GREATER MISSOURI OPERATIONS - ECORP

KANSAS CITY, MISSOURI

DEPRECIATION STUDY

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

GREATER MISSOURI OPERATIONS - ECORP Kansas City, Missouri

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GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

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May 18, 2010

Greater Missouri Operations - ECORP One Kansas City Place 1200 Main Kansas City, MO 64105

Attention Mr. Tim M. Rush

Director, Regulatory Affairs

Ladies and Gentlemen:

ii

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Greater Missouri Operations - ECORP 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

John J. Spanos

Vice President

Valuation and Rate Division

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PART I. INTRODUCTION

GREATER MISSOURI OPERATIONS - ECORP

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 - ECORP ("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 the structures account, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For the remaining 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 most 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-26 of the report.

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

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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 lowa type survivor curves are reviewed.

Survivor Curves

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

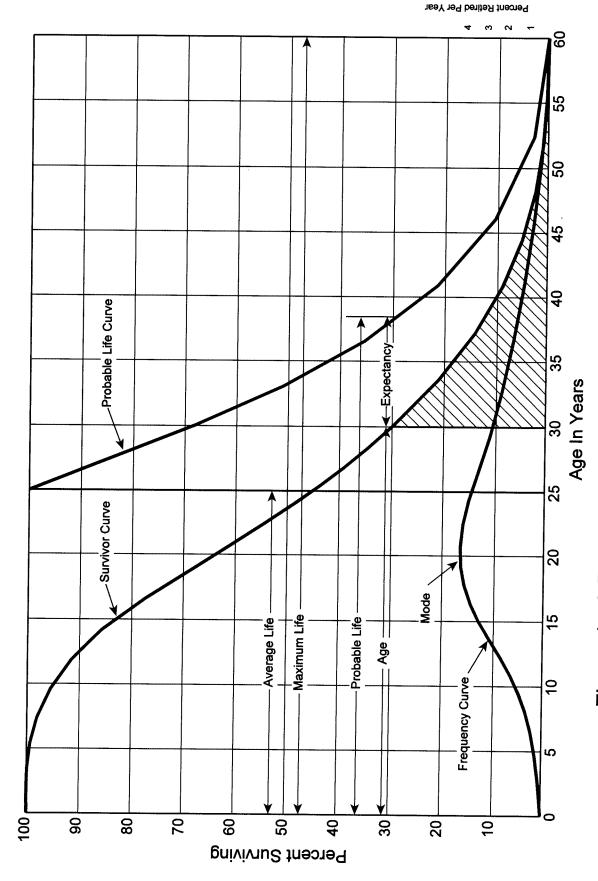


Figure 1. A Typical Survivor Curve and Derived Curves

lowa 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 lowa type curves. There are four families in the lowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded or L curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded or S curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded or R curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded or O curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numerical subscripts represent the relative heights of the modes of the frequency curves within each family.

