In the Matter of the Application of Kansas Gas Service, a Division of ONEOK, Inc. for Adjustment of its Natural Gas Rates in the State of Kansas	)))))	DOCKET NO. 06-KGSG-___-RTS

DIRECT TESTIMONY

OF

DR. RONALD E. WHITE

ON BEHALF OF

KANSAS GAS SERVICE

A DIVISION OF ONEOK, INC.

BEFORE THE
KANSAS CORPORATION COMMISSION

PREPARED DIRECT TESTIMONY OF
DR. RONALD E. WHITE
IN DOCKET NO. 06-KGSG____-RTS

Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?

A. My name is Ronald E. White. My business address is 17595 S. Tamiami Trail, Suite 212, Fort Myers, Florida 33908.

Q. WHAT IS YOUR OCCUPATION?

A. I am an Executive Vice President and Senior Consultant of Foster Associates, Inc.

I. QUALIFICATIONS

Q. WOULD YOU BRIEFLY DESCRIBE YOUR EDUCATIONAL TRAINING AND PROFESSIONAL BACKGROUND?

A. I received a B.S. degree in Engineering Operations and an M.S. degree and Ph.D. (1977) in Engineering Valuation from Iowa State University. I have taught graduate and undergraduate courses in industrial engineering, engineering economics, and engineering valuation at Iowa State University and previously served on the faculty for Depreciation Programs for public utility commissions, companies, and consultants, sponsored by Depreciation Programs, Inc., in cooperation with Western Michigan University. I also conduct courses in depreciation and public utility economics for clients of the firm.

I have prepared and presented a number of papers to professional organizations, committees, and conferences and have published several articles on matters relating to depreciation, valuation and economics. I am a past member of the Board of Directors of the Iowa State Regulatory Conference and an affiliate member of the joint American Gas Association (A.G.A.) – Edison Electric Institute (EEI) Depreciation Accounting Committee, where I previously served as chairman of a standing committee on capital recovery and its effect on corporate economics. I am also a member

of the American Economic Association, the Financial Management Association, the Midwest Finance Association, the Electric Cooperatives Accounting Association (ECAA), and a founding member of the Society of Depreciation Professionals.

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE?

A. I joined the firm of Foster Associates in 1979, as a specialist in depreciation, the economics of capital investment decisions, and cost of capital studies for ratemaking applications. Before joining Foster Associates, I was employed by Northern States Power Company (1968–1979) in various assignments related to finance and treasury activities. As Manager of the Corporate Economics Department, I was responsible for book depreciation studies, studies involving staff assistance from the Corporate Economics Department in evaluating the economics of capital investment decisions, and the development and execution of innovative forms of project financing. As Assistant Treasurer at Northern States, I was responsible for bank relations, cash requirements planning, and short–term borrowings and investments.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE A REGULATORY BODY?

A. Yes. I have testified in numerous proceedings before administrative and judicial bodies in Alabama, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Idaho, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, Wisconsin, and the District of Columbia. I have also testified before the Federal Energy Regulatory Commission, the Federal Power Commission, the Alberta Energy Board, the Ontario Energy Board, and the Securities and Exchange Commission. I have sponsored position statements before the Federal Communication Commission and numerous local franchising authorities in matters relating to the regulation of telephone and cable television. A more detailed description of my professional qualifications is contained in Attachment REW–1.

II. Purpose of Testimony

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

A. Foster Associates was engaged by Kansas Gas Service, a division of Oneok, Inc., to conduct a 2006 depreciation rate study for gas utility plant owned and operated by Kansas Gas Service. The purpose of my testimony is to sponsor and describe the study conducted by Foster Associates. Depreciation rates currently used by Kansas Gas Service were adopted pursuant to a Stipulated Settlement Agreement in Docket No. 03–KGSG–602–RTS (Order Approving Settlement Agreement dated September 17, 2003).

III. Development of Depreciation Rates

Q. WOULD YOU PLEASE EXPLAIN WHY DEPRECIATION STUDIES ARE NEEDED FOR ACCOUNTING AND RATEMAKING PURPOSES?

A. The goal of depreciation accounting is to charge to operations a reasonable estimate of the cost of the service potential of an asset (or group of assets) consumed during an accounting interval. A number of depreciation systems have been developed to achieve this objective, most of which employ time as the apportionment base.

Implementation of a time–based (or age–life system) of depreciation accounting requires the estimation of several parameters or statistics related to a plant account. The average service life of a vintage, for example, is a statistic that will not be known with certainty until all units from the original placement have been retired from service. A vintage average service life, therefore, must be estimated initially and periodically revised as indications of the eventual average service life becomes more certain. Future net salvage rates and projection curves, which describe the expected distribution of retirements over time, are also estimated parameters of a depreciation system that are subject to future revisions. Depreciation studies should be conducted periodically to assess the continuing reasonableness of parameters and accrual rates derived from prior estimates.

The need for periodic depreciation studies is also a derivative of the ratemaking

process which establishes prices for utility services based on costs. Absent regulation, deficient or excessive depreciation rates will produce no adverse consequence other than a systematic over or understatement of the accounting measurement of earnings. While a continuance of such practices may not comport with the goals of depreciation accounting, the achievement of capital recovery is not dependent upon either the amount or the timing of depreciation expense for an unregulated firm. In the case of a regulated utility, however, recovery of investor–supplied capital is dependent upon allowed revenues, which are in turn dependent upon approved levels of depreciation expense. Periodic reviews of depreciation rates are, therefore, essential to the achievement of timely capital recovery for a regulated utility.

It is also important to recognize that revenue associated with depreciation is a significant source of internally generated funds used to finance plant replacements and new capacity additions. It can be shown that given the same financing requirements and the same dividend payout ratio, an increase in internal cash generation will accelerate per–share growth in earnings, dividends, and book value over the business life of a firm. Financial theory provides that the marginal cost of external financing will be reduced by these enhanced measurements of financial performance. This is not to suggest that internal cash generation should be substituted for the goals of depreciation accounting. However, the potential for realizing a reduction in the marginal cost of external financing provides an added incentive for conducting periodic depreciation studies and adopting proper depreciation rates.

Q. WHAT ARE THE PRINCIPAL ACTIVITIES INVOLVED IN CONDUCTING A DEPRECIATION STUDY?

A. The first step in conducting a depreciation study is the collection of plant accounting data needed to conduct a statistical analysis of past retirement experience. Data are also collected to permit an analysis of the relationship between retirements and realized gross salvage and removal expense. The data collection phase should include a verification of the accuracy of the plant accounting records and a reconciliation of the assembled data to the official plant records of the company.

The next step in a depreciation study is the estimation of service life statistics from an analysis of past retirement experience. The term *life analysis* is used to describe the activities undertaken in this step to obtain a mathematical description of the forces of retirement acting upon a plant category. The mathematical expressions used to describe these forces are known as survival functions or survivor curves.

Life indications obtained from an analysis of past retirement experience are blended with expectations about the future to obtain an appropriate projection life curve. This step, called *life estimation*, is concerned with predicting the expected remaining life of property units still exposed to the forces of retirement. The amount of weight given to the analysis of historical data will depend upon the extent to which past retirement experience is considered descriptive of the future.

An estimate of the net salvage rate applicable to future retirements is usually obtained from an analysis of the gross salvage and removal expense realized in the past. An analysis of past experience (including an examination of trends over time) provides a baseline for estimating future salvage and cost of removal. Consideration, however, should be given to events that may cause deviations from the net salvage realized in the past. Among the factors which should be considered are the age of plant retirements; the portion of retirements that will be reused; changes in the method of removing plant; the type of plant to be retired in the future; inflation expectations; the shape of the projection life curve; and economic conditions that may warrant greater or lesser weight to be given to the net salvage observed in the past.

A comprehensive depreciation study will also include an analysis of the adequacy of the recorded depreciation reserve. The purpose of such an analysis is to compare the current balance in the recorded reserve with the balance required to achieve the goals and objectives of depreciation accounting if the amount and timing of future retirements and net salvage are realized exactly as predicted. The difference between the required (or theoretical) reserve and the recorded reserve provides a measurement of the expected excess or shortfall that will remain in the depreciation reserve if corrective action is not taken to extinguish the reserve imbalance.

Although reserve records are typically maintained by various account classifications, the total reserve for a company is the most important measure of the status of the company's depreciation practices and procedures. Differences between the theoretical reserve and the recorded reserve will arise as a normal occurrence when service lives, dispersion patterns and salvage estimates are adjusted in the course of depreciation reviews. Differences will also arise due to plant accounting activity such as transfers and adjustments, which require an identification of reserves at a different level from that maintained in the accounting system. It is appropriate, therefore, and consistent with group depreciation theory, to periodically redistribute recorded reserves among primary accounts based on the most recent estimates of retirement dispersion and salvage. A redistribution of the recorded reserve will provide an initial reserve balance for each primary account consistent with the estimates of retirement dispersion selected to describe mortality characteristics of the accounts and establish a baseline against which future comparisons can be made.

Finally, parameters estimated from service life and net salvage studies are integrated into an appropriate formulation of an accrual rate based upon a selected depreciation system. Three elements are needed to describe a depreciation system. The sub–elements most widely used in constructing a depreciation system are shown in Table 1.

Methods	Procedures	Techniques
Retirement	Total Company	Whole-Life
Compound-Interest	Broad Group	Remaining-Life
Sinking-Fund	Vintage Group	Probable-Life
Straight-Line	Equal-Life Group	
Declining Balance	Unit Summation	
Sum-of-Years'-Digits	Item	
Expensing		
Unit-of-Production		
Net Revenue		

Table 1. Elements of a Depreciation System

These elements (*i.e.*, method, procedure and technique) can be visualized as three dimensions of a cube in which each face describes a variety of sub–elements

that can be combined to form a system. A depreciation system is therefore formed by selecting a sub–element from each face such that the system contains one method, one procedure and one technique.

IV. 2006 Depreciation Rate Study

Q. DID KANSAS GAS SERVICE PROVIDE FOSTER ASSOCIATES PLANT ACCOUNTING DATA FOR CONDUCTING THE 2006 DEPRECIATION STUDY?

A. Yes, they did. The database used in the 2006 study was assembled by Kansas Gas Service from two sources and provided to Foster Associates in Microsoft Excel spreadsheets. The first source was the database used in conducting a 2001 depreciation study. Additions, aged retirements, salvage and cost of removal were provided for activity years 1970 through 2000.

The second source was from a PowerPlant asset management system implemented by Kansas Gas Service in 2002. PowerPlant was initially populated with age distributions of surviving plant at July 31, 2002. Plant and reserve activity for 2001 and the first six months of 2002 were subsequently uploaded to PowerPlant. Accordingly, post–2000 plant, salvage and cost of removal transactions and age distributions of surviving plant at December 31, 2005 were available from the PowerPlant system.

The database obtained from Kansas Gas Service was coded by Foster Associates. Transaction codes for plant additions, for example, were used to distinguish normal additions from acquisitions, purchases, reimbursements and adjustments. Similar transaction codes were used to distinguish normal retirements from sales, reimbursements, abnormal retirements and adjustments. Transaction codes were also assigned to transfers, capital leases, gross salvage, cost of removal and other accounting activity used in conducting a depreciation study.

Q. DID FOSTER ASSOCIATES CONDUCT STATISTICAL LIFE STUDIES FOR KANSAS GAS SERVICE PLANT AND EQUIPMENT?

A. Yes, we did. As discussed in Exhibit REW–1, all plant accounts were analyzed using a technique in which first, second and third degree orthogonal polynomials were fitted

to a set of observed retirement ratios. The resulting function can be expressed as a survivorship function, which is numerically integrated to obtain an estimate of the average service life. The smoothed survivorship function is then fitted by a weighted least–squares procedure to the Iowa–curve family to obtain a mathematical description or classification of the dispersion characteristics of the data. Service life indications derived from the statistical analyses were blended with informed judgment and expectations about the future to obtain an appropriate projection life curve for each plant category.

Q. DID FOSTER ASSOCIATES CONDUCT A NET SALVAGE ANALYSIS FOR KANSAS GAS SERVICE PLANT AND EQUIPMENT?

A. Yes, we did. A traditional, historical analysis using a five–year moving average of the ratio of realized salvage and removal expense to the associated retirements was used in the study to a) estimate a realized net salvage rate; b) detect the emergence of historical trends; and c) establish a basis for estimating a future net salvage rate. Cost of removal and salvage opinions obtained from Kansas Gas Service operating personnel were blended with judgment and historical net salvage indications in developing estimates of the future.

The average net salvage rate for an account was estimated using direct dollar weighting of historical retirements with the historical net salvage rate, and future retirements (*i.e.*, surviving plant) with the estimated future net salvage rate.

Q. DID FOSTER ASSOCIATES CONDUCT AN ANALYSIS OF RECORDED DEPRECIATION RESERVES?

A. Yes, we did. Statement C of Exhibit REW–1 provides a comparison of the computed and recorded reserves for Kansas Gas Service at December 31, 2005. The combined recorded reserve for transmission, distribution and general plant was $458,272,477 or 37.1 percent of the depreciable plant investment. The corresponding computed reserve is $405,409,447 or 32.8 percent of the depreciable plant investment. A proportionate amount of the measured reserve imbalance of $52,863,030 will be amortized

over the composite weighted-average remaining life of each rate category using the remaining life depreciation rates proposed in the study.

Q. IS FOSTER ASSOCIATES RECOMMENDING A REBALANCING OF DEPRECIATION RESERVES FOR KANSAS GAS SERVICE?

A. Yes, we are. Offsetting reserve imbalances attributable to both the passage of time and parameter adjustments recommended in the current study should be realigned among primary accounts to reduce offsetting imbalances and increase depreciation rate stability. Reserves should also be realigned to reflect implementation of the vintage group procedure.

A redistribution of reserves is further needed to eliminate reserve imbalances derived from an initialization of amortization accounting proposed for several general support asset accounts. Amortization periods proposed for these accounts were used to derive theoretical reserves that will replace the recorded reserves and permit a uniform treatment of embedded plant and future additions. Plant older than the proposed amortization periods will be retired from service and future retirements will be posted as each vintage achieves an age equal to the amortization period. Depreciation reserves for the general plant function were redistributed by setting the recorded reserves for the proposed amortization accounts equal to the theoretical reserves derived from the proposed amortization periods and distributing the residual imbalances to the remaining depreciable accounts in the general function.

A redistribution of the recorded reserve for all depreciable plant was achieved by multiplying the calculated reserve for each primary account within a function by the ratio of the function total recorded reserve to the function total calculated reserve. The sum of the redistributed reserves within a function is, therefore, equal to the function total recorded depreciation reserve before the redistribution.

Q. WOULD YOU PLEASE DESCRIBE THE DEPRECIATION SYSTEM CURRENTLY APPROVED BY THE COMMISSION FOR KANSAS GAS SERVICE?

A. Kansas Gas Service is presently using a depreciation system composed of the straight–line method, broad group procedure, and remaining–life technique. The level of asset grouping identified in the broad group procedure is the total plant in service from all vintages in an account. Each vintage is estimated to have the same average service life. The remaining life of each vintage is estimated from a projection life curve and the attained age of the vintage. The average remaining life for a broad–group plant account or rate category is a direct, dollar–weighted average of the remaining life of each vintage. The weights used in this calculation are the vintage survivors at the beginning of the study year. The formulation of an account depreciation accrual rate using the straight–line method, broad group procedure, and remaining–life technique is given by:

$$Accrual\ Rate = \frac{1.0 - Reserve\ Ratio - Future\ Net\ Salvage\ Rate}{Remaining\ Life}.$$

A remaining–life rate is equivalent to the sum of a whole–life rate and an amortization of any reserve imbalance over the estimated remaining life of a rate category. Stated as an equation, a remaining–life accrual rate is equivalent to

$$Accrual\ Rate = \frac{1.0 - Average\ Net\ Savage\ Rate}{Average\ Life} + \frac{Computed\ Reserve - Recorded\ Reserve}{Remaining\ Life}$$

where both the computed reserve and the recorded reserve are expressed as ratios to the plant in service.

Q. IS FOSTER ASSOCIATES RECOMMENDING A CHANGE IN THE DEPRECIATION SYSTEM FOR KANSAS GAS SERVICE?

A. Yes, we are. It is the opinion of Foster Associates that the objectives of depreciation accounting can be more nearly achieved using the vintage group procedure combined with the remaining–life technique. Unlike the broad group procedure in which each vintage is estimated to have the same average service life, consideration is given to the realized life of each vintage when average service lives and remaining lives are derived using the vintage group procedure. The vintage group procedure distinguishes average service lives among vintages and composite life statistics are computed for

each plant account. The formulation of an account accrual rate using the straight–line method, vintage group procedure, remaining–life technique is identical to the broad group procedure.

In addition to revised depreciation rates, Foster Associates is recommending amortization accounting for selected general support asset categories in which the unit cost of equipment is small in relation to the cost of maintaining detailed accounting records. Amortization periods recommended by Foster Associates were used to derive theoretical reserves that will replace the recorded reserves and permit a uniform treatment of both embedded plant and future additions. Upon approval of the proposed change in accounting, plant older than the proposed amortization period will be retired from service and future retirements will be posted as each vintage achieves an age equal to the amortization period.

Q. WOULD YOU PLEASE SUMMARIZE THE DEPRECIATION RATES AND ACCRUALS FOSTER ASSOCIATES RECOMMENDED FOR KANSAS GAS SERVICE IN THE 2006 STUDY?

A. Table 2 provides a summary of the changes in annual rates and accruals resulting from adoption of the parameters and depreciation system recommended in the 2006 study for electric distribution and general plant categories.

	Accrual Rate			2006 Annualized Accrual		
Function	Present	Proposed	Difference	Present	Proposed	Difference
A	B	C	D=C-B	E	F	G=F-E
Transmission	1.85%	2.22%	0.37%	$3,652,326	$4,372,916	$720,590
Distribution	3.20%	2.69%	-0.51%	30,417,496	25,526,983	(4,890,513)
General Plant	7.94%	6.36%	-1.58%	6,936,525	5,558,135	(1,378,390)
Total	3.32%	2.87%	-0.45%	$41,006,347	$35,458,034	($5,548,313)

Foster Associates is recommending primary account depreciation rates equivalent to a composite rate of 2.87 percent. Depreciation expense is presently accrued at a composite rate of 3.32 percent. The recommended change in the composite depreciation rate is, therefore, a decrease of 0.45 percentage points.

