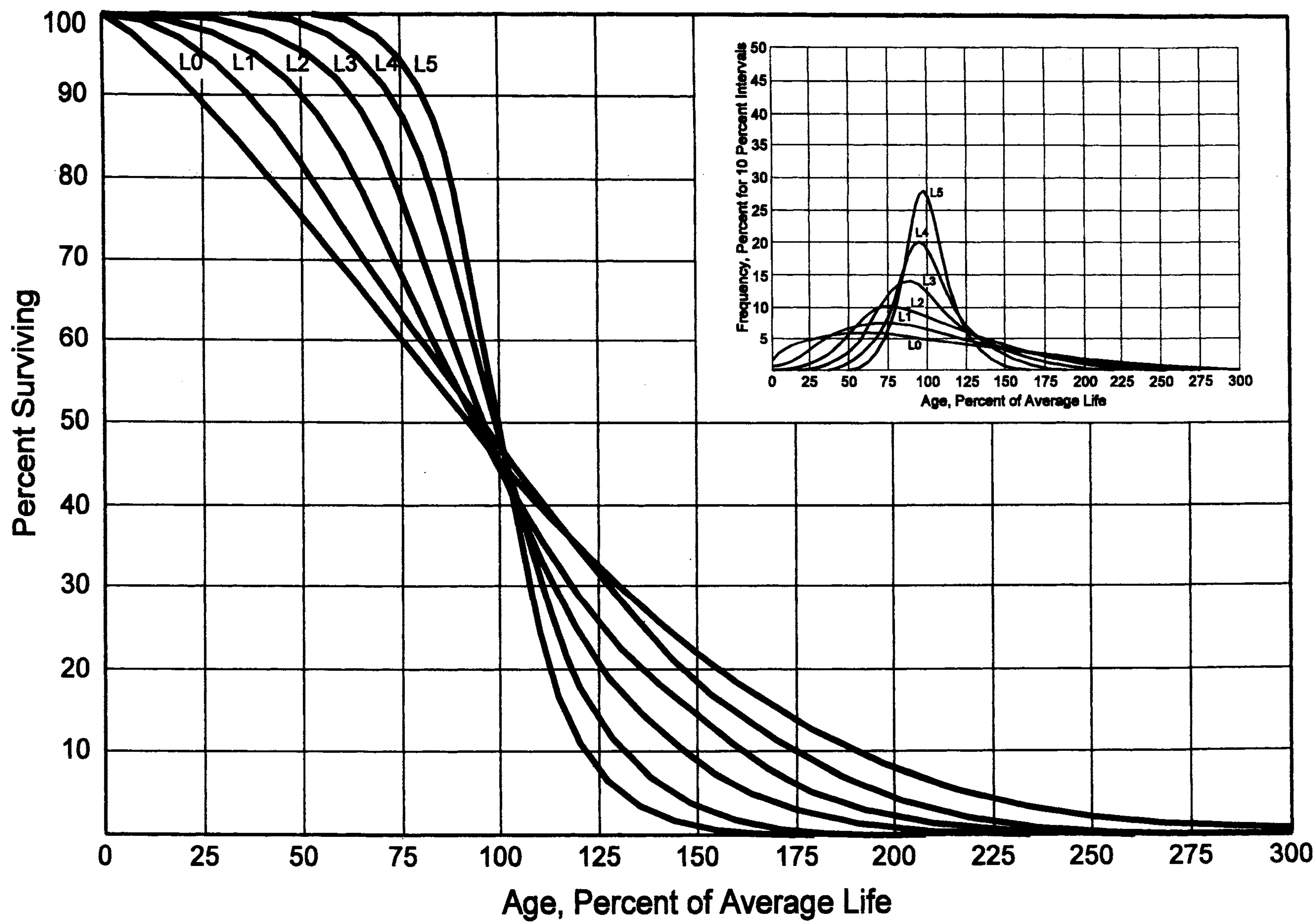

Figure 2. Left Modal or "L" Iowa Type Survivor Curves

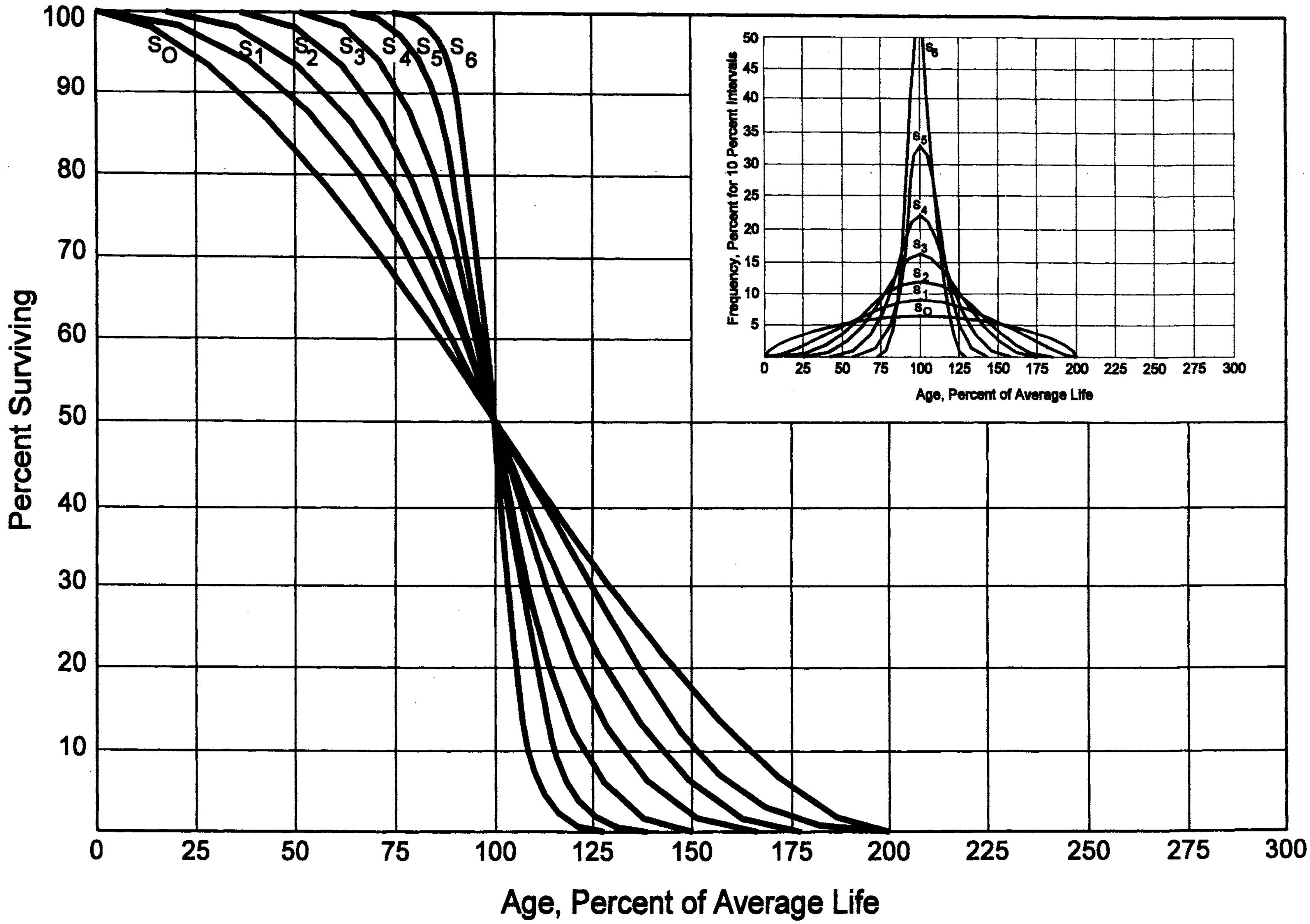

Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

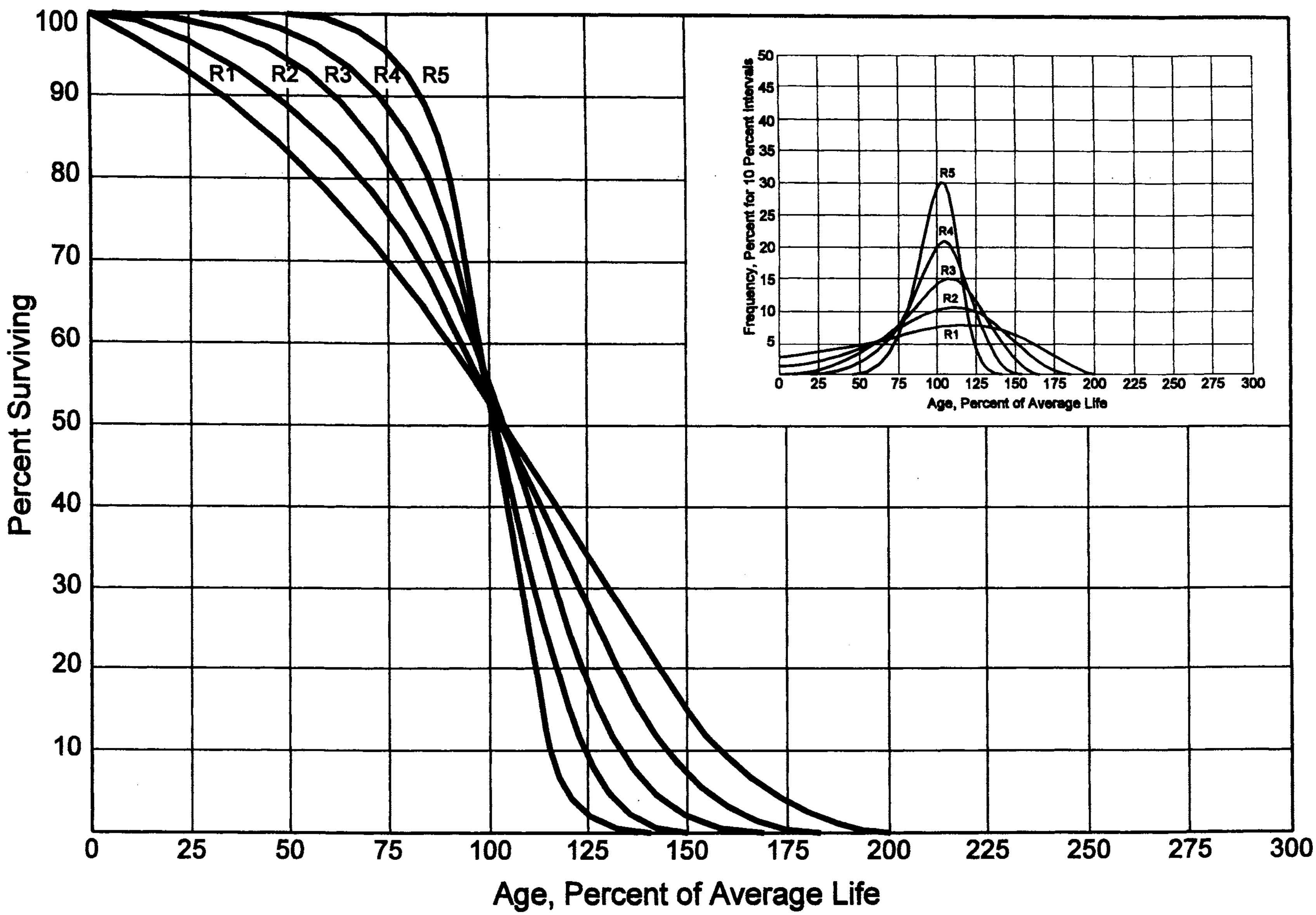

Figure 4. Right Modal or "R" Iowa Type Survivor Curves

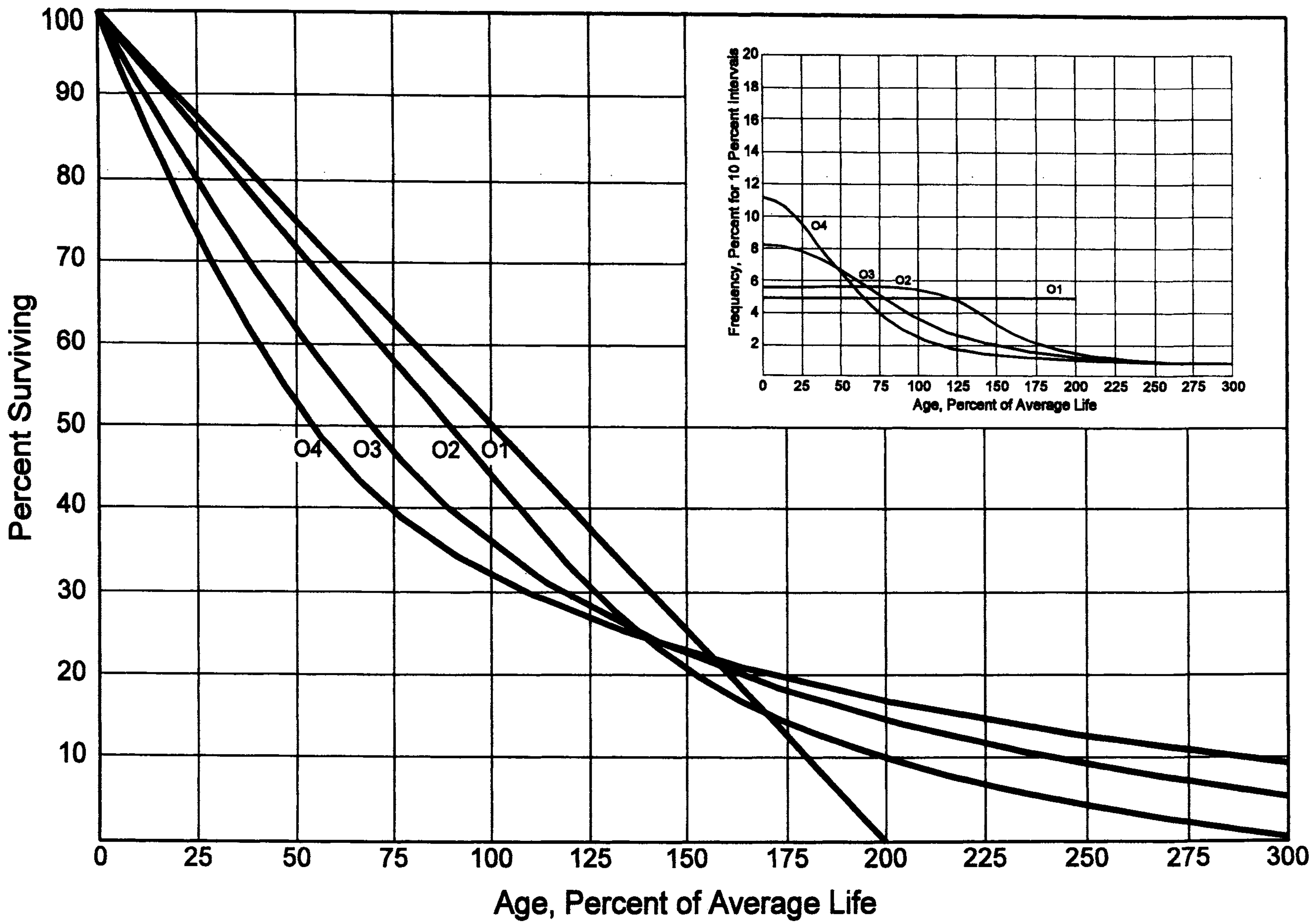

Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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 thesis[3] 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 property exposed to retirement at the beginnings of the age intervals during the same

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

[3]Couch, 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.

