GAZIFERE INC.

DEPRECIATION STUDY

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PRE-FILED TESTIMONY OF

BERNARD KATUGAMPOLA

Q.1 Please state your name.

A.1 My name is Bernard Katugampola.

Q.2 By whom are you employed?

A.2 Enbridge Consumers Gas.

Q.3 What are your professional qualifications?

A.3 See the attached curriculum vitae.

Q.4 What area will you be testifying about in this hearing?

A.4 I am responsible for the study determining the appropriate rates of depreciation which should be applied to distribution and general plant of Gazifere Inc. as at September 30, 1998.

Q.5 What is your concept of depreciation and cost of removal?

A.5 It is the process of cost allocation of the original cost, adjusted for net salvage, of plant-in-service in a rational and uniform manner over account periods included in the plant's useful life.

The underlying principle in the recovery of removal costs is the

recovery of costs from those benefiting from use of the assets. That is, customers who benefit from the use of assets should pay a proportionate cost of asset removal during the useful like of the asset. If not, a future generation will be burdened with asset retirement costs which were not recovered during the useful life of the asset from customers who benefited from those assets. This will result in present customers paying less than their true cost of service while future customers will be required to pay more than their true cost of service because their rates will include retiring past property from which they received no benefit.

Q.6 With respect to the 1998 Depreciation Study you are now presenting for Gazifere Inc., have you utilized the expertise of other persons?

A.6 Yes, I have. I have discussed the reasonableness of the life and salvage estimates of the accounts with engineers and accountants of the Company who are conversant with those accounts. Also, I have reviewed some of my estimates with asset lives and rates used by other utilities.

Q.7 What is the purpose of presenting a Depreciation Study at this time?

A.7 In order to utilize fully the inherent advantages of using the

Remaining Life Technique, it is advisable to review life and salvage estimates about every five years. The last time our depreciation rates were reviewed was in 1994 based on the plant balances as at September 30, 1993.

Q.8 Can you give a brief description of the depreciation system used in your study?

A.8 The Depreciation system used is the Broad Group Procedure, Straight-Line Method using the Remaining-Life Technique. With the Broad Group Procedure all similar plant units are grouped together and depreciation is calculated for the group as a whole and not by individual units of property. The Remaining-Life Technique allocates the undepreciated cost over the remaining life of the account, taking into consideration the accumulated depreciation to date. The Straight-Line Method is intended to recover the asset cost by equal installments over its economic life. This depreciation methodology was accepted by Le Regie in its Ordinance G-361.

We have analyzed our historical plant data using a "semi-actuarial" method known as the Simulated Plant Record or the SPR method. In

brief, the SPR- Balances method involves the input of gross additions, retirements and earliest year balance with the number of test points within the placement band of each account. The computer system then attempts to duplicate the annual balances of the account by distributing the additions over time according to successive assumed mortality distribution patterns, - expressed as survivor tables for each of the IOWA curves. Thus for a given year, the plant balance is an accumulation of survivors from many vintages.

This process of simulation is repeated for different mortality distributions or curves, until a pattern is found which produces a series of simulated balances most nearly duplicating the set of actual plant balances experienced by the account over a test period of years. However, depending on the IOWA curve selected, the total plant surviving may or may not be equal to the ledger balance. The "best-fit" mortality dispersion is the distribution that produces the minimum sum of squared differences between the simulated balances and the actual balances with maximum retirement experience. However, in the life estimation process, the overriding factor is informed judgement taking into consideration all known factors and foreseeable

events.

Q.9 Are the depreciation rates currently in use at Gazifere the same as those used at Enbridge?

A.9 No. The rates used at Gazifere are based on the plant additions, retirements and the book reserve of Gazifere's plant accounts. The depreciation methodology, that is, the straight line remaining life method, and the application of IOWA curves in the life estimation process is the same at Enbridge and Gazifere.

Q.10 What guidelines are followed in the analysis and adjustments to input data and in the reconciliation of output to general ledger balances?

A10. Our input data consists of additions, retirements and salvage (for the percentage salvage computation). We analyze all significant and material transfers between accounts affecting additions and retirements to determine their validity and to ensure an adjustment to the proper vintage year. For projects with long construction periods, we ensure that current year's charges are included with additions of the year in which the asset was placed in service. For transfers between primary plant accounts, we also transfer the book reserve applicable to the asset cost, if it is material. For purposes of life

estimates, any unusual transactions are adjusted, or taken into consideration, to reflect normal operating conditions. The salvage analysis was adjusted in order not to include in the accrual rate the effect of extraordinary items that will not occur in the future as part of the day-to-day operations of that account. However, such non-recurring items are reflected in the reserve balance as part of the normal accounting process.

Q.11 What tests were performed in arriving at the estimated average service life for each of the accounts?

A.11 This study was prepared employing the following tests and guidelines:

1. Life estimates were based on tests employing IOWA curves of the most recent 5, 10 and 15 years retirement experience plus the maximum available retirement history. Our computer program tests 31 different curves for periods up to 999 years and is capable of arriving at estimated average lives up to 999 years.

   These estimates were then reviewed with engineering and other personnel and adjusted if necessary to reflect all known and foreseeable events. In all cases, industry practices and

judgement were overriding considerations.

2. The life estimates for those accounts with a fit to an IOWA curve were selected based on the minimum index of variation between actual and simulated plant balances and with maximum retirement experience for each of the accounts. In all cases, the final decision was based on judgement as to the reasonableness of the statistical results taking into consideration factors causing retirement.

3. Where a proper fit to an IOWA curve was not obtainable for certain accounts, we used a judgement figure based on the experience at Enbridge, industry practices and our discussion with engineers and other personnel taking into consideration such factors as changes in demand, inadequacy, managerial decisions, maintenance policy, obsolescence, gas supply, etc.

4. Salvage estimates were based on cumulative data from 1994 to 1998 as the salvage realized in the last five years gives a more realistic indication of future events. The data was adjusted for any extraordinary events that my have occurred and may not reasonably re-occur as part of day-to-day operations.

Q.12 Was the Depreciation Study prepared under your direct supervision?

A.12 The analysis, adjustments and input of data was made under my direct supervision. I selected the mortality dispersions for each of the accounts and I prepared the exhibits. Further, I discussed with engineers, sales and/or operating personnel those accounts where the use of their expertise was warranted.

Q.13 What exhibits and schedules will you be presenting at this time?

A.13 I am presenting Exhibits in Section 2, 3 and 4 in support of my recommendations to the revised depreciation rates.

Q.14 What are your recommendations ?

A.14 My recommendations for each of the accounts is contained in Section 2 of the Study. In summary, Iam recommending the Depreciation Rates listed in the Summary of 1998 Utility Plant In Section 2 be adopted effective October 1, 2000.

CIRRICULUM VITAE OF
BERNARD KATUGAMPOLA

Education:

1982:	Admitted to the membership of the Society of Management Accountants of Canada and awarded the CMA designation.
1978 – 1987:	Completed Programs I to VI of the IOWA Depreciation Program under the auspices of Western Michigan University and Depreciation Programs Inc.
1973:	Passed the Final Examinations of the Certified General Accountants Association of Ontario and awarded the CGA designation.
1966:	Passed the Final Examinations of the Chartered Institute of Management Accountants, London, England.
	Admitted to Associate Membership in 1968.
	Admitted as a Fellow in 1978.

Business Experience:

1970-Present: Employed by The Consumers' Gas Company Ltd.

1979-1999 Manager, Plant Accounting

Responsible for the management of the Plant Accounting Department, accounting policy changes and depreciation. Functionally responsible for the plant accounting functions of Gazifere Inc. and St. Lawrence Gas Company, Inc.

Responsible for testifying on plant accounting matters and depreciation before regulatory bodies.

1974-1979: Plant Accountant

Responsible for the accuracy of the accounting functions related to property, plant and equipment.

1970-1973: Supervisor, Inventory Accounting

Responsible for system-wide materials accounting function, physical counts and reconciliations.

1968-1969: Crane Ltd., Sussex, England – Branch Accountant.

Responsibilities included Financial Statements, Payroll and General Accounting.

1966-1968: Coty (England) Ltd., London, England – Budget Accountant.

Responsibilities included preparation of manufacturing budgets, monthly variance analysis and preparation of standard costs.

1960-1966: Employed in various accounting positions in industry and commerce while studying for the examinations of the Chartered Institute of Management Accountants, London, England.

Experience as a
Witness on Depreciation

1994: Prepared a Depreciation Study for Gazifere Inc. And testified on it before La Regie.

1992:	Prepared a Depreciation Study for the Consumers' Gas Company Ltd. And testified on it before the Ontario Energy Board.
1990:	Prepared a study on Assets Not Currently In Use for The Consumers' Gas Company Ltd. and testified on it before the Ontario Energy Board.
1988:	Prepared a Depreciation Study for The Consumers' Gas Company Ltd. and testified on it before the Ontario Energy Board.
1987:	Prepared a Depreciation Study for Gazifere Inc. And testified on it before the Quebec Electricity and Gas Board.
1984:	Prepared a Depreciation Study for St. Lawrence Gas Company, New York State and presented to the New York Public Service Commission.
1983:	Prepared a Depreciation Study for Tecumseh Gas Storage Limited and testified on it before the Ontario Energy Board.
1982:	Prepared a Depreciation Study for Gazifere Inc. And testified on it before the Quebec Electricity and Gas Board.
1981:	Prepared a Depreciation Study for The Consumers' Gas Company Ltd. and testified on it before the Ontario Energy Board.

Other

1986-1988:	Chairman, Plant Accounting Committee of the Canadian Gas Association.
1982-1993:	Member, Plant Accounting Committee of the American Gas Association.

1992-Present:	Member, Society of Depreciation Professionals in the U.S.

SUMMARY OF 1998 UTILITY PLANT

Column 1 lists the plant balances as at September 30, 1998. Column 2 indicates the percentage salvage estimated for each account. Column 3 indicates the estimated salvage amount which is the result of applying the salvage percentage against the account balance in Column 1. Column 4 is Column 1 plus or minus Column 3. Column 5 shows the estimates of average service life and IOWA curve which best indicates the retirement pattern for the account. Next is Column 6, which is the book reserve.

The unrecovered service value in Column 7 is the estimated service value (Column 4) less the book reserve (Column 6). Column 8 shows the estimated remaining life for each of the accounts. The annual depreciation amount in Column 9 is the quotient resulting from the division of the unrecovered service value (Column 7) by the estimated remaining life (Column 8).

The final Column (10) indicated the annual depreciation rate which is obtained by expressing the annual depreciation amount (Column 9) as a percentage of the plant balance (Column 1).

GAZIFERE INC.
SUMMARY OF 1998 UTILITY PLANT

Line	A/C	Account Description	Col. 1 Plant Balance 30/9/98 ($)	Col. 2 Salvage ($)	Col. 3 Estimated Salvage Value ($)	Col. 4 Estimated Service Value ($)	Col. 5 Mortality Dispersion (Yrs., Curve)	Col. 6 Book Reserve 30/9/98 ($)	Col. 7 Unrecovered Service Value ($)	Col. 8 Estimated Remaining Life (Yrs.)	Col. 9 Proposed Annual Recovery ($)	Col. 10 Proposed Depreciation Rate (%)
1	473	Service	19,047,042	-150	-28,570,563	47,617,605	50 R5	2,932,444	44,685,161	42.3	1,056,387	5.55
2	475	Mains	35,470,994	-80	-28,376,795	63,847,789	70 SQ	4,879,052	58,968,737	59.8	986,099	2.78
3	477	Regulating Equipment	1,784,225	-5	-89,211	1,873,436	26 R4	439,839	1,433,597	19.6	73,143	4.10
4	478	Meters	2,869,582	65	1,865,228	1,004,354	11 SC	325,018	679,336	8.1	83,869	2.92
5	483	Office Furn. & Equip.	231,265	0	0	231,265	16 S6	111,830	119,435	8.3	14,390	6.22
6	484	Transportation Equipment	154,643	15	23,196	131,447	7 S6	10,365	121,082	6	20,180	13.05
7	485	Heavy Work Equipment	34,539	0	0	34,539	12R1	13,319	21,220	6.8	3,121	9.03
8	486	Tool & Work Equipment	95,005	0	0	95,005	10 S6	41,001	54,004	5.4	10,001	10.53
9	488	Communication Struct. & Equipment	168,407	0	0	168,407	8 S6	32,081	136,326	4.9	27,822	16.52
10	490	Computer Equipment	321,043	0	0	321,043	4 S0	107,153	213,890	2.3	92,996	28.97
11		TOTAL PLANT	60,176,745		-55,148,145	115,324,890		8,892,102	106,432,788		2,368,006	3.94

RECOMMENDATIONS

ACCOUNT 473

SERVICES

	Present	Proposed
Estimated Average Life (Yrs.)	50	50
Depreciation Rate (%)	4.52	5.55
Salvage (%)	-100	-150

This account consists of the installed cost of service pipe from the main to the meter. All services have been installed since 1958.

Most of the copper services are retired because of leaks due to corrosion which makes them irrepairable and steel services are being retired because of damage to its coating and corrosion. The retirement experience of this account indicates an acceptable fit to an IOWA curve. We are recommending an estimated average service life of 50 years for this account in Gazifere. Statistically an average life of 26 years seems appropriate indicating a trend towards a shorter life in the long term than the proposed 50 years.

The cost of removing or abandoning-in-place assets in service has increased significantly in the last decade. Since nearly 80% of the cost of removal are

labour costs, a significant increase in the cost of cutting-off a service is to be expected.