A continued application of rates currently approved would provide annualized depreciation expense of $41,006,347 compared to an annualized expense of $35,458,034 using the rates developed in this study. The proposed 2006 expense decrease is $5,548,313. Of this decrease, $2,117,209 represents amortization of a $52,863,030 reserve imbalance. The remaining portion of the decrease is attributable to changes in service lives and net salvage parameters.

Of the 28 property accounts included in the 2006 study, Foster Associates is recommending rate reductions for 15 accounts and rate increases for 13 accounts.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

VERIFICATION

STATE OF FLORIDA)
) ss.
COUNTY OF LEE)

Ronald E. White, being duly sworn upon his oath, deposes and states that he is Executive Vice President for Foster Associates, Inc.; that he has read and is familiar with the foregoing Direct Testimony filed herewith; and that the statements made therein are true to the best of his knowledge, information, and belief.

Ronald E. White, Ph.D.

Subscribed and sworn to before me on this 25th day of April, 2006.

NOTARY PUBLIC

My appointment Expires:

MARGARET E. LANGE
Notary Public, State of Florida
My Comm. expires Oct. 19, 2009
Comm. No. DD 465538

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Ronald E. White, Ph.D.

Education

1961 - 1964 Valparaiso University
Major: Electrical Engineering

1965 Iowa State University
B.S., Engineering Operations

1968 Iowa State University
M.S., Engineering Valuation
Thesis: The Multivariate Normal Distribution and the Simulated Plant Record Method of Life Analysis

1977 Iowa State University
Ph.D., Engineering Valuation
Minor: Economics
Dissertation: A Comparative Analysis of Various Estimates of the Hazard Rate Associated With the Service Life of Industrial Property

Employment

1996 - Present Foster Associates, Inc.
Executive Vice President

1988 - 1996 Foster Associates, Inc.
Senior Vice President

1979 - 1988 Foster Associates, Inc.
Vice President

1978 - 1979 Northern States Power Company
Assistant Treasurer

1974 - 1978 Northern States Power Company
Manager, Corporate Economics

1972 - 1974 Northern States Power Company
Corporate Economist

1970 - 1972 Iowa State University
Graduate Student and Instructor

1968 - 1970 Northern States Power Company
Valuation Engineer

1965 - 1968 Iowa State University
Graduate Student and Teaching Assistant

Publications

A New Set of Generalized Survivor Tables, Journal of the Society of Depreciation Professionals, October, 1992.

The Theory and Practice of Depreciation Accounting Under Public Utility Regulation, Journal of the Society of Depreciation Professionals, December, 1989.

Standards for Depreciation Accounting Under Regulated Competition, paper presented at The Institute for Study of Regulation, Rate Symposium, February, 1985.

The Economics of Price-Level Depreciation, paper presented at the Iowa State

University Regulatory Conference, May, 1981.

Depreciation and the Discount Rate for Capital Investment Decisions, paper presented at the National Communications Forum - National Electronics Conference, October 1979.

A Computerized Method for Generating a Life Table From the 'h-System' of Survival Functions, paper presented at the American Gas Association - Edison Electric Institute Depreciation Accounting Committee Meeting, December, 1975.

The Problem With AFDC is ..., paper presented at the Iowa State University Conference on Public Utility Valuation and the Rate Making Process, May, 1973.

The Simulated Plant-Record Method of Life Analysis, paper presented at the Missouri Public Service Commission Regulatory Information Systems Conference, May, 1971.

Simulated Plant-Record Survivor Analysis Program (User's Manual), special report published by Engineering Research Institute, Iowa State University, February, 1971.

A Test Procedure for the Simulated Plant-Record Method of Life Analysis, Journal of the American Statistical Association, September, 1970.

Modeling the Behavior of Property Records, paper presented at the Iowa State University Conference on Public Utility Valuation and the Rate Making Process, May, 1970.

A Technique for Simulating the Retirement Experience of Limited-Life Industrial Property, paper presented at the National Conference of Electric and Gas Utility Accountants, May, 1969.

How Dependable are Simulated Plant-Record Estimates?, paper presented at the Iowa State University Conference on Public Utility Valuation and the Rate Making Process, April, 1968.

Expert Opinion

Alabama Public Service Commission, Docket No. 18488, General Telephone Company of the Southeast; testimony concerning engineering economy study techniques.

Alabama Public Service Commission, Docket No. 20208, General Telephone Company of the South; testimony concerning the equal-life group procedure and remaining-life technique.

Alberta Energy and Utilities Board, Application No. 1250392, Aquila Networks Canada; rebuttal testimony supporting proposed depreciation rates.

Alberta Energy and Utilities Board, Case No. RE95081, Edmonton Power Inc.; rebuttal evidence concerning appropriate depreciation rates.

Alberta Energy and Utilities Board, 1999/2000 General Tariff Application, Edmonton Power Inc.; direct and rebuttal evidence concerning appropriate depreciation rates.

Arizona Corporation Commission, Docket No. T-01051B-97-0689, U S West Communications, Inc.; testimony concerning appropriate depreciation rates.

Arizona Corporation Commission, Docket No. G-1032A-02-0598, Citizens Communications Company; testimony supporting proposed depreciation rates.

Arizona Corporation Commission, Docket No. E-0135A-03-0437, Arizona Public Service Company; rebuttal testimony supporting net salvage rates.

Arizona Corporation Commission, Docket No. E-0135A-05-0816, Arizona Public

Service Company; testimony supporting proposed depreciation rates.

Arizona State Board of Equalization, Docket No. 6302-07-2, Arizona Public Service Company; testimony concerning valuation and assessment of contributions in aid of construction.

California Public Utilities Commission, Case Nos. A.92-06-040, 92-06-042, GTE California Incorporated; rebuttal testimony supporting depreciation study techniques.

Public Utilities Commission of the State of Colorado, Application No. 36883-Reopened. U S WEST Communications; testimony concerning equal-life group procedure.

State of Connecticut Department of Public Utility Control, Docket No. 05–03–17, The Southern Connecticut Gas Company; testimony supporting recommended depreciation rates.

Delaware Public Service Commission, Docket No. 81-8, Diamond State Telephone Company; testimony concerning the amortization of inside wiring.

Delaware Public Service Commission, Docket No. 82-32, Diamond State Telephone Company; testimony concerning the equal-life group procedure and remaining-life technique.

Public Service Commission of the District of Columbia, Formal Case No. 842, District of Columbia Natural Gas; testimony concerning depreciation rates.

Public Service Commission of the District of Columbia, Formal Case No. 1016, Washington Gas Light Company - District of Columbia; testimony supporting proposed depreciation rates.

Federal Communications Commission, Prescription of Revised Depreciation Rates for AT&T Communications; statement concerning depreciation, regulation and competition.

Federal Communications Commission, Petition for Modification of FCC Depreciation Prescription Practices for AT&T; statement concerning alignment of depreciation expense used for financial reporting and regulatory purposes.

Federal Communications Commission, Docket No. 99-117, Bell Atlantic; affidavit concerning revenue requirement and capital recovery implications of omitted plant retirements.

Federal Energy Regulatory Commission, Docket No. ER95-267-000, New England Power Company; testimony supporting proposed depreciation rates.

Federal Energy Regulatory Commission, Docket No. RP89-248, Mississippi River Transmission Corporation; rebuttal testimony concerning appropriateness of net salvage component in depreciation rates.

Federal Energy Regulatory Commission, Docket No. ER91-565, New England Power Company; testimony supporting proposed depreciation rates.

Federal Energy Regulatory Commission, Docket No. ER78-291, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Federal Energy Regulatory Commission, Docket Nos. RP80-97 and RP81-54, Tennessee Gas Pipeline Company; testimony concerning offshore plant depreciation rates.

Federal Power Commission, Docket No. E-8252, Northern States Power Company; testimony concerning general financial requirements and

measurements of financial performance.

Federal Power Commission, Docket No. E-9148, Northern States Power Company; testimony concerning general financial requirements and measurements of financial performance.

Federal Power Commission, Docket No. ER76-818, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Federal Power Commission, Docket No. RP74-80, *Northern* Natural Gas Company; testimony concerning depreciation expense.

Public Utilities Commission of the State of Hawaii, Docket No. 00-0309, The Gas Company; testimony supporting proposed depreciation rates.

Public Utilities Commission of the State of Hawaii, Docket No. 94-0298, GTE Hawaiian Telephone Company Incorporated; testimony concerning the need for shortened service lives and disclosure of asset impairment losses.

Idaho Public Utilities Commission, Case No. U-1002-59, General Telephone Company of the Northwest, Inc.; testimony concerning the remaining-life technique and the equal-life group procedure.

Illinois Commerce Commission, Case No. 04–0476, Illinois Power Company, testimony supporting proposed depreciation rates.

Illinois Commerce Commission, Docket No. 94-0481, Citizens Utilities Company of Illinois; rebuttal testimony concerning applications of the Simulated Plant-Record method of life analysis.

Iowa State Commerce Commission, Docket No. RPU 82-47, North Central Public Service Company; testimony on depreciation rates.

Iowa State Commerce Commission, Docket No. RPU 84-34, General Telephone Company of the Midwest, testimony concerning the remaining-life technique and the equal-life group procedure.

Iowa State Utilities Board, Docket No. DPU-86-2, Northwestern Bell Telephone Company; testimony concerning capital recovery in competition.

Iowa State Utilities Board, Docket No. RPU-84-7, Northwestern Bell Telephone Company; testimony concerning the deduction of a reserve deficiency from the rate base.

Iowa State Utilities Board, Docket No. DPU-88-6, U S WEST Communications; testimony concerning depreciation subject to refund.

Iowa State Utilities Board, Docket No. RPU-90-9, Central Telephone Company of Iowa; testimony concerning depreciation rates.

Iowa State Utilities Board, Docket No. RPU-93-9, U S WEST Communications; testimony concerning principles of depreciation accounting and abandonment of FASB 71.

Iowa State Utilities Board, Docket No. DPU-96-1, U S WEST Communications; testimony concerning principles of depreciation accounting and abandonment of FASB 71.

Iowa State Utilities Board, Docket No. RPU-05-2, Aquila Networks; testimony supporting recommended depreciation rates.

Kansas Corporation Commission, Docket No. 04–AQLE–1065–RTS, testimony supporting proposed depreciation rates.

Kansas Corporation Commission, Docket No. 03–KGSG–602–RTS, Kansas Gas

Service, a Division of ONEOK, Inc., rebuttal testimony supporting net salvage rates.

Kentucky Public Service Commission, Case No. 97-224, Jackson Purchase Electric Cooperative Corporation; rebuttal testimony supporting proposed depreciation rates.

Maryland Public Service Commission, Case No. 8485, Baltimore Gas and Electric Company; testimony supporting proposed depreciation rates.

Maryland Public Service Commission, Case No. 7689, Washington Gas Light Company; testimony concerning life analysis and net salvage.

Maryland Public Service Commission, Case No. 8960, Washington Gas Light Company; testimony supporting proposed depreciation rates.

Massachusetts Department of Public Utilities, Case No. DPU 91-52, Massachusetts Electric Company; testimony supporting proposed depreciation rates which include a net salvage component.

Michigan Public Service Commission, Case No. U13899, Michigan Consolidated Gas Company, testimony concerning service life estimates.

Michigan Public Service Commission, Case No. U-13393, Aquila Networks – MGU; testimony supporting proposed depreciation rates.

Michigan Public Service Commission, Case No. U-12395, Michigan Gas Utilities; testimony supporting proposed depreciation rates including amortization accounting and redistribution of recorded reserves.

Michigan Public Service Commission, Case No. U-6587, General Telephone Company of Michigan; testimony concerning use of a theoretical depreciation reserve with the remaining-life technique.

Michigan Public Service Commission, Case No. U-7134, General Telephone Company of Michigan; testimony concerning the equal-life group depreciation procedure.

Minnesota District Court. In Re: Northern States Power Company v. Ronald G. Blank, *et. al.* File No. 394126; testimony concerning depreciation and engineering economics.

Minnesota Public Service Commission, Docket No. E-611, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Minnesota Public Service Commission, Docket No. E-1086, Northern States Power Company; testimony concerning depreciation rates.

Minnesota Public Service Commission, Docket No. G-1015, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Public Service Commission of the State of Missouri, Case No. ER-2001-672, Missouri Public Service, a division of Utilicorp United Inc.; surrebuttal testimony regarding computation of income tax expense.

Public Service Commission of the State of Missouri, Case No. TO-82-3, Southwestern Bell Telephone Company; rebuttal testimony concerning the remaining-life technique and the equal-life group procedure.

Public Service Commission of the State of Missouri, Case No. GO-97-79, Laclede Gas Company; rebuttal testimony concerning adequacy of database for conducting depreciation studies.

Public Service Commission of the State of Missouri, Case No. GR-99-315,

Laclede Gas Company; rebuttal testimony concerning treatment of net salvage in development of depreciation rates.

Public Service Commission of the State of Missouri, Case No. HR–2004–0024, Aquila Inc. d/b/a/ Aquila Networks–L & P, testimony supporting depreciation rates.

Public Service Commission of the State of Missouri, Case No. ER–2004–0034, Aquila Inc. d/b/a/ Aquila Networks–L & P and Aquila Networks–MPS, testimony supporting depreciation rates.

Public Service Commission of the State of Missouri, Case No. GR–2004–0072, Aquila Inc. d/b/a/ Aquila Networks–L & P and Aquila Networks–MPS, testimony supporting depreciation rates.

Public Service Commission of the State of Montana, Docket No. 88.2.5, Mountain State Telephone and Telegraph Company; rebuttal testimony concerning the equal-life group procedure and amortization of reserve imbalances.

Montana Public Service Commission, Docket No. D95.9.128, The Montana Power Company; testimony supporting proposed depreciation rates.

Public Service Commission of Nevada, Docket No. 92-7002, Central Telephone Company-Nevada; testimony supporting proposed depreciation rates.

Public Service Commission of Nevada, Docket No. 91-5054, Central Telephone Company-Nevada; testimony supporting proposed depreciation rates.

New Hampshire Public Utilities Commission, Docket No. DR95-169, Granite State Electric Company; testimony supporting proposed net salvage rates.

New Jersey Board of Public Utilities, Docket No. GR 87060552, New Jersey Natural Gas Company; testimony concerning depreciation rates.

New Jersey Board of Regulatory Commissioners, Docket No. GR93040114J, New Jersey Natural Gas Company; testimony concerning depreciation rates.

North Carolina Utilities Commission, Docket No. E-7, SUB 487, Duke Power Company; rebuttal testimony concerning proposed depreciation rates.

North Carolina Utilities Commission, Docket No. P-19, SUB 207, General Telephone Company of the South; rebuttal testimony concerning the equal-life group depreciation procedure.

North Dakota Public Service Commission, Case No. 8860, Northern States Power Company; testimony concerning general financial requirements.

North Dakota Public Service Commission, Case No. 9634, Northern States Power Company; testimony concerning rate of return and general financial requirements.

North Dakota Public Service Commission, Case No. 9666, Northern States Power Company; testimony concerning rate of return and general financial requirements.

North Dakota Public Service Commission, Case No. 9741, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Ontario Energy Board, E.B.R.O. 385, Tecumseh Gas Storage Limited; testimony concerning depreciation rates.

Ontario Energy Board, E.B.R.O. 388, Union Gas Limited; testimony concerning depreciation rates.

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depreciation rates.

Public Utilities Commission of Ohio, Case No. 81-383-TP-AIR, General Telephone Company of Ohio; testimony in support of the remaining-life technique.

Public Utilities Commission of Ohio, Case No. 82-886-TP-AIR, General Telephone Company of Ohio; testimony concerning the remaining-life technique and the equal-life group procedure.

Public Utilities Commission of Ohio, Case No. 84-1026-TP-AIR, General Telephone Company of Ohio; testimony in support of the equal-life group procedure and the remaining-life technique.

Public Utilities Commission of Ohio, Case No. 81-1433, The Ohio Bell Telephone Company; testimony concerning the remaining-life technique and the equal-life group procedure.

Public Utilities Commission of Ohio, Case No. 83-300-TP-AIR, The Ohio Bell Telephone Company; testimony concerning straight-line age-life depreciation.

Public Utilities Commission of Ohio, Case No. 84-1435-TP-AIR, The Ohio Bell Telephone Company; testimony in support of test period depreciation expense.

Public Utilities Commission of Oregon, Docket No. UM 204, GTE of the Northwest; testimony concerning the theory and practice of depreciation accounting under public utility regulation.

Public Utilities Commission of Oregon, Docket No. UM 840, GTE Northwest Incorporated; rebuttal testimony concerning principles of capital recovery.

Pennsylvania Public Utility Commission, Docket No. R-80061235, The Bell Telephone Company of Pennsylvania; testimony concerning the proper depreciation reserve to be used with an original cost rate base.

Pennsylvania Public Utility Commission, Docket No. R-811512, General Telephone Company of Pennsylvania; testimony concerning the proper depreciation reserve to be used with an original cost rate base.

Pennsylvania Public Utility Commission, Docket No. R-811819, The Bell Telephone Company of Pennsylvania; testimony concerning the proper depreciation reserve to be used with an original cost rate base.

Pennsylvania Public Utility Commission, Docket No. R-822109, General Telephone Company of Pennsylvania; testimony in support of the remaining-life technique.

Pennsylvania Public Utility Commission, Docket No. R-850229, General Telephone Company of Pennsylvania; testimony in support of the remaining-life technique and the proper depreciation reserve to be used with an original cost rate base.

Pennsylvania Public Utility Commission, Docket No. C-860923, The Bell Telephone Company of Pennsylvania; testimony concerning capital recovery under competition.

Rhode Island Public Utilities Commission, Docket No. 2290, The Narragansett Electric Company; testimony supporting proposed net salvage rates and depreciation rates.

South Carolina Public Service Commission, Docket No. 91-216-E, Duke Power Company; testimony supporting proposed depreciation rates.

Public Utilities Commission of the State of South Dakota, Case No. F-3062, Northern States Power Company; testimony concerning general financial

requirements and measurements of financial performance.

Public Utilities Commission of the State of South Dakota, Case No. F-3188, Northern States Power Company; testimony concerning rate of return and general financial requirements.