[4]Winfrey, Robley, Supra Note 1.

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

[6]Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. Iowa State University Press. 1994

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 1998-2007 during which there were placements during the years 1993-2007. 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 1993 were retired in 1998. 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 1998-2007
SUMMARIZED BY AGE INTERVAL

Experience Band 1998-2007

Placement Band 1993-2007

Year Placed (1)	Retirements, Thousands of Dollars During Year 1998 (2)	1999 (3)	2000 (4)	2001 (5)	2002 (6)	2003 (7)	2004 (8)	2005 (9)	2006 (10)	2007 (11)	Total During Age Interval (12)	Age Interval (13)
1993	10	11	12	13	14	16	23	24	25	26	26	13½-14½
1994	11	12	13	15	16	18	20	21	22	19	44	12½-13½
1995	11	12	13	14	16	17	19	21	22	18	64	11½-12½
1996	8	9	10	11	11	13	14	15	16	17	83	10½-11½
1997	9	10	11	12	13	14	16	17	19	20	93	9½-10½
1998	4	9	10	11	12	13	14	15	16	20	105	8½-9½
1999		5	11	12	13	14	15	16	18	20	113	7½-8½
2000			6	12	13	15	16	17	19	19	124	6½-7½
2001				6	13	15	16	17	19	19	131	5½-6½
2002					7	14	16	17	19	20	143	4½-5½
2003						8	18	20	22	23	146	3½-4½
2004							9	20	22	25	150	2½-3½
2005								11	23	25	151	1½-2½
2006									11	24	153	½-1½
2007	—	—	—	—	—	—	—	—	—	13	80	0-½
Total	53	68	86	106	128	157	196	231	273	308	1,606	