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

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

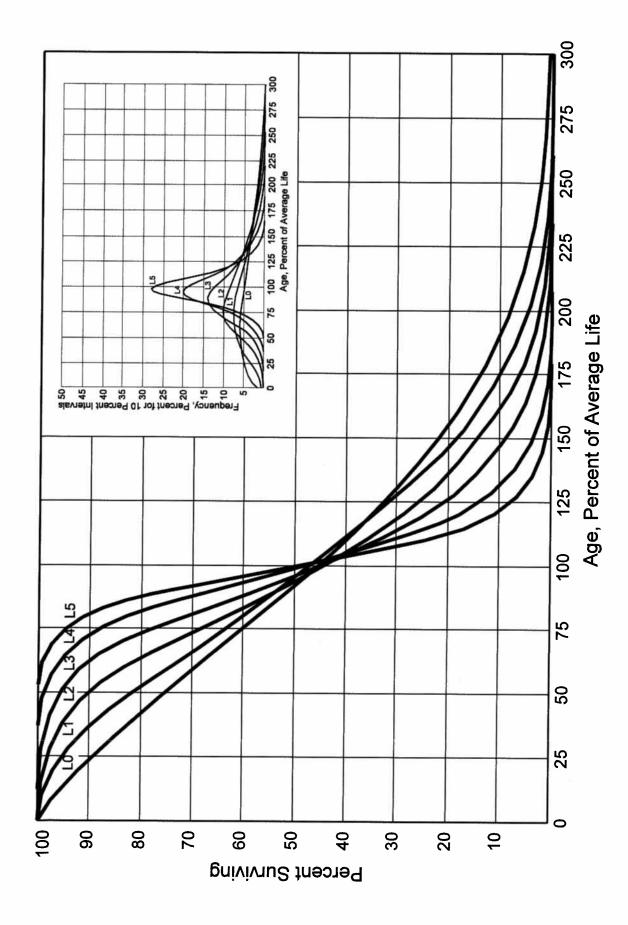


Figure 2. Left Modal or "L" lowa Type Survivor Curves

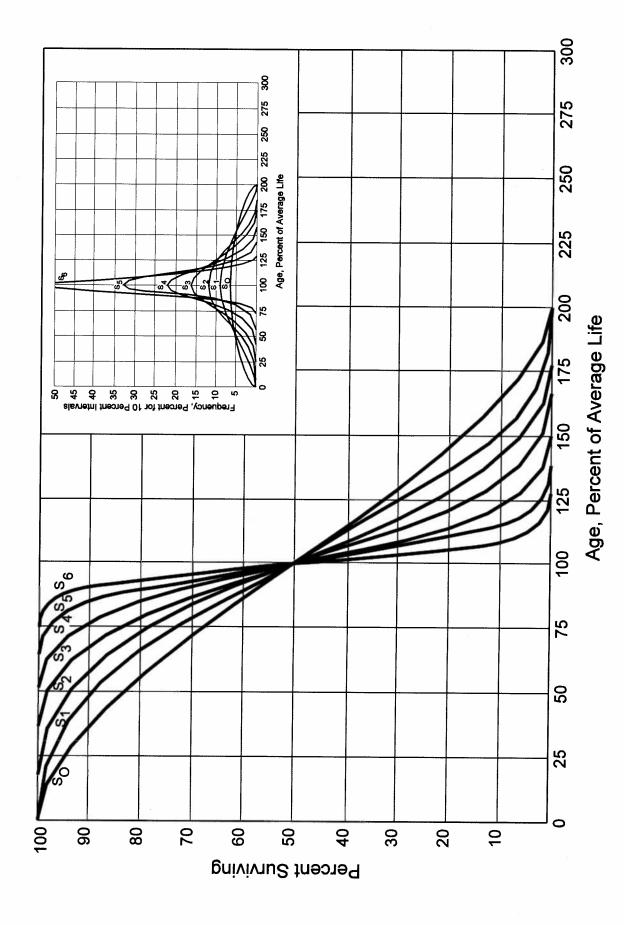


Figure 3. Symmetrical or "S" lowa Type Survivor Curves

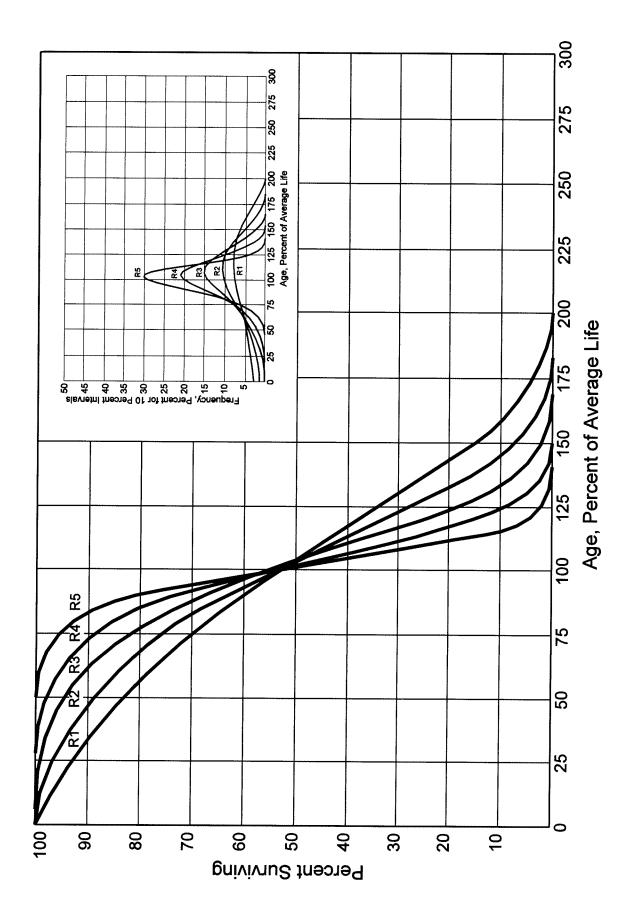


Figure 4. Right Modal or "R" lowa Type Survivor Curves

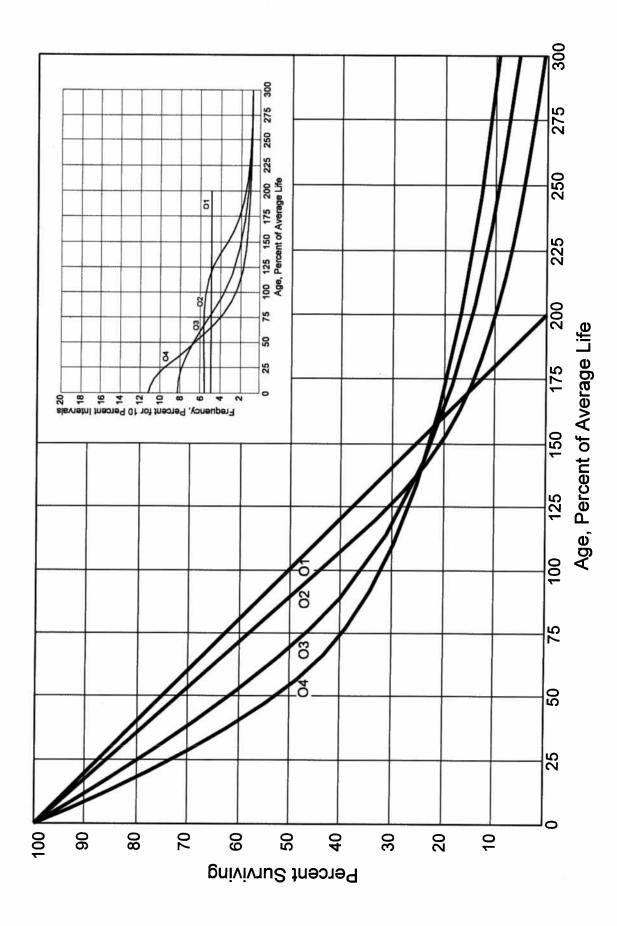


Figure 5. Origin Modal or "O" lowa Type Survivor Curves

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," "Engineering Valuation and Depreciation," and "Depreciation Systems."