Securities and Exchange Commission, File No. 3-5749, Northern States Power Company; testimony concerning the financial and ratemaking implications of an affiliation with Lake Superior District Power Company.

Tennessee Public Service Commission, Docket No. 89-11041, United Inter-Mountain Telephone Company; testimony concerning depreciation principles and capital recovery under competition.

State of Vermont Public Service Board, Docket No. 6596, Citizens Communications Company – Vermont Electric Division, testimony supporting recommended depreciation rates.

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Public Service Commission of Wisconsin, Docket No. 2180-DT-3, General Telephone Company of Wisconsin; testimony concerning the equal-life group depreciation procedure.

Other Consulting Activities

Moran Towing Corporation. In Re: Barge TEXAS-97 CIV. 2272 (ADS) and Tug HEIDE MORAN – 97 CIV. 1947 (ADS), United States District Court, Southern District of New York.

John Reigle, et al. v. Baltimore Gas & Electric Co., et al., Case No. C-2001-73230-CN, Circuit Court for Anne Arundel County, Maryland.

SR International Business Insurance Co. vs. WTC Properties et. al., 01,CV–9291 (JSM) and other related cases.

BellSouth Telecommunications, Inc. v. Citizens Utilities Company d/b/a/ Louisiana Gas Service Company, CA No. 95-2207, United States District Court, Eastern District of Louisiana.

Affidavit on behalf of Continental Cablevision, Inc. and its operating cable television systems regarding basic broadcast tier and equipment and installation cost-of-service rate justification.

Office of Chief Counsel, Internal Revenue Service. In Re: Kansas City Southern Railway Co., et. al. Docket Nos. 971-72, 974-72, and 4788-73.

Office of Chief Counsel, Internal Revenue Service. In Re: Northern Pacific Railway Co., Docket No. 4489-69.

United States Department of Justice. In Re: Burlington Northern Inc. v. United States, Ct. Cl. No. 30-72.

Faculty

Depreciation Programs for public utility commissions, companies, and consultants, sponsored by Depreciation Programs, Inc., in cooperation with Western Michigan University. (1980 - 1999)

United States Telephone Association (USTA), Depreciation Training Seminar, November 1999.

Depreciation Advocacy Workshop, a three-day team-training workshop on preparation, presentation, and defense of contested depreciation issues, sponsored by Gilbert Associates, Inc., October, 1979.

Corporate Economics Course, Employee Education Program, Northern States Power Company. (1968 - 1979)

Perspectives of Top Financial Executives, Course No. 5-300, University of Minnesota, September, 1978.

Depreciation Programs for public utility commissions, companies, and consultants, jointly sponsored by Western Michigan University and Michigan Technological University, 1973.

Professional Associations

Advisory Committee to the Institute for Study of Regulation, sponsored by the American University and The University of Missouri-Columbia.

American Economic Association.

American Gas Association - Edison Electric Institute Depreciation Accounting Committee.

Board of Directors, Iowa State Regulatory Conference.

Edison Electric Institute, Energy Analysis Division, Economic Advisory Committee, 1976-1980.

Financial Management Association.

The Institute of Electrical and Electronics Engineers, Inc., Power Engineering Society, Engineering and Planning Economics Working Group.

Midwest Finance Association.

Society of Depreciation Professionals (Founding Member and Chairman, Policy Committee

Moderator

Depreciation Open Forum, Iowa State University Regulatory Conference, May 1991.

The Quantification of Risk and Uncertainty in Engineering Economic Studies, Iowa State University Regulatory Conference, May 1989.

Plant Replacement Decisions with Added Revenue from New Service Offerings, Iowa State University Regulatory Conference, May 1988.

Economic Depreciation, Iowa State University Regulatory Conference, May 1987.

Opposing Views on the Use of Customer Discount Rates in Revenue Requirement Comparisons, Iowa State University Regulatory Conference, May 1986.

Cost of Capital Consequences of Depreciation Policy, Iowa State University Regulatory Conference, May 1985.

Concepts of Economic Depreciation, Iowa State University Regulatory Conference, May 1984.

Ratemaking Treatment of Large Capacity Additions, Iowa State University Regulatory Conference, May 1983.

The Economics of Excess Capacity, Iowa State University Regulatory Conference, May 1982.

New Developments in Engineering Economics, Iowa State University Regulatory Conference, May 1980.

Training in Engineering Economy, Iowa State University Regulatory Conference, May 1979.

The Real Time Problem of Capital Recovery, Missouri Public Service Commission, Regulatory Information Systems Conference, September 1974.

Speaker

Depreciation Studies for Cooperatives and Small Utilities. TELERGEE CFO and Controllers Conference, November, 2004.

Finding the "D" in RCNLD (Valuation Applications of Depreciation), Society of Depreciation Professionals Annual Meeting, September 2001.

Capital Asset and Depreciation Accounting, City of Edmonton Value Engineering Workshop, April 2001.

A Valuation View of Economic Depreciation, Society of Depreciation Professionals Annual Meeting, October 1999.

Capital Recovery in a Changing Regulatory Environment, Pennsylvania Electric Association Financial-Accounting Conference, May 1999.

Depreciation Theory and Practice, Southern Natural Gas Company Accounting and Regulatory Seminar, March 1999.

Depreciation Theory Applied to Special Franchise Property, New York Office of Real Property Services, March 1999.

Capital Recovery in a Changing Regulatory Environment, PowerPlan Consultants Annual Client Forum, November 1998.

Economic Depreciation, AGA Accounting Services Committee and EEI Property Accounting and Valuation Committee, May 1998.

Discontinuation of Application of FASB Statement No. 71, Southern Natural Gas Company Accounting Seminar, April 1998.

Forecasting in Depreciation, Society of Depreciation Professionals Annual Meeting, September 1997.

Economic Depreciation In Response to Competitive Market Pricing, 1997 TELUS Depreciation Conference, June 1997.

Valuation of Special Franchise Property, City of New York, Department of Finance Valuation Seminar, March 1997.

Depreciation Implications of FAS Exposure Draft 158-B, 1996 TLG Decommissioning Conference, October 1996.

Why Economic Depreciation?, American Gas Association Depreciation Accounting Committee Meeting, August 1995.

The Theory of Economic Depreciation, Society of Depreciation Professionals Annual Meeting, November 1994.

Vintage Depreciation Issues, G & T Accounting and Finance Association Conference, June 1994.

Pricing and Depreciation Strategies for Segmented Markets (Regulated and Competitive), Iowa State Regulatory Conference, May 1990.

Principles and Practices of Depreciation Accounting, Canadian Electrical Association and Nova Scotia Power Electric Utility Regulatory Seminar, December 1989.

Principles and Practices of Depreciation Accounting, Duke Power Accounting

Seminar, September 1989.

The Theory and Practice of Depreciation Accounting Under Public Utility Regulation, GTE Capital Recovery Managers Conference, February 1989.

Valuation Methods for Regulated Utilities, GTE Capital Recovery Managers Conference, January 1988.

Depreciation Principles and Practices for REA Borrowers, NRECA 1985 National Accounting and Finance Conference, September 1985.

Depreciation Principles and Practices for REA Borrowers, Kentucky Association of Electric Cooperatives, Inc., Summer Accountants Association Meeting, June 1985.

Considerations in Conducting a Depreciation Study, NRECA 1984 National Accounting and Finance Conference, October 1984.

Software for Conducting Depreciation Studies on a Personal Computer, United States Independent Telephone Association, September 1984.

Depreciation—An Assessment of Current Practices, NRECA 1983 National Accounting and Finance Conference, September 1983

Depreciation—An Assessment of Current Practices, REA National Field Conference, September 1983.

An Overview of Depreciation Systems, Iowa State Commerce Commission, October 1982.

Depreciation Practices for Gas Utilities, Regulatory Committee of the Canadian Gas Association, September 1981.

Practice, Theory, and Needed Research on Capital Investment Decisions in the Energy Supply Industry, workshop, sponsored by Michigan State University and the Electric Power Research Institute, November 1977.

Depreciation Concepts Under Regulation, Public Utilities Conference, sponsored by The University of Texas at Dallas, July 1976.

Electric Utility Economics, Mid-Continent Area Power Pool, May 1974.

Honors and Awards

The Society of Sigma Xi.

Professional Achievement Citation in Engineering, Iowa State University, 1993.

Exhibit REW–1

2006 Depreciation Rate Study

Kansas Gas Service

Prepared by
Foster Associates, Inc.

FOSTER ASSOCIATES INCORPORATED
ENERGY CONSULTANTS

17595 S. Tamiami Trail, Suite 212
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(239) 267-1600 • FAX (239) 267-5030

Ronald E. White, Ph.D.
Executive Vice President

April 11, 2006

Mr. Walker Hendrix, Esq.
Director, Regulatory Law
KANSAS GAS SERVICE
7421 West 129th Street
Overland Park, KS 66213

RE: 2006 Depreciation Rate Study

Dear Mr. Hendrix:

Foster Associates is pleased to submit our report of the 2006 Depreciation Rate Study for Kansas Gas Service. This report presents the results of our study leading to a recommendation that Kansas Gas Service seek regulatory authorization to adopt straight–line, vintage–group, remaining–life rates and record depreciation expense using primary account accrual rates that composite to 2.87 percent.

The following table provides a comparison of present and proposed depreciation rates and accruals for calendar year 2006, based upon plant investments and deprecation reserves at December 31, 2005.

	Accrual Rate			2006 Annualized Accrual		
Function	Present	Proposed	Difference	Present	Proposed	Difference
A	B	C	D=C-B	E	F	G=F-E
Transmission	1.85%	2.22%	0.37%	$3,652,326	$4,372,916	$720,590
Distribution	3.20%	2.69%	-0.51%	30,417,496	25,526,983	(4,890,513)
General	7.94%	6.36%	-1.58%	6,936,525	5,558,135	(1,378,390)
Total	3.32%	2.87%	-0.45%	$41,006,347	$35,458,034	($5,548,313)

A continued application of currently approved rates would provide annual depreciation expense of $41,006,347 compared to an annual expense of $35,458,034 using the rates recommended in the study. The resulting change in depreciation rates produces an annualized 2006 expense decrease of $5,548,313.

The scope of our investigation included:

- Collection of plant and net salvage data;
- Discussions with Kansas Gas Service plant accounting and engineering personnel;
- Estimation of projection lives and retirement dispersion patterns;
- Analysis of gross salvage and cost of removal;

- Analysis and redistribution of recorded depreciation reserves; and
- Development of recommended accrual rates for each rate category.

The results of our investigation are presented in the attached report in five sections. The Executive Summary provides an overview of the study and a discussion of the principal findings. The Company Profile provides background information about Kansas Gas Service that is foundational to the study. The Study Procedure section describes the steps involved in conducting a depreciation study and the specific procedures used in this engagement. The Statements provide a comparative summary of the present and proposed depreciation parameters, rates and accruals. The report concludes with the Analysis section which includes an example of supporting schedules prepared for each plant account.

We wish to express our appreciation for this opportunity to be of service to Kansas Gas Service and for the assistance provided to us. We would be pleased to discuss the study with you or others at your convenience.

Respectively submitted,
FOSTER ASSOCIATES, INC.
by

Ronald E. White, Ph.D.
Executive Vice President

REW:ml

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TRANSMISSION

ACCOUNT 367.00 – MAINS

EXECUTIVE SUMMARY

INTRODUCTION

This report presents findings and recommendations developed in a 2006 Depreciation Rate Study conducted by Foster Associates, Inc. (Foster Associates) for gas plant owned and operated by Kansas Gas Service, a division of Oneok, Inc. Work on the study commenced in December 2005 and progressed through mid–March 2006, at which time the project was completed.

Foster Associates is a public utility economic consulting firm headquartered in Bethesda, Maryland offering economic research and consulting services on issues and problems arising from governmental regulation of business. Areas of specialization supported by our Fort Myers office include property service–life forecasting, depreciation estimation, and valuation of industrial property.

Foster Associates has undertaken numerous depreciation engagements for both public and privately owned business entities, including detailed statistical life studies, analyses of required net salvage rates, and the selection of depreciation systems that will most nearly achieve the goals of depreciation accounting under the constraints of either government regulation or competitive market pricing. Foster Associates is widely recognized for industry leadership in the development of depreciation systems, life analysis techniques and computer software for conducting depreciation and valuation studies.

Depreciation rates currently used by Kansas Gas Service were adopted pursuant to a Stipulated Settlement Agreement in Docket No. 03–KGSG–602–RTS (Order Approving Settlement Agreement dated September 17, 2003). The parties to the Agreement consented to adopt depreciation rates proposed by Kansas Gas Service in a 2001 depreciation study, based on December 31, 2000 plant and reserve balances.

The principal findings and recommendations of the 2006 Kansas Gas Service Depreciation Study are summarized in the Statements section of this report. Statement A provides a comparative summary of present and proposed annual depreciation rates for each rate category. Statement B provides a comparison of present and proposed annual depreciation accruals. Statement C provides a comparison of computed, recorded and rebalanced depreciation reserves for each rate category. Statement D provides a summary of the components used to obtain a weighted–average net salvage rate for each plant account. Statement E provides a comparative summary of present and proposed parameters and statistics including projection life, projection curve, average service life, average remaining life, and average and future net salvage rates. A set of statements is included in this report for both gas and common operations.

SCOPE OF REVIEW

The principal activities undertaken in conducting the 2006 study included:

- Collection of plant and reserve data;
- Discussions with Kansas Gas Service plant accounting and operating personnel;
- Estimation of projection lives and retirement dispersion patterns;
- Analysis of gross salvage and cost of removal;
- Analysis and redistribution of recorded depreciation reserves; and
- Development of recommended accrual rates for each rate category.

DEPRECIATION SYSTEM

A depreciation rate is formed by combining the elements of a depreciation system. A depreciation system is composed of a method, a procedure and a technique. Depreciation rates currently approved for Kansas Gas Service were developed from a system composed of the straight–line method, broad group procedure remaining–life technique. Depreciation rates recommended in the 2006 study for all depreciable categories were derived from a system composed of the straight–line method, vintage group procedure, remaining–life technique. This change in procedure from broad group to vintage group is recommended by Foster Associates to more nearly achieve the goals and objectives of depreciation accounting.

The matching and expense recognition principles of accounting provide that the cost of an asset (or group of assets) should be allocated to operations over an estimate of the economic life of the asset in proportion to the consumption of service potential. It is the opinion of Foster Associates that the objectives of depreciation accounting can be more nearly achieved using the vintage group procedure combined with the remaining–life technique. Unlike the broad group procedure in which each vintage is estimated to have the same average service life, the vintage group procedure distinguishes average service lives among vintages and provides cost apportionment over the estimated weighted–average remaining life or average life of a rate category.

The level of asset grouping identified in the broad group procedure is the total plant in service from all vintages in an account. Each vintage is estimated to have the same average service life. It is unlikely, therefore, that compensating deviations (*i.e.*, over and underestimates of average service life) will be created among vintages to achieve cost allocation over the average service life of each vintage.

The level of asset grouping identified in the vintage group procedure is the plant in service from each vintage. The average service life (or remaining life) is

estimated independently for each vintage and composite life statistics are computed for each plant account. It is more likely that compensating deviations will be created with a vintage group procedure than with a broad group procedure.

In addition to revised depreciation rates, amortization accounting is being requested for selected general support asset categories in which the unit cost of equipment is small in relation to the cost of maintaining detailed accounting records. Depreciation accounting would be replaced with amortization accounting for the asset categories summarized in Table 1.

Account Number	Description	Amortization Period
A	B	C
391.10	Office Furniture and Equipment	20 yrs.
391.25	Computer Equipment	7 yrs.
393.00	Stores Equipment	20 yrs.
394.00	Tools, Shop and Garage Equipment	15 yrs.
395.00	Laboratory Equipment	15 yrs.
398.00	Miscellaneous Equipment	20 yrs.

Table 1. Proposed Amortization Accounts

Recommended amortization periods were used to derive theoretical reserves that will replace recorded reserves and permit a uniform treatment of both embedded plant and future additions. Upon approval of the proposed change in accounting, plant older than the proposed amortization period will be retired from service and future retirements will be posted as each vintage achieves an age equal to the amortization period. Reserve imbalances created by the recommended amortization periods were eliminated by a systematic redistribution of recorded reserves. Reserve imbalances for the proposed amortization accounts were distributed to the remaining depreciable accounts in the General plant function. Net salvage realized in the future would be netted against current–year vintage additions.

RECOMMENDED DEPRECIATION RATES

Table 2 provides a summary of the changes in annual rates and accruals resulting from an application of the parameters and depreciation system recommended for the Company's gas operations.

Function	Accrual Rate			2006 Annualized Accrual		
	Present	Proposed	Difference	Present	Proposed	Difference
A	B	C	D=C-B	E	F	G=F-E
Transmission	1.85%	2.22%	0.37%	$3,652,326	$4,372,916	$720,590
Distribution	3.20%	2.69%	-0.51%	30,417,496	25,526,983	(4,890,513)
General Plant	7.94%	6.36%	-1.58%	6,936,525	5,558,135	(1,378,390)
Total	3.32%	2.87%	-0.45%	$41,006,347	$35,458,034	($5,548,313)

Table 2. Gas Operations

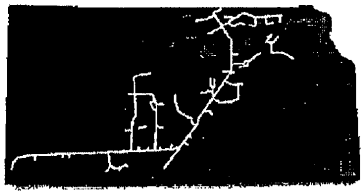
The composite accrual rate recommended for gas operations is 2.87 percent. The current equivalent rate is 3.32 percent. The recommended change in the composite rate is a reduction of 0.45 percentage points.

A continued application of current rates would provide annualized depreciation expense of $41,006,347 compared with an annualized expense of $35,458,034 using the proposed rates. The resulting 2006 expense decrease is $5,548,313. The computed change in the annualized accrual includes $2,117,209 attributable to an amortization of a $52,863,030 reserve imbalance. The remaining portion of the change is attributable to adjustments in service life parameters recommended in the 2006 study.

Of the 28 primary accounts included in the 2006 study of gas operations, Foster Associates is recommending rate reductions for 15 plant accounts and rate increases for 13 accounts.