TABLE 2. OTHER TRANSACTIONS FOR EACH YEAR 1998-2007
SUMMARIZED BY AGE INTERVAL

Experience Band 1998-2007 Placement Band 1993 -2007

Year Placed (1)	1998 (2)	1999 (3)	2000 (4)	2001 (5)	2002 (6)	2003 (7)	2004 (8)	2005 (9)	2006 (10)	2007 (11)	Total During Age Interval (12)	Age Interval (13)
	Acquisitions, Transfers and Sales, Thousands of Dollars During Year											
1993	-	-	-	-	-	-	60[a]	-	-	-	-	13½-14½
1994	-	-	-	-	-	-	-	-	-	-	-	12½-13½
1995	-	-	-	-	-	-	-	-	-	-	-	11½-12½
1996	-	-	-	-	-	-	-	(5)[b]	-	-	60	10½-11½
1997	-	-	-	-	-	-	-	6[a]	-	-	-	9½-10½
1998		-	-	-	-	-	-	-	-	-	(5)	8½-9½
1999		-	-	-	-	-	-	-	-	-	6	7½-8½
2000			-	-	-	-	-	-	-	-	-	6½-7½
2001				-	-	-	-	(12)[b]	-	-	-	5½-6½
2002					-	-	-	-	22[a]	-	-	4½-5½
2003						-	-	(19)[b]	-	-	10	3½-4½
2004							-	-	-	-	-	2½-3½
2005								-	-	(102)[c]	(121)	1½-2½
2006									-	-	-	½-1½
2007											-	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 1998 retirements of 1993 installations and ending with the 2007 retirements of the 2002 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 1998 through 2007 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

TABLE 3. PLANT EXPOSED TO RETIREMENT
JANUARY 1 OF EACH YEAR 1998-2007
SUMMARIZED BY AGE INTERVAL

Experience Band 1998-2007

Placement Band 1993-2007

	Exposures, Thousands of Dollars — Annual Survivors at the Beginning of the Year											
Year Placed (1)	1998 (2)	1999 (3)	2000 (4)	2001 (5)	2002 (6)	2003 (7)	2004 (8)	2005 (9)	2006 (10)	2007 (11)	Total at Beginning of Age Interval (12)	Age Interval (13)
1993	255	245	234	222	209	195	239	216	192	167	167	13½-14½
1994	279	268	256	243	228	212	194	174	153	131	323	12½-13½
1995	307	296	284	271	257	241	224	205	184	162	531	11½-12½
1996	338	330	321	311	300	289	276	262	242	226	823	10½-11½
1997	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
1998	420[a]	416	407	397	386	374	361	347	332	316	1,503	8½-9½
1999		460[a]	455	444	432	419	405	390	374	356	1,952	7½-8½
2000			510[a]	504	492	479	464	448	431	412	2,463	6½-7½
2001				580[a]	574	561	546	530	501	482	3,057	5½-6½
2002					660[a]	653	639	623	628	609	3,789	4½-5½
2003						750[a]	742	724	685	663	4,332	3½-4½
2004							850[a]	841	821	799	4,955	2½-3½
2005								960[a]	949	926	5,719	1½-2½
2006									1,080[a]	1,069	6,579	½-1½
2007										1,220[a]	7,490	0-½
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	

[a] Additions during the year.

following 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 2002 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 1998-2007, 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 retire-

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

Experience Band 1998-2007

Placement Band 1993-2007

(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	167	26	0.1557	0.8443	42.24
					35.66
Total	44,780	1,606			

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.

ment ratio. The percent surviving is developed by starting with 100% at age zero and 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	÷	3,789,000	=	0.0377
Survivor Ratio	=	1.000	-	0.0377	=	0.9623
Percent surviving at age 5½	=	(88.15)	x	(0.9623)	=	84.83

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

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

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 Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be 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 Iowa 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 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 was obtained during the trips. This knowledge and information were incorporated in the interpretation and extrapolation of the statistical analyses.

The plant facilities visited on April 17, 2008, October 4 and 5, 2004, as well as October 18 and 19, 2004, are as follows:

April 17, 2008
Jeffrey Energy Center
Lawrence Energy Center

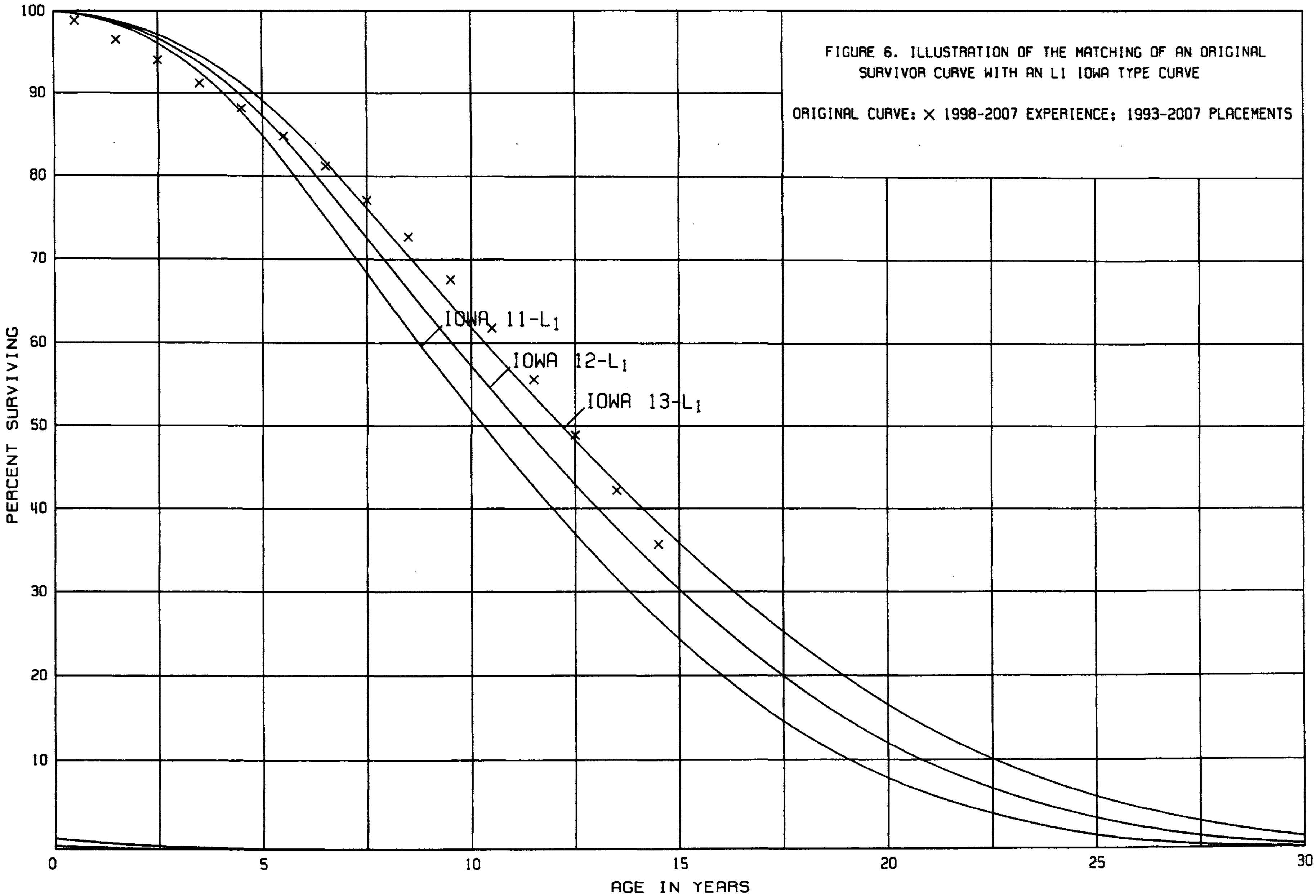

FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE

ORIGINAL CURVE: × 1998-2007 EXPERIENCE; 1993-2007 PLACEMENTS

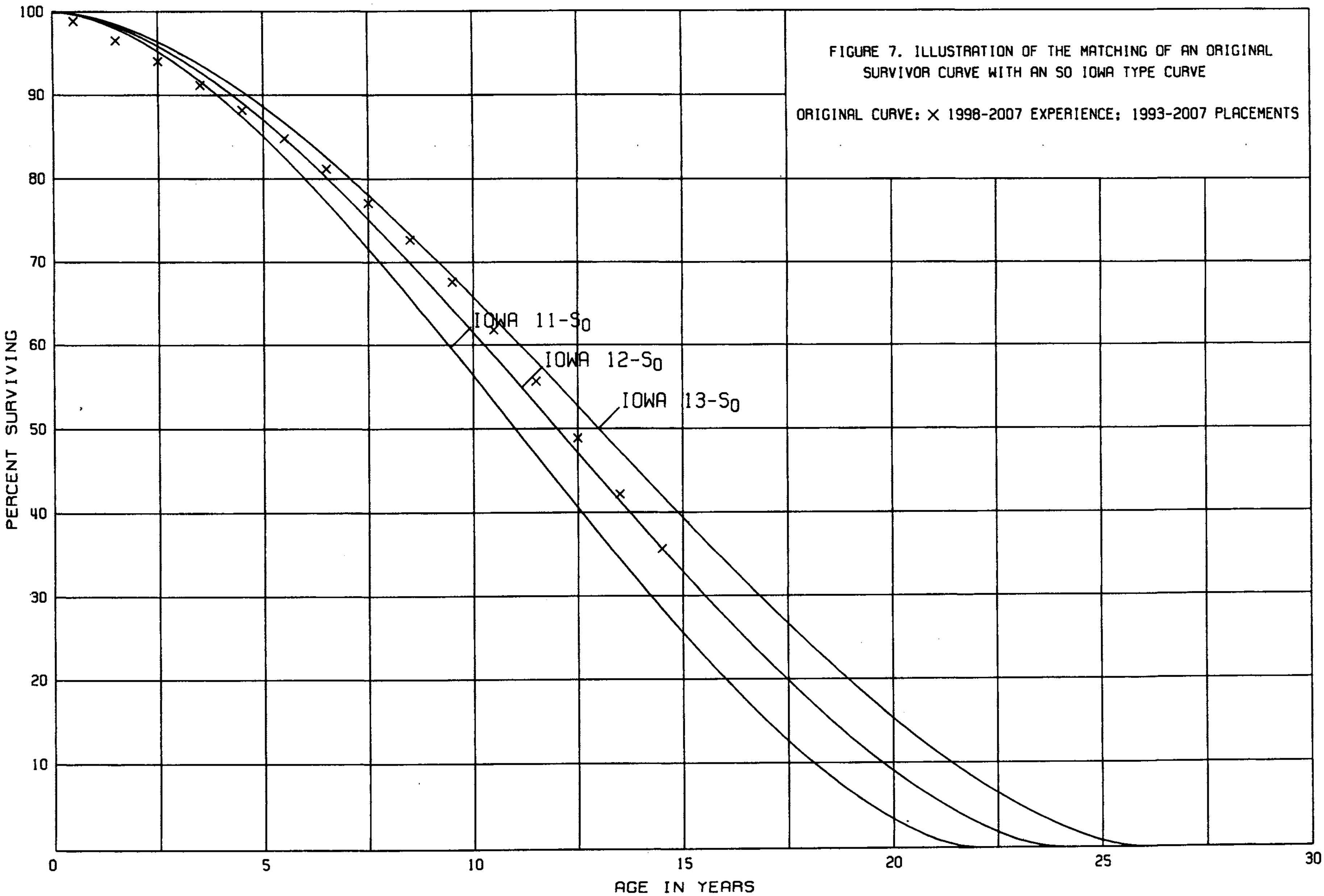

FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE

ORIGINAL CURVE: × 1998-2007 EXPERIENCE; 1993-2007 PLACEMENTS

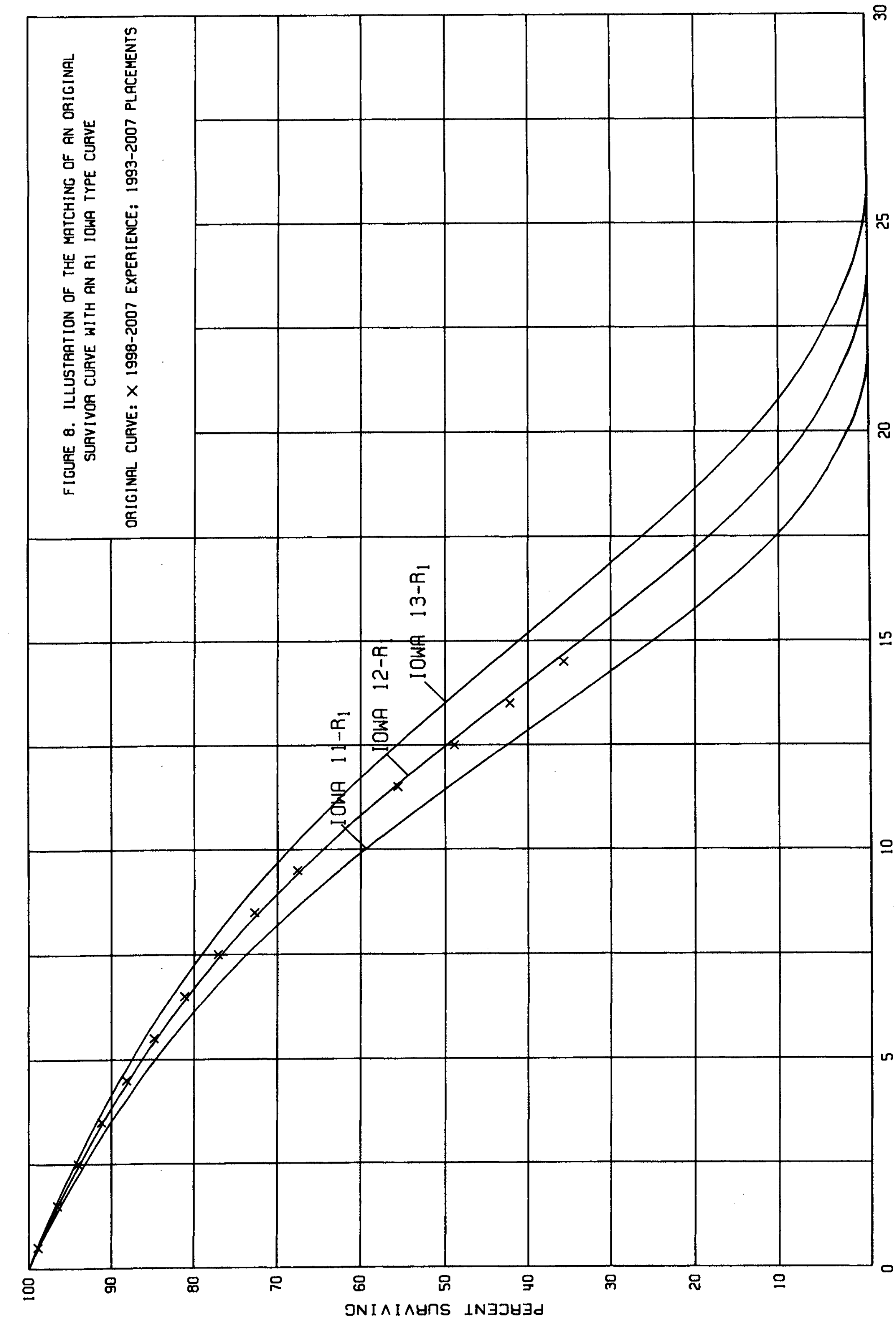

FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE

ORIGINAL CURVE: × 1998-2007 EXPERIENCE; 1993-2007 PLACEMENTS

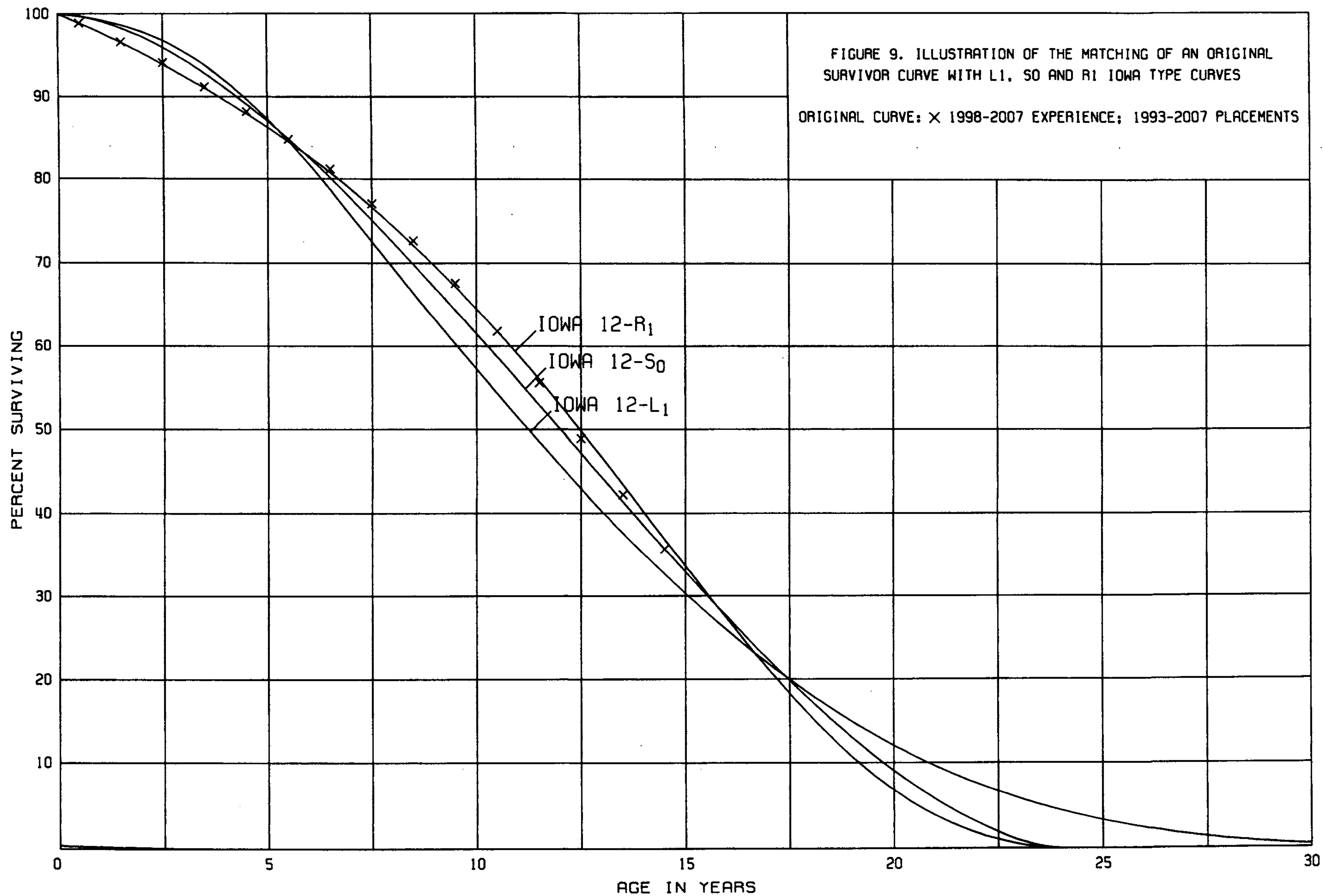
FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH L1, S0 AND R1 IOWA TYPE CURVES
ORIGINAL CURVE: × 1998-2007 EXPERIENCE; 1993-2007 PLACEMENTS
IOWA 12-R1
IOWA 12-S0
IOWA 12-L1
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