Most of the service cut-offs are done by our own crews while occasionally we hire a back-hoe and a truck. Most of the removal costs include site restoration costs and expensive permanent, and sometimes, temporary leak repair work in the winter months with permanent repair work in the summer. This is reflected in the salvage computation indicating a five year average of over 150%. An estimate of negative salvage of 150% is recommended for this account. Charging the accumulated depreciation account with costs of removal complies with Ordinance G-448 of June 26, 1986.

As a result of the increase in removal costs, the depreciation reserve ratio for the services account is low at 15% indicating an under-accrual of depreciation expense. The low depreciation reserve ratio is also due to Ordinance G-448 of June 1986 whereby it was required that cost of removal be charged to the accumulated depreciation account instead of being expensed. (Under the old methodology, removal costs were expensed if the asset was not replaced or was capitalized with the cost of the new asset, if the retired asset was replaced – Ordinance GC-24 of March 1980).

Therefore, removal costs are now increasing rate base instead of increasing operating expenses. Since most of the services are over 20 years old, we should expect a reserve ratio of about 25%. With the proposed increase in the depreciation rate to 5.55%, the low reserve position will be brought back into an acceptable level in the coming years.

ACCOUNT 475

MAINS

	Present	Proposed
Estimated Average Life (Yrs.)	70	70
Depreciation Rate (%)	2.58	2.78
Salvage (%)	-70	-80

This account includes the installed cost of distribution system main pipe and fittings from the transmission line to the customer service line. Most of the distribution system pipe is coated steel or plastic.

This is a relatively young account and the retirement experience is insufficient to produce a fit to an IOWA curve using the SPR Balances Method. We are recommending as estimated average service life of 70 years for this account which is the same as that used for the Mains Account at Consumers Gas.

Salvage analysis indicates a five year average of negative 84%. Review of

the activities involved in retiring mains showed that the costs to retire have been increasing due to labour costs and also because it involves permanent repair work in the winter and also some temporary repair work followed by permanent work in the summer. Retirements have been of minor items of plant, i.e. leaking valves, 1 to 2 metres of pipe. Operating practices for Gazifere differ from those of Consumers Gas with regard to this type of removal. In Ontario, any removal/replacements of mains have to be a minimum of 8 metres before the work can be charged to capital. If the minimum is not met, the costs are expensed. However, in Quebec there is no minimum rule and all replacements are capitalized. Therefore removal costs for even small lengths of pipe are capitalized thus requiring a greater recovery for removal costs.

To reflect the retirement practices at Gazifere and to compensate for the predominately winter retirements, a negative salvage of 80% is recommended for the account although the salvage analysis shows a negative 84% which may increase in the long term.

ACCOUNT 477

REGULATING EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	27	26
Depreciation Rate (%)	3.84	4.10
Salvage (%)	-5	-5

This account includes the cost of guages, recorders and other control type equipment used in measuring and regulating the flow of gas in connection with the gas distribution operation.

Our statistical analysis indicates a life of 26 years which we recommend. We recommend a negative 5% for salvage. It is reasonable to expect labour costs in dismantling a station with very little realizable salvage.

ACCOUNT 478

METERS

	Present	Proposed
Estimated Average Life (Yrs.)	11	11
Depreciation Rate (%)	2.82	2.92
Salvage (%)	65	65

This account includes the costs of meters installed and held in reserve.

Our statistical analyis continues to indicate an estimated average service life of 11 years which coincides with the policy of returning meters on a sample basis to the Consumers' Gas Company for testing, calibration, etc.

While at Gazifere the meters have a location life of 11 years; this represents approximately 1/3 of the average life (of 33 years) of a meter at Consumers Gas. Thus the meter has approximately 65% of its useful life remaining when it is returned to Consumers for inspection and re-use. To recognize this proceed, we have assumed 65% positive salvage for this account.

ACCOUNT 483

OFFICE FURNITURE & EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	14	16
Depreciation Rate (%)	5.56	6.22
Salvage (%)	15	0

This account includes all types of office equipment and furniture excluding equipment designated as computer equipment.

The statistical analysis indicates a good fit at an estimated average service life of 16 years.

We have not realized any salvage from retired furniture because they have been scrapped or donated.

ACCOUNT 484

TRANSPORTATION EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	6	7
Depreciation Rate (%)	16.31	13.05
Salvage (%)	15	15

Our statistical analysis indicates an estimated average service life of approximately 7 years as appropriate for this account.

The salvage rate of 15% remains appropriate based on the current 5 year history.

ACCOUNT 485

HEAVY WORK EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	12	12
Depreciation Rate (%)	7.77	9.03
Salvage (%)	0	0

This account balance consists of two compressors, a generator and a dump trailer.

Since the addition and retirement pattern is not steady due to low activity, the average service life of 12 years, as indicated in our statistical analysis, is reccomended for this account.

ACCOUNT 486

TOOLS AND WORK EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	10	10
Depreciation Rate (%)	10.00	10.53
Salvage (%)	0	0

This account consists of a wide variety of items used in the distribution and general operations of the Company.

The statistical analysis indicates a 10 year estimated average life for this account. There is very little or no salvage realized from these assets.

ACCOUNT 488

COMMUNICATION EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	16	8
Depreciation Rate (%)	5.83	16.52
Salvage (%)	0	0

This account was opened in 1985 when a new telephone system, including digital switching equipment, was installed. Other smaller additions have occurred since.

Our statistical analysis indicates an excellent fit to an IOWA curve with an estimated life of 8 years.

This is reasonable in light of the life expectancy of computer based electronic communication systems.

Salvage remains at zero.

ACCOUNT 490

COMPUTER EQUIPMENT

	Present	Proposed
Estimated Average Life (Yrs.)	6	4
Depreciation Rate (%)	14.11	28.97
Salvage (%)	0	0

This account includes printers and personal computers.

The statistical results indicated a 6 year average service life, however we are recommending a life of 4 years because the assets in this account are subject to rapid technological obsolescence.

COMPARISON OF PROPOSED AND CURRENT DEPRECIATION RATES

This schedule shows the increase or decrease in depreciation recovery as a result of the proposed rates.

The calculations are self-explanatory.

The proposed increase in the annual depreciation expense is mainly due to the affect of the services account.

The increase in the depreciation rate is mainly caused by increased removal costs and the shorter life of services.

The self-adjusting nature of the remaining life technique is of paramount importance when reviewing fluctuating depreciation rates from one period to another. The depreciation "equation" is basically made of additions, retirements, cost of removal, salvage and their frequency. All these variables impact on life estimates and accrual rates. For instance, if there were significant retirements in prior periods with additions at the same level as previous periods, it is reasonable to expect a shorter estimated life because of the high turnover of assets. The high retirements would have a direct

impact on the accumulated depreciation reserve – it will be reduced. Thus, the unrecovered service value will be increased, necessitating a higher recovery rate.

GAZIFERE INC.
COMPARISON OF PROPOSED & CURRENT
DEPRECIATION RATES

LINE	A/C	ACCOUNT DESCRIPTION	Col. 1 Plant Balance 30/9/98 ($)	Col. 2 Proposed Depreciation Rate (%)	Col. 3 Proposed Annual Depreciation ($)	Col. 4 Current Depreciation Rate (%)	Col. 5 Current Annual Depreciation ($)	Col. 6 Difference In Annual Depreciation ($)
1	473	Services	19,047,042	5.55	1,057,111	4.52	860,926	196,185
2	475	Mains	35,470,994	2.78	986,094	2.58	915,152	70,942
3	477	Regulating Equipment	1,784,225	4.10	73,153	3.84	68,514	4,639
4	478	Meters	2,869,582	2.92	83,792	2.82	80,922	2,870
5	483	Office Furn. & Equip.	231,265	6.22	14,385	5.56	12,858	1,526
6	484	Transportation Equipment	154,643	13.05	20,181	16.21	25,068	-4,887
7	485	Heavy Work Equipment	34,539	9.03	3,119	7.77	2,684	435
8	486	Tools & Work Equipment	95,005	10.53	10,004	10.00	9,501	504
9	488	Communication Struct. & Equip.	168,407	16.52	27,821	5.83	9,818	18,003
10	490	490 Computer Equipment	321,043	28.97	93,006	14.11	45,299	47,707
11	TOTAL PLANT		60,176,745	3.94	2,370,964	3.41	2,052,027	318,937

RESERVE RATIOS

The depreciation reserve ratios are calculated using the formula:

$$\frac{\text{Book Reserve}}{\text{Plant Balance}} \times 100$$

Theoretically, the reserve ratio is 100% for a single unit of property at the time of its retirement assuming the estimated life equalled the actual life. For any account with a large number of items and continually growing, the ratio tends to decrease with a constant accrual rate because of the increasing account balance.

If the depreciation rates used in the past have been low in relation to the estimated average life of a unit of property, the reserve ratio will be low. As a general guideline, the reserve ratio should move in tandem with age for a unit of property.

GAZIFERE INC.
RESERVE RATIOS BY ACCOUNT

LINE	A/C	ACCOUNT DESCRIPTION	Col. 1 Book Reserve 30/9/98 ($)	Col. 2 Plant Balance 30/9/98 ($)	Col. 3 Reserve/ Plant Bal. Equals Ratio (%)
1	473	Services	2,932,444	19,047,042	15
2	475	Mains	4,879,052	35,470,994	14
3	477	Regulating Equipment	439,839	1,784,225	25
4	478	mmeters	325,018	2,869,582	11
5	483	Office Fruniture and Equipment	111,830	231,285	48
6	484	Transportation Equipment	10,365	154,643	6
7	485	Heavy Work Equipment	13,319	34,539	38
8	486	Tools and Work Equipment	41,001	95,005	43
9	488	Communication Structure and Equipment	32,081	168,407	19
10	490	Computer Equipment	107,153	321,043	33

SALVAGE RATIO CALCULATION

The salvage percentage is computed by expressing the net salvage (expenses less proceeds) as a percentage of retirements. Expenses are the costs of removal, dismantling, cut-offs, etc. Positive salvage represents the excess of sales proceeds of the retired plant unit over expenses. Negative salvage is where expenses exceed sales proceeds. The analysis consists of the most recent five years historical information on an individual year basis and cumulatively. That is, the 1998 percentage is calculated on the cumulative totals from 1994 to 1998, inclusive. The asterisk beside an amount represents a negative number. The statistical results so obtained were then reviewed for reasonableness in light of past an foreseeable events, and adjusted if necessary.

GAZIFERE
1998 DEPRECIATION STUDY
CUMULATIVE SALVAGE RATIOS

AS AT SEPTEMBER 30, 1998

A/C	YEAR	RETIREMENT	GROSS SALVAGE	EXPENSES	NET SALVAGE	YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE
473	1998	91,068	0	89,881	89,881*	98*	103*	123*	114*	151*
473	1997	55,846	0	62,357	62,357*	111*	140*	120*	166*	
473	1996	82,789	0	132,271	132,271*	159*	123*	179*		
473	1995	89,819	0	80,203	80,203*	89*	188*			
473	1994	80,524	0	240,795	240,795*	299*				
475	1998	25,991	0	7,920	7,920*	30*	83*	96*	78*	84*
475	1997	28,209	0	37,359	37,359*	132*	150*	102*	111*	
475	1996	2,942	0	9,673	9,673*	328*	68*	87*		
475	1995	22,086	0	7,361	7,361*	33*	55*			
475	1994	206	0	5,062	5,062*	2457*				
477	1998	0	0	0	0	0	0	0	0	0
477	1997	0	0	0	0	0	0	0	0	
477	1996	0	0	0	0	0	0	0		
477	1995	23,222	0	0	0	0	0			
477	1994	0	0	0	0	0				
478	1998	115,679	15,203	0	15,203	13	14	16	16	22
478	1997	129,928	20,624	0	20,624	15	17	17	24	
478	1996	106,670	21,820	0	21,820	20	18	26		
478	1995	162,434	28,323	0	28,323	17	28			
478	1994	156,913	63,815	0	63,815	40				
483	1998	0	0	0	0	0	0	0	0	0
483	1997	0	135	0	135	0	0	0	0	
483	1996	21,898	0	0	0	0	0	0		
483	1995	0	75	0	75	0	0			
483	1994	0	0	0	0	0				
484	1998	48,440	1,374	0	1,374	2	2	2	2	2
484	1997	0	0	0	0	0	0	0	0	
484	1996	0	0	0	0	0	0	0		
484	1995	0	0	0	0	0	0			
484	1994	0	0	0	0	0				
485	1998	0	0	0	0	0	0	0	0	0
485	1997	0	0	0	0	0	0	0	0	
485	1996	0	0	0	0	0	0	0		
485	1995	0	0	0	0	0	0			
485	1994	12,763	0	0	0	0				

GAZIFERE
1998 DEPRECIATION STUDY
CUMULATIVE SALVAGE RATIOS

AS AT SEPTEMBER 30, 1998

A/C	YEAR	RETIREMENT	GROSS SALVAGE	EXPENSES	NET SALVAGE	YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE
486	1998	805	0	0	0	0	0	0	0	0
486	1997	2,180	0	0	0	0	0	0	0	
486	1996	5,245	0	0	0	0	0	0		
486	1995	797	0	0	0	0	0			
486	1994	0	0	0	0	0				
488	1998	0	0	0	0	0	0	0	0	0
488	1997	0	0	0	0	0	0	0	0	
488	1996	3,161	0	0	0	0	0	0		
488	1995	0	0	0	0	0	0			
488	1994	0	0	0	0	0				
490	1998	3,085	225	0	225	7	0	0	0	0
490	1997	78,707	0	0	0	0	0	0	0	
490	1996	86,195	0	0	0	0	0	0		
490	1995	0	0	0	0	0	0			
490	1994	0	0	0	0	0				

NOTE- AN ASTERISK INDICATES A NEGATIVE RESULT.