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

²Marston, Anson, Robley Winfrey and Jean C. Hempstead. <u>Engineering Valuation</u> and <u>Depreciation</u>, 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. <u>Depreciation Systems</u>. Iowa State University Press. 1994

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

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

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

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

nd 1994-2008	Age	Interval	(13)	131/-141/	12%-13%	111/2-121/2	101/2-111/2	912-101/2	81/2-91/2	71%-81%	61/2-71/2	51%-61%	41/2-51/2	31/2-41/2	21/2-31/2	11%-21%	1/2-11/2	0-1/2	
Placement Band 1994-2008	Total During	Age Interval	(12)	26	44	64	83	93	105	113	124	131	143	146	150	151	153	80	1,606
		2008	(11)	26	19	18	17	20	20	20	19	19	20	23	25	25	24	13	308
		2007	(10)	25	22	22	16	19	16	18	19	19	19	22	22	23			273
Oollars		2006	(6)	24	21	21	15	17	15	16	17	17	17	20	20				231
ands of [2005	(8)	23	20	19	4	16	4	15	16	16	16	18	o			***	196
, Thous	During Year	2004	<u>(</u>	16	18	17	13	14	13	14	15	15	4	∞					157
Retirements, Thousands of Dollars	Duri	2003	(9)	4	16	16	1	13	12	13	13	13	7						128
Re		2002	(2)	13	15	4	7	12		12	12	9							106
m		2001	4	12	13	13	10	1	10	-	9								86
999-2008			2000	(3)	7	12	12	o	10	တ	2								
e Band 1		<u>1999</u>	(2)	10		=	∞	ဝ	4							•			53
Experience Band 1999-2008	Year	<u>Placed</u>	Ē	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total

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

Experience Band 1999-2008

Placement Band 1994 -2008

Year	00	0000		COOC	Dr	During Yea	<u>-</u> 1	0000	0000		Total During	Age
	2)	(2) (3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	Age Interval (12)	Interval (13)
	1	,	1	t	ı	ı	_e 0 _a	,	1	ı	ı	131/-141/
	,	1	1	ı		ı) 1	,	ı	,		101/2-14/2
	1	,	ı	,	ı	ı	ı	1		!!	i I	111/2 101/2
	1	1	1	ı	ı	,	f	(2) _p		ı ı	- - -	101/2-12/2
		ı	1		1	1	1	္တို့ တ	•		} '	91/2-101/2
		ı	ı	ı	ı	ı	ı	1	ı	ı	(2)	81/2-191/2
_		ı	ı	,	ı	ı	ı	ı	ı	•	9	71/2-81/2
			ı	ı	ı	ı	•	1	•	ı	ı	61/2-71/2
				ı	ı	1	•	(12) ^b	ı	ı	ı	51/2-61/2
					ı	1		ı	22 _a	ı	ı	41/2-51/2
						1	ı	(19)້	,	1	10	31/2-41/2
							ı	,	1		1	21/2-31/2
								,	ı	(102) ^c	(121)	11/2-21/2
									ī			1/2-11/2
	1	1	I	ı	I	ļ	I	1	1		'	0-1/2
Total <u> </u>	. 11	·	ı	. [ı	.]	09	(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 $4\frac{1}{2}$ - $5\frac{1}{2}$ is the sum of the retirements entered on Table 1 immediately above the stairstep line drawn on the table beginning with the 1999 retirements of 1994 installations and ending with the 2008 retirements of the 2003 installations. Thus, the total amount of 143 for age interval $4\frac{1}{2}$ - $5\frac{1}{2}$ equals the sum of:

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

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

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

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

Placement Band 1994-2008

Experience Band 1999-2008

		Age Interval (13)	1312-1412	121/2-131/2	111/2-121/2	101/2-111/2	91/2-101/2	81/2-91/2	71/2-81/2	61/2-71/2	51/2-61/2	41/2-51/2	31/2-41/2	21/2-31/2	11/2-21/2	1/2-11/2	0-1/2	
	Total at	Beginning of Age Interval (12)	167	323	531	823	1,097	1,503	1,952	2,463	3,057	3,789	4,332	4,955	5,719	6,579	7,490	44,780
		<u>2008</u> (11)	167	131	162	226	261	316	356	412	482	609	663	799	926	1,069	$1,220^{a}$	7,799
	Year	<u>2007</u> (10)	192	153	184	242	280	332	374	431	501	628	685	821	949	$1,080^{a}$		6,852
Dollars	al Survivors at the Beginning of the Year	<u>2006</u> (9)	216	174	205	262	297	347	390	448	530	623	724	841	_e 096			6,017
ands of	Beginnir	<u>2005</u> (8)	239	194	224	276	307	361	405	464	546	639	742	850ª				5,247
s, Thous	rs at the	2004	195	212	241	289	321	374	419	479	561	653	$750^{\rm a}$					4,494
Exposures, Thousands of Dollars	l Survivo	<u>2003</u> (6)	209	228	257	300	334	386	432	492	574	660ª					2.	3,872
	Annua	<u>2002</u> (5)				ı					580^{a}							3,318
		<u>2001</u> (4)	234	256	284	321	357	407	455	510^{a}								2,824
		(3)	245	268	296	330	367	416	460ª									2,382
	and the second s	<u>1999</u> (2)	255	279	307	338	376	420ª										1,975
	Year	Placed (1)	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total

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

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

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 <u>Ratio</u> (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 = 3,789,000Retirements from age $4\frac{1}{2}$ to $5\frac{1}{2}$ = 143,000 Retirement Ratio = $143,000 \div 3,789,000 = 0.0377$ Survivor Ratio 1.000 -0.0377 = 0.9623Percent 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.