COMPANY PROFILE

GENERAL



Kansas Gas Service, a division of Oneok, Inc., is the largest natural gas distribution company in Kansas. Oneok is a diversified energy company and among the largest natural gas distributors in the United States, serving more than 2 million customers in Oklahoma, Kansas and Texas. The Company is a leader in the gathering, processing, storage and transportation of natural gas in the mid-continent region of the U.S. and owns one of the nation's premier natural gas liquids (NGL) systems, connecting much of the NGL supply in the mid-continent with two key market centers. Energy services operations focus primarily on marketing natural gas and related services throughout the U.S. ONEOK is the majority general partner of Northern Border Partners, L.P., one of the largest publicly traded limited partnerships. Oneok is a Fortune 500 company.

GAS UTILITY OPERATIONS

At December 31, 2005, Kansas Gas Service owned and operated approximately 10,800 miles of distribution mains and 1,500 miles of transmission mains. The distribution system consists of 5,780 miles of cathodically protected pipe, 470 miles of unprotected pipe, 180 miles of cast iron pipe and 4,450 miles of plastic mains. The majority of the transmission system is cathodically protected.

At the end of 2005, Kansas Gas Service maintained over 620,000 service lines consisting of 129,800 unprotected lines, 31,700 cathodically protected lines and 459,000 plastic lines.

CUSTOMER BASE

Kansas Gas Service provides natural gas service to over 642,000 residential, commercial and industrial customers covering nearly two-thirds of the state. The combined population throughout the 341 communities served represents approximately 2,120,000 individuals.

Kansas Gas Service offers a variety of services and customer choice programs for its customers. Kansas Gas Service transports natural gas for nearly 4,200 commercial and industrial customers that meet the minimum requirements to purchase natural gas from a third-party marketer.

STUDY PROCEDURE

INTRODUCTION

The purpose of a depreciation study is to analyze the mortality characteristics, net salvage rates and adequacy of the depreciation accrual and recorded depreciation reserve for each rate category. This study provides the foundation and documentation for recommended changes in depreciation rates used by Kansas Gas Service. The proposed rates are subject to approval by the Kansas Corporation Commission.

SCOPE

The steps involved in conducting a depreciation study can be grouped into five major tasks:

- Data Collection;
- Life Analysis and Estimation;
- Net Salvage Analysis;
- Depreciation Reserve Analysis; and
- Development of Accrual Rates.

The scope of the 2006 study undertaken for Kansas Gas Service included a consideration of each of these tasks as described below.

DATA COLLECTION

The minimum database required to conduct a statistical life study consists of a history of vintage year additions and unaged activity year retirements, transfers and adjustments. These data must be appropriately adjusted for transfers, sales and other plant activity that would otherwise bias the measured service life of normal retirements. The age distribution of surviving plant for unaged data can be estimated by distributing the plant in service at the beginning of the study year to prior vintages in proportion to the theoretical amount surviving from a projection or survivor curve identified in the life study. The statistical methods of life analysis used to examine unaged plant data are known as *semi–actuarial techniques.*

A far more extensive database is required to apply statistical methods of life analysis known as *actuarial techniques.* Plant data used in an actuarial life study most often include age distributions of surviving plant at the beginning of a study year and the vintage year, activity year, and dollar amounts associated with normal retirements, reimbursed retirements, sales, abnormal retirements, transfers, corrections, and extraordinary adjustments over a series of prior activity years. An actuarial database may include age distributions of surviving plant at the beginning of the earliest activity year, rather than at the beginning of the study year. Plant additions, however, must be included in a database containing an opening age distribution to derive aged survivors at the beginning of the study year. All activity year

transactions with vintage year identification are coded and stored in a data file. The data are processed by a computer program and transaction summary reports are created in a format reconcilable to the Company's official plant records. The availability of such detailed information is dependent upon an accounting system that supports aged property records. The Continuing Property Record (CPR) system currently used by Kansas Gas Service provides aged transactions over the period 2001–2005 for all plant accounts.

The database used in the 2006 study was assembled by Kansas Gas Service from two sources and provided to Foster Associates in Microsoft Excel spreadsheets. The first source was the database used in conducting a 2001 depreciation study. Additions, aged retirements, salvage and cost of removal were provided for activity years 1970 through 2000.

The second source was from a PowerPlant asset management system implemented by Kansas Gas Service in 2002. PowerPlant was initially populated with age distributions of surviving plant at July 31, 2002. Plant and reserve activity for 2001 and the first six months of 2002 were subsequently uploaded to PowerPlant. Accordingly, post–2000 plant, salvage and cost of removal transactions and age distributions of surviving plant at December 31, 2005 were available from the PowerPlant system.

The database obtained from Kansas Gas Service was coded by Foster Associates. A reverse flow process was used to derive adjusting additions for activity years 1970–2005, vintaged exposures and opening age distributions at December 31, 1969.

LIFE ANALYSIS AND ESTIMATION

Life analysis and life estimation are terms used to describe a two–step procedure for estimating the mortality characteristics of a plant category. The first step (*i.e.*, life analysis) is largely mechanical and primarily concerned with history. Statistical techniques are used in this step to obtain a mathematical description of the forces of retirement acting upon a plant category and an estimate of a service life known as the *projection life* of the account. Mathematical expressions used to describe these life characteristics are known as *survival functions* or *survivor curves*.

The second step (*i.e.*, life estimation) is concerned with predicting the expected remaining life of property units still exposed to forces of retirement. It is a process of blending the results of a life analysis with informed judgment (including expectations about the future) to obtain an appropriate projection life and curve. The amount of weight given to the life analysis will depend upon the extent to which past retirement experience is considered descriptive of the future.

The analytical methods used in a life analysis are broadly classified as actuar-

ial and semi–actuarial techniques. Actuarial techniques can be applied to plant accounting records that reveal the age of a plant asset at the time of its retirement from service. Stated differently, each property unit must be identifiable by date of installation and age at retirement. Semi–actuarial techniques can be used to derive service life and dispersion estimates when age identification of retirements is not maintained or readily available.

An actuarial life analysis program designed and developed by Foster Associates was used in the 2006 study. The first step in an actuarial analysis involves a systematic treatment of the available data for the purpose of constructing an observed life table. A complete life table contains the life history of a group of property units installed during the same accounting period and various probability relationships derived from the data. A life table is arranged by age–intervals (usually defined as one year) and shows the number of units (or dollars) entering and leaving each age–interval and probability relationships associated with this activity. A life table minimally contains the age of each survivor and the age of each retirement from a group of property units installed in a given accounting year.

A life table can be constructed in any one of at least five alternative methods. The annual–rate or retirement–rate method was used in the 2006 study. The mechanics of the annual–rate method require the calculation of a series of ratios obtained by dividing the number of units (or dollars) surviving at the beginning of an age interval into the number of units (or dollars) retired during the same interval. This ratio (or set of ratios) is commonly referred to as retirement ratios. The cumulative proportion surviving is obtained by multiplying the retirement ratio for each age–interval by the proportion of the original group surviving at the beginning of that interval and subtracting this product from the proportion surviving at the beginning of the same interval. The annual–rate method is applied to multiple groups or vintages by combining the retirements and/or survivors of like ages for each vintage included in the analysis.

The second step in an actuarial analysis involves graduating or smoothing the observed life table and fitting the smoothed series to a family of survival functions. The functions used in the 2006 study are the Iowa–type curves which are mathematically described by the Pearson frequency curve family. Observed life tables were smoothed by a weighted least–squares procedure in which first, second and third degree polynomials were fitted to the observed retirement ratios. The resulting function can be expressed as a survivorship function which is numerically integrated to obtain an estimate of average service life. The smoothed survivorship function is then fitted by a weighted least–squares procedure to the Iowa–curve family to obtain a mathematical description or classification of the dispersion characteristics of the data.

The set of computer programs used in the Kansas Gas Service study provides

multiple rolling–band and shrinking–band analyses of an account. Observation bands are defined for a "retirement era" which restricts the analysis to retirement activity of all vintages represented by survivors at the beginning of a selected era. In a rolling–band analysis, a year of retirement experience is added to each successive retirement band and the earliest year from the preceding band is dropped. A shrinking–band analysis begins with the total retirement experience available and the earliest year from the preceding band is dropped for each successive band. Rolling and shrinking band analyses are used to detect the emergence of trends in the behavior of the dispersion and average service life.

Options available in the actuarial life analysis program include the width and location of both placement and observation bands; the interval of years included in a selected rolling or shrinking band analysis; the estimator of the hazard rate (actuarial, conditional proportion retired, or maximum likelihood); the elements to include on the diagonal of a weight matrix (exposures, inverse of age, inverse of variance, or unweighted); and the age at which an observed life table is truncated. The program also provides tabular and graphics output as an aid in the analysis and algorithms for calculating depreciation rates and accruals.

While actuarial and semi–actuarial statistical methods are well–suited to an analysis of plant categories containing a large number of homogeneous units (*e.g.*, poles and services), theses methods are not well–suited to plant categories composed of major items of plant that will most likely be retired as a single unit. Property units retired from an integrated system prior to the retirement of the entire facility are more properly viewed as interim retirements that will be replaced in order to maintain the integrity of the system. Plant facilities may also be added to the existing system (*i.e.*, interim additions) to expand or enhance its productive capacity without extending the service life of the present system. A proper depreciation rate can be developed for an integrated system using a life–span method. All plant accounts were treated as full mortality categories in the Kansas Gas Service study.

NET SALVAGE ANALYSIS

Depreciation rates designed to achieve the goals and objectives of depreciation accounting will normally include a parameter for future net salvage and a variable for average net salvage that reflects both realized and future net salvage rates.

An estimate of the net salvage rate applicable to future retirements is most often obtained from an analysis of gross salvage and removal expense realized in the past. An analysis of past experience (including an examination of trends over time) provides an appropriate basis for estimating future salvage and cost of removal. However, consideration should also be given to events that may cause de-

viations from net salvage realized in the past. Among the factors that should be considered are the age of plant retirements; the portion of retirements likely to be reused; changes in the method of removing plant; the type of plant to be retired in the future; inflation expectations; the shape of the projection life curve; and economic conditions that may warrant greater or lesser weight to be given to the net salvage observed in the past.

Special consideration should also be given to the treatment of insurance proceeds and other forms of third–party reimbursements credited to the depreciation reserve. A properly conducted net salvage study will exclude such activity from the estimate of future parameters and include the activity in the computation of realized and average net salvage rates.

Five–year moving averages of the ratio of realized salvage and cost of removal to the associated retirements were used in the 2006 study to a) estimate a realized net salvage rate; b) detect the emergence of historical trends; and c) establish a basis for estimating a future net salvage rate. Cost of removal and salvage opinions obtained from Company engineers were blended with judgment and historical net salvage indications in developing estimates of the future.

The average net salvage rate for an account was estimated using direct dollar–weighting of historical retirements with the historical net salvage rate, and future retirements (*i.e.*, surviving plant) with the estimated future net salvage rate. The computation of the estimated average net salvage rate for each rate category is shown in Statement D.

DEPRECIATION RESERVE ANALYSIS

The purpose of a depreciation reserve analysis is to compare the current level of the recorded reserve with the level required to achieve the goals or objectives of depreciation accounting if the amount and timing of future retirements and net salvage are realized as predicted. The difference between the required depreciation reserve and the recorded reserve provides a measurement of the expected excess or shortfall that will remain in the depreciation reserve if corrective action is not taken to gradually extinguish the reserve imbalance.

Unlike a recorded reserve which represents the net amount of depreciation expense charged to previous periods of operations, a theoretical reserve is a measure of the implied reserve requirement at the beginning of a study year if the timing of future retirements and net salvage is in exact conformance with a survivor curve chosen to predict the probable life of plant units still exposed to the forces of retirement. Stated differently, a theoretical depreciation reserve is the difference between the recorded cost of plant presently in service and the sum of the depreciation expense and net salvage that will be charged in the future if retirements are

distributed over time according to a specified retirement frequency distribution.

The survivor curve used in the calculation of a theoretical depreciation reserve is intended to describe forces of retirement that will be operative in the future. However, retirements caused by forces such as accidents, physical deterioration and changing technology seldom, if ever, remain stable over time. It is unlikely, therefore, that a probability or retirement frequency distribution can be identified that will accurately describe the age of plant retirements over the complete life cycle of a vintage. It is for this reason that depreciation rates should be reviewed periodically and adjusted for observed or expected changes in the parameters chosen to describe the underlying forces of mortality.

Although reserve records are commonly maintained by various account classifications, the total reserve for a company is the most important measure of the status of the company's depreciation practices. If a company has not previously conducted statistical life studies or considered retirement dispersion in setting depreciation rates, it is likely that some accounts will be over–depreciated and other accounts will be under–depreciated relative to a calculated theoretical reserve. Differences between theoretical reserves and recorded reserves also will arise as a normal occurrence when service lives, dispersion patterns and net salvage estimates are adjusted in the course of depreciation reviews. It is appropriate, therefore, and consistent with group depreciation theory to periodically redistribute or rebalance the total recorded reserve among the various primary accounts based upon the most recent estimates of retirement dispersion and net salvage rates.

A redistribution of recorded reserves is considered appropriate for Kansas Gas Service at this time. Offsetting reserve imbalances attributable to both the passage of time and parameter adjustments recommended in the current study should be realigned among primary accounts to reduce offsetting imbalances and increase depreciation rate stability. Reserves should also be realigned to reflect implementation of the vintage group procedure.

A redistribution of reserves is further needed to eliminate reserve imbalances derived from an initialization of amortization accounting proposed for the general support asset accounts summarized in Table 1. Amortization periods proposed for these accounts were used to derive theoretical reserves that will replace the recorded reserves and permit a uniform treatment of embedded plant and future additions. Plant older than the proposed amortization periods will be retired from service and future retirements will be posted as each vintage achieves an age equal to the amortization period. Depreciation reserves for the general plant function were redistributed by setting the recorded reserves for the proposed amortization accounts equal to the theoretical reserves derived from the proposed amortization periods and distributing the residual imbalances to the remaining depreciable ac-

counts in the general function.

A redistribution of the recorded reserve for all depreciable plant was achieved by multiplying the calculated reserve for each primary account within a function by the ratio of the function total recorded reserve to the function total calculated reserve. The sum of the redistributed reserves within a function is, therefore, equal to the function total recorded depreciation reserve before the redistribution.

Statement C provides a comparison of the computed, recorded and rebalanced reserves at December 31, 2005. The recorded reserve was $458,272,477 or 37.1 percent of the depreciable plant investment. The corresponding computed reserve is $405,409,447 or 32.8 percent of the depreciable plant investment. A proportionate amount of the measured reserve excess of $52,863,030 will be amortized over the composite weighted–average remaining life of each rate category using the remaining life depreciation rates proposed in this review.

DEVELOPMENT OF ACCRUAL RATES

The goal or objective of depreciation accounting is cost allocation over the economic life of an asset in proportion to the consumption of service potential. Ideally, the cost of an asset—which represents the cost of obtaining a bundle of service units—should be allocated to future periods of operation in proportion to the amount of service potential expended during an accounting interval. The service potential of an asset is the present value of future net revenue (*i.e.*, revenue less expenses exclusive of depreciation and other non–cash expenses) or cash inflows attributable to the use of that asset alone.

Cost allocation in proportion to the consumption of service potential is often approximated by the use of depreciation methods employing time rather than net revenue as the apportionment base. Examples of time–based methods include sinking–fund, straight–line, declining balance, and sum–of–the–years' digits. The advantage of a time–based method is that it does not require an estimate of the remaining amount of service capacity an asset will provide or the amount of capacity actually consumed during an accounting interval. Using a time–based allocation method, however, does not change the goal of depreciation accounting. If it is reasonable to predict that the net revenue pattern of an asset will either decrease or increase over time, then an accelerated or decelerated time–based method should be used to approximate the rate at which service potential is actually consumed.

The time period over which the cost of an asset will be allocated to operations is determined by the combination of a procedure and a technique. A depreciation procedure describes the level of grouping or sub–grouping of assets within a plant category. The broad group, vintage group, equal–life group, and item (or unit) are a few of the more widely used procedures. A depreciation technique describes the

life statistic used in a depreciation system. Whole–life and remaining–life (or expectancy) are the most common techniques.

The first step in the development of an accrual rate, therefore, is the selection of an appropriate method, procedure and technique. Depreciation rates recommended in this study were developed using a system composed of the straight–line method, vintage group procedure, remaining–life technique. It is the opinion of Foster Associates that this system will remain appropriate for Kansas Gas Service, provided depreciation studies are conducted periodically and parameters are routinely adjusted to reflect changing operating conditions. Although the emergence of economic factors such as restructuring, bypass and performance based regulation may ultimately encourage abandonment of the straight–line method, no attempt was made in the current study to address this concern.

It is also the opinion of Foster Associates that the adoption of amortization accounting proposed in this study is consistent with the goals and objectives of depreciation accounting derived from the matching and expense recognition principles of accounting. Adoption of amortization accounting for the general plant categories will relieve Kansas Gas Service of the burden to maintain detailed plant records for numerous plant items in which the unit cost is small in relation to the cost of tracking the disposition of the assets.

STATEMENTS

INTRODUCTION

This section provides a comparative summary of depreciation rates, annual depreciation accruals, recorded and computed depreciation reserves, and present and proposed service life and net salvage statistics recommended for Kansas Gas Service. The content of these statements is briefly described below.

- Statement A provides a comparative summary of present and proposed annual depreciation rates using the vintage group procedure, remaining–life technique.
- Statement B provides a comparison of present and proposed annualized 2006 depreciation accruals using the vintage group procedure, remaining–life technique.
- Statement C provides a comparison of recorded, computed and redistributed reserves for each rate category at December 31, 2005.
- Statement D provides a summary of the components used to obtain a weighted average net salvage rate for each rate category.
- Statement E provides a comparative summary of present and proposed parameters including projection life, projection curve, average service life, average remaining life and average and future net salvage rates.

Present depreciation accruals shown on Statement B are the product of the plant investment (Column B) and present depreciation rates (Column D) shown on Statement A. These are the effective rates used by Kansas Gas Service for the mix of investments recorded on December 31, 2005. Proposed depreciation accruals shown on Statement B are the product of the plant investment and proposed depreciation rates (Column H) shown on Statement A. Proposed accrual rates are given by:

$$Accrual\ Rate = \frac{1.0 - Reserve\ Ratio - Future\ Net\ Salvage\ Rate}{Remaining\ Life}.$$

This formulation of the accrual rate is equivalent to

$$Accrual\ Rate = \frac{1.0 - Average\ Net\ Salvage}{Average\ Life} + \frac{Computed\ Reserve - Recorded\ Reserve}{Remaining\ Life}$$

where *Average Net Salvage*, *Computed Reserve* and *Recorded Reserve* are expressed in percent.