ACCOUNT 473 SERVICES 00160

ACCOUNT CONTROL CARD

ACCOUNT NAME= 473 EARLIEST ADDITION= 1960 LATEST ADDITION= 1998 EARLIEST BALANCE= 1960 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1960	53347.	1968	59850.	1976	170029.	1984	470756.	1992	1521612.
1961	89742.	1969	74146.	1977	100043.	1985	711301.	1993	1582339.
1962	233202.	1970	58837.	1978	97479.	1986	450886.	1994	1752836.
1963	385789.	1971	164837.	1979	132749.	1987	333393.	1995	1571100.
1964	111650.	1972	195071.	1980	163715.	1988	335580.	1996	1408249.
1965	169523.	1973	255032.	1981	214400.	1989	497130.	1997	1668874.
1966	76544.	1974	245118.	1982	358920.	1990	652549.	1998	1979245.
1967	60849.	1975	256056.	1983	523004.	1991	1266928.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1960	0.	1968	11257.	1976	32972.	1984	27581.	1992	47010.
1961	0.	1969	14376.	1977	27592.	1985	40697.	1993	84506.
1962	0.	1970	31878.	1978	30916.	1986	44394.	1994	80525.
1963	0.	1971	15507.	1979	42928.	1987	51667.	1995	89820.
1964	0.	1972	31610.	1980	26406.	1988	34212.	1996	82789.
1965	0.	1973	64910.	1981	25268.	1989	46474.	1997	55846.
1966	29885.	1974	31610.	1982	22313.	1990	53466.	1998	91068.
1967	5276.	1975	32610.	1983	36578.	1991	61721.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1960	53347.	1968	1194078.	1976	2357731.	1984	4179215.	1992	9568953.
1961	143089.	1969	1253848.	1977	2430182.	1985	4849819.	1993	11066786.
1962	376291.	1970	1280807.	1978	2496745.	1986	5256311.	1994	12739097.
1963	762080.	1971	1430137.	1979	2586566.	1987	5538037.	1995	14220377.
1964	873730.	1972	1593598.	1980	2723875.	1988	5839405.	1996	15545837.
1965	1043253.	1973	1783720.	1981	2913007.	1989	6290061.	1997	17158865.
1966	1089912.	1974	1997228.	1982	3249614.	1990	6889144.	1998	19047042.
1967	1145485.	1975	2220674.	1983	3736040.	1991	8094351.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 473 SERVICES 00160

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	28.2 YRS.	0.6217E 10	2	100.00
L2	33.9 YRS.	0.2279E 11	4	66.30
L1	40.8 YRS.	0.2446E 11	4	50.60
L5	28.4 YRS.	0.2462E 11	4	97.12
L1.5	36.8 YRS.	0.2463E 11	4	58.44
L3	30.7 YRS.	0.2510E 11	4	79.12
S5	28.3 YRS.	0.2570E 11	4	99.92
S1	33.3 YRS.	0.2629E 11	4	64.06
L0.5	46.9 YRS.	0.2727E 11	4	43.38
S0	39.9 YRS.	0.2733E 11	4	47.50
S0.5	36.1 YRS.	0.2783E 11	4	55.34
L0	54.6 YRS.	0.2792E 11	4	37.99
L4	29.1 YRS.	0.2807E 11	4	90.26
S1.5	31.8 YRS.	0.2885E 11	4	71.21
S2	30.4 YRS.	0.2915E 11	4	79.17
O4	146.3 YRS.	0.3032E 11	4	28.65
R5	28.4 YRS.	0.3044E 11	4	100.00
O3	105.6 YRS.	0.3045E 11	4	28.94
O2	72.5 YRS.	0.3049E 11	4	29.84
SC	64.4 YRS.	0.3053E 11	4	29.91
R0.5	52.9 YRS.	0.3086E 11	4	32.68
R1	43.5 YRS.	0.3194E 11	5	38.98
S2.5	29.6 YRS.	0.3213E 11	5	85.25
S3	29.2 YRS.	0.3392E 11	5	90.05
R1.5	37.7 YRS.	0.3441E 11	5	48.33
S4	28.4 YRS.	0.3653E 11	5	98.03
R2	33.8 YRS.	0.3677E 11	5	60.99
R2.5	31.8 YRS.	0.4238E 11	5	72.85
R4	28.8 YRS.	0.4468E 11	6	97.33
R3	30.2 YRS.	0.4573E 11	6	84.65
SQ	30.4 YRS.	0.1272E 12	10	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 473 SERVICES 00290

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
L1	39.5 YRS.	0.8861E 11	7	52.60
L0	52.4 YRS.	0.9228E 11	7	39.76
L0.5	45.1 YRS.	0.9407E 11	8	45.58
S0	38.7 YRS.	0.9542E 11	8	49.55
L1.5	36.1 YRS.	0.9958E 11	8	60.00
S0.5	35.4 YRS.	0.1032E 12	8	57.08
L2	33.3 YRS.	0.1032E 12	8	67.95
O4	138.5 YRS.	0.1053E 12	8	30.09
O3	100.0 YRS.	0.1056E 12	8	30.43
O2	69.4 YRS.	0.1067E 12	8	31.20
SC	61.8 YRS.	0.1069E 12	8	31.14
R0.5	50.8 YRS.	0.1094E 12	8	34.32
S1	32.6 YRS.	0.1096E 12	8	66.10
R1	41.7 YRS.	0.1170E 12	8	41.51
S1.5	30.8 YRS.	0.1290E 12	9	74.57
R1.5	36.6 YRS.	0.1317E 12	9	51.19
L3	30.1 YRS.	0.1358E 12	9	80.71
S2	29.8 YRS.	0.1477E 12	10	81.46
R2	32.8 YRS.	0.1529E 12	10	64.85
S2.5	29.0 YRS.	0.1741E 12	10	87.36
L4	28.3 YRS.	0.1868E 12	11	92.33
R2.5	30.8 YRS.	0.1903E 12	11	77.19
S3	28.3 YRS.	0.1988E 12	11	92.77
L5	27.6 YRS.	0.2264E 12	12	98.15
R3	29.1 YRS.	0.2271E 12	12	89.05
S6	27.0 YRS.	0.2276E 12	12	100.00
S4	27.6 YRS.	0.2629E 12	13	99.01
S5	27.2 YRS.	0.2705E 12	13	99.99
R4	27.8 YRS.	0.2995E 12	14	99.03
R5	27.1 YRS.	0.3135E 12	14	100.00
SQ	29.4 YRS.	0.1261E 13	29	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 473 SERVICES 00310

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
L0	51.4 YRS.	0.1993E 12	11	40.66
O4	134.9 YRS.	0.2058E 12	12	30.80
O3	97.4 YRS.	0.2071E 12	12	31.18
SC	60.0 YRS.	0.2106E 12	12	32.09
O2	67.5 YRS.	0.2108E 12	12	32.03
L0.5	44.2 YRS.	0.2150E 12	12	46.71
R0.5	49.3 YRS.	0.2205E 12	12	35.61
L1	38.7 YRS.	0.2222E 12	12	53.94
S0	38.0 YRS.	0.2239E 12	12	50.96
R1	40.9 YRS.	0.2454E 12	13	42.84
S0.5	34.7 YRS.	0.2569E 12	13	58.83
L1.5	35.4 YRS.	0.2661E 12	13	61.54
R1.5	35.9 YRS.	0.2916E 12	14	53.16
S1	32.0 YRS.	0.2939E 12	14	68.14
L2	32.6 YRS.	0.3061E 12	14	69.55
R2	32.4 YRS.	0.3617E 12	15	66.16
S1.5	30.5 YRS.	0.3625E 12	15	75.67
S2	29.2 YRS.	0.4341E 12	17	83.65
L3	29.5 YRS.	0.4542E 12	17	82.22
R2.5	30.5 YRS.	0.4709E 12	18	78.59
S2.5	28.4 YRS.	0.5289E 12	19	89.29
R3	28.7 YRS.	0.5956E 12	20	90.85
S3	27.7 YRS.	0.6280E 12	20	94.30
L4	27.4 YRS.	0.7073E 12	22	94.10
R4	27.4 YRS.	0.8660E 12	24	99.49
S4	27.0 YRS.	0.9125E 12	25	99.41
L5	26.7 YRS.	0.9614E 12	25	98.88
R5	26.4 YRS.	0.1136E 13	28	100.00
S5	26.4 YRS.	0.1160E 13	28	100.00
S6	26.0 YRS.	0.1360E 13	30	100.00
SQ	28.3 YRS.	0.2507E 13	41	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
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ACCOUNT 473 SERVICES 00330

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
04	132.2 YRS.	0.3199E 12	15	31.34
03	95.5 YRS.	0.3224E 12	15	31.75
02	66.2 YRS.	0.3287E 12	15	32.68
SC	59.1 YRS.	0.3289E 12	15	32.57
L0	50.6 YRS.	0.3347E 12	16	41.34
R0.5	48.8 YRS.	0.3484E 12	16	36.04
L0.5	43.9 YRS.	0.3762E 12	16	46.99
S0	37.8 YRS.	0.3942E 12	17	51.31
R1	40.5 YRS.	0.3962E 12	17	43.51
L1	38.2 YRS.	0.4172E 12	17	54.93
S0.5	34.1 YRS.	0.4680E 12	18	60.15
R1.5	35.5 YRS.	0.4807E 12	19	54.14
L1.5	34.8 YRS.	0.5097E 12	19	62.67
S1	31.5 YRS.	0.5590E 12	20	69.65
R2	32.1 YRS.	0.6131E 12	21	67.42
L2	32.1 YRS.	0.6183E 12	21	70.71
S1.5	30.1 YRS.	0.6888E 12	22	77.27
R2.5	30.2 YRS.	0.7973E 12	24	79.91
S2	28.7 YRS.	0.8418E 12	25	85.19
L3	29.0 YRS.	0.9339E 12	26	83.29
S2.5	28.0 YRS.	0.1017E 13	27	90.60
R3	28.7 YRS.	0.1025E 13	28	90.84
S3	27.6 YRS.	0.1206E 13	30	94.63
L4	27.3 YRS.	0.1371E 13	32	94.37
R4	27.1 YRS.	0.1494E 13	33	99.68
S4	26.6 YRS.	0.1711E 13	36	99.62
L5	26.6 YRS.	0.1820E 13	37	98.97
R5	26.4 YRS.	0.2007E 13	39	100.00
S5	26.2 YRS.	0.2121E 13	40	100.00
S6	26.1 YRS.	0.2389E 13	42	100.00
SQ	28.4 YRS.	0.3554E 13	52	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 473 SERVICES 00350

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 38 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	131.7 YRS.	0.4005E 12	20	31.46
O3	95.1 YRS.	0.4042E 12	20	31.87
SC	58.5 YRS.	0.4133E 12	21	32.90
O2	65.3 YRS.	0.4135E 12	21	33.15
R0.5	48.3 YRS.	0.4420E 12	21	36.49
L0	50.1 YRS.	0.4516E 12	22	41.81
R1	40.1 YRS.	0.5113E 12	23	44.21
L0.5	43.5 YRS.	0.5208E 12	23	47.57
S0	37.4 YRS.	0.5524E 12	24	52.03
L1	38.2 YRS.	0.6103E 12	25	54.94
R1.5	35.5 YRS.	0.6295E 12	26	54.17
S0.5	34.1 YRS.	0.6669E 12	26	60.15
L1.5	34.8 YRS.	0.7479E 12	28	62.69
S1	31.5 YRS.	0.8193E 12	29	69.66
R2	31.8 YRS.	0.8197E 12	29	68.73
L2	32.1 YRS.	0.9294E 12	31	70.73
S1.5	30.1 YRS.	0.1001E 13	32	77.28
R2.5	29.9 YRS.	0.1063E 13	33	81.25
S2	28.7 YRS.	0.1219E 13	36	85.20
L3	29.0 YRS.	0.1351E 13	38	83.30
R3	28.6 YRS.	0.1368E 13	38	91.27
S2.5	28.0 YRS.	0.1436E 13	39	90.61
S3	27.6 YRS.	0.1680E 13	42	94.64
L4	27.3 YRS.	0.1867E 13	45	94.38
R4	27.3 YRS.	0.1957E 13	46	99.57
S4	26.6 YRS.	0.2246E 13	49	99.62
L5	26.6 YRS.	0.2362E 13	50	98.98
R5	26.3 YRS.	0.2547E 13	52	100.00
S5	26.2 YRS.	0.2668E 13	53	100.00
S6	26.1 YRS.	0.2936E 13	56	100.00
SQ	28.4 YRS.	0.4101E 13	66	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
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REMAINING LIFE CALCULATION