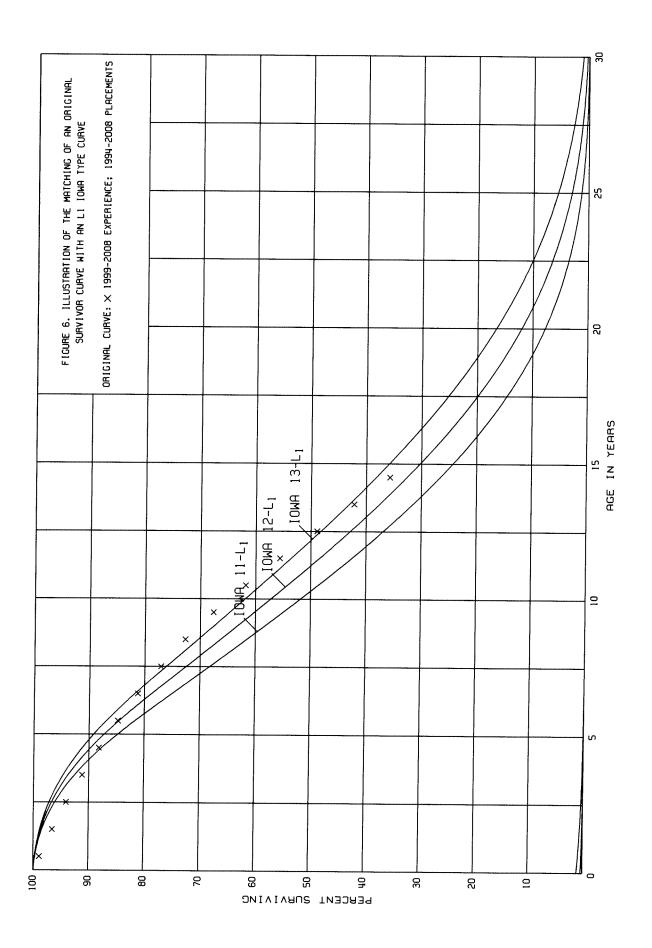
The lowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the lowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures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

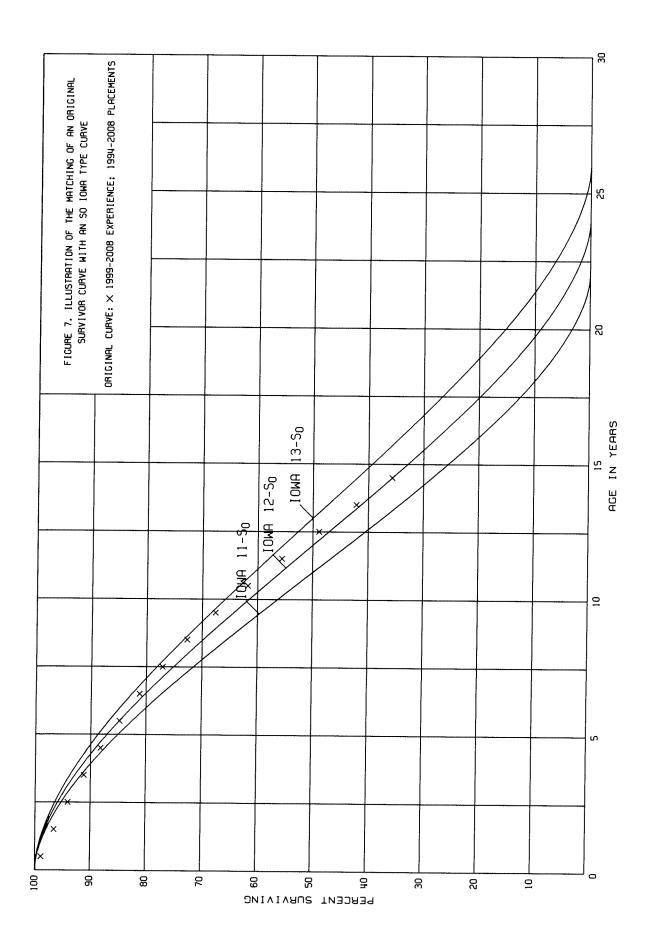
developed in Table 4 is compared with the L, S, and R lowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best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