KANSAS GAS SERVICE Statement A

Comparison of Present and Proposed Accrual Rates
Present: VG Procedure / RL Technique
Proposed: VG Procedure / RL Technique

Account Description	Present Rem. Life	Present Net Salvage	Present Accrual Rate	Proposed Rem. Life	Proposed Net Salvage	Proposed Reserve Ratio	Proposed Accrual Rate
A	B	C	D	E	F	G	H
TRANSMISSION PLANT							
365.20 Rights of Way	88.40		0.70%	62.91		14.13%	1.36%
366.10 Compressor Station Structures	21.50	-25.0%	1.22%	30.02	-25.0%	38.62%	2.88%
366.20 Meas. and Reg. Station Structures	37.30	-30.0%	1.81%	39.81	-30.0%	44.07%	2.16%
367.00 Mains	44.40	-10.0%	1.79%	42.25	-25.0%	35.28%	2.12%
368.00 Compressor Station Equipment	31.30	-40.0%	2.07%	30.78	-30.0%	42.41%	2.85%
369.00 Meas. and Reg. Station Equipment	35.30	-20.0%	3.26%	39.39	-30.0%	22.03%	2.74%
Total Transmission Plant			1.85%	41.04	-24.6%	34.19%	2.22%
DISTRIBUTION PLANT							
374.20 Rights of Way	59.80		1.44%	60.55		15.66%	1.39%
375.00 Structures and Improvements	22.10	-15.0%	4.66%	19.94	-15.0%	27.33%	4.40%
376.10 Mains - Metallic	41.00	-25.0%	2.42%	55.42	-30.0%	31.75%	1.77%
376.20 Mains - Plastic	42.80	-25.0%	2.42%	35.95	-30.0%	29.82%	2.79%
378.00 Meas. and Reg. Station Equip. - General	33.50	-15.0%	2.27%	34.75	-20.0%	32.63%	2.51%
379.00 Meas. and Reg. Station Equip. - City Gate	35.50	-15.0%	2.06%	40.76	-20.0%	35.74%	2.07%
380.10 Services - Metallic	16.80	-40.0%	4.53%	28.34	-50.0%	57.37%	3.27%
380.20 Services - Plastic	22.10	-40.0%	4.53%	27.89	-50.0%	50.99%	3.55%
381.00 Meters	24.70		3.13%	28.40		28.20%	2.53%
382.00 Meter Installations	30.90	-15.0%	3.23%	36.83	-15.0%	23.58%	2.48%
383.00 House Regulators and Installations	36.20	-20.0%	2.17%	38.20	-5.0%	36.56%	1.79%
386.00 Other Property - Customer Premises			10.20%	8.50		16.82%	9.79%
Total Distribution Plant			3.20%	35.86	-32.7%	37.06%	2.69%
GENERAL PLANT							
Depreciable							
390.10 General Structures	22.10	5.0%	3.09%	46.90	-5.0%	22.68%	1.76%
392.00 Transportation Equipment	8.00	15.0%	9.56%	5.73	15.0%	44.42%	7.08%
396.00 Power Operated Equipment	8.00	15.0%	11.72%	5.75	10.0%	44.13%	7.98%
397.00 Communication Equipment	6.80	10.0%	4.29%	17.77	-5.0%	28.61%	4.30%
Total Depreciable			6.45%	12.35	3.0%	33.07%	4.62%
Amortizable							
391.10 Office Furniture and Equipment	19.00	5.0%	3.38%	← 20 Year Amortization →			
391.25 Computer Equipment	3.40		18.30%	← 7 Year Amortization →			
393.00 Stores Equipment	36.00		1.52%	← 20 Year Amortization →			
394.00 Tools, Shop and Garage Equipment	25.50	-5.0%	2.38%	← 15 Year Amortization →			
395.00 Laboratory Equipment	25.70		2.27%	← 15 Year Amortization →			
398.00 Miscellaneous Equipment	7.60		4.72%	← 20 Year Amortization →			
Total Amortizable			10.15%	4.70		61.03%	8.95%
Total General Plant			7.94%	8.20	-29.0%	44.30%	6.36%
TOTAL GAS UTILITY			3.32%	30.55	-29.0%	37.11%	2.87%

KANSAS GAS SERVICE Statement B

Comparison of Present and Proposed Accruals
Present: VG Procedure / RL Technique
Proposed: VG Procedure / RL Technique

Account Description	12/31/05 Plant Investment	2006 Annualized Accrual Present	Proposed	Difference
A	B	C	D	E=D-C
TRANSMISSION PLANT				
365.20 Rights of Way	$10,119,694	$70,838	$137,628	$66,790
366.10 Compressor Station Structures	4,038,803	49,273	116,318	67,045
366.20 Meas. and Reg. Station Structures	1,257,571	22,762	27,164	4,402
367.00 Mains	147,880,397	2,647,059	3,135,064	488,005
368.00 Compressor Station Equipment	20,889,103	432,404	595,339	162,935
369.00 Meas. and Reg. Station Equipment	13,189,892	429,990	361,403	(68,587)
Total Transmission Plant	$197,375,460	$3,652,326	$4,372,916	$720,590
DISTRIBUTION PLANT				
374.20 Rights of Way	$1,230,558	$17,720	$17,105	($615)
375.00 Structures and Improvements	362,713	16,902	15,959	(943)
376.10 Mains - Metallic	258,294,042	6,250,716	4,571,805	(1,678,911)
376.20 Mains - Plastic	214,445,982	5,189,593	5,983,043	793,450
378.00 Meas. and Reg. Station Equip. - General	17,176,759	389,912	431,137	41,225
379.00 Meas. and Reg. Station Equip. - City Gate	5,716,674	117,763	118,335	572
380.10 Services - Metallic	33,180,615	1,503,082	1,085,006	(418,076)
380.20 Services - Plastic	274,659,331	12,442,068	9,750,406	(2,691,662)
381.00 Meters	67,622,824	2,116,594	1,710,857	(405,737)
382.00 Meter Installations	63,633,947	2,055,376	1,578,122	(477,254)
383.00 House Regulators and Installations	13,590,288	294,909	243,266	(51,643)
386.00 Other Property - Customer Premises	224,125	22,861	21,942	(919)
Total Distribution Plant	$950,137,858	$30,417,496	$25,526,983	($4,890,513)
GENERAL PLANT				
Depreciable				
390.10 General Structures	$21,475,552	$663,595	$377,970	($285,625)
392.00 Transportation Equipment	14,694,213	1,404,767	1,040,350	(364,417)
396.00 Power Operated Equipment	8,282,226	970,677	660,922	(309,755)
397.00 Communication Equipment	7,838,932	336,290	337,074	784
Total Depreciable	$52,290,923	$3,375,329	$2,416,316	($959,013)
Amortizable				
391.10 Office Furniture and Equipment	$4,321,849	$146,078	$178,492	$32,414
391.25 Computer Equipment	16,876,123	3,088,331	2,411,598	(676,733)
393.00 Stores Equipment	713,490	10,845	25,400	14,555
394.00 Tools, Shop and Garage Equipment	12,116,799	288,380	483,460	195,080
395.00 Laboratory Equipment	919,958	20,883	38,454	17,571
398.00 Miscellaneous Equipment	141,504	6,679	4,415	(2,264)
Total Amortizable	$35,089,723	$3,561,196	$3,141,819	($419,377)
Total General Plant	$87,380,646	$6,936,525	$5,558,135	($1,378,390)
TOTAL GAS UTILITY	$1,234,893,964	$41,006,347	$35,458,034	($5,548,313)

KANSAS GAS SERVICE
Depreciation Reserve Summary
Vintage Group Procedure
December 31, 2005

Statement C

Account Description	Plant Investment	Recorded Reserve Amount	Recorded Reserve Ratio	Computed Reserve Amount	Computed Reserve Ratio	Redistributed Reserve Amount	Redistributed Reserve Ratio
A	B	C	D=C/B	E	F=E/B	G	H=G/B
TRANSMISSION PLANT							
365.20 Rights of Way	$10,119,694	$2,061,195	20.37%	$1,166,944	11.53%	$1,429,574	14.13%
366.10 Compressor Station Structures	4,038,803	3,527,674	87.34%	1,273,080	31.52%	1,559,597	38.62%
366.20 Meas. and Reg. Station Structures	1,257,571	889,180	70.71%	452,374	35.97%	554,184	44.07%
367.00 Mains	147,880,397	41,330,953	27.95%	42,593,478	28.80%	52,179,463	35.28%
368.00 Compressor Station Equipment	20,889,103	18,214,685	87.20%	7,230,837	34.62%	8,858,192	42.41%
369.00 Meas. and Reg. Station Equipment	13,189,892	1,462,434	11.09%	2,371,408	17.98%	2,905,111	22.03%
Total Transmission Plant	$197,375,460	$67,486,121	34.19%	$55,088,122	27.91%	$67,486,121	34.19%
DISTRIBUTION PLANT							
374.20 Rights of Way	$1,230,558	$243,057	19.75%	$171,872	13.97%	$192,740	15.66%
375.00 Structures and Improvements	362,713	111,107	30.63%	88,396	24.37%	99,128	27.33%
376.10 Mains - Metallic	258,294,042	147,681,319	57.18%	73,133,610	28.31%	82,012,850	31.75%
376.20 Mains - Plastic	214,445,982			57,025,489	26.59%	63,949,022	29.82%
378.00 Meas. and Reg. Station Equip. - General	17,176,759	6,714,162	39.09%	4,997,598	29.10%	5,604,362	32.63%
379.00 Meas. and Reg. Station Equip. - City Gate	5,716,674	3,084,596	53.96%	1,821,919	31.87%	2,043,121	35.74%
380.10 Services - Metallic	33,180,615	161,491,958	486.71%	16,974,897	51.16%	19,035,839	57.37%
380.20 Services - Plastic	274,659,331			124,897,027	45.47%	140,060,925	50.99%
381.00 Meters	67,622,824	14,297,747	21.14%	17,006,093	25.15%	19,070,824	28.20%
382.00 Meter Installations	63,633,947	12,136,638	19.07%	13,379,083	21.03%	15,003,454	23.58%
383.00 House Regulators and Installations	13,590,288	6,278,843	46.20%	4,430,593	32.60%	4,968,517	36.56%
386.00 Other Property - Customer Premises	224,125	39,054	17.42%	33,619	15.00%	37,700	16.82%
Total Distribution Plant	$950,137,858	$352,078,482	37.06%	$313,960,197	33.04%	$352,078,482	37.06%
GENERAL PLANT							
Depreciable							
390.10 General Structures	$21,475,552	$6,714,095	31.26%	$4,208,888	19.60%	$4,869,694	22.68%
392.00 Transportation Equipment	14,694,213	6,643,300	45.21%	5,641,335	38.39%	6,527,040	44.42%
396.00 Power Operated Equipment	8,282,226	1,111,387	13.42%	3,158,709	38.14%	3,654,635	44.13%
397.00 Communication Equipment	7,838,932	3,034,746	38.71%	1,938,251	24.73%	2,242,561	28.61%
Total Depreciable	$52,290,923	$17,503,529	33.47%	$14,947,183	28.58%	$17,293,930	33.07%

KANSAS GAS SERVICE
Depreciation Reserve Summary
Vintage Group Procedure
December 31, 2005

Statement C

Account Description	Plant Investment	Recorded Reserve Amount	Recorded Reserve Ratio	Computed Reserve Amount	Computed Reserve Ratio	Redistributed Reserve Amount	Redistributed Reserve Ratio
A	B	C	D=C/B	E	F=E/B	G	H=G/B
Amortizable							
391.10 Office Furniture and Equipment	$4,321,849	$1,385,595	32.06%	$1,897,583	43.91%	$1,897,583	43.91%
391.25 Computer Equipment	16,876,123	12,379,155	73.35%	9,328,180	55.27%	9,328,180	55.27%
393.00 Stores Equipment	713,490	414,983	58.16%	544,892	76.37%	544,892	76.37%
394.00 Tools, Shop and Garage Equipment	12,116,799	6,372,362	52.59%	8,745,170	72.17%	8,745,170	72.17%
395.00 Laboratory Equipment	919,958	528,350	57.43%	789,105	85.78%	789,105	85.78%
398.00 Miscellaneous Equipment	141,504	123,900	87.56%	109,014	77.04%	109,014	77.04%
Total Amortizable	$35,089,723	$21,204,345	60.43%	$21,413,944	61.03%	$21,413,944	61.03%
Total General Plant	$87,380,646	$38,707,874	44.30%	$36,361,127	41.61%	$38,707,874	44.30%
TOTAL GAS UTILITY	$1,234,893,964	$458,272,477	37.11%	$405,409,447	32.83%	$458,272,477	37.11%

KANSAS GAS SERVICE
Average Net Salvage

Statement D

Account Description	Plant Investment			Salvage Rate		Net Salvage			Average
	Additions	Retirements	Survivors	Realized	Future	Realized	Future	Total	Rate
A	B	C	D=B-C	E	F	G=E*C	H=F*D	I=G+H	J=I/B
TRANSMISSION PLANT									
365.20 Rights of Way	$10,162,184	$42,490	$10,119,694	216.2%		$91,863		$91,863	0.9%
366.10 Compressor Station Structures	4,664,108	625,305	4,038,803	-98.4%	-25.0%	(615,300)	(1,009,701)	(1,625,001)	-34.8%
366.20 Meas. and Reg. Station Structures	1,313,595	56,024	1,257,571	-29.2%	-30.0%	(16,359)	(377,271)	(393,630)	-30.0%
367.00 Mains	161,389,065	13,508,668	147,880,397	3.0%	-25.0%	405,260	(36,970,099)	(36,564,839)	-22.7%
368.00 Compressor Station Equipment	23,615,038	2,725,935	20,889,103	-68.5%	-30.0%	(1,867,265)	(6,266,731)	(8,133,996)	-34.4%
369.00 Meas. and Reg. Station Equipment	14,480,209	1,290,317	13,189,892	-16.4%	-30.0%	(211,612)	(3,956,968)	(4,168,580)	-28.8%
Total Transmission Plant	$215,624,199	$18,248,739	$197,375,460	-12.1%	-24.6%	($2,213,413)	($48,580,770)	($50,794,183)	-23.6%
DISTRIBUTION PLANT									
374.20 Rights of Way	$1,230,629	$71	$1,230,558	-7.8%		($6)		($6)	
375.00 Structures and Improvements	652,462	289,749	362,713	-20.3%	-15.0%	(58,819)	(54,407)	(113,226)	-17.4%
376.10 Mains - Metallic	284,625,990	26,331,948	258,294,042	-21.9%	-30.0%	(5,766,697)	(77,488,213)	(83,254,909)	-29.3%
376.20 Mains - Plastic	217,550,724	3,104,742	214,445,982	-21.9%	-30.0%	(679,938)	(64,333,795)	(65,013,733)	-29.9%
378.00 Meas. and Reg. Station Equip. - General	19,051,046	1,874,287	17,176,759	7.9%	-20.0%	148,069	(3,435,352)	(3,287,283)	-17.3%
379.00 Meas. and Reg. Station Equip. - City Gate	6,081,622	364,948	5,716,674	7.0%	-20.0%	25,546	(1,143,335)	(1,117,788)	-18.4%
380.10 Services - Metallic	67,947,663	34,767,048	33,180,615	-55.6%	-50.0%	(19,330,479)	(16,590,308)	(35,920,786)	-52.9%
380.20 Services - Plastic	277,454,750	2,795,419	274,659,331	-55.6%	-50.0%	(1,554,253)	(137,329,666)	(138,883,918)	-50.1%
381.00 Meters	79,577,729	11,954,905	67,622,824	2.5%		298,873		298,873	0.4%
382.00 Meter Installations	69,638,563	6,004,616	63,633,947	-14.6%	-15.0%	(876,674)	(9,545,092)	(10,421,766)	-15.0%
383.00 House Regulators and Installations	14,946,946	1,356,658	13,590,288	11.4%	-5.0%	154,659	(679,514)	(524,855)	-3.5%
386.00 Other Property - Customer Premises	224,125		224,125						
Total Distribution Plant	$1,038,982,249	$88,844,391	$950,137,858	-31.1%	-32.7%	($27,639,719)	($310,599,680)	($338,239,399)	-32.6%
GENERAL PLANT									
Depreciable									
390.10 General Structures	$24,473,225	$2,997,673	$21,475,552	15.4%	-5.0%	$461,642	($1,073,778)	($612,136)	-2.5%
392.00 Transportation Equipment	26,899,188	12,204,975	14,694,213	17.8%	15.0%	2,172,486	2,204,132	4,376,618	16.3%
396.00 Power Operated Equipment	19,045,017	10,762,791	8,282,226	13.0%	10.0%	1,399,163	828,223	2,227,385	11.7%
397.00 Communication Equipment	9,557,199	1,718,267	7,838,932	1.2%	-5.0%	20,619	(391,947)	(371,327)	-3.9%
Total Depreciable	$79,974,629	$27,683,706	$52,290,923	14.6%	3.0%	$4,053,909	$1,566,630	$5,620,540	7.0%
Amortizable									
391.10 Office Furniture and Equipment	$4,951,207	$629,358	$4,321,849						
391.25 Computer Equipment	20,725,681	3,849,558	16,876,123						
393.00 Stores Equipment	846,563	133,073	713,490						
394.00 Tools, Shop and Garage Equipment	14,820,328	2,703,529	12,116,799						
395.00 Laboratory Equipment	999,037	79,079	919,958						
398.00 Miscellaneous Equipment	238,545	97,041	141,504						
Total Amortizable	$42,581,361	$7,491,638	$35,089,723						
Total General Plant	$122,555,990	$35,175,344	$87,380,646	11.5%	1.8%	$4,053,909	$1,566,630	$5,620,540	4.6%
TOTAL GAS UTILITY	$1,377,162,438	$142,268,474	$1,234,893,964	-18.1%	-29.0%	($25,799,223)	($357,613,820)	($383,413,042)	-27.8%