ACCOUNT 473 SERVICES 00350

REMAINING LIFE AND AGE FOR CURVE, R5 SERVICE LIFE = 50.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	1979245	1979245	49.50	97971.81	989.62
1997	1.5	1668874	1668874	48.50	80939.69	2503.31
1996	2.5	1408249	1408249	47.50	66891.25	3520.62
1995	3.5	1571100	1571100	46.50	73055.50	5498.85
1994	4.5	1752836	1752836	45.50	79753.31	7887.76
1993	5.5	1582339	1582339	44.50	70413.44	8702.86
1992	6.5	1521612	1521612	43.50	66189.50	9890.48
1991	7.5	1266928	1266928	42.50	53843.95	9501.96
1990	8.5	652549	652549	41.50	27080.52	5546.66
1989	9.5	497130	497130	40.50	20133.57	4722.73
1988	10.5	335580	335580	39.50	13255.28	3523.59
1987	11.5	333393	333393	38.50	12835.50	3834.02
1986	12.5	450886	450886	37.50	16908.04	5636.07
1985	13.5	711301	711301	36.50	25962.20	9602.56
1984	14.5	470756	470755	35.50	16711.62	6825.95
1983	15.5	523004	523003	34.50	18043.39	8106.54
1982	16.5	358920	358919	33.50	12023.64	5922.16
1981	17.5	214400	214399	32.50	6967.88	3751.98
1980	18.5	163715	163714	31.50	5156.93	3028.71
1979	19.5	132749	132748	30.50	4048.78	2588.59
1978	20.5	97479	97477	29.50	2875.58	1998.28
1977	21.5	100043	100039	28.50	2851.19	2150.84
1976	22.5	170029	170013	27.50	4675.73	3825.29
1975	23.5	256056	256007	26.50	6785.44	6016.16
1974	24.5	245118	245028	25.51	6250.52	6003.18
1973	25.5	255032	254865	24.52	6248.44	6499.05
1972	26.5	195071	194854	23.53	4584.45	5163.63
1971	27.5	164837	133199	22.54	3002.77	3662.97
			19047042.		805459.93	146904.43

REMAINING LIFE = 805459.93 / 19047.04 = 42.29

AGE = 146904.43 / 19047.04 = 7.71

ACCOUNT 475 MAINS 00390

ACCOUNT CONTROL CARD

ACCOUNT NAME= 475 EARLIEST ADDITION= 1959 LATEST ADDITION= 1998 EARLIEST BALANCE= 1960 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1959	3176726.	1967	79292.	1975	282814.	1983	943223.	1991	1260709.
1960	0.	1968	65374.	1976	228087.	1984	778337.	1992	1644295.
1961	224746.	1969	64100.	1977	140303.	1985	1656979.	1993	1472176.
1962	390931.	1970	49027.	1978	66822.	1986	763046.	1994	1435361.
1963	480023.	1971	84622.	1979	83357.	1987	408999.	1995	2127862.
1964	48665.	1972	49399.	1980	104227.	1988	390671.	1996	6195128.
1965	58858.	1973	594943.	1981	107043.	1989	568528.	1997	3613254.
1966	25816.	1974	365416.	1982	241910.	1990	719648.	1998	4840657.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1960	0.	1968	1420.	1976	21800.	1984	3303.	1992	12409.
1961	0.	1969	43.	1977	15313.	1985	38.	1993	12418.
1962	0.	1970	4384.	1978	866.	1986	4376.	1994	206.
1963	0.	1971	12729.	1979	11013.	1987	177.	1995	22087.
1964	0.	1972	0.	1980	10239.	1988	1559.	1996	2942.
1965	0.	1973	3995.	1981	18045.	1989	1068.	1997	28209.
1966	0.	1974	43875.	1982	8572.	1990	4848.	1998	25991.
1967	51329.	1975	29279.	1983	529.	1991	7318.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1960	3176726.	1968	4497682.	1976	6099985.	1984	8497327.	1992	15878409.
1961	3401472.	1969	4561739.	1977	6224975.	1985	10154268.	1993	17338167.
1962	3792403.	1970	4606382.	1978	6290931.	1986	10912938.	1994	18773322.
1963	4272426.	1971	4678275.	1979	6363275.	1987	11321760.	1995	20879097.
1964	4321091.	1972	4727674.	1980	6457263.	1988	11710872.	1996	27071283.
1965	4379949.	1973	5318622.	1981	6546261.	1989	12278332.	1997	30656328.
1966	4405765.	1974	5640163.	1982	6779599.	1990	12993132.	1998	35470994.
1967	4433728.	1975	5893698.	1983	7722293.	1991	14246523.	0	0.

DEPRECIATION STUDY
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ACCOUNT 475 MAINS 00390

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S0	157.0 YRS.	0.4160E 09	0	5.62
L0	272.0 YRS.	0.4653E 09	0	4.86
S0.5	123.9 YRS.	0.4851E 09	0	5.96
L0.5	205.1 YRS.	0.5086E 09	0	4.99
L1	142.8 YRS.	0.6851E 09	0	5.59
R2	131.5 YRS.	0.6881E 09	0	4.68
R1.5	197.7 YRS.	0.7045E 09	0	4.23
R1	272.7 YRS.	0.7095E 09	0	4.09
L1.5	113.9 YRS.	0.7152E 09	0	6.15
R0.5	383.9 YRS.	0.7188E 09	0	3.99
SC	503.2 YRS.	0.7209E 09	0	3.92
O3	832.9 YRS.	0.7214E 09	0	3.92
O2	560.5 YRS.	0.7254E 09	0	3.96
O4	***** YRS.	0.7256E 09	0	3.91
R2.5	99.2 YRS.	0.7754E 09	0	5.19
S1	94.4 YRS.	0.8115E 09	0	7.15
L2	87.3 YRS.	0.1155E 10	0	7.35
S1.5	82.0 YRS.	0.1170E 10	0	7.44
R3	74.1 YRS.	0.1201E 10	0	6.60
S2	69.8 YRS.	0.2582E 10	0	8.62
L3	65.8 YRS.	0.3525E 10	0	8.81
S2.5	63.7 YRS.	0.3799E 10	1	9.02
R4	56.4 YRS.	0.4822E 10	1	8.94
S3	58.1 YRS.	0.7494E 10	1	9.88
L4	54.6 YRS.	0.8294E 10	1	10.25
S4	50.0 YRS.	0.2516E 11	2	11.69
R5	47.3 YRS.	0.2643E 11	2	11.67
L5	48.4 YRS.	0.2786E 11	2	11.44
S5	45.6 YRS.	0.6979E 11	4	13.05
S6	42.7 YRS.	0.1546E 12	6	16.00
SQ	46.5 YRS.	0.5059E 12	11	0.0

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DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 475 MAINS 00520

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
L0	260.1 YRS.	0.6709E 10	1	5.17
O4	***** YRS.	0.7090E 10	1	4.17
O3	781.7 YRS.	0.7096E 10	1	4.18
O2	531.3 YRS.	0.7106E 10	1	4.17
SC	471.5 YRS.	0.7109E 10	1	4.19
R0.5	363.4 YRS.	0.7136E 10	1	4.22
R1	258.2 YRS.	0.7227E 10	1	4.35
L0.5	198.1 YRS.	0.7269E 10	1	5.25
S0	151.5 YRS.	0.7303E 10	1	5.96
R1.5	189.0 YRS.	0.7387E 10	1	4.47
R2	125.8 YRS.	0.8170E 10	1	5.01
S0.5	119.6 YRS.	0.8745E 10	1	6.39
R2.5	94.8 YRS.	0.9825E 10	1	5.66
L1	138.0 YRS.	0.9875E 10	1	5.99
L1.5	110.0 YRS.	0.1114E 11	1	6.64
S1	91.7 YRS.	0.1359E 11	1	7.70
R3	71.5 YRS.	0.1611E 11	1	7.28
L2	85.1 YRS.	0.1721E 11	2	7.91
S1.5	79.6 YRS.	0.1804E 11	2	8.09
S2	67.8 YRS.	0.3246E 11	2	9.59
L3	64.2 YRS.	0.3887E 11	3	9.79
S2.5	62.5 YRS.	0.4283E 11	3	9.78
R4	54.8 YRS.	0.4987E 11	3	10.21
S3	56.4 YRS.	0.7324E 11	4	11.45
L4	53.3 YRS.	0.7776E 11	4	11.68
S4	49.0 YRS.	0.1755E 12	6	13.58
R5	46.7 YRS.	0.1775E 12	6	13.04
L5	47.2 YRS.	0.1914E 12	6	14.05
S5	45.2 YRS.	0.3264E 12	8	14.60
S6	42.8 YRS.	0.4793E 12	10	15.85
SQ	46.6 YRS.	0.8440E 12	14	0.0

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 475 MAINS 00540

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	***** YRS.	0.3265E 11	2	4.41
O3	739.4 YRS.	0.3267E 11	2	4.42
SC	443.9 YRS.	0.3269E 11	2	4.45
O2	497.5 YRS.	0.3270E 11	2	4.46
R0.5	342.1 YRS.	0.3290E 11	2	4.49
R1	245.5 YRS.	0.3357E 11	2	4.59
R1.5	177.9 YRS.	0.3467E 11	2	4.80
L0	249.7 YRS.	0.3467E 11	2	5.47
L0.5	188.3 YRS.	0.3691E 11	2	5.67
R2	120.8 YRS.	0.3899E 11	2	5.33
S0	147.0 YRS.	0.3928E 11	2	6.28
S0.5	116.0 YRS.	0.4575E 11	3	6.78
R2.5	92.0 YRS.	0.4643E 11	3	6.01
L1	132.5 YRS.	0.4806E 11	3	6.50
L1.5	106.7 YRS.	0.5449E 11	3	7.11
S1	88.9 YRS.	0.6645E 11	3	8.30
R3	69.4 YRS.	0.7175E 11	4	7.93
L2	82.5 YRS.	0.7663E 11	4	8.68
S1.5	77.2 YRS.	0.8189E 11	4	8.83
S2	66.4 YRS.	0.1293E 12	5	10.31
L3	63.2 YRS.	0.1425E 12	5	10.44
S2.5	61.2 YRS.	0.1569E 12	5	10.63
R4	54.2 YRS.	0.1718E 12	6	10.72
S3	55.9 YRS.	0.2346E 12	7	12.07
L4	53.0 YRS.	0.2503E 12	7	12.00
S4	49.0 YRS.	0.4233E 12	9	13.64
R5	46.2 YRS.	0.4246E 12	9	14.24
L5	47.4 YRS.	0.4547E 12	10	13.50
S5	45.2 YRS.	0.6103E 12	11	14.70
S6	42.7 YRS.	0.7668E 12	13	16.03
SQ	46.5 YRS.	0.1131E 13	15	0.0

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 475 MAINS 00560

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	975.7 YRS.	0.7284E 11	4	4.67
O3	704.4 YRS.	0.7289E 11	4	4.63
SC	424.3 YRS.	0.7296E 11	4	4.65
O2	474.0 YRS.	0.7301E 11	4	4.68
R0.5	325.6 YRS.	0.7365E 11	4	4.72
R1	233.6 YRS.	0.7556E 11	4	4.85
R1.5	171.0 YRS.	0.7853E 11	4	5.04
L0	238.9 YRS.	0.8233E 11	4	5.81
L0.5	181.9 YRS.	0.8738E 11	4	5.97
R2	116.1 YRS.	0.8974E 11	4	5.67
S0	141.3 YRS.	0.9583E 11	4	6.70
R2.5	88.9 YRS.	0.1071E 12	5	6.43
S0.5	112.7 YRS.	0.1108E 12	5	7.17
L1	129.3 YRS.	0.1130E 12	5	6.83
L1.5	104.1 YRS.	0.1291E 12	5	7.51
S1	87.2 YRS.	0.1586E 12	6	8.71
R3	68.1 YRS.	0.1624E 12	6	8.34
L2	81.4 YRS.	0.1761E 12	6	9.08
S1.5	76.5 YRS.	0.1885E 12	6	9.07
S2	65.8 YRS.	0.2769E 12	8	10.66
L3	62.3 YRS.	0.2938E 12	8	11.12
S2.5	60.6 YRS.	0.3194E 12	8	11.04
R4	53.8 YRS.	0.3360E 12	8	11.13
S3	55.9 YRS.	0.4362E 12	10	12.04
L4	52.8 YRS.	0.4628E 12	10	12.30
S4	49.0 YRS.	0.6598E 12	12	13.58
R5	46.2 YRS.	0.6607E 12	12	14.02
L5	47.2 YRS.	0.6931E 12	12	14.03
S5	45.2 YRS.	0.8505E 12	14	14.60
S6	42.8 YRS.	0.1007E 13	15	15.85
SQ	46.6 YRS.	0.1372E 13	17	0.0