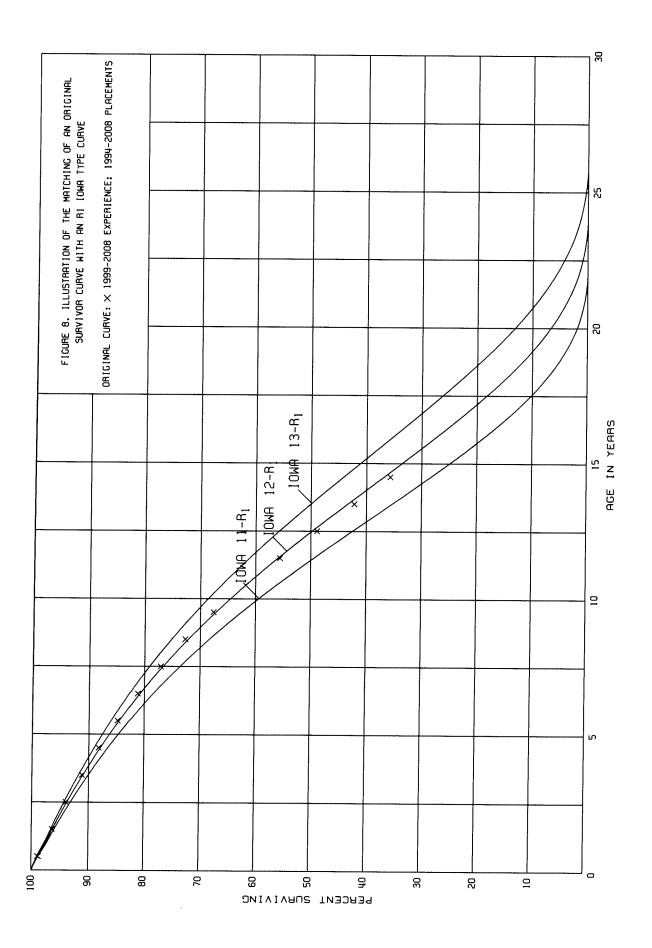
Service Life Considerations

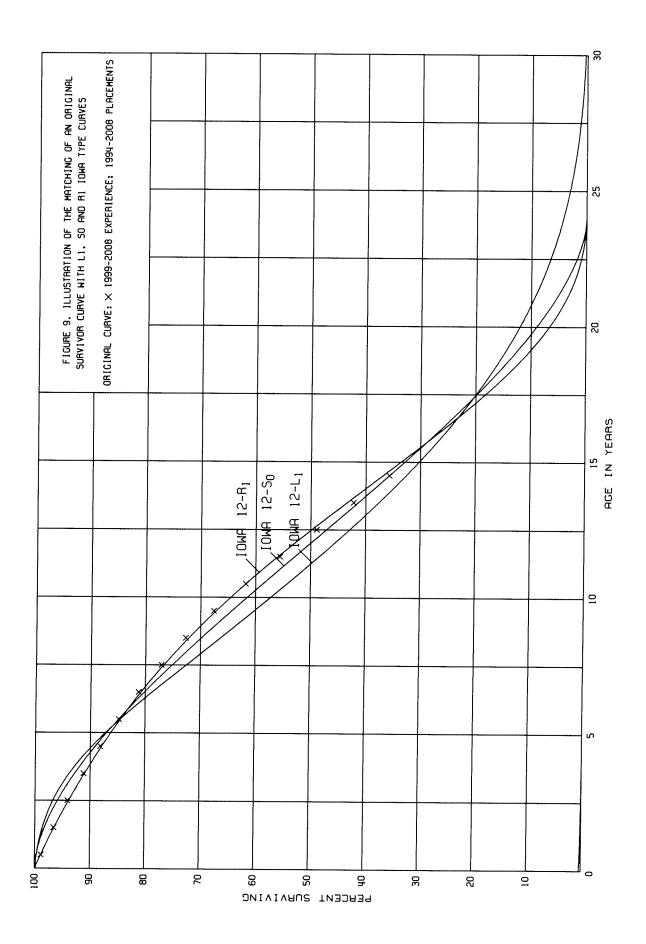
The service life estimate for Account 390.00 was based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current Company policies and outlook as determined during conversations with management; and the survivor curve estimates from previous studies of this company and other electric utility companies.

Account 390.00, Structures and Improvements, was the only account for which survivor curves were estimated. The statistical analyses using the retirement rate method did not result in a good indication of the survivor pattern experienced, therefore, the estimate of the other Greater Missouri Operations companies had a greater impact in the determination of life characteristics. The statistical support for the service life estimates is presented in the section beginning on page III-5.









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 1999 through 2008 for electric plant were analyzed. The analyses contributed significantly toward the net salvage estimates for Account 390.00, Structures and Improvements.

CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

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

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

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

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

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

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

<u>Single Unit of Property</u>

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

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

The accrued depreciation is:

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

Group Depreciation Procedures

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

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:

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

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:

	Account	Amortization Period, <u>Years</u>
ELECTRIC	PLANT	
391.01	Office Furniture and Equipment	20
391.02	Computers	5
391.04	Software	7
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.

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 page III-4 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 ECORP