KANSAS GAS SERVICE
Present and Proposed Parameters
Vintage Group Procedure

Statement E

Account Description	Present Parameters P-Life/ AYFR	Curve Shape	BG ASL	Rem. Life	Avg. Sal.	Fut. Sal.	Proposed Parameters P-Life/ AYFR	Curve Shape	VG ASL	Rem. Life	Avg. Sal.	Fut. Sal.
A	B	C	D	E	F	G	H	I	J	K	L	M
TRANSMISSION PLANT												
365.20 Rights of Way	100.00	R3	100.00	88.40			70.00	R1.5	70.47	62.91	0.9	
366.10 Compressor Station Structures	45.00	R2.5	45.00	21.50	-25.0	-25.0	42.00	L1.5	43.29	30.02	-34.8	-25.0
366.20 Meas. and Reg. Station Structures	49.00	R2.5	49.00	37.30	-30.0	-30.0	55.00	S1.5	55.04	39.81	-30.0	-30.0
367.00 Mains	57.00	R2	57.00	44.40	-10.0	-10.0	53.00	S0	53.89	42.25	-22.7	-25.0
368.00 Compressor Station Equipment	42.00	R2	42.00	31.30	-40.0	-40.0	42.00	R1	43.37	30.78	-34.4	-30.0
369.00 Meas. and Reg. Station Equipment	40.00	L1	40.00	35.30	-20.0	-20.0	45.00	R0.5	45.29	39.39	-28.8	-30.0
Total Transmission Plant									52.26	41.04	-23.6	-24.6
DISTRIBUTION PLANT												
374.20 Rights of Way	70.00	SQ	70.00	59.80			70.00	R1.5	70.38	60.55		
375.00 Structures and Improvements	25.00	L0	25.00	22.10	-15.0	-15.0	25.00	L0	25.83	19.94	-17.4	-15.0
376.10 Mains - Metallic	55.00	R2.5	55.00	41.00	-25.0	-25.0	70.00	R1.5	70.47	55.42	-29.3	-30.0
376.20 Mains - Plastic	50.00	R2.5	50.00	42.80	-25.0	-25.0	45.00	R2.5	45.16	35.95	-29.9	-30.0
378.00 Meas. and Reg. Station Equip. - General	42.00	L1	42.00	33.50	-15.0	-15.0	45.00	L1.5	44.84	34.75	-17.3	-20.0
379.00 Meas. and Reg. Station Equip. - City Gate	45.00	R1.5	45.00	35.50	-15.0	-15.0	55.00	R2	54.76	40.76	-18.4	-20.0
380.10 Services - Metallic	30.00	R1.5	30.00	16.80	-40.0	-40.0	45.00	L1	43.84	28.34	-52.9	-50.0
380.20 Services - Plastic	30.00	R1.5	30.00	22.10	-40.0	-40.0	40.00	S3	40.05	27.89	-50.1	-50.0
381.00 Meters	35.00	R2	35.00	24.70			38.00	R3	37.79	28.40	0.4	
382.00 Meter Installations	38.00	R1	38.00	30.90	-15.0	-15.0	45.00	R1.5	45.07	36.83	-15.0	-15.0
383.00 House Regulators and Installations	50.00	R2.5	50.00	36.20	-20.0	-20.0	55.00	R3	54.61	38.20	-3.5	-5.0
386.00 Other Property - Customer Premises							10.00	S3	10.00	8.50		
Total Distribution Plant									47.46	35.86	-32.6	-32.7
GENERAL PLANT												
Depreciable												
390.10 General Structures	55.00	L0	55.00	22.10	5.0	5.0	55.00	R0.5	56.29	46.90	-2.5	-5.0
392.00 Transportation Equipment	9.00	L2	9.00	8.00	15.0	15.0	10.00	L1.5	10.29	5.73	16.3	15.0
396.00 Power Operated Equipment	9.00	L2	9.00	8.00	15.0	15.0	10.00	L3	9.79	5.75	11.7	10.0
397.00 Communication Equipment	10.00	S1.5	10.00	6.80	10.0	10.0	23.00	L1	23.00	17.77	-3.9	-5.0
Total Depreciable									17.45	12.35	7.0	3.0

KANSAS GAS SERVICE
Present and Proposed Parameters
Vintage Group Procedure

Statement E

Account Description	Present Parameters P-Life/ AYFR	Curve Shape	BG ASL	Rem. Life	Avg. Sal.	Fut. Sal.	Proposed Parameters P-Life/ AYFR	Curve Shape	VG ASL	Rem. Life	Avg. Sal.	Fut. Sal.
A	B	C	D	E	F	G	H	I	J	K	L	M
Amortizable												
391.10 Office Furniture and Equipment	25.00	L0.5	25.00	19.00	5.0	5.0	20.00	SQ	20.00	13.58		
391.25 Computer Equipment	5.00	R2	5.00	3.40			7.00	SQ	7.00	3.13		
393.00 Stores Equipment	45.00	R1	45.00	36.00			20.00	SQ	20.00	6.63		
394.00 Tools, Shop and Garage Equipment	32.00	L0.5	32.00	25.50	-5.0	-5.0	15.00	SQ	15.00	6.98		
395.00 Laboratory Equipment	35.00	S1.5	35.00	25.70			15.00	SQ	15.00	3.40		
398.00 Miscellaneous Equipment	17.00	S1.5	17.00	7.60			20.00	SQ	20.00	7.35		
Total Amortizable									9.92	4.70		
Total General Plant									13.37	8.20	-27.8	-29.0
TOTAL GAS UTILITY									40.71	30.55	-27.8	-29.0

ANALYSIS

INTRODUCTION

This section provides an explanation of the supporting schedules developed in the Kansas Gas Service depreciation study to estimate appropriate projection curves, projection lives and net salvage statistics for each rate category. The form and content of the schedules developed for an account depend upon the method of analysis adopted for the category.

This section also includes examples of the supporting schedules developed for transmission Account 367.00 (Mains). Documentation for all other plant accounts is contained in the study work papers. Supporting schedules developed in the Kansas Gas Service study include:

Schedule A – Generation Arrangement;

Schedule B – Age Distribution;

Schedule C – Plant History;

Schedule D – Actuarial Life Analysis;

Schedule E – Graphics Analysis; and

Schedule F – Historical Net Salvage Analysis.

The format and content of these schedules are briefly described below.

SCHEDULE A – GENERATION ARRANGEMENT

The purpose of this schedule is to obtain appropriate weighted–average life statistics for a rate category. The weighted–average remaining–life is the sum of Column H divided by the sum of Column I. The weighted average life is the sum of Column C divided by the sum of Column I.

It should be noted that the generation arrangement does not include parameters for net salvage. Computed Net Plant (Column H) and Accruals (Column I) must be adjusted for net salvage to obtain a correct measurement of theoretical reserves and annualized depreciation accruals.

The following table provides a description of each column in the generation arrangement.

Column	Title	Description
A	Vintage	Vintage or placement year of surviving plant.
B	Age	Age of surviving plant at beginning of study year.
C	Surviving Plant	Actual dollar amount of surviving plant.
D	Average Life	Estimated average life of each vintage. This statistic is the sum of the realized life and the unrealized life, which is the product of the remaining life (Column E) and the theoretical proportion surviving.
E	Remaining Life	Estimated remaining life of each vintage.
F	Net Plant Ratio	Theoretical net plant ratio of each vintage.
G	Allocation Factor	A pivotal ratio which determines the amortization period of the difference between the recorded and computed reserve.
H	Computed Net Plant	Plant in service less theoretical reserve for each vintage.
I	Accrual	Ratio of computed net plant (Column H) and remaining life (Column E).

Table 3. Generation Arrangement

SCHEDULE B – AGE DISTRIBUTION

This schedule provides the age distribution and realized life of surviving plant shown in Column C of the Generation Arrangement (Schedule A). The format of the schedule depends upon the availability of either aged or unaged data. Derived additions for vintage years older than the earliest activity year in an account for unaged data are obtained from the age distribution of surviving plant at the beginning of the earliest activity year. The amount surviving from these vintages is shown in Column D. The realized life (Column G) is derived from the dollar years of service provided by a vintage over the period of years the vintage has been in service. Plant additions for vintages older than the earliest activity year in an account are represented by the opening balances shown in Column D.

The computed proportion surviving (Column D) for unaged is derived from a computed mortality analysis. The average service life displayed in the title block is the life statistic derived for the most recent activity year, given the derived age distribution at the start of the year and the specified retirement dispersion. The realized life (Column F) is obtained by finding the slope of an SC retirement dispersion, which connects the computed survivors of a vintage (Column E) to the recorded vintage addition (Column B). The realized life is the area bounded by the SC dispersion, the computed proportion surviving and the age of the vintage.

SCHEDULE C – PLANT HISTORY

An Unadjusted Plant History schedule provides a summary of recorded plant data extracted from the continuing property records maintained by the Company. Activity year total amounts shown on this schedule for aged data are obtained from a historical arrangement of the data base in which all plant accounting transactions are identified by vintage and activity year. Activity year totals for unaged data are obtained from a transaction file without vintage identification. Information displayed in the unadjusted plant history is consistent with regulated investments reported internally by the Company.

An Adjusted Plant History schedule provides a summary of recorded plant data extracted from the continuing property records maintained by the Company with sales, transfers, and adjustments appropriately aged for depreciation study purposes. Activity year total amounts shown on this schedule for aged data are obtained from a historical arrangement of the data base in which all plant accounting transactions are identified by vintage and activity year. Ageing of adjusting transactions is achieved using transaction codes that identify an adjusting year associated with the dollar amount of a transaction. Adjusting transactions processed in the adjusted plant history are not aged in the Company's records or in the unadjusted plant history.

SCHEDULE D – ACTUARIAL LIFE ANALYSIS

These schedules provide a summary of the dispersion and life indications obtained from an actuarial life analysis for a specified placement band. The observation band (Column A) is specified to produce either a rolling–band or a shrinking–band analysis depending upon the movement of the end points of the band. The degree of censoring (or point of truncation) of the observed life table is shown in Column B for each observation band. The estimated average service life, best fitting Iowa dispersion, and a statistical measure of the goodness of fit are shown for each degree polynomial (First, Second, and Third) fitted to the estimated hazard rates. Options available in the analysis include the width and location of both the placement and observation bands; the interval of years included in a selected rolling or shrinking band analysis; the estimator of the hazard rate (actuarial, conditional proportion retired, or maximum likelihood); the elements to include on the diagonal of a weight matrix (exposures, inverse of age, inverse of variance, or unweighted); and the age at which an observed life table is truncated.

The estimated average service lives (Columns C, F, and I) are flagged with an asterisk if negative hazard rates are indicated by the fitted polynomial. All negative hazard rates are set equal to zero in the calculation of the graduated survivor curve. The Conformance Index (Columns E, H, and K) is the square root of the mean sum–of–squared differences between the graduated survivor curve and the

best fitting Iowa curve. A Conformance Index of zero would indicate a perfect fit.

SCHEDULE E – GRAPHICS ANALYSIS

This schedule provides a graphics plot of a) the observed proportion surviving for a selected placement and observation band; b) the statistically best fitting Iowa dispersion and derived average service life; and c) the projection curve and projection life selected to describe future forces of mortality.

The graphics analysis also provides a plot of the observed hazard rates and graduated hazard function for a selected placement and observation band. The estimator of the hazard rates and weighting used in fitting orthogonal polynomials to the observed data are displayed in the title block of the displayed graph.

SCHEDULE F – HISTORICAL NET SALVAGE ANALYSIS

This schedule provides a moving average analysis of the ratio of realized net salvage (Column I) to the associated retirements (Column B). The schedule also provides a moving average analysis of the components of net salvage related to retirements. The ratio of gross salvage to retirements is shown in Column D and the ratio of cost of removal to retirements is shown in Column G.

KANSAS GAS SERVICE

Transmission Plant
Account: 367.00 Mains

Dispersion: 53 - S0
Procedure: Vintage Group

Generation Arrangement

	December 31, 2005				Net			
Vintage	Age	Surviving Plant	Avg. Life	Rem. Life	Plant Ratio	Alloc. Factor	Computed Net Plant	Accrual
A	B	C	D	E	F	G	H=C*F*G	I=H/E
2005	0.5	5,361,603	53.00	52.51	0.9908	1.0000	5,312,074	101,162
2004	1.5	6,198,741	53.00	51.57	0.9730	1.0000	6,031,374	116,958
2003	2.5	8,423,945	52.97	50.66	0.9565	1.0000	8,057,259	159,032
2002	3.5	17,547,175	52.93	49.79	0.9407	1.0000	16,506,009	331,504
2001	4.5	347,239	53.01	48.94	0.9232	1.0000	320,582	6,550
2000	5.5	10,492,557	53.02	48.12	0.9076	1.0000	9,523,437	197,899
1999	6.5	16,070,625	53.02	47.32	0.8925	1.0000	14,342,919	303,088
1998	7.5	6,886,543	53.04	46.54	0.8774	1.0000	6,042,407	129,826
1997	8.5	970,308	53.08	45.78	0.8624	1.0000	836,840	18,279
1996	9.5	229,225	53.09	45.04	0.8483	1.0000	194,440	4,317
1995	10.5	4,289,800	52.92	44.31	0.8372	1.0000	3,591,409	81,055
1994	11.5	6,317,493	53.11	43.60	0.8209	1.0000	5,185,808	118,953
1993	12.5	4,763,249	53.14	42.90	0.8073	1.0000	3,845,339	89,644
1992	13.5	2,141,455	53.16	42.21	0.7940	1.0000	1,700,240	40,281
1991	14.5	2,863,120	53.22	41.54	0.7804	1.0000	2,234,468	53,796
1990	15.5	1,345,914	53.15	40.87	0.7690	1.0000	1,035,003	25,322
1989	16.5	3,504,986	53.03	40.22	0.7585	1.0000	2,658,451	66,093
1988	17.5	2,678,147	53.04	39.58	0.7462	1.0000	1,998,544	50,491
1987	18.5	1,882,981	52.96	38.95	0.7355	1.0000	1,384,953	35,555
1986	19.5	5,339,876	53.36	38.33	0.7183	1.0000	3,835,653	100,065
1985	20.5	1,191,908	53.33	37.72	0.7073	1.0000	842,984	22,348
1984	21.5	5,179,835	53.09	37.12	0.6991	1.0000	3,621,352	97,565
1983	22.5	2,234,963	52.81	36.52	0.6916	1.0000	1,545,764	42,324
1982	23.5	4,471,499	52.62	35.94	0.6829	1.0000	3,053,786	84,979
1981	24.5	1,021,415	50.44	35.36	0.7010	1.0000	716,018	20,251
1980	25.5	599,261	51.15	34.78	0.6801	1.0000	407,534	11,716
1979	26.5	977,203	53.15	34.22	0.6438	1.0000	629,151	18,386
1978	27.5	498,535	53.81	33.66	0.6256	1.0000	311,887	9,265
1977	28.5	123,506	44.02	33.11	0.7522	1.0000	92,903	2,806
1976	29.5	490,674	54.25	32.56	0.6002	1.0000	294,520	9,044
1975	30.5	126,490	48.68	32.02	0.6578	1.0000	83,209	2,598
1974	31.5	553,878	53.99	31.49	0.5833	1.0000	323,078	10,260
1973	32.5	113,692	51.46	30.96	0.6017	1.0000	68,406	2,209
1972	33.5	1,257,121	54.66	30.44	0.5569	1.0000	700,095	23,001
1971	34.5	6,302,283	56.26	29.92	0.5318	1.0000	3,351,590	112,019
1970	35.5	72,700	50.84	29.41	0.5784	1.0000	42,049	1,430
1969	36.5	464,411	55.38	28.90	0.5218	1.0000	242,352	8,386

KANSAS GAS SERVICE

Transmission Plant
Account: 367.00 Mains

Dispersion: 53 - S0
Procedure: Vintage Group

Generation Arrangement

Vintage	Age	December 31, 2005 Surviving Plant	Avg. Life	Rem. Life	Net Plant Ratio	Alloc. Factor	Computed Net Plant	Accrual
A	B	C	D	E	F	G	H=C*F*G	I=H/E
1968	37.5	362,686	51.40	28.39	0.5525	1.0000	200,368	7,057
1967	38.5	617,134	55.79	27.90	0.5000	1.0000	308,557	11,061
1966	39.5	147,283	53.18	27.40	0.5152	1.0000	75,883	2,769
1965	40.5	766,257	55.47	26.91	0.4851	1.0000	371,683	13,813
1964	41.5	522,636	55.73	26.42	0.4741	1.0000	247,765	9,377
1963	42.5	629,094	58.30	25.94	0.4449	1.0000	279,908	10,791
1962	43.5	529,578	58.10	25.46	0.4382	1.0000	232,059	9,115
1961	44.5	41,781	49.01	24.98	0.5098	1.0000	21,299	853
1960	45.5	53,529	52.82	24.51	0.4640	1.0000	24,840	1,013
1959	46.5	135,823	56.46	24.04	0.4259	1.0000	57,843	2,406
1958	47.5	148,946	58.43	23.58	0.4035	1.0000	60,106	2,549
1957	48.5	44,566	48.93	23.12	0.4724	1.0000	21,054	911
1956	49.5	95,672	59.51	22.66	0.3807	1.0000	36,428	1,608
1955	50.5	549,519	61.09	22.20	0.3634	1.0000	199,709	8,995
1954	51.5	861,733	61.56	21.75	0.3533	1.0000	304,445	13,998
1953	52.5	2,031,255	62.39	21.30	0.3414	1.0000	693,403	32,556
1952	53.5	14,639	53.65	20.85	0.3887	1.0000	5,690	273
1951	54.5	331,751	60.31	20.41	0.3383	1.0000	112,248	5,500
1950	55.5	807,034	63.11	19.97	0.3163	1.0000	255,292	12,787
1949	56.5	3,602,945	64.36	19.53	0.3034	1.0000	1,093,122	55,983
1948	57.5	27,884	57.25	19.09	0.3335	1.0000	9,298	487
1947	58.5	8,891	48.36	18.66	0.3858	1.0000	3,430	184
1946	59.5	819	57.20	18.22	0.3186	1.0000	261	14
1945	60.5	59	59.40	17.79	0.2996	1.0000	18	1
1944	61.5	429	62.50	17.37	0.2779	1.0000	119	7
1943	62.5	24,510	68.36	16.94	0.2478	1.0000	6,074	359
1942	63.5	329	65.62	16.52	0.2517	1.0000	83	5
1941	64.5	14,765	60.79	16.10	0.2648	1.0000	3,910	243
1940	65.5	4,616	51.38	15.68	0.3052	1.0000	1,409	90
1939	66.5	3,034	66.03	15.26	0.2312	1.0000	701	46
1938	67.5	1,824	72.15	14.85	0.2058	1.0000	375	25
1937	68.5	148	58.68	14.44	0.2460	1.0000	36	3
1936	69.5	21,473	69.63	14.03	0.2014	1.0000	4,326	308
1935	70.5	31,767	68.52	13.62	0.1987	1.0000	6,312	464
1933	72.5	21,894	75.74	12.80	0.1691	1.0000	3,701	289
1932	73.5	2,086	73.77	12.40	0.1681	1.0000	351	28
1931	74.5	120,090	72.64	12.00	0.1652	1.0000	19,834	1,653