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 475 MAINS 00580

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 30 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	960.7 YRS.	0.9580E 11	4	4.74
O3	686.6 YRS.	0.9586E 11	4	4.75
SC	415.9 YRS.	0.9605E 11	4	4.75
O2	462.1 YRS.	0.9609E 11	4	4.80
R0.5	318.9 YRS.	0.9714E 11	4	4.82
R1	228.9 YRS.	0.1004E 12	5	4.96
R1.5	167.5 YRS.	0.1053E 12	5	5.17
L0	234.1 YRS.	0.1158E 12	5	5.98
L0.5	180.1 YRS.	0.1233E 12	5	6.07
R2	113.7 YRS.	0.1236E 12	5	5.86
S0	139.9 YRS.	0.1409E 12	5	6.82
R2.5	88.0 YRS.	0.1507E 12	6	6.57
L1	127.9 YRS.	0.1628E 12	6	6.97
S0.5	111.6 YRS.	0.1649E 12	6	7.32
L1.5	103.0 YRS.	0.1904E 12	6	7.68
R3	68.1 YRS.	0.2358E 12	7	8.36
S1	86.3 YRS.	0.2419E 12	7	8.93
L2	80.5 YRS.	0.2650E 12	8	9.36
S1.5	75.7 YRS.	0.2824E 12	8	9.34
S2	65.8 YRS.	0.4015E 12	10	10.66
L3	62.3 YRS.	0.4199E 12	10	11.14
S2.5	60.6 YRS.	0.4505E 12	10	11.05
R4	53.8 YRS.	0.4635E 12	10	11.16
S3	55.9 YRS.	0.5834E 12	12	12.05
L4	52.7 YRS.	0.6143E 12	12	12.33
S4	49.0 YRS.	0.8130E 12	14	13.60
R5	46.2 YRS.	0.8142E 12	14	14.09
L5	47.2 YRS.	0.8465E 12	14	14.08
S5	45.2 YRS.	0.1004E 13	15	14.63
S6	42.7 YRS.	0.1160E 13	17	15.91
SQ	46.5 YRS.	0.1525E 13	19	0.0

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 475 MAINS 00600

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 38 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	960.7 YRS.	0.9928E 11	5	4.74
O3	686.6 YRS.	0.9934E 11	5	4.75
SC	415.9 YRS.	0.9951E 11	5	4.75
O2	466.7 YRS.	0.9955E 11	5	4.75
R0.5	318.9 YRS.	0.1006E 12	5	4.82
R1	228.9 YRS.	0.1036E 12	5	4.96
R1.5	167.5 YRS.	0.1083E 12	5	5.17
L0	234.1 YRS.	0.1180E 12	5	5.98
L0.5	180.1 YRS.	0.1256E 12	5	6.07
R2	113.7 YRS.	0.1261E 12	5	5.86
S0	139.9 YRS.	0.1433E 12	6	6.82
R2.5	88.0 YRS.	0.1531E 12	6	6.57
L1	127.9 YRS.	0.1653E 12	6	6.97
S0.5	111.6 YRS.	0.1677E 12	6	7.32
L1.5	103.0 YRS.	0.1934E 12	7	7.68
R3	68.1 YRS.	0.2390E 12	7	8.36
S1	86.3 YRS.	0.2461E 12	8	8.93
L2	80.5 YRS.	0.2693E 12	8	9.36
S1.5	75.7 YRS.	0.2869E 12	8	9.34
S2	65.8 YRS.	0.4068E 12	10	10.66
L3	62.3 YRS.	0.4252E 12	10	11.14
S2.5	60.6 YRS.	0.4558E 12	10	11.05
R4	53.8 YRS.	0.4686E 12	11	11.16
S3	55.9 YRS.	0.5888E 12	12	12.05
L4	52.7 YRS.	0.6197E 12	12	12.33
S4	49.0 YRS.	0.8184E 12	14	13.60
R5	46.2 YRS.	0.8196E 12	14	14.09
L5	47.2 YRS.	0.8519E 12	14	14.08
S5	45.2 YRS.	0.1009E 13	16	14.63
S6	42.7 YRS.	0.1166E 13	17	15.91
SQ	46.5 YRS.	0.1530E 13	20	0.0

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 475 MAINS 00600

REMAINING LIFE AND AGE FOR CURVE, SQ SERVICE LIFE = 70.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	4840657	4840657	69.50	336425.44	2420.33
1997	1.5	3613254	3613254	68.50	247507.75	5419.88
1996	2.5	6195128	6195128	67.50	418170.81	15487.82
1995	3.5	2127862	2127862	66.50	141502.75	7447.52
1994	4.5	1435361	1435361	65.50	94016.06	6459.12
1993	5.5	1472176	1472176	64.50	94955.25	8096.96
1992	6.5	1644295	1644295	63.50	104412.63	10687.91
1991	7.5	1260709	1260709	62.50	78794.25	9455.31
1990	8.5	719648	719648	61.50	44258.32	6117.00
1989	9.5	568528	568528	60.50	34395.91	5401.02
1988	10.5	390671	390671	59.50	23244.91	4102.04
1987	11.5	408999	408999	58.50	23926.41	4703.48
1986	12.5	763046	763046	57.50	43875.11	9538.07
1985	13.5	1656979	1656979	56.50	93619.25	22369.21
1984	14.5	778337	778337	55.50	43197.68	11285.88
1983	15.5	943223	943223	54.50	51405.63	14619.95
1982	16.5	241910	241910	53.50	12942.18	3991.51
1981	17.5	107043	107043	52.50	5619.75	1873.25
1980	18.5	104227	104227	51.50	5367.69	1928.20
1979	19.5	83357	83357	50.50	4209.52	1625.46
1978	20.5	66822	66822	49.50	3307.69	1369.85
1977	21.5	140303	140303	48.50	6804.69	3016.51
1976	22.5	228087	228087	47.50	10834.12	5131.95
1975	23.5	282814	282814	46.50	13150.84	6646.13
1974	24.5	365416	365416	45.50	16626.42	8952.69
1973	25.5	594943	594943	44.50	26474.94	15171.04
1972	26.5	49399	49399	43.50	2148.85	1309.07
1971	27.5	84622	84622	42.50	3596.43	2327.10
1970	28.5	49027	49027	41.50	2034.62	1397.27
1969	29.5	64100	64100	40.50	2596.05	1890.95
1968	30.5	65374	65374	39.50	2582.27	1993.91
1967	31.5	79292	79292	38.50	3052.74	2497.70
1966	32.5	25816	25816	37.50	968.10	839.02
1965	33.5	58858	58858	36.50	2148.32	1971.74
1964	34.5	48665	48665	35.50	1727.61	1678.94
1963	35.5	480023	480023	34.50	16560.78	17040.81
1962	36.5	390931	390931	33.50	13096.18	14268.98
1961	37.5	224746	224746	32.50	7304.23	8427.97
1960	38.5	0	0	31.50	0.0	0.0
1959	39.5	3176726	2816346	30.50	85898.44	111245.63
			35470994.		2122760.62	360207.21

= 10.15

360207.21 / 35470.99 = AGE

= 59.84

2122760.62 / 35470.99 = REMAINING LIFE

ACCOUNT 477 REGULATING EQUIPMENT 00630

ACCOUNT CONTROL CARD

ACCOUNT NAME= 477 EARLIEST ADDITION= 1959 LATEST ADDITION= 1998 EARLIEST BALANCE= 1960 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1959	33461.	1967	2305.	1975	19812.	1983	53656.	1991	149850.
1960	0.	1968	557.	1976	10257.	1984	33731.	1992	78998.
1961	9397.	1969	0.	1977	3772.	1985	44860.	1993	83705.
1962	13315.	1970	60.	1978	6977.	1986	64041.	1994	89128.
1963	3823.	1971	0.	1979	7074.	1987	56088.	1995	11658.
1964	696.	1972	5.	1980	0.	1988	53844.	1996	423126.
1965	6389.	1973	15119.	1981	13142.	1989	72484.	1997	115384.
1966	2426.	1974	2957.	1982	98569.	1990	94539.	1998	232415.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1960	0.	1968	0.	1976	1565.	1984	0.	1992	0.
1961	0.	1969	0.	1977	0.	1985	0.	1993	24513.
1962	0.	1970	0.	1978	0.	1986	10396.	1994	0.
1963	0.	1971	0.	1979	0.	1987	0.	1995	23222.
1964	0.	1972	0.	1980	0.	1988	19227.	1996	0.
1965	0.	1973	0.	1981	0.	1989	13194.	1997	0.
1966	0.	1974	2.	1982	0.	1990	29412.	1998	0.
1967	0.	1975	0.	1983	0.	1991	9743.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1960	41340.	1968	80248.	1976	126891.	1984	343812.	1992	876544.
1961	50737.	1969	80248.	1977	130663.	1985	388672.	1993	935736.
1962	64052.	1970	80308.	1978	137640.	1986	442317.	1994	1024864.
1963	67875.	1971	80308.	1979	144714.	1987	498405.	1995	1013300.
1964	68571.	1972	80313.	1980	144714.	1988	533022.	1996	1436426.
1965	74960.	1973	95432.	1981	157856.	1989	592312.	1997	1551810.
1966	77386.	1974	98387.	1982	256425.	1990	657439.	1998	1784225.
1967	79691.	1975	118199.	1983	310081.	1991	797546.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 477 REGULATING EQUIPMENT 00630

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	19.5 YRS.	0.3270E 09	5	100.00
S5	20.0 YRS.	0.5836E 09	7	100.00
L5	20.5 YRS.	0.6868E 09	8	100.00
R3	24.5 YRS.	0.7403E 09	8	99.92
R5	20.2 YRS.	0.7551E 09	9	100.00
R4	21.9 YRS.	0.7713E 09	9	100.00
L4	21.8 YRS.	0.7914E 09	9	99.91
S4	20.7 YRS.	0.7966E 09	9	100.00
S3	22.4 YRS.	0.8214E 09	9	99.99
S2.5	23.2 YRS.	0.8572E 09	9	99.61
R2.5	26.5 YRS.	0.9221E 09	9	95.13
S2	24.3 YRS.	0.9497E 09	10	98.22
L3	23.7 YRS.	0.9895E 09	10	95.78
S1.5	25.9 YRS.	0.1046E 10	10	92.98
R2	28.5 YRS.	0.1107E 10	10	85.14
L2	27.0 YRS.	0.1133E 10	11	84.62
S1	27.2 YRS.	0.1146E 10	11	86.14
L1.5	29.9 YRS.	0.1169E 10	11	75.73
S0.5	29.8 YRS.	0.1186E 10	11	74.78
R1.5	31.9 YRS.	0.1204E 10	11	68.64
S0	33.0 YRS.	0.1212E 10	11	63.55
L0.5	38.1 YRS.	0.1219E 10	11	57.01
L0	44.7 YRS.	0.1226E 10	11	48.58
L1	33.1 YRS.	0.1235E 10	11	66.54
R1	36.3 YRS.	0.1236E 10	11	53.72
O2	59.0 YRS.	0.1244E 10	11	37.61
O3	85.1 YRS.	0.1244E 10	11	36.03
SC	52.7 YRS.	0.1245E 10	11	37.51
O4	117.9 YRS.	0.1245E 10	11	35.38
R0.5	43.4 YRS.	0.1245E 10	11	43.14
SQ	21.2 YRS.	0.1420E 10	12	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 477 REGULATING EQUIPMENT 00760

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R3	24.5 YRS.	0.1429E 10	11	99.91
R2.5	26.3 YRS.	0.1541E 10	11	95.65
S2	24.1 YRS.	0.1688E 10	12	98.46
S2.5	23.5 YRS.	0.1693E 10	12	99.49
S1.5	25.5 YRS.	0.1756E 10	12	93.88
R2	28.0 YRS.	0.1813E 10	12	87.12
L3	23.7 YRS.	0.1823E 10	12	95.73
S6	19.5 YRS.	0.1824E 10	12	100.00
S3	22.5 YRS.	0.1865E 10	12	99.99
L2	26.8 YRS.	0.1899E 10	12	85.14
S1	26.9 YRS.	0.1903E 10	12	87.02
L1.5	29.3 YRS.	0.1935E 10	13	76.99
L4	21.9 YRS.	0.1962E 10	13	99.90
R1.5	31.3 YRS.	0.1971E 10	13	70.74
S0.5	29.5 YRS.	0.1975E 10	13	75.72
R1	35.3 YRS.	0.2023E 10	13	56.16
O4	114.5 YRS.	0.2023E 10	13	36.26
L0.5	37.4 YRS.	0.2023E 10	13	58.15
O3	82.7 YRS.	0.2024E 10	13	36.96
O2	57.3 YRS.	0.2026E 10	13	38.71
SC	51.1 YRS.	0.2027E 10	13	38.66
S0	32.3 YRS.	0.2027E 10	13	65.19
R0.5	42.1 YRS.	0.2032E 10	13	44.73
L0	43.5 YRS.	0.2040E 10	13	50.04
L1	32.5 YRS.	0.2047E 10	13	67.82
R4	22.4 YRS.	0.2143E 10	13	100.00
S5	20.0 YRS.	0.2169E 10	13	100.00
L5	20.6 YRS.	0.2199E 10	13	100.00
S4	20.9 YRS.	0.2323E 10	14	100.00
R5	20.4 YRS.	0.2415E 10	14	100.00
SQ	21.2 YRS.	0.3539E 10	17	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 477 REGULATING EQUIPMENT 00780