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

	ACCOUNT	SURVIVOR	NET SALVAGE	ORIGINAL COST AS OF	ВООК	FUTURE	CALCULATED ANNUAL ACCRUAL	ATED CRUAL	COMPOSITE REMAINING
	(1)	(2)	(3)	(4)	(5)	(6)	AMOUN (7)	(8)=(7)/(4)	(9)=(6)/(7)
390.00	GENERAL PLANT STRUCTURES AND IMPROVEMENTS	45-R1.5	0	10,694,631.17	(1,179,932)	11,874,562	322,556	3.02	36.8
391.01	OFFICE FURNITURE AND EQUIPMENT OFFICE FURNITURE AND EQUIPMENT AMORTIZED	20-SQ	0	3,070,158.29	1,190,670	1,879,486	153,507	5.00	12.2
391.02	COMPUTERS FULLY ACCRUED AMORTIZED TOTAL COMPUTERS	5-80	0	2,355,432.38 11,752,651.11 14,108,083.49	2,355,432 5,775,421 8,130,853	0 5,977,230 5,977,230	0 2,350,075 2,350,075	20.00	2.5
391.04	SOFTWARE FULLY ACCRUED AMORTIZED TOTAL SOFTWARE	7.50	0	10,656,517.91 12,092,037.39 22,748,555.30	10,656,518 6,291,725 16,948,243	5,800,314 5,800,314	0 1,728,007 1,728,007	. 14.29	4.6
	TOTAL OFFICE FURNITURE AND EQUIPMENT			39,926,797.08	26,269,766	13,657,030	4,231,589	10.60	3.2
394.00 397.00 398.00	TOOLS, SHOPS AND GARAGE EQUIPMENT COMMUNICATION EQUIPMENT MISCELLANEOUS EQUIPMENT	20-SQ 15-SQ 20-SQ	000	43,490.69 1,092,578.03 53,500.59	33,105 262,535 19,080	10,385 830,043 34,421	2,174 72,839 2,675	5.00 6.67 5.00	4 1.1 8,4 1.1 9,0
•	TOTAL GENERAL PLANT			51,810,997.56	25,404,554	26,406,441	4,631,833	8.94	5.7
•	TOTAL DEPRECIABLE PLANT			51,810,997.56	25,404,554	26,406,441	4,631,833	8.94	5.7
391.01 391.02 391.04 394.00 397.00	UNRECOVERED RESERVE ADJUSTMENT FOR AMORTIZATION OFFICE FURNITURE AND EQUIPMENT OFFICE FURNITURE AND EQUIPMENT COMPUTERS SOFTWARE TOOLS, SHOPS AND GARAGE EQUIPMENT COMMUNICATION EQUIPMENT				(1,808,480.00) (6,159,485.00) (16,025,406.00) (23,491.00) (1,034,152.00)		180,848 • 615,949 • 1,602,541 • 2,349 • 103,415 • 322		
r	TOTAL UNRECOVERED RESERVE ADJUSTMENT FOR AMORTIZATION				(25,054,234)		2,505,423		
389.00	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED LAND			36,491.77					
_	TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED			36,491.77					
_	TOTAL ELECTRIC PLANT 10.was amortization of increasing diseases.	:		51,847,489.33	350,320	26,406,441	7,137,256		

^{* 10-}year amortization of unrecovered reserve related to implementation of amortization accounting.
**Annual depreciation rates for latan 2 will be as follows:

Account 311, 2,56%

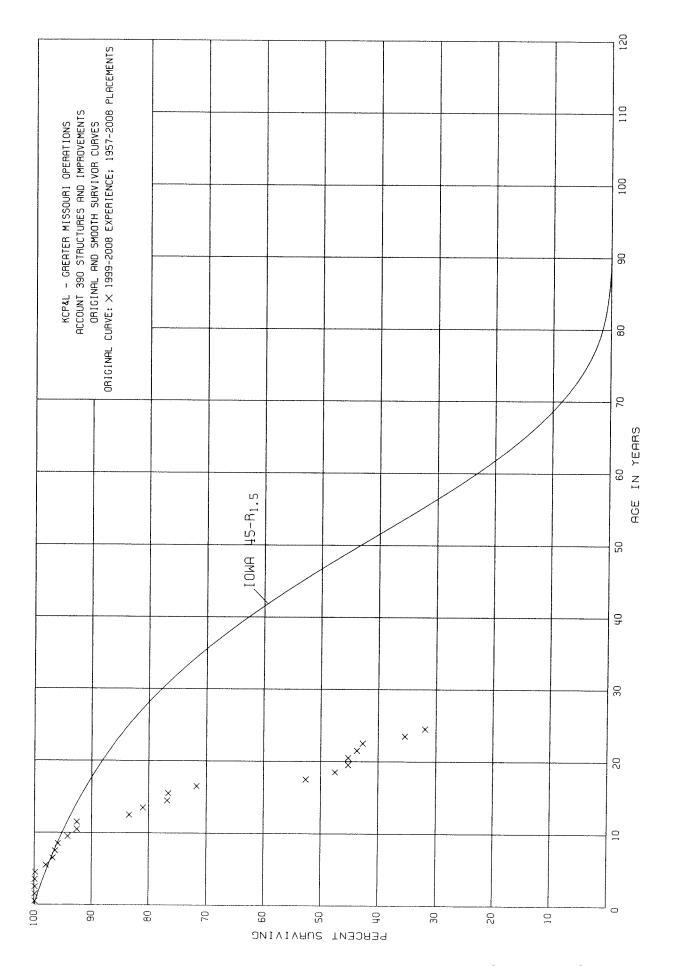
Account 314, 2,54%

Account 315, 2,80%

Account 315, 2,80%

III-5

SERVICE LIFE STATISTICS



ACCOUNT 390 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT	BAND 1957-2008		EXPERIEN	ICE BAND	1999-2008
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT DURING AGI INTERVAL		SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 7.5 8.5	21,963,568 22,106,678 61,879,218 58,240,882 57,949,712 61,991,711 62,026,483 58,526,142 48,026,844 47,680,093	29,400 2,866 110,769 1,069,903 790,839 238,597 262,244 831,090	0.0000 0.0000 0.0005 0.0000 0.0019 0.0173 0.0128 0.0041 0.0055 0.0174	1.0000 1.0000 0.9995 1.0000 0.9981 0.9827 0.9872 0.9959 0.9945 0.9826	100.00 100.00 100.00 99.95 99.95 99.76 98.03 96.78 96.38 95.85
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	46,754,133 45,683,757 1,705,562 1,651,444 1,805,134 2,831,360 2,563,212 2,188,240 1,411,738 1,248,579	780,148 168,908 47,555 94,825 8,861 161,280 584,146 136,511 60,110	0.0167 0.0000 0.0990 0.0288 0.0525 0.0031 0.0629 0.2669 0.0967 0.0481	0.9833 1.0000 0.9010 0.9712 0.9475 0.9969 0.9371 0.7331 0.9033 0.9519	94.18 92.61 92.61 83.44 81.04 76.79 76.55 71.74 52.59 47.50
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	1,176,598 1,216,785 859,945 700,344 529,081 959	40,187 19,827 119,724 52,882 959 1,765	0.0000 0.0330 0.0231 0.1710 0.1000 1.0000	1.0000 0.9670 0.9769 0.8290 0.9000	45.22 45.22 43.73 42.72 35.41 31.87
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,940 353 1,464 1,832 284 291 397 616	2,940 353 1,464 1,832 284 291 397 616	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000		