KANSAS GAS SERVICE

Transmission Plant
Account: 367.00 Mains

Dispersion: 53 - S0
Procedure: Vintage Group

Generation Arrangement

		December 31, 2005			Net			
Vintage	Age	Surviving Plant	Avg. Life	Rem. Life	Plant Ratio	Alloc. Factor	Computed Net Plant	Accrual
A	B	C	D	E	F	G	H=C*F*G	I=H/E
1930	75.5	372,299	68.70	11.60	0.1688	1.0000	62,846	5,419
1929	76.5	1,486,012	71.29	11.20	0.1571	1.0000	233,410	20,844
1928	77.5	109,250	70.91	10.80	0.1523	1.0000	16,639	1,541
Total	15.6	$147,880,397	53.89	42.25	0.7840	1.0000	$115,938,724	$2,743,884

KANSAS GAS SERVICE
Transmission Plant
Account: 367.00 Mains

Age Distribution

Vintage	Age as of 12/31/2005	Derived Additions	1970 Opening Balance	Experience to 12/31/2005 Amount Surviving	Proportion Surviving	Realized Life
A	B	C	D	E	F=E/(C+D)	G
2005	0.5	5,361,603		5,361,603	1.0000	0.5000
2004	1.5	6,203,407		6,198,741	0.9992	1.4989
2003	2.5	9,019,108		8,423,945	0.9340	2.4670
2002	3.5	18,494,429		17,547,175	0.9488	3.4244
2001	4.5	347,239		347,239	1.0000	4.5000
2000	5.5	10,590,119		10,492,557	0.9908	5.4945
1999	6.5	16,180,808		16,070,625	0.9932	6.4831
1998	7.5	7,021,595		6,886,543	0.9808	7.4857
1997	8.5	970,308		970,308	1.0000	8.5000
1996	9.5	230,839		229,225	0.9930	9.4822
1995	10.5	4,486,400		4,289,800	0.9562	10.2787
1994	11.5	6,460,799		6,317,493	0.9778	11.4224
1993	12.5	5,033,276		4,763,249	0.9464	12.4017
1992	13.5	2,188,907		2,141,455	0.9783	13.3758
1991	14.5	2,927,624		2,863,120	0.9780	14.3730
1990	15.5	1,417,890		1,345,914	0.9492	15.2352
1989	16.5	3,755,707		3,504,986	0.9332	16.0378
1988	17.5	2,893,182		2,678,147	0.9257	16.9643
1987	18.5	2,041,678		1,882,981	0.9223	17.7885
1986	19.5	5,567,781		5,339,876	0.9591	19.0922
1985	20.5	1,243,603		1,191,908	0.9584	19.9506
1984	21.5	5,779,914		5,179,835	0.8962	20.5888
1983	22.5	2,452,133		2,234,963	0.9114	21.1752
1982	23.5	5,023,902		4,471,499	0.8900	21.8486
1981	24.5	1,305,191		1,021,415	0.7826	20.5179
1980	25.5	766,321		599,261	0.7820	22.0710
1979	26.5	1,106,561		977,203	0.8831	24.9028
1978	27.5	558,161		498,535	0.8932	26.3788
1977	28.5	324,685		123,506	0.3804	17.3981
1976	29.5	528,644		490,674	0.9282	28.4326
1975	30.5	325,999		126,490	0.3880	23.6489
1974	31.5	647,718		553,878	0.8551	29.7294
1973	32.5	172,298		113,692	0.6599	27.9672
1972	33.5	1,410,584		1,257,121	0.8912	31.9174
1971	34.5	6,546,131		6,302,283	0.9627	34.2634
1970	35.5	123,445		72,700	0.5889	29.5741
1969	36.5		541,386	464,411	0.8578	34.8252
1968	37.5		598,547	362,686	0.6059	31.5507

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Age Distribution

Vintage	Age as of 12/31/2005	Derived Additions	1970 Opening Balance	Experience to 12/31/2005 Amount Surviving	Proportion Surviving	Realized Life
A	B	C	D	E	F=E/(C+D)	G
1967	38.5		742,361	617,134	0.8313	36.6387
1966	39.5		241,018	147,283	0.6111	34.7082
1965	40.5		1,757,983	766,257	0.4359	37.6699
1964	41.5		694,850	522,636	0.7522	38.5849
1963	42.5		681,726	629,094	0.9228	41.7906
1962	43.5		586,462	529,578	0.9030	42.2242
1961	44.5		135,667	41,781	0.3080	33.7497
1960	45.5		96,397	53,529	0.5553	38.1673
1959	46.5		200,627	135,823	0.6770	42.3939
1958	47.5		185,546	148,946	0.8027	44.9416
1957	48.5		458,736	44,566	0.0971	36.0097
1956	49.5		228,741	95,672	0.4183	47.1419
1955	50.5		604,219	549,519	0.9095	49.2605
1954	51.5		980,574	861,733	0.8788	50.2573
1953	52.5		2,281,599	2,031,255	0.8903	51.6033
1952	53.5		33,450	14,639	0.4376	43.3596
1951	54.5		433,412	331,751	0.7654	50.5111
1950	55.5		914,162	807,034	0.8828	53.7865
1949	56.5		3,844,166	3,602,945	0.9372	55.4901
1948	57.5		296,850	27,884	0.0939	48.8276
1947	58.5		171,872	8,891	0.0517	40.3723
1946	59.5		7,173	819	0.1142	49.6383
1945	60.5		235	59	0.2493	52.2459
1944	61.5		1,175	429	0.3653	55.7433
1943	62.5		25,531	24,510	0.9600	61.9816
1942	63.5		35,863	329	0.0092	59.6177
1941	64.5		55,518	14,765	0.2659	55.1441
1940	65.5		447,364	4,616	0.0103	46.0742
1939	66.5		4,334	3,034	0.7002	61.0574
1938	67.5		1,824	1,824	1.0000	67.5000
1937	68.5		674	148	0.2199	54.3301
1936	69.5		37,624	21,473	0.5707	65.5748
1935	70.5		59,449	31,767	0.5344	64.7559
1934	71.5		2,980		0.0000	53.4619
1933	72.5		21,935	21,894	0.9981	72.4972
1932	73.5		4,044	2,086	0.5158	70.7757
1931	74.5		167,488	120,090	0.7170	69.8844
1930	75.5		969,403	372,299	0.3841	66.1664

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Age Distribution

Vintage	Age as of 12/31/2005	Derived Additions	1970 Opening Balance	Experience to 12/31/2005 Amount Surviving	Proportion Surviving	Realized Life
A	B	C	D	E	F=E/(C+D)	G
1929	76.5		2,836,467	1,486,012	0.5239	68.9713
1928	77.5		323,707	109,250	0.3375	68.7970
1927	78.5		167,937		0.0000	71.7557
Total		$139,507,989	$21,881,076	$147,880,397	0.9163	

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Unadjusted Plant History

Year	Beginning Balance	Additions	Retirements	Sales, Transfers & Adjustments	Ending Balance
A	B	C	D	E	F=B+C-D+E
1970	11,364,686	117,692			11,482,378
1971	11,482,378	889,015			12,371,393
1972	12,371,393	409,780			12,781,172
1973	12,781,172	158,388			12,939,561
1974	12,939,561	561,983			13,501,544
1975	13,501,544	324,239			13,825,783
1976	13,825,783	97,959			13,923,742
1977	13,923,742	297,813			14,221,556
1978	14,221,556	274,016			14,495,571
1979	14,495,571	808,978			15,304,549
1980	15,304,549	435,787	61,967		15,678,370
1981	15,678,370	1,137,682	54,083		16,761,969
1982	16,761,969	3,699,347	38,314		20,423,003
1983	20,423,003	750,353	519,195		20,654,160
1984	20,654,160	2,586,183	269,952		22,970,391
1985	22,970,391	1,169,339	803,283		23,336,447
1986	23,336,447	2,936,363	710,980		25,561,830
1987	25,561,830	953,574	1,664,985		24,850,419
1988	24,850,419	1,242,831	176,814		25,916,435
1989	25,916,435	2,174,262	376,320		27,714,377
1990	27,714,377	272,208	118,712		27,867,873
1991	27,867,873	2,683,825	993,076		29,558,622
1992	29,558,622	1,823,837	428,435		30,954,025
1993	30,954,025	1,637,021	(8,293)		32,599,339
1994	32,599,339	3,306,702			35,906,041
1995	35,906,041	3,273,816	247,870		38,931,987
1996	38,931,987	176,132	1,213,758		37,894,361
1997	37,894,361		34,171		37,860,191
1998	37,860,191	3,935,903	68,457		41,727,636
1999	41,727,636	3,309,628	47,277		44,989,987
2000	44,989,987	9,872,772	691,775		54,170,984
2001	54,170,984	2,577			54,173,561
2002	54,173,561	16,229,708	622,261	59,472,267	129,253,275
2003	129,253,275	11,902,377	597,653	997,766	141,555,765
2004	141,555,765	6,617,559	2,437,469		145,735,855
2005	145,735,855	3,484,697	1,340,155		147,880,397

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Adjusted Plant History

Year	Beginning Balance	Additions	Retirements	Sales, Transfers & Adjustments	Ending Balance
A	B	C	D	E	F=B+C-D+E
1970	11,364,686	117,692			11,482,378
1971	11,482,378	889,015			12,371,393
1972	12,371,393	409,780			12,781,172
1973	12,781,172	158,388			12,939,561
1974	12,939,561	561,983			13,501,544
1975	13,501,544	324,239			13,825,783
1976	13,825,783	97,959			13,923,742
1977	13,923,742	297,813			14,221,556
1978	14,221,556	274,016			14,495,571
1979	14,495,571	808,978			15,304,549
1980	15,304,549	435,787	61,967		15,678,370
1981	15,678,370	1,137,682	54,083		16,761,969
1982	16,761,969	3,699,347	38,314		20,423,003
1983	20,423,003	750,353	519,168		20,654,188
1984	20,654,188	2,586,183	269,980		22,970,391
1985	22,970,391	1,169,339	802,416		23,337,314
1986	23,337,314	2,936,363	711,847		25,561,830
1987	25,561,830	953,574	1,606,025		24,909,379
1988	24,909,379	1,242,831	168,294		25,983,916
1989	25,983,916	2,174,262	376,320		27,781,858
1990	27,781,858	272,208	118,331		27,935,735
1991	27,935,735	2,683,825	880,313		29,739,247
1992	29,739,247	1,823,837	413,387		31,149,698
1993	31,149,698	1,637,021	187,380		32,599,339
1994	32,599,339	3,306,702			35,906,041
1995	35,906,041	3,273,816	247,870		38,931,987
1996	38,931,987	176,132	1,213,758		37,894,361
1997	37,894,361		34,171		37,860,191
1998	37,860,191	3,935,903	68,457		41,727,636
1999	41,727,636	3,357,870	47,277		45,038,230
2000	45,038,230	9,897,760	691,775		54,244,214
2001	54,244,214	347,001			54,591,215
2002	54,591,215	17,232,569	622,261	59,472,267	130,673,789
2003	130,673,789	9,019,108	597,653	997,766	140,093,011
2004	140,093,011	6,203,407	2,437,469		143,858,950
2005	143,858,950	5,361,603	1,340,155		147,880,397

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

T-Cut: None

Placement Band: 1927-2005

Hazard Function: Proportion Retired

Weighting: Exposures

Rolling Band Life Analysis

		First Degree			Second Degree			Third Degree		
Observation Band	Censoring	Average Life	Dispersion	Conf. Index	Average Life	Dispersion	Conf. Index	Average Life	Dispersion	Conf. Index
A	B	C	D	E	F	G	H	I	J	K
1970-1974	100.0				No Retirements					
1971-1975	100.0				No Retirements					
1972-1976	100.0				No Retirements					
1973-1977	100.0				No Retirements					
1974-1978	100.0				No Retirements					
1975-1979	100.0				No Retirements					
1976-1980	92.5	146.0	R1.5 *	0.65	108.4	S2 *	0.98	81.2	R4 *	1.31
1977-1981	91.7	130.5	S0 *	0.64	113.9	S1 *	0.54	103.1	S1.5 *	0.53
1978-1982	89.7	126.3	S0 *	0.66	110.5	S1	0.62	170.0	R1.5 *	0.67
1979-1983	63.5	74.7	L0	4.26	60.9	R1.5	2.44	116.8	SC *	2.17
1980-1984	55.8	61.2	L0.5	5.54	55.6	R1	3.00	75.2	O3 *	3.05
1981-1985	31.4	45.5	O2	7.65	44.7	R0.5	4.49	53.3	O2 *	3.79
1982-1986	4.8	37.4	L0	13.94	38.1	SC	15.38	58.7	O4 *	13.93
1983-1987	1.3	27.7	L0	5.22	28.8	L0	6.77	28.7	L0	6.57
1984-1988	2.5	29.8	L0	5.92	30.9	L0	7.48	30.6	L0	7.07
1985-1989	3.3	29.8	L0.5	5.12	31.4	L0.5	6.55	31.0	L0	5.91
1986-1990	7.4	33.9	L0.5	5.78	34.8	L0.5	6.63	34.2	L0.5	5.73
1987-1991	2.4	33.2	L1	5.86	34.7	S-.5	7.99	34.1	L0.5	7.20
1988-1992	12.7	42.4	L1 *	4.23	43.1	S0	4.75	43.2	L1.5	4.61
1989-1993	12.7	43.0	L1 *	4.58	42.9	L1	4.54	51.6	O2 *	3.73
1990-1994	20.2	49.0	L1	8.21	54.4	O2 *	6.74	69.5	O4 *	5.23
1991-1995	7.4	47.0	L1.5 *	11.41	46.9	L1 *	10.46	59.6	O3 *	9.65
1992-1996	10.7	45.8	L1	7.69	46.0	L1	8.82	45.7	S-.5 *	10.32
1993-1997	23.4	52.1	L1	2.56	52.2	R1	4.94	52.3	R1 *	6.77
1994-1998	24.7	55.4	L1	3.72	54.9	R1.5	4.79	55.4	R1.5	7.02
1995-1999	27.8	55.4	L1	4.19	54.8	R1.5	3.64	55.1	R1.5	3.78
1996-2000	13.9	50.8	L1	3.90	51.1	R1	4.32	52.2	R1	5.93
1997-2001	48.6	80.6	L1	3.64	71.8	R2	2.87	70.0	R2.5	3.68
1998-2002	0.0	72.5	L1	13.59	67.3	R1.5	13.83	65.8	R2 *	16.76
1999-2003	4.1	70.9	L1	21.56	66.4	R1.5	22.18	64.8	R2	24.56
2000-2004	15.6	59.1	L0.5	8.34	57.5	S-.5	8.69	70.2	O3 *	8.01
2001-2005	21.0	64.3	L0	9.32	60.6	R0.5	9.93	87.5	O3 *	8.25

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

T-Cut: None

Placement Band: 1927-2005

Hazard Function: Proportion Retired

Weighting: Exposures

Shrinking Band Life Analysis

		First Degree			Second Degree			Third Degree		
Observation Band	Censoring	Average Life	Dispersion	Conf. Index	Average Life	Dispersion	Conf. Index	Average Life	Dispersion	Conf. Index
A	B	C	D	E	F	G	H	I	J	K
1970-2005	16.8	54.4	L0.5	4.40	53.0	S0	3.45	56.3	L1 *	3.17
1972-2005	16.5	53.8	L0.5	4.30	52.5	S0	3.41	56.8	L1 *	3.08
1974-2005	16.1	53.1	L0.5	4.20	52.0	S0	3.43	57.5	L1 *	3.03
1976-2005	15.4	52.3	L0.5	4.12	51.4	S0	3.55	58.3	L0.5 *	3.03
1978-2005	14.8	51.3	L0.5	4.02	50.7	R0.5	3.55	58.9	O2 *	2.90
1980-2005	14.2	50.3	L0.5	3.84	49.9	S-.5	3.41	59.1	O2 *	2.63
1982-2005	13.8	49.5	L0.5	3.69	49.2	S-.5	3.19	58.9	O2 *	2.30
1984-2005	14.0	49.3	L0.5	3.49	49.2	S-.5	3.00	58.6	O2 *	2.13
1986-2005	14.4	50.3	L0.5	3.47	50.0	S-.5	3.10	58.8	O2 *	2.38
1988-2005	20.1	55.9	L0.5	3.26	54.7	S0	2.76	61.5	L0.5 *	2.37
1990-2005	21.5	56.7	L0.5	3.04	55.3	S0	3.21	64.6	O2 *	2.76
1992-2005	20.7	59.6	L0.5	4.59	57.5	S0	5.02	65.5	O2 *	4.44
1994-2005	18.8	60.6	L0.5	6.12	57.9	S0	6.47	60.8	L1 *	5.95
1996-2005	14.8	59.4	L0.5	8.45	57.0	R0.5	9.06	63.3	L0.5 *	8.33
1998-2005	18.4	64.3	L0	9.83	60.5	R0.5	10.47	80.7	O3 *	9.18
2000-2005	15.3	60.8	L0	9.36	57.8	R0.5	10.04	73.1	O3 *	8.93
2002-2005	14.5	61.2	L0	10.60	58.1	S-.5	11.31	82.6	O3 *	9.65
2004-2005	25.5	53.0	O2	9.34	50.9	L0	9.37	70.9	O4 *	7.01