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	121.1 YRS.	0.6613E 10	24	34.60
O3	87.4 YRS.	0.6616E 10	24	35.20
SC	53.7 YRS.	0.6618E 10	24	36.76
O2	60.0 YRS.	0.6619E 10	24	37.00
R0.5	44.5 YRS.	0.6631E 10	24	41.80
R1	36.9 YRS.	0.6648E 10	24	52.46
R1.5	32.3 YRS.	0.6658E 10	24	66.94
R2	28.9 YRS.	0.6742E 10	24	83.46
R2.5	27.5 YRS.	0.6750E 10	24	92.67
L0	45.3 YRS.	0.6828E 10	24	47.89
S0	33.7 YRS.	0.7020E 10	25	61.94
L0.5	39.0 YRS.	0.7069E 10	25	55.57
S0.5	30.4 YRS.	0.7243E 10	25	72.94
R3	26.1 YRS.	0.7348E 10	25	98.82
L1	33.5 YRS.	0.7522E 10	26	65.61
S1	28.1 YRS.	0.7681E 10	26	83.45
L1.5	30.6 YRS.	0.7847E 10	26	74.10
S1.5	26.5 YRS.	0.8027E 10	26	91.17
L2	27.9 YRS.	0.8687E 10	28	82.52
S2	25.4 YRS.	0.8774E 10	28	96.58
S2.5	25.0 YRS.	0.9441E 10	29	98.33
R4	25.5 YRS.	0.9818E 10	29	100.00
L3	25.2 YRS.	0.1046E 11	30	93.12
S3	24.6 YRS.	0.1056E 11	30	99.59
L4	24.6 YRS.	0.1246E 11	33	98.85
S4	25.2 YRS.	0.1316E 11	34	99.98
R5	26.1 YRS.	0.1341E 11	34	100.00
S5	26.5 YRS.	0.1447E 11	36	100.00
S6	27.5 YRS.	0.1458E 11	36	100.00
L5	25.5 YRS.	0.1458E 11	36	99.76
SQ	29.9 YRS.	0.1769E 11	40	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 477 REGULATING EQUIPMENT 00800

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R2.5	27.7 YRS.	0.9478E 10	31	91.94
O4	124.1 YRS.	0.9537E 10	31	33.86
SC	55.1 YRS.	0.9540E 10	31	35.86
O3	89.6 YRS.	0.9540E 10	31	34.41
O2	61.5 YRS.	0.9540E 10	31	36.08
R1.5	33.0 YRS.	0.9547E 10	31	64.82
R0.5	45.3 YRS.	0.9557E 10	31	40.81
R1	37.6 YRS.	0.9572E 10	31	50.92
R2	29.5 YRS.	0.9616E 10	31	81.27
R3	26.5 YRS.	0.9972E 10	32	98.28
L0	46.2 YRS.	0.1004E 11	32	46.93
S0	34.3 YRS.	0.1035E 11	32	60.43
L0.5	39.7 YRS.	0.1040E 11	32	54.40
S0.5	31.0 YRS.	0.1064E 11	33	71.19
L1	34.5 YRS.	0.1115E 11	33	63.58
S1	28.3 YRS.	0.1125E 11	34	82.61
L1.5	31.2 YRS.	0.1151E 11	34	72.74
S1.5	27.1 YRS.	0.1155E 11	34	89.71
R4	25.8 YRS.	0.1182E 11	34	100.00
S2	26.1 YRS.	0.1235E 11	35	95.05
L2	28.7 YRS.	0.1266E 11	36	80.60
S2.5	25.7 YRS.	0.1279E 11	36	97.37
S3	25.3 YRS.	0.1370E 11	37	99.18
R5	26.5 YRS.	0.1434E 11	38	100.00
L3	26.2 YRS.	0.1438E 11	38	91.15
S6	27.6 YRS.	0.1484E 11	39	100.00
S4	25.7 YRS.	0.1499E 11	39	99.96
S5	26.6 YRS.	0.1513E 11	39	100.00
L4	25.6 YRS.	0.1525E 11	39	97.96
L5	26.2 YRS.	0.1591E 11	40	99.53
SQ	30.0 YRS.	0.1789E 11	43	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 477 REGULATING EQUIPMENT 00820

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 38 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R2.5	28.0 YRS.	0.1190E 11	43	91.06
R3	26.6 YRS.	0.1202E 11	43	98.11
R2	29.8 YRS.	0.1238E 11	44	80.03
R1.5	33.3 YRS.	0.1265E 11	44	63.67
R1	38.0 YRS.	0.1292E 11	45	50.10
R0.5	46.2 YRS.	0.1307E 11	45	39.79
O2	63.1 YRS.	0.1313E 11	45	35.21
SC	56.2 YRS.	0.1313E 11	45	35.14
O3	90.9 YRS.	0.1315E 11	45	33.97
O4	127.2 YRS.	0.1316E 11	45	33.16
R4	26.0 YRS.	0.1330E 11	45	100.00
L0	47.2 YRS.	0.1353E 11	46	45.93
S0	34.7 YRS.	0.1361E 11	46	59.63
S0.5	31.3 YRS.	0.1366E 11	46	70.26
L0.5	40.1 YRS.	0.1372E 11	46	53.78
S1	28.6 YRS.	0.1401E 11	47	81.66
S1.5	27.3 YRS.	0.1402E 11	47	88.89
L1	34.9 YRS.	0.1430E 11	47	62.87
L1.5	31.8 YRS.	0.1438E 11	47	71.29
S2	26.1 YRS.	0.1452E 11	47	95.04
S2.5	25.7 YRS.	0.1468E 11	48	97.37
L2	29.0 YRS.	0.1523E 11	49	79.90
S3	25.6 YRS.	0.1532E 11	49	98.97
R5	26.6 YRS.	0.1545E 11	49	100.00
S6	27.6 YRS.	0.1589E 11	50	100.00
S4	26.0 YRS.	0.1617E 11	50	99.94
S5	26.6 YRS.	0.1619E 11	50	100.00
L3	26.5 YRS.	0.1632E 11	50	90.60
L4	25.6 YRS.	0.1666E 11	51	97.96
L5	26.2 YRS.	0.1702E 11	51	99.53
SQ	30.0 YRS.	0.1894E 11	54	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 477 REGULATING EQUIPMENT 00820

REMAINING LIFE AND AGE FOR CURVE, R4 SERVICE LIFE = 26.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	232415	232410	25.50	5926.58	116.20
1997	1.5	115384	115375	24.50	2826.90	173.06
1996	2.5	423126	423058	23.50	9943.57	1057.64
1995	3.5	11658	11654	22.51	262.30	40.79
1994	4.5	89128	89078	21.51	1916.31	400.85
1993	5.5	83705	83627	20.52	1716.08	459.95
1992	6.5	78998	78879	19.53	1540.68	512.71
1991	7.5	149850	149493	18.55	2772.92	1121.20
1990	8.5	94539	94193	17.57	1655.15	800.64
1989	9.5	72484	72085	16.60	1196.86	684.81
1988	10.5	53844	53408	15.65	835.59	560.78
1987	11.5	56088	55432	14.70	814.88	637.47
1986	12.5	64041	62980	13.77	867.29	787.25
1985	13.5	44860	43823	12.86	563.54	591.61
1984	14.5	33731	32661	11.97	390.92	473.58
1983	15.5	53656	51358	11.10	570.18	796.05
1982	16.5	98569	92956	10.26	953.76	1533.77
1981	17.5	13142	12161	9.45	114.87	212.82
1980	18.5	0	0	8.66	0.0	0.0
1979	19.5	7074	6207	7.90	49.06	121.04
1978	20.5	6977	5905	7.18	42.37	121.05
1977	21.5	3772	3055	6.48	19.78	65.68
1976	22.5	10257	7876	5.80	45.70	177.21
1975	23.5	19812	6551	5.16	33.83	153.95
			1784225.		35059.13	11600.12

REMAINING LIFE = 35059.13 / 1784.23 = 19.65

AGE = 11600.12 / 1784.23 = 6.50

ACCOUNT 478 METERS 00860

ACCOUNT CONTROL CARD

ACCOUNT NAME= 478 EARLIEST ADDITION= 1966 LATEST ADDITION= 1998 EARLIEST BALANCE= 1968 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1966	206888.	1973	37431.	1980	49127.	1987	120933.	1994	492742.
1967	0.	1974	40500.	1981	54121.	1988	245254.	1995	234737.
1968	0.	1975	41267.	1982	108047.	1989	181109.	1996	179314.
1969	41369.	1976	40855.	1983	126759.	1990	231988.	1997	144234.
1970	37054.	1977	47479.	1984	106965.	1991	266944.	1998	444640.
1971	200208.	1978	50080.	1985	150530.	1992	401847.	0	0.
1972	35084.	1979	43250.	1986	144418.	1993	322695.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1968	0.	1975	16876.	1982	29288.	1989	92962.	1996	106669.
1969	35388.	1976	21229.	1983	41210.	1990	105195.	1997	129928.
1970	25359.	1977	24797.	1984	37055.	1991	114753.	1998	115681.
1971	153266.	1978	26292.	1985	58592.	1992	110737.	0	0.
1972	19052.	1979	13789.	1986	80344.	1993	102554.	0	0.
1973	4918.	1980	24893.	1987	59115.	1994	156914.	0	0.
1974	3737.	1981	23420.	1988	61839.	1995	162435.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1968	206888.	1975	381205.	1982	610456.	1989	1255307.	1996	2526317.
1969	212869.	1976	400831.	1983	696005.	1990	1382100.	1997	2540623.
1970	224564.	1977	423513.	1984	765915.	1991	1534291.	1998	2869582.
1971	271506.	1978	447301.	1985	857853.	1992	1825401.	0	0.
1972	287538.	1979	476762.	1986	921927.	1993	2045542.	0	0.
1973	320051.	1980	500996.	1987	983745.	1994	2381370.	0	0.
1974	356814.	1981	531697.	1988	1167160.	1995	2453672.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 478 METERS 00860

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SC	11.7 YRS.	0.1120E 11	18	100.00
R0.5	11.2 YRS.	0.1328E 11	20	100.00
O4	19.5 YRS.	0.1422E 11	20	81.39
O3	15.4 YRS.	0.1505E 11	21	86.89
O2	12.5 YRS.	0.1510E 11	21	96.39
R1	10.7 YRS.	0.1648E 11	22	100.00
L0	11.9 YRS.	0.1945E 11	24	99.22
R1.5	10.4 YRS.	0.2003E 11	24	100.00
S0	10.7 YRS.	0.2035E 11	24	100.00
L0.5	11.4 YRS.	0.2127E 11	25	99.77
S0.5	10.4 YRS.	0.2341E 11	26	100.00
R2	10.0 YRS.	0.2369E 11	26	100.00
L1	11.0 YRS.	0.2388E 11	27	100.00
S5	9.3 YRS.	0.2519E 11	27	100.00
L1.5	10.6 YRS.	0.2520E 11	27	100.00
S6	9.2 YRS.	0.2552E 11	27	100.00
R2.5	9.9 YRS.	0.2565E 11	28	100.00
R5	9.4 YRS.	0.2572E 11	28	100.00
L5	9.4 YRS.	0.2612E 11	28	100.00
S4	9.3 YRS.	0.2614E 11	28	100.00
S1	10.2 YRS.	0.2694E 11	28	100.00
L2	10.3 YRS.	0.2707E 11	28	100.00
R4	9.5 YRS.	0.2714E 11	28	100.00
R3	9.6 YRS.	0.2743E 11	28	100.00
L4	9.5 YRS.	0.2764E 11	29	100.00
L3	9.9 YRS.	0.2805E 11	29	100.00
S1.5	9.9 YRS.	0.2811E 11	29	100.00
S3	9.6 YRS.	0.2863E 11	29	100.00
S2.5	9.6 YRS.	0.2893E 11	29	100.00
S2	9.8 YRS.	0.2932E 11	29	100.00
SQ	10.1 YRS.	0.1166E 12	59	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 478 METERS 00970

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SC	11.6 YRS.	0.1581E 11	19	100.00
R0.5	11.2 YRS.	0.1607E 11	19	100.00
R1	10.7 YRS.	0.1962E 11	21	100.00
O2	12.4 YRS.	0.2258E 11	22	96.61
R1.5	10.3 YRS.	0.2392E 11	23	100.00
S0	10.6 YRS.	0.2405E 11	23	100.00
O4	19.2 YRS.	0.2575E 11	24	81.79
O3	15.1 YRS.	0.2599E 11	24	87.36
L0	11.6 YRS.	0.2763E 11	25	99.38
S0.5	10.3 YRS.	0.2764E 11	25	100.00
L0.5	11.2 YRS.	0.2789E 11	25	99.80
R2	10.0 YRS.	0.2897E 11	25	100.00
L1	10.9 YRS.	0.2973E 11	26	100.00
L1.5	10.5 YRS.	0.3062E 11	26	100.00
R2.5	9.8 YRS.	0.3153E 11	26	100.00
S1	10.1 YRS.	0.3194E 11	27	100.00
L2	10.2 YRS.	0.3231E 11	27	100.00
S5	9.2 YRS.	0.3293E 11	27	100.00
L5	9.3 YRS.	0.3318E 11	27	100.00
L3	9.8 YRS.	0.3338E 11	27	100.00
S4	9.3 YRS.	0.3340E 11	27	100.00
S6	9.2 YRS.	0.3373E 11	27	100.00
R5	9.2 YRS.	0.3376E 11	27	100.00
L4	9.4 YRS.	0.3403E 11	28	100.00
S1.5	9.8 YRS.	0.3405E 11	28	100.00
R3	9.5 YRS.	0.3457E 11	28	100.00
R4	9.4 YRS.	0.3504E 11	28	100.00
S3	9.5 YRS.	0.3523E 11	28	100.00
S2	9.7 YRS.	0.3547E 11	28	100.00
S2.5	9.5 YRS.	0.3555E 11	28	100.00
SQ	10.0 YRS.	0.1865E 12	65	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 478 METERS 00990