ACCOUNT 390 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1957-2008 EXPERIENCE BAND 1999-2008

	GINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
	E INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5 40.5 41.5 42.5 43.5	9,131 33,889 802,970 11,828 11,828	9,131 33,889 791,141 11,828	1.0000 1.0000 0.9853 0.0000 1.0000		

III-9

NET SALVAGE STATISTICS

ACCOUNT 390 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT PC	SALVAGE	NET SALVAGE AMOUNT PCT
1999 2000 2001 2002 2003 2004	930,896 41,831 2,780,428 745,987 1,441,500		0 155 0 0 0 0 1,145,739 41 0 1,145,739-154 5 0	155 0 0 1,145,739 41 - 1,145,739-154- 65,872- 5-
2005 2006 2007 2008	116,643 1,835,847		1 0 0	718- 1- 0
TOTAL	7,893,132	66,590	1 155 0	66,435- 1-
THREE-	YEAR MOVING AVE	RAGES		
99-01 00-02 01-03 02-04 03-05 04-06 05-07 06-08	1,251,052 1,189,415 1,655,972 729,162 480,500 38,881 650,830 650,830	21,957 21,957 21,957 239 239	381,965 31 0 0 1 0 3 381,913- 52- 5 0 1 0	381,965 31 0 21,957- 1- 403,870- 55- 21,957- 5- 239- 1- 239- 0 239- 0
	EAR AVERAGE			
04-08	390,498	144 (0	144- 0

III-11

DEPRECIATION CALCULATIONS

ACCOUNT 390 STRUCTURES AND IMPROVEMENTS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUT. BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	JIVOR CURVE IO SALVAGE PERCENT	_				
1984	476,198.80	196,813	134,454-	610,653	26.40	23,131
1985	65,883.98	26,222	17,914-	83,798	27.09	3,093
1986	140,711.60	53,850	36,788-	177,500	27.78	6,389
1987	336,480.20	123,522	84,385-	420,865	28.48	14,778
1989	11,871.41	3,984	2,722-	14,593	29.90	488
1990	26,647.65	8,509	5,813-	32,461	30.63	1,060
1991	192,355.86	58,303	39,830-	232,186	31.36	7,404
1992	213,692.12	61,308	41,883-	255,575	32.09	7,964
1993	442,365.55	119,616	81,717-	524,083	32.83	15,964
1994	54,686.34	13,879	9,482-	64,168	33.58	1,911
1996	34,783.00	7,659	5,232-	40,015	35.09	1,140
1997	1,029,194.10	209,235	142,940-	1,172,134	35.85	32,696
1998	203,662.03	37,922	25,907-	229,569	36.62	6,269
1999	52,601.96	8,895	6,077-	58,679	37.39	1,569
2000	65,131.39	9,887	6,754-	71,885	38.17	1,883
2001	3,381,829.86	454,518	310,507-	3,692,337	38.95	94,797
2002	2,186,109.46	255,556	174,585-	2,360,694	39.74	59,403
2003	47,781.99	4,735	3,235-	51,017	40.54	1,258
2005	356,772.30	22,691	15,501~	372,273	42.14	8,834
2006	772,241.17	35,214	24,057-	796,298	42.95	18,540
2007	514,426.35	14,044	9,594-	524,020	43.77	11,972
2008	89,204.05	812	555-	89,759	44.59	2,013
	10,694,631.17	1,727,174	1,179,932-	11,874,562		322,556
COMPO	SITE REMAINING	LIFE AND ANN	JAL ACCRUAL R	ATE, PCT	36.8	3.02

ACCOUNT 391.01 OFFICE FURNITURE AND EQUIPMENT

מו ארבונט	ORIGINAL	CALCULATED	ALLOC. BOOK		REM.	ANNUAL
YEAR	COST	ACCRUED	RESERVE	ACCRUALS	LIFE	ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CIIDA	IVOR CURVE 20	- COIIA DE				
	SALVAGE PERCENT					
.,,,,	JIH VIIGH THICHIT	0				
1990	24,046.00	22,243	22,243	1,803	1.50	1,202
1995	176,606.33	119,209	119,210	57,396	6.50	8,830
1996	19,458.70	12,162	12,162	7,297	7.50	973
1997	70,219.53	40,376	40,376	29,844	8.50	3,511
1998	87,858.22	46,126	46,126	41,732	9.50	4,393
1999	239,949.30	113,976	113,976	125,973	10.50	11,997
2000	11,962.17	5,084	5,084	6,878	11.50	598
2001	1,739,893.42	652,460	652,463	1,087,430	12.50	86,994
2002	497,744.38	161,767	161,768	335,976	13.50	24,887
2003	4,931.47	1,356	1,356	3,575	14.50	247
2004	2,247.16	506	506	1,741	15.50	112
2005	8,175.36	1,431	1,431	6,744	16.50	409
2006	76,533.45	9,567	9,567	66,966	17.50	3,827
2007	32,772.88	2,458	2,458	30,315	18.50	1,639
2008	77,759.92	1,944	1,944	75,816	19.50	3,888
	3,070,158.29	1,190,665	1,190,670	1,879,486		153,507
GOMBOO	TOO DOME THE	T TT:				
COMPOS	SITE REMAINING	LIFE AND ANN	UAL ACCRUAL R	RATE, PCT	12.2	5.00