October 4 and 5, 2004

Lawrence Energy Center
Tecumseh Energy Center
Lacygne Generating Plant
Jeffrey Energy Center
Jeffrey Wind Turbine Facility

October 18 and 19, 2004

Murray Gill Generating Station
Gordan Evans Energy Center
Gordan Evans Gas Turbine Station
Hutchinson Energy Center
Wolf Creek Nuclear Plant
Eisenhower Learning Center

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.

For 4 Westar South and 5 Westar North 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 80 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-8.

WESTAR SOUTH

STEAM PRODUCTION PLANT

311.00 Structures and Improvements
312.00 Boiler Plant Equipment
314.00 Turbogenerator Units
316.00 Miscellaneous Power Plant Equipment

WESTAR NORTH

STEAM PRODUCTION PLANT

311.00 Structures and Improvements
312.00 Boiler Plant Equipment
314.00 Turbogenerator Units
315.00 Accessory Electric Equipment
316.00 Miscellaneous Power Plant Equipment

The combined Account 312, Boiler Plant Equipment of Westar South and Westar North, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Aged plant accounting data for the boiler plant equipment have been compiled for the years 1982 through 2007. 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 interim survivor curve estimate is based on the statistical indications for the period 1982 through 2007 and 1990 through 2007. The Iowa 50-R1 is a reasonable fit of the original survivor curve. The 50-year interim service life is within the typical service life range of 45 to 60 years for boiler plant equipment. The 50-year life reflects the Company's plans to replace components of the boiler consistently in the future as have been retired over the last twenty-six years.

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 and wind production plant were based on the retirement rate method of life analysis which incorporated experienced aged retirements for the period 1982 through 2007 for steam and 2001 through 2007 for wind.

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, and the estimate of the operating partner, if applicable.

The life span estimate for most steam, base-load units is 55 to 70 years, which is on the upper end of the typical range of life spans for such units. Wind turbines at Jeffrey have a 15-year life span.

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

Depreciable Group	Major Year in Service	Probable Retirement Year	Life Span
WESTAR SOUTH			
Steam Production Plant			
Jeffrey	1978,1980,1983	2040	60,62,57
Neosho	1954	2014	60
Murray Gill	1952,1954, 1956,1959	2020	68,66 64,61
Gordan Evans	1961,1967	2027	66,60
Lacygne Unit 1	1973	2033	60
Lacygne Unit 2	1977	2016	39
Other Production Plant			
Jeffrey-Wind	2001	2016	15
WESTAR NORTH			
Steam Production Plant			
Jeffrey	1978,1980,1983	2040	62,60,57
Tecumseh	1957,1962,1978	2022	65,60,44
Lawrence	1955,1960,1971	2031	76,71,60
Hutchinson	1950,1965	2023	73,58

Depreciable Group	Major Year in Service	Probable Retirement Year	Life Span
Other Production Plant			
Jeffrey-Wind	2001	2016	15

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 2007. 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 1984 through 2007 for Westar South and 1990 through 2007 for Westar North for steam plant were analyzed. The analyses contributed significantly toward the net salvage estimates for 8 plant accounts, representing 53 percent of the depreciable plant, as follows:

WESTAR SOUTH

Steam Production Plant

311.00 Structures and Improvements
312.00 Boiler Plant Equipment
312.10 Pollution Control Equipment
314.00 Turbogenerator Units
315.00 Accessory Electric Equipment
316.00 Miscellaneous Power Plant Equipment

WESTAR NORTH

Steam Production Plant

314.00 Turbogenerator Units
315.00 Accessory Electric Equipment

Account 312.00, Boiler Plant Equipment for Westar South, 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 1984 through 2007 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 1984-1986 through 2005-2007 periods were computed to smooth the annual amounts.

Cost of removal was high during the last fifteen-year period. The primary cause of the high levels of cost of removal was the required effort needed to take out the equipment from the various portions of the boiler. Cost of removal for the most recent five years averaged 53 percent.

Gross salvage has basically varied between 1 and 10 percent throughout the period but has begun to diminish during the 2004 through 2007 period. The most recent five-year average of 0 percent gross salvage reflects recent trends and the reduced market for boiler plant equipment.

The net salvage percent based on the overall period 1984 through 2007 is 36 percent negative net salvage and based on the most recent five-year period is 53 percent. The range of estimates for interim net salvage made by other electric companies for boiler plant equipment is negative 15 to negative 40 percent. The net salvage estimate for boiler plant equipment is negative 35 percent, is within the range of other estimates and considers the trend toward more negative net salvage.

The net salvage percents for the remaining accounts representing 47 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:

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

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:

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

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:

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

The accrued depreciation is:

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

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, 2007, 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, 2007, 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 lien accrued depreciation ratios are calculated as follows for the average service life procedure:

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

III-1

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 average 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, 2007. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2007, 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.