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SC	11.6 YRS.	0.1632E 11	19	100.00
R0.5	11.2 YRS.	0.1744E 11	20	100.00
O2	12.4 YRS.	0.2299E 11	23	96.61
O4	19.2 YRS.	0.2650E 11	24	81.80
O3	14.9 YRS.	0.2664E 11	24	87.60
R1	10.8 YRS.	0.2681E 11	24	100.00
L0	11.6 YRS.	0.2828E 11	25	99.38
S0	10.7 YRS.	0.2906E 11	25	100.00
L0.5	11.2 YRS.	0.2932E 11	25	99.80
L1	10.9 YRS.	0.3285E 11	27	100.00
L1.5	10.6 YRS.	0.3698E 11	29	100.00
S0.5	10.4 YRS.	0.3758E 11	29	100.00
R1.5	10.4 YRS.	0.3791E 11	29	100.00
L2	10.3 YRS.	0.4324E 11	31	100.00
S1	10.2 YRS.	0.4762E 11	33	100.00
R2	10.1 YRS.	0.5059E 11	34	100.00
S1.5	10.0 YRS.	0.5513E 11	35	100.00
L3	9.9 YRS.	0.5565E 11	35	100.00
R2.5	9.9 YRS.	0.5987E 11	37	100.00
S2	9.8 YRS.	0.6244E 11	37	100.00
S2.5	9.7 YRS.	0.6679E 11	39	100.00
R3	9.7 YRS.	0.6860E 11	39	100.00
L4	9.5 YRS.	0.6916E 11	39	100.00
S3	9.6 YRS.	0.7036E 11	40	100.00
L5	9.4 YRS.	0.7429E 11	41	100.00
S4	9.3 YRS.	0.7443E 11	41	100.00
R4	9.5 YRS.	0.7480E 11	41	100.00
S5	9.3 YRS.	0.7626E 11	41	100.00
R5	9.4 YRS.	0.7656E 11	42	100.00
S6	9.2 YRS.	0.7831E 11	42	100.00
SQ	10.1 YRS.	0.2055E 12	68	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 478 METERS 01010

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SC	11.5 YRS.	0.2497E 11	24	100.00
R0.5	11.2 YRS.	0.2556E 11	25	100.00
O2	12.3 YRS.	0.2686E 11	25	96.82
O4	19.2 YRS.	0.2721E 11	26	81.80
O3	14.9 YRS.	0.2776E 11	26	87.60
L0	11.6 YRS.	0.3153E 11	28	99.38
L0.5	11.2 YRS.	0.3259E 11	28	99.80
R1	10.7 YRS.	0.3381E 11	29	100.00
S0	10.7 YRS.	0.3441E 11	29	100.00
L1	10.9 YRS.	0.3620E 11	30	100.00
L1.5	10.6 YRS.	0.4097E 11	31	100.00
S0.5	10.4 YRS.	0.4287E 11	32	100.00
R1.5	10.4 YRS.	0.4445E 11	33	100.00
L2	10.3 YRS.	0.4862E 11	34	100.00
S1	10.2 YRS.	0.5410E 11	36	100.00
R2	10.1 YRS.	0.5833E 11	38	100.00
S1.5	10.0 YRS.	0.6349E 11	39	100.00
L3	9.9 YRS.	0.6779E 11	41	100.00
R2.5	10.0 YRS.	0.7047E 11	41	100.00
S2	9.9 YRS.	0.7415E 11	42	100.00
S2.5	9.7 YRS.	0.8169E 11	45	100.00
R3	9.7 YRS.	0.8342E 11	45	100.00
S3	9.7 YRS.	0.9017E 11	47	100.00
L4	9.6 YRS.	0.9206E 11	47	100.00
R4	9.6 YRS.	0.1010E 12	50	100.00
S4	9.4 YRS.	0.1049E 12	51	100.00
L5	9.5 YRS.	0.1076E 12	51	100.00
R5	9.4 YRS.	0.1149E 12	53	100.00
S5	9.4 YRS.	0.1167E 12	53	100.00
S6	9.3 YRS.	0.1262E 12	56	100.00
SQ	10.2 YRS.	0.2490E 12	78	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 478 METERS 01030

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 30 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
O4	19.0 YRS.	0.8707E 11	51	81.99
O3	14.8 YRS.	0.9773E 11	54	87.83
O2	12.3 YRS.	0.1231E 12	60	96.82
SC	11.5 YRS.	0.1341E 12	63	100.00
L0	11.5 YRS.	0.1408E 12	64	99.45
R0.5	10.9 YRS.	0.1544E 12	67	100.00
L0.5	11.1 YRS.	0.1558E 12	68	99.82
L1	10.7 YRS.	0.1735E 12	72	100.00
S0	10.6 YRS.	0.1811E 12	73	100.00
R1	10.6 YRS.	0.1830E 12	74	100.00
L1.5	10.5 YRS.	0.1928E 12	75	100.00
S0.5	10.3 YRS.	0.2031E 12	77	100.00
R1.5	10.3 YRS.	0.2100E 12	79	100.00
L2	10.2 YRS.	0.2146E 12	80	100.00
S1	10.1 YRS.	0.2274E 12	82	100.00
R2	10.0 YRS.	0.2398E 12	84	100.00
S1.5	9.8 YRS.	0.2482E 12	86	100.00
L3	9.8 YRS.	0.2595E 12	88	100.00
R2.5	9.8 YRS.	0.2636E 12	88	100.00
S2	9.7 YRS.	0.2692E 12	89	100.00
S2.5	9.6 YRS.	0.2855E 12	92	100.00
R3	9.6 YRS.	0.2886E 12	92	100.00
S3	9.5 YRS.	0.3013E 12	94	100.00
L4	9.4 YRS.	0.3072E 12	95	100.00
R4	9.4 YRS.	0.3205E 12	97	100.00
S4	9.3 YRS.	0.3317E 12	99	100.00
L5	9.3 YRS.	0.3369E 12	100	100.00
R5	9.3 YRS.	0.3480E 12	102	100.00
S5	9.2 YRS.	0.3535E 12	102	100.00
S6	9.2 YRS.	0.3708E 12	105	100.00
SQ	10.0 YRS.	0.5663E 12	130	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 478 METERS 01030

REMAINING LIFE AND AGE FOR CURVE, SC SERVICE LIFE = 11.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	444640	434534	10.75	4671.24	217.27
1997	1.5	144234	134399	10.25	1377.59	201.60
1996	2.5	179314	158937	9.75	1549.63	397.34
1995	3.5	234737	197392	9.25	1825.87	690.87
1994	4.5	492742	391953	8.75	3429.59	1763.79
1993	5.5	322695	242021	8.25	1996.67	1331.11
1992	6.5	401847	283119	7.75	2194.17	1840.27
1991	7.5	266944	175940	7.25	1275.56	1319.55
1990	8.5	231988	142356	6.75	960.90	1210.03
1989	9.5	181109	102902	6.25	643.14	977.57
1988	10.5	245254	128200	5.75	737.15	1346.10
1987	11.5	120933	57718	5.25	303.02	663.76
1986	12.5	144418	62362	4.75	296.22	779.52
1985	13.5	150530	58159	4.25	247.18	785.15
1984	14.5	106965	36465	3.75	136.74	528.74
1983	15.5	126759	37451	3.25	121.72	580.49
1982	16.5	108047	27011	2.75	74.28	445.68
1981	17.5	54121	11070	2.25	24.91	193.72
1980	18.5	49127	7815	1.75	13.68	144.58
1979	19.5	43250	4914	1.25	6.14	95.82
1978	20.5	50080	3414	0.75	2.56	69.99
1977	21.5	47479	1079	0.25	0.27	23.20
1976	22.5	40855	0	0.0	0.0	0.0
1975	23.5	41267	0	0.0	0.0	0.0
1974	24.5	40500	0	0.0	0.0	0.0
1973	25.5	37431	0	0.0	0.0	0.0
1972	26.5	35084	0	0.0	0.0	0.0
1971	27.5	200208	0	0.0	0.0	0.0
1970	28.5	37054	0	0.0	0.0	0.0
1969	29.5	41369	0	0.0	0.0	0.0
1968	30.5	0	0	0.0	0.0	0.0
1967	31.5	0	0	0.0	0.0	0.0
1966	32.5	206888	0	0.0	0.0	0.0
			2699211.		21888.23	15606.15

$$\text{REMAINING LIFE} = \frac{21888.23}{2699.21} = 8.11$$

$$\text{AGE} = \frac{15606.15}{2699.21} = 5.78$$

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01070

ACCOUNT CONTROL CARD

ACCOUNT NAME= 483 EARLIEST ADDITION= 1961 LATEST ADDITION= 1998 EARLIEST BALANCE= 1965 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1961	1265.	1969	51.	1977	4298.	1985	18950.	1993	3592.
1962	1783.	1970	603.	1978	1488.	1986	0.	1994	3233.
1963	1902.	1971	826.	1979	4713.	1987	4649.	1995	3307.
1964	1833.	1972	971.	1980	1886.	1988	0.	1996	0.
1965	1577.	1973	1262.	1981	6372.	1989	70470.	1997	45711.
1966	681.	1974	2716.	1982	21492.	1990	23582.	1998	9457.
1967	9417.	1975	4012.	1983	4756.	1991	19398.	0	0.
1968	384.	1976	1306.	1984	5704.	1992	4595.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1965	0.	1972	609.	1979	7861.	1986	2508.	1993	1172.
1966	0.	1973	0.	1980	2679.	1987	807.	1994	0.
1967	262.	1974	1075.	1981	1976.	1988	0.	1995	0.
1968	1000.	1975	1005.	1982	765.	1989	4240.	1996	0.
1969	304.	1976	540.	1983	2350.	1990	10049.	1997	21898.
1970	519.	1977	0.	1984	0.	1991	0.	1998	0.
1971	406.	1978	1024.	1985	383.	1992	0.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1965	14815.	1972	24648.	1979	32938.	1986	81437.	1993	191455.
1966	15496.	1973	25910.	1980	32145.	1987	85279.	1994	194688.
1967	24651.	1974	27551.	1981	36541.	1988	85279.	1995	197995.
1968	24035.	1975	30558.	1982	57268.	1989	151509.	1996	197995.
1969	23782.	1976	31324.	1983	59674.	1990	165042.	1997	221808.
1970	23866.	1977	35622.	1984	65378.	1991	184440.	1998	231265.
1971	24286.	1978	36086.	1985	83945.	1992	189035.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01070

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	16.6 YRS.	0.1345E 09	24	100.00
S5	17.0 YRS.	0.1360E 09	24	100.00
L5	17.3 YRS.	0.1418E 09	25	100.00
S4	17.5 YRS.	0.1452E 09	25	100.00
R5	17.1 YRS.	0.1468E 09	25	100.00
L3	19.3 YRS.	0.1473E 09	26	99.37
L4	18.0 YRS.	0.1481E 09	26	100.00
S3	18.3 YRS.	0.1530E 09	26	100.00
S2	19.4 YRS.	0.1533E 09	26	100.00
L2	21.1 YRS.	0.1535E 09	26	94.40
S2.5	18.9 YRS.	0.1545E 09	26	100.00
S1.5	20.3 YRS.	0.1549E 09	26	99.71
S1	21.1 YRS.	0.1552E 09	26	98.65
R4	17.9 YRS.	0.1563E 09	26	100.00
L1.5	22.7 YRS.	0.1574E 09	26	89.38
L1	24.4 YRS.	0.1610E 09	27	83.34
S0.5	22.4 YRS.	0.1620E 09	27	93.77
R3	19.1 YRS.	0.1660E 09	27	100.00
S0	23.8 YRS.	0.1693E 09	27	86.54
R2.5	20.3 YRS.	0.1721E 09	28	100.00
R2	21.3 YRS.	0.1728E 09	28	99.77
L0.5	26.7 YRS.	0.1742E 09	28	76.11
R1.5	22.7 YRS.	0.1777E 09	28	95.52
R1	24.4 YRS.	0.1841E 09	29	86.80
L0	29.9 YRS.	0.1847E 09	29	68.19
R0.5	27.2 YRS.	0.1952E 09	29	72.42
O2	34.7 YRS.	0.2046E 09	30	60.41
SC	31.1 YRS.	0.2047E 09	30	60.31
O3	49.1 YRS.	0.2091E 09	30	53.96
O4	67.0 YRS.	0.2108E 09	31	52.12
SQ	18.1 YRS.	0.4704E 09	46	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01190

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	16.4 YRS.	0.2951E 09	28	100.00
S5	16.6 YRS.	0.3139E 09	29	100.00
L5	16.9 YRS.	0.3242E 09	29	100.00
R5	16.8 YRS.	0.3258E 09	29	100.00
R4	17.4 YRS.	0.3287E 09	29	100.00
S4	17.0 YRS.	0.3318E 09	29	100.00
L4	17.5 YRS.	0.3471E 09	30	100.00
S3	17.8 YRS.	0.3519E 09	30	100.00
R3	18.4 YRS.	0.3523E 09	30	100.00
S2.5	18.3 YRS.	0.3697E 09	31	100.00
R2.5	19.3 YRS.	0.3851E 09	32	100.00
S2	18.8 YRS.	0.3935E 09	32	100.00
L3	18.6 YRS.	0.4025E 09	32	99.69
O4	62.9 YRS.	0.4095E 09	33	54.21
O3	46.1 YRS.	0.4102E 09	33	56.37
O2	33.0 YRS.	0.4142E 09	33	63.47
SC	29.1 YRS.	0.4145E 09	33	64.37
R2	20.4 YRS.	0.4213E 09	33	100.00
S1.5	19.4 YRS.	0.4222E 09	33	99.97
R0.5	25.8 YRS.	0.4233E 09	33	77.16
R1.5	21.7 YRS.	0.4339E 09	34	97.65
R1	23.3 YRS.	0.4344E 09	34	90.74
L2	20.4 YRS.	0.4409E 09	34	95.67
L1.5	21.7 YRS.	0.4460E 09	34	91.59
L0	28.3 YRS.	0.4475E 09	34	71.43
L0.5	25.5 YRS.	0.4484E 09	34	78.88
S1	20.3 YRS.	0.4502E 09	34	99.47
L1	23.3 YRS.	0.4535E 09	34	86.01
S0.5	21.4 YRS.	0.4594E 09	35	96.32
S0	22.8 YRS.	0.4649E 09	35	90.11
SQ	17.8 YRS.	0.8791E 09	48	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01210