ACCOUNT 391.02 OFFICE FURNITURE AND EQUIPMENT - COMPUTERS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUT. BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULI	LY ACCRUED					
NET	SALVAGE PERCENT	Γ 0				
1995	7,587.12	7,587	7 507			
1996	195,390.14	195,390	7,587 195,390			
1998	449,128.40	449,128	449,128			
2000	10,600.56	10,601	10,601			
2001	122,548.99	122,549	122,549			
2002	1,342,018.14	1,342,018	1,342,018			
2002	228,159.03	228,159	228,159			
2003	220,139.03	220,139	440,159			
	2,355,432.38	2,355,432	2,355,432			
AMOR	TIZED					
	IVOR CURVE 5-	SOUTABE				
	SALVAGE PERCENT					
1111	DIM VIIOM I MICCHIA	0				
2004	154,726.68	139,254	138,574	16,153	0.50	16,153
2005	4,105,632.25	2,873,943	2,859,913	1,245,719	1.50	830,479
2006	4,071,268.22	2,035,634	2,025,697	2,045,571	2.50	818,228
2007	2,064,099.05	619,230	616,207	1,447,892	3.50	413,683
2008	1,356,924.91	135,692	135,030	1,221,895	4.50	271,532
						,
	11,752,651.11	5,803,753	5,775,421	5,977,230		2,350,075
	14,108,083.49	8,159,185	8,130,853	5,977,230		2,350,075
COMPO	SITE REMAINING	LIFE AND ANNU	JAL ACCRUAL R	RATE, PCT	2.5	16.66

ACCOUNT 391.04 OFFICE FURNITURE AND EQUIPMENT - SOFTWARE

YEAR	ORIGINAL	CALCULATED	ALLOC. BOOK		REM.	ANNUAL
	COST	ACCRUED	RESERVE	ACCRUALS	LIFE	ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
י דו זים	LY ACCRUED					
	LI ACCROED SALVAGE PERCENT					
1/17.1	SALVAGE PERCEN.	1 0				
1996	73,465.33	73,465	73,465			
1997	577,644.75	577,645	577,645			
1998	809,497.93	809,498	809,498			
1999	5,365,134.72	5,365,135	5,365,135			
2000	1,075,303.20	1,075,303	1,075,303			
2001	2,755,471.98	2,755,472	2,755,472			
	10,656,517.91	10,656,518	10,656,518			
AMOI	RTIZED					
SURV	JIVOR CURVE 7-	SOUARE				
	SALVAGE PERCENT					
2002	2,528,519.50	2,347,983	2,234,683	293,837	0.50	293,837
2003	818,114.79	642,793	611,775	206,340	1.50	137,560
2004	917,372.56	589,779	561,320	356,053	2.50	142,421
2005	2,402,530.73	1,201,265	1,143,299	1,259,232	3.50	359,781
2006	4,665,386.03	1,666,009	1,585,616	3,079,770	4.50	684,393
2007	760,113.78	162,892	155,032	605,082	5.50	110,015
			,	770,702	3.30	110,013
	12,092,037.39	6,610,721	6,291,725	5,800,314		1,728,007
	22,748,555.30	17,267,239	16,948,243	5,800,314		1,728,007
COMPO	SITE REMAINING	TIPE AND AMM	יובד. בכפסווגד י	D አጥሮ ኮረሙ	2 4	
		TITE THAT PRINTS	DAM WCCKONT I	MAID, PUL	3.4	7.60

ACCOUNT 394 TOOLS, SHOP AND GARAGE EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUT. BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 20 AGE PERCENT					
1990	10,584.21	9,790	9,791	793	1.50	529
1991	11,851.08	10,370	10,372	1,479	2.50	592
1996	16,659.35	10,412	10,414	6,245	7.50	833
1997	4,396.05	2,528	2,528	1,868	8.50	220
	43,490.69	33,100	33,105	10,385		2,174
COMPOSITE	REMAINING	LIFE AND ANNU	JAL ACCRUAL I	RATE, PCT	4.8	5.00

ACCOUNT 397 COMMUNICATION EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUT. BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE 15	-SOUARE				
	SALVAGE PERCENT					
1999	18,802.79	11,908	11,908	6,895	5.50	1,254
2002	283,286.20	122,748	122,749	160,537	8.50	18,887
2003	69,995.86	25,667	25,667	44,329	9.50	4,666
2006	586,326.84	97,741	97,743	488,584	12.50	39,087
2008	134,166.34	4,468	4,468	129,698	14.50	8,945
	1,092,578.03	262,532	262,535	830,043		72,839
COMPOS	ITE REMAINING	LIFE AND ANNU	JAL ACCRUAL F	RATE, PCT	11.4	6.67

ACCOUNT 398 MISCELLANEOUS EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUT. BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR	CURVE 20	-SOUARE				
	AGE PERCENT					
2001	44,444.74	16,667	16,671	20 004	10 50	
2002	6,380.72		•	27,774	12.50	2,222
		2,074	2,075	4,306	13.50	319
2006	2,675.13	334	334	2,341	17.50	134
	53,500.59	19,075	19,080	34,421		2,675
COMPOSITE	REMAINING	LIFE AND ANNU	JAL ACCRUAL	RATE, PCT	12.9	5.00