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

T-Cut: None

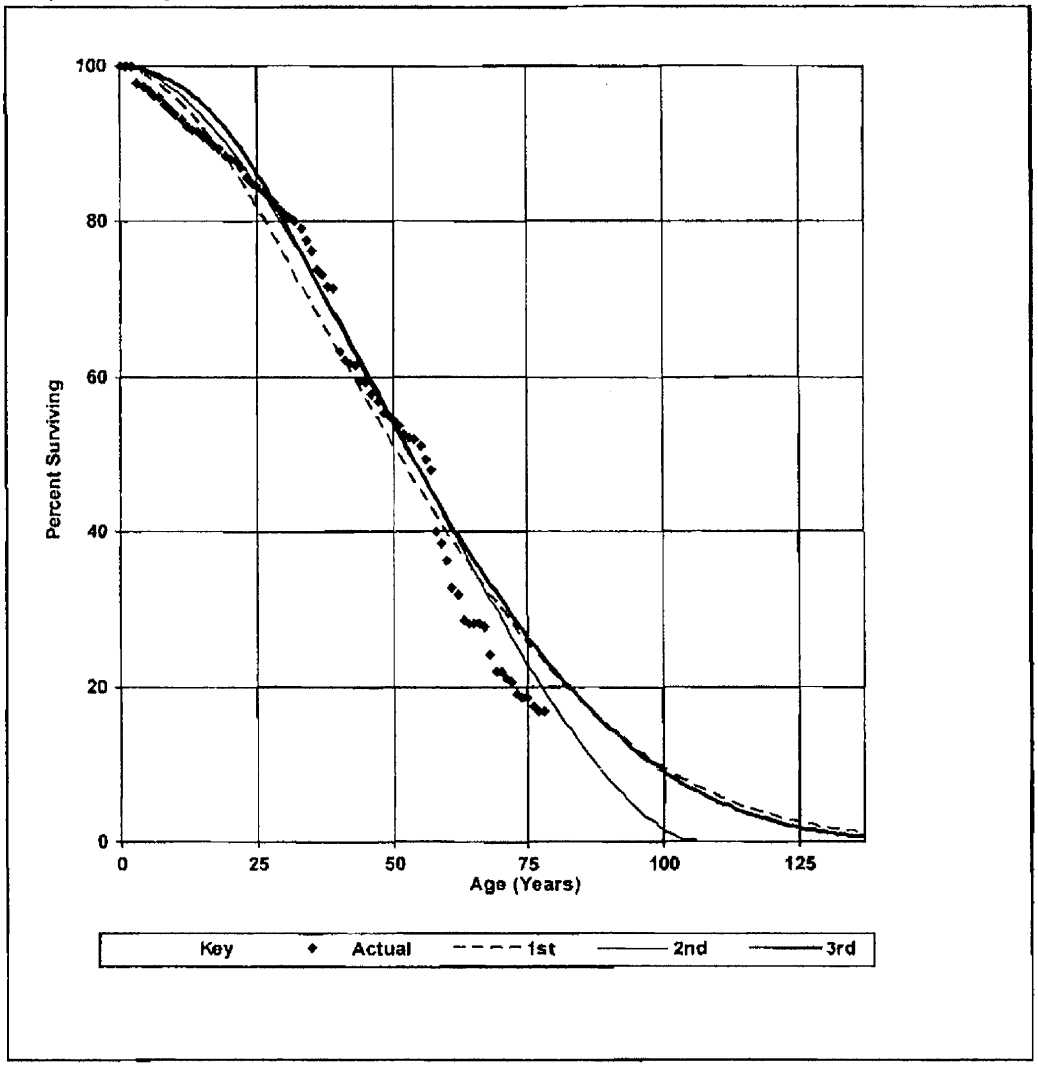
Placement Band: 1927-2005 Observation Band: 1970-2005

Hazard Function: Proportion Retired

Weighting: Exposures

Graphics Analysis

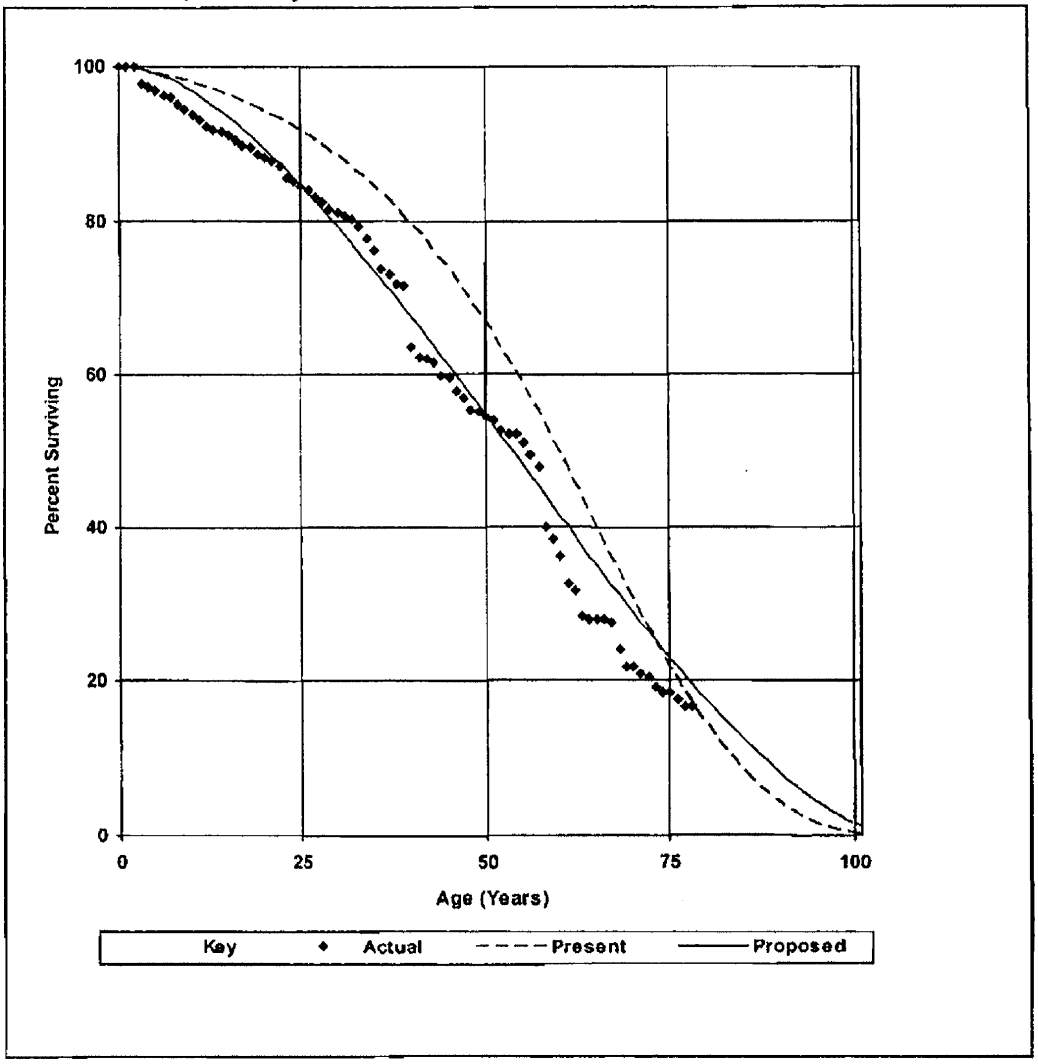
1st: 54.4-L0.5 2nd: 53.0-S0 3rd: 56.3-L1



KANSAS GAS SERVICE
Transmission Plant
Account: 367.00 Mains

T-Cut: None
Placement Band: 1927-2005
Observation Band: 1970-2005

Present and Proposed Projection Life Curves Present: 57.0-R2 Proposed: 53.0-S0



KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

T-Cut: None

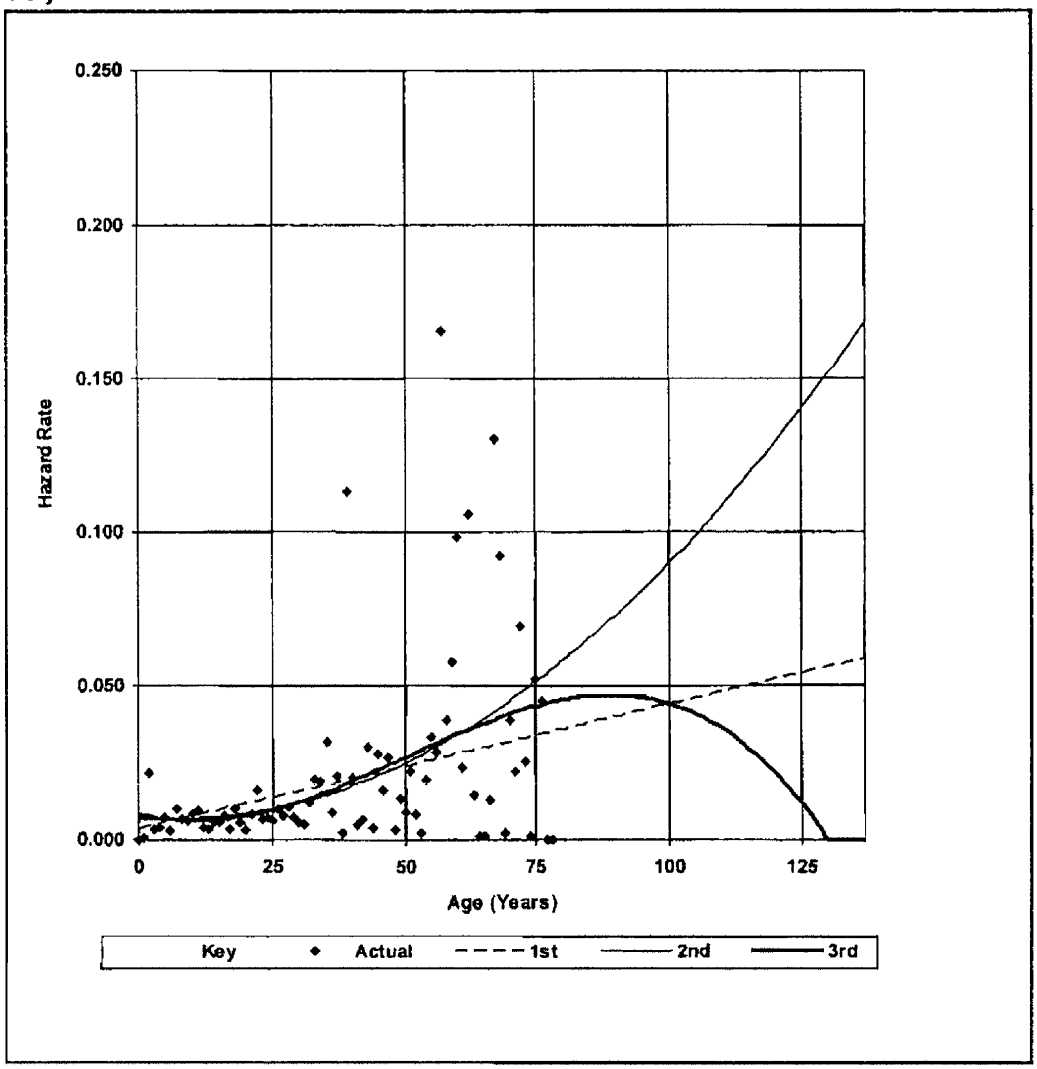
Placement Band: 1927-2005 Observation Band: 1970-2005

Hazard Function: Proportion Retired

Weighting: Exposures

Polynomial Hazard Function

1st: 54.4-L0.5 2nd: 53.0-S0 3rd: 56.3-L1



KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Unadjusted Net Salvage History

		Gross Salvage			Cost of Retiring			Net Salvage		
Year	Retirements	Amount	Pct.	5-Yr Avg.	Amount	Pct.	5-Yr Avg.	Amount	Pct.	5-Yr Avg.
A	B	C	D=C/B	E	F	G=F/B	H	I=C-F	J=I/B	K
1978		61,434	0.0		38,332	0.0		23,102	0.0	
1979		21,108	0.0		27,260	0.0		(6,152)	0.0	
1980	61,967	54,569	88.1		42,756	69.0		11,813	19.1	
1981	54,083	(4,745)	-8.8		46,515	86.0		(51,260)	-94.8	
1982	38,314	(5,981)	-15.6	81.9	63,357	165.4	141.4	(69,338)	-181.0	-59.5
1983	519,195	352,794	68.0	62.0	276,899	53.3	67.8	75,895	14.6	-5.8
1984	269,952	242,667	89.9	67.8	273,435	101.3	74.5	(30,768)	-11.4	-6.7
1985	803,283	(39,190)	-4.9	32.4	104,539	13.0	45.4	(143,729)	-17.9	-13.0
1986	710,980	197,210	27.7	31.9	188,190	26.5	38.7	9,020	1.3	-6.8
1987	1,664,985	159,793	9.6	23.0	134,266	8.1	24.6	25,527	1.5	-1.6
1988	176,814	403,200	228.0	26.6	90,567	51.2	21.8	312,633	176.8	4.8
1989	376,320	94,714	25.2	21.9	130,157	34.6	17.4	(35,443)	-9.4	4.5
1990	118,712	431,953	363.9	42.2	148,251	124.9	22.7	283,702	239.0	19.5
1991	993,076	745,055	75.0	55.1	68,511	6.9	17.2	676,544	68.1	37.9
1992	428,435	73,570	17.2	83.5	226,383	52.8	31.7	(152,813)	-35.7	51.8
1993	(8,293)	31,934	-385.1	72.2	81,655	-984.6	34.3	(49,721)	599.5	37.8
1994		469,556	0.0	114.4	256,496	0.0	51.0	213,060	0.0	63.4
1995	247,870	31,786	12.8	81.4	38,187	15.4	40.4	(6,401)	-2.6	41.0
1996	1,213,758	(85,741)	-7.1	27.7	184,914	15.2	41.9	(270,655)	-22.3	-14.2
1997	34,171	642,234	1879.5	73.3	154,454	452.0	48.1	487,780	1427.5	25.1
1998	68,457	383,313	559.9	92.1	374,876	547.6	64.5	8,437	12.3	27.6
1999	47,277		0.0	60.3	4,719	10.0	47.0	(4,719)	-10.0	13.3
2000	691,775	100	0.0	45.7	265,527	38.4	47.9	(265,427)	-38.4	-2.2
2001			0.0	121.9	31,070	0.0	98.7	(31,070)	0.0	23.2
2002	622,261	18,524	3.0	28.1	25,593	4.1	49.1	(7,069)	-1.1	-21.0
2003	597,653	729,339	122.0	38.2	409,472	68.5	37.6	319,867	53.5	0.6
2004	2,437,469	1,042,405	42.8	41.2	1,744,729	71.6	56.9	(702,324)	-28.8	-15.8
2005	1,340,155	(34,971)	-2.6	35.1	186,375	13.9	48.0	(221,346)	-16.5	-12.8
Total	13,508,668	6,016,630	44.5		5,617,484	41.6		399,146	3.0	

KANSAS GAS SERVICE

Transmission Plant

Account: 367.00 Mains

Adjusted Net Salvage History

		Gross Salvage			Cost of Retiring			Net Salvage		
Year	Retirements	Amount	Pct.	5-Yr Avg.	Amount	Pct.	5-Yr Avg.	Amount	Pct.	5-Yr Avg.
A	B	C	D=C/B	E	F	G=F/B	H	I=C-F	J=I/B	K
1978		51,234	0.0		38,332	0.0		12,902	0.0	
1979		4,720	0.0		27,260	0.0		(22,540)	0.0	
1980	61,967	19,455	31.4		42,756	69.0		(23,301)	-37.6	
1981	54,083	16,366	30.3		46,515	86.0		(30,149)	-55.7	
1982	38,314	38,796	101.3	84.6	63,357	165.4	141.4	(24,561)	-64.1	-56.8
1983	519,168	269,159	51.8	51.7	276,899	53.3	67.8	(7,740)	-1.5	-16.1
1984	269,980	206,009	76.3	58.3	273,435	101.3	74.5	(67,426)	-25.0	-16.2
1985	802,416	379,544	47.3	54.0	104,539	13.0	45.4	275,005	34.3	8.6
1986	711,847	198,104	27.8	46.6	188,190	26.4	38.7	9,914	1.4	7.9
1987	1,606,025	17,186	1.1	27.4	134,266	8.4	25.0	(117,080)	-7.3	2.4
1988	168,294	201,194	119.5	28.2	90,567	53.8	22.2	110,627	65.7	5.9
1989	376,320	3,002	0.8	21.8	130,157	34.6	17.7	(127,155)	-33.8	4.1
1990	118,331	332,398	280.9	25.2	148,251	125.3	23.2	184,147	155.6	2.0
1991	880,313	578,532	65.7	36.0	68,511	7.8	18.2	510,021	57.9	17.8
1992	413,387	40,021	9.7	59.0	226,383	54.8	33.9	(186,362)	-45.1	25.1
1993	187,380	(1,728)	-0.9	48.2	81,655	43.6	33.2	(83,383)	-44.5	15.0
1994		469,556	0.0	88.7	256,496	0.0	48.8	213,060	0.0	39.9
1995	247,870	4,265	1.7	63.1	38,187	15.4	38.8	(33,922)	-13.7	24.3
1996	1,213,758	(85,741)	-7.1	20.7	184,914	15.2	38.2	(270,655)	-22.3	-17.5
1997	34,171	643,513	1883.2	61.2	154,454	452.0	42.5	489,059	1431.2	18.7
1998	68,457	383,313	559.9	90.5	374,876	547.6	64.5	8,437	12.3	26.0
1999	47,277		0.0	58.7	4,719	10.0	47.0	(4,719)	-10.0	11.7
2000	691,775		0.0	45.8	265,527	38.4	47.9	(265,527)	-38.4	-2.1
2001			0.0	122.0	31,070	0.0	98.7	(31,070)	0.0	23.3
2002	622,261		0.0	26.8	25,593	4.1	49.1	(25,593)	-4.1	-22.3
2003	597,653		0.0	0.0	409,472	68.5	37.6	(409,472)	-68.5	-37.6
2004	2,437,489		0.0	0.0	1,744,729	71.6	56.9	(1,744,729)	-71.6	-56.9
2005	1,340,155		0.0	0.0	186,375	13.9	48.0	(186,375)	-13.9	-48.0
Total	13,508,668	3,768,898	27.9		5,617,484	41.6		(1,848,586)	-13.7	