The analyses of salvage data are presented in the section titled, "Net Salvage Statistics". The tabulations present annual cost of removal and salvage data, three-year moving averages and the most recent five-year average. Data are shown in dollars and as percentages of original costs retired.

DESCRIPTION OF DEPRECIATION TABULATIONS

A summary of the results of the study, as applied to the original cost of electric plant as of December 31, 2007, is presented on pages III-4 and III-5 for Westar South and pages III-6 and III-7 for Westar North. The schedule sets forth the original cost, the book depreciation reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to electric plant.

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 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.

WESTAR SOUTH
SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED
ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2007

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
	STEAM PRODUCTION PLANT								
311.00	STRUCTURES & IMPROVEMENTS								
	JEFFREY	75-R3 *	(10)	49,344,053.76	32,657,131	21,621,329	710,588	1.44	30.4
	NEOSHO	75-R3 *	(10)	2,710,769.29	2,678,363	303,488	47,806	1.76	6.3
	MURRAY GILL	75-R3 *	(10)	5,579,842.03	5,549,578	588,250	47,220	0.85	12.5
	GORDAN EVANS	75-R3 *	(10)	4,632,061.07	4,059,399	1,035,872	53,550	1.16	19.3
	LACYGNE UNIT 1	75-R3 *	(10)	26,046,152.15	14,105,026	14,545,744	588,355	2.26	24.7
	LACYGNE UNIT 2	75-R3 *	(10)	2,078,891.96	482,011	1,804,772	213,818	10.29	8.4
	TOTAL STRUCTURES & IMPROVEMENTS			90,391,770.26	59,531,508	39,899,455	1,661,337	1.84	24.0
312.00	BOILER PLANT EQUIPMENT								
	JEFFREY	50-R1 *	(35)	96,325,034.36	42,877,659	87,161,136	3,365,256	3.49	25.9
	NEOSHO	50-R1 *	(35)	5,573,192.23	5,247,556	2,276,254	371,870	6.67	6.1
	MURRAY GILL	50-R1 *	(35)	20,608,781.64	21,217,149	6,604,707	593,193	2.88	11.1
	GORDAN EVANS	50-R1 *	(35)	40,899,781.14	20,900,063	34,314,641	1,969,206	4.81	17.4
	LACYGNE UNIT 1	50-R1 *	(35)	93,714,189.90	51,014,595	75,499,566	3,380,899	3.61	22.3
	LACYGNE UNIT 2	50-R1 *	(15)	28,592,057.03	2,027,857	30,853,009	3,754,954	13.13	8.2
	TOTAL BOILER PLANT EQUIPMENT			285,713,036.30	143,284,879	236,709,313	13,435,378	4.70	17.6
312.10	POLLUTION CONTROL EQUIPMENT								
	JEFFREY	40-R2.5 *	(30)	46,055,401.42	32,137,369	27,734,652	1,494,502	3.25	18.6
	NEOSHO	40-R2.5 *	(30)	94,344.16	1,811	120,836	18,796	19.92	6.4
	MURRAY GILL	40-R2.5 *	(30)	1,356,875.39	15,940	1,747,998	145,630	10.73	12.0
	GORDAN EVANS	40-R2.5 *	(30)	1,051,439.08	(230)	1,367,101	75,532	7.18	18.1
	LACYGNE UNIT 1	40-R2.5 *	(30)	78,897,546.32	35,978,667	66,588,142	2,876,157	3.65	23.2
	TOTAL POLLUTION CONTROL EQUIPMENT			127,455,606.37	68,133,557	97,558,729	4,610,617	3.62	21.2
312.20	BOILER PLANT EQUIPMENT - TRAIN CARS								
	JEFFREY	25-R3 *	25	82,818.00	38,228	23,886	1,413	1.71	16.9
	LACYGNE UNIT 1	25-R3 *	25	456,630.07	19,122	323,351	14,874	3.26	21.7
	LACYGNE UNIT 2	25-R3 *	0	1,286,715.99	1,168,921	117,795	43,628	3.39	2.7
	TOTAL BOILER PLANT EQUIPMENT - TRAIN CARS			1,826,164.06	1,226,271	465,032	59,915	3.28	7.8
314.00	TURBOGENERATOR UNITS								
	JEFFREY	40-S1 *	(20)	45,881,983.10	14,042,385	41,015,995	1,801,032	3.93	22.8
	NEOSHO	40-S1 *	(20)	4,321,405.36	4,612,135	573,551	90,917	2.10	6.3
	MURRAY GILL	40-S1 *	(20)	23,184,831.51	20,587,857	7,233,942	692,044	2.98	10.5
	GORDAN EVANS	40-S1 *	(20)	26,192,860.94	19,959,309	11,472,126	677,027	2.58	16.9
	LACYGNE UNIT 1	40-S1 *	(20)	34,463,535.15	14,296,106	27,060,136	1,350,312	3.92	20.0
	LACYGNE UNIT 2	40-S1 *	(10)	8,234,579.27	(1,037,290)	10,095,328	1,239,356	15.05	8.1
	TOTAL TURBOGENERATOR UNITS			142,279,195.33	72,460,502	97,451,078	5,850,688	4.11	16.7
315.00	ACCESSORY ELECTRIC EQUIPMENT								
	JEFFREY	50-S1.5 *	(10)	15,704,318.59	8,059,454	9,215,297	371,900	2.37	24.8
	NEOSHO	50-S1.5 *	(10)	1,794,853.86	1,895,965	78,375	12,095	0.67	6.5
	MURRAY GILL	50-S1.5 *	(10)	6,141,735.95	5,607,164	1,148,745	93,883	1.53	12.2
	GORDAN EVANS	50-S1.5 *	(10)	5,942,809.33	5,291,990	1,245,103	65,633	1.10	19.0
	LACYGNE UNIT 1	50-S1.5 *	(10)	12,234,949.59	7,097,384	6,361,064	310,130	2.53	20.5
	LACYGNE UNIT 2	50-S1.5 *	(5)	2,844,096.74	743,147	2,243,155	269,025	9.46	8.3
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			44,662,764.06	28,695,104	20,291,739	1,122,666	2.51	18.1