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	16.4 YRS.	0.3047E 09	29	100.00
S5	16.6 YRS.	0.3186E 09	29	100.00
L5	16.9 YRS.	0.3285E 09	30	100.00
R5	16.7 YRS.	0.3311E 09	30	100.00
S4	17.0 YRS.	0.3396E 09	30	100.00
R4	17.3 YRS.	0.3465E 09	30	100.00
L4	17.5 YRS.	0.3617E 09	31	100.00
S3	17.7 YRS.	0.3776E 09	32	100.00
R3	18.3 YRS.	0.3988E 09	33	100.00
S2.5	18.1 YRS.	0.4083E 09	33	100.00
L3	18.6 YRS.	0.4410E 09	34	99.69
S2	18.6 YRS.	0.4469E 09	35	100.00
R2.5	19.2 YRS.	0.4526E 09	35	100.00
O4	62.0 YRS.	0.4699E 09	36	54.71
O3	45.4 YRS.	0.4722E 09	36	56.95
O2	32.5 YRS.	0.4813E 09	36	64.36
SC	28.8 YRS.	0.4814E 09	36	65.02
S1.5	19.2 YRS.	0.4915E 09	36	99.99
R0.5	25.4 YRS.	0.5001E 09	37	78.44
L2	20.2 YRS.	0.5044E 09	37	96.00
R2	20.1 YRS.	0.5058E 09	37	100.00
L1.5	21.5 YRS.	0.5194E 09	37	92.04
R1	22.9 YRS.	0.5218E 09	38	91.92
L0	27.7 YRS.	0.5247E 09	38	72.60
R1.5	21.4 YRS.	0.5248E 09	38	98.16
L0.5	25.0 YRS.	0.5273E 09	38	80.07
S1	19.9 YRS.	0.5337E 09	38	99.75
L1	23.1 YRS.	0.5345E 09	38	86.58
S0.5	21.2 YRS.	0.5475E 09	38	96.80
S0	22.5 YRS.	0.5539E 09	39	90.87
SQ	17.8 YRS.	0.9316E 09	50	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01230

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	16.4 YRS.	0.3773E 09	34	100.00
S5	16.4 YRS.	0.4000E 09	35	100.00
L5	16.7 YRS.	0.4129E 09	35	100.00
R5	16.6 YRS.	0.4180E 09	35	100.00
S4	16.9 YRS.	0.4321E 09	36	100.00
L4	17.3 YRS.	0.4566E 09	37	100.00
R4	17.2 YRS.	0.4652E 09	37	100.00
S3	17.5 YRS.	0.4848E 09	38	100.00
S2.5	17.9 YRS.	0.5239E 09	40	100.00
L3	18.4 YRS.	0.5404E 09	40	99.75
R3	18.2 YRS.	0.5410E 09	40	100.00
S2	18.4 YRS.	0.5674E 09	41	100.00
O4	61.4 YRS.	0.5677E 09	41	55.05
O3	45.0 YRS.	0.5719E 09	42	57.34
O2	32.1 YRS.	0.5868E 09	42	64.96
SC	28.6 YRS.	0.5871E 09	42	65.67
R2.5	19.0 YRS.	0.6023E 09	43	100.00
L2	20.0 YRS.	0.6111E 09	43	96.31
R0.5	25.1 YRS.	0.6174E 09	43	79.30
S1.5	19.0 YRS.	0.6191E 09	43	100.00
L1.5	21.3 YRS.	0.6321E 09	44	92.49
L0	27.4 YRS.	0.6349E 09	44	73.19
L0.5	25.0 YRS.	0.6393E 09	44	80.08
L1	22.8 YRS.	0.6462E 09	44	87.14
R1	22.7 YRS.	0.6538E 09	44	92.69
R2	19.9 YRS.	0.6550E 09	44	100.00
S1	19.9 YRS.	0.6626E 09	45	99.75
R1.5	21.1 YRS.	0.6685E 09	45	98.47
S0.5	21.0 YRS.	0.6765E 09	45	97.26
S0	22.3 YRS.	0.6783E 09	45	91.62
SQ	17.8 YRS.	0.1204E 10	60	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01250

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 32 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	16.4 YRS.	0.5419E 09	45	100.00
S5	16.6 YRS.	0.5683E 09	46	100.00
L5	16.7 YRS.	0.5887E 09	47	100.00
R5	16.7 YRS.	0.5914E 09	47	100.00
S4	16.9 YRS.	0.6117E 09	48	100.00
L4	17.3 YRS.	0.6486E 09	50	100.00
R4	17.3 YRS.	0.6602E 09	50	100.00
S3	17.5 YRS.	0.6862E 09	51	100.00
S2.5	17.9 YRS.	0.7387E 09	53	100.00
L3	18.4 YRS.	0.7598E 09	54	99.75
R3	18.1 YRS.	0.7689E 09	54	100.00
S2	18.4 YRS.	0.7958E 09	55	100.00
R2.5	18.9 YRS.	0.8556E 09	57	100.00
S1.5	19.2 YRS.	0.8688E 09	57	99.99
L2	20.2 YRS.	0.8714E 09	58	96.00
L1.5	21.5 YRS.	0.9204E 09	59	92.04
S1	19.9 YRS.	0.9312E 09	59	99.75
R2	20.0 YRS.	0.9354E 09	60	100.00
L1	22.8 YRS.	0.9617E 09	60	87.13
S0.5	21.2 YRS.	0.9751E 09	61	96.80
R1.5	21.2 YRS.	0.9831E 09	61	98.32
L0.5	25.0 YRS.	0.9841E 09	61	80.07
O3	45.7 YRS.	0.9945E 09	61	56.75
O4	62.3 YRS.	0.9948E 09	62	54.54
O2	32.3 YRS.	0.9968E 09	62	64.66
SC	28.8 YRS.	0.9971E 09	62	65.02
R0.5	25.5 YRS.	0.1001E 10	62	78.02
R1	22.8 YRS.	0.1002E 10	62	92.30
S0	22.5 YRS.	0.1005E 10	62	90.87
L0	27.7 YRS.	0.1007E 10	62	72.60
SQ	17.8 YRS.	0.1359E 10	72	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 483 OFFICE FURNITURE AND EQUIPMENT 01250

REMAINING LIFE AND AGE FOR CURVE, S6 SERVICE LIFE = 16.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	9457	9457	15.50	146.58	4.73
1997	1.5	45711	45711	14.50	662.81	68.57
1996	2.5	0	0	13.50	0.0	0.0
1995	3.5	3307	3307	12.50	41.34	11.57
1994	4.5	3233	3233	11.50	37.18	14.55
1993	5.5	3592	3592	10.50	37.72	19.76
1992	6.5	4595	4595	9.50	43.65	29.87
1991	7.5	19398	19398	8.50	164.88	145.48
1990	8.5	23582	23581	7.50	176.86	200.44
1989	9.5	70470	70469	6.50	458.05	669.46
1988	10.5	0	0	5.50	0.0	0.0
1987	11.5	4649	4648	4.50	20.92	53.45
1986	12.5	0	0	3.51	0.0	0.0
1985	13.5	18950	18589	2.56	47.52	250.95
1984	14.5	5704	5085	1.75	8.91	73.73
1983	15.5	4756	3135	1.17	3.68	48.59
1982	16.5	21492	7323	0.80	5.89	120.83
1981	17.5	6372	691	0.57	0.40	12.09
1980	18.5	1886	35	0.43	0.01	0.65
1979	19.5	4713	7	0.32	0.00	0.14
1978	20.5	1488	0	0.25	0.0	0.0
1977	21.5	4298	0	0.20	0.0	0.0
1976	22.5	1306	0	0.16	0.0	0.0
1975	23.5	4012	0	0.12	0.0	0.0
1974	24.5	2716	0	0.0	0.0	0.0
1973	25.5	1262	0	0.0	0.0	0.0
1972	26.5	971	0	0.0	0.0	0.0
1971	27.5	826	0	0.0	0.0	0.0
1970	28.5	603	0	0.0	0.0	0.0
1969	29.5	51	0	0.0	0.0	0.0
1968	30.5	384	0	0.0	0.0	0.0
1967	31.5	9417	0	0.0	0.0	0.0
1966	32.5	681	0	0.0	0.0	0.0
1965	33.5	1577	0	0.0	0.0	0.0
1964	34.5	1833	0	0.0	0.0	0.0
1963	35.5	1902	0	0.0	0.0	0.0
1962	36.5	1783	0	0.0	0.0	0.0
1961	37.5	1265	0	0.0	0.0	0.0
			222856.		1856.40	1724.85

1856.40 1724.85

AGE ---------- = 7.74
222.86

REMAINING LIFE ---------- = 8.33
222.86

ACCOUNT 484 TRANSPORTATION EQUIPMENT 01300

ACCOUNT CONTROL CARD

ACCOUNT NAME= 484 EARLIEST ADDITION= 1960 LATEST ADDITION= 1998 EARLIEST BALANCE= 1960 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1960	4581.	1968	7744.	1976	0.	1984	0.	1992	0.
1961	0.	1969	0.	1977	0.	1985	19340.	1993	0.
1962	0.	1970	5765.	1978	12879.	1986	0.	1994	0.
1963	3955.	1971	6274.	1979	0.	1987	927.	1995	0.
1964	2495.	1972	0.	1980	0.	1988	0.	1996	0.
1965	3073.	1973	0.	1981	0.	1989	0.	1997	82126.
1966	3800.	1974	4497.	1982	0.	1990	0.	1998	72518.
1967	0.	1975	0.	1983	0.	1991	48440.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1960	0.	1968	6450.	1976	0.	1984	0.	1992	0.
1961	0.	1969	0.	1977	6274.	1985	12879.	1993	0.
1962	0.	1970	3073.	1978	0.	1986	0.	1994	0.
1963	0.	1971	3800.	1979	4497.	1987	0.	1995	0.
1964	1973.	1972	2007.	1980	0.	1988	0.	1996	0.
1965	2608.	1973	0.	1981	0.	1989	0.	1997	0.
1966	0.	1974	11502.	1982	0.	1990	927.	1998	48440.
1967	0.	1975	0.	1983	0.	1991	19341.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1960	4581.	1968	14617.	1976	10771.	1984	12879.	1992	48439.
1961	4581.	1969	14617.	1977	4497.	1985	19340.	1993	48439.
1962	4581.	1970	17309.	1978	17376.	1986	19340.	1994	48439.
1963	8536.	1971	19783.	1979	12879.	1987	20267.	1995	48439.
1964	9058.	1972	17776.	1980	12879.	1988	20267.	1996	48439.
1965	9523.	1973	17776.	1981	12879.	1989	20267.	1997	130565.
1966	13323.	1974	10771.	1982	12879.	1990	19340.	1998	154643.
1967	13323.	1975	10771.	1983	12879.	1991	48439.	0	0.

DEPRECIATION STUDY
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ACCOUNT 484 TRANSPORTATION EQUIPMENT 01300

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	7.0 YRS.	0.1433E 09	62	100.00
S5	7.0 YRS.	0.3591E 09	98	100.00
R5	6.9 YRS.	0.4082E 09	104	100.00
L5	7.1 YRS.	0.4564E 09	110	100.00
S4	7.0 YRS.	0.5874E 09	125	100.00
R4	6.8 YRS.	0.6482E 09	132	100.00
L4	7.2 YRS.	0.6632E 09	133	100.00
O4	12.2 YRS.	0.6685E 09	134	94.37
O3	10.3 YRS.	0.7183E 09	139	99.22
O2	9.1 YRS.	0.7958E 09	146	100.00
S3	7.1 YRS.	0.8076E 09	147	100.00
SC	8.4 YRS.	0.8272E 09	149	100.00
R3	6.9 YRS.	0.8459E 09	151	100.00
R0.5	8.1 YRS.	0.8460E 09	151	100.00
L3	7.6 YRS.	0.8534E 09	151	100.00
R1	7.9 YRS.	0.8759E 09	153	100.00
S2.5	7.2 YRS.	0.8779E 09	153	100.00
R2.5	7.1 YRS.	0.9026E 09	156	100.00
R1.5	7.7 YRS.	0.9086E 09	156	100.00
L0	8.6 YRS.	0.9151E 09	157	100.00
R2	7.4 YRS.	0.9396E 09	159	100.00
S2	7.3 YRS.	0.9471E 09	159	100.00
L0.5	8.4 YRS.	0.9603E 09	160	100.00
S0	7.9 YRS.	0.9646E 09	161	100.00
S1.5	7.5 YRS.	0.9756E 09	162	100.00
L2	7.9 YRS.	0.9798E 09	162	100.00
S0.5	7.8 YRS.	0.9807E 09	162	100.00
L1.5	8.1 YRS.	0.9935E 09	163	100.00
S1	7.7 YRS.	0.1001E 10	164	100.00
L1	8.2 YRS.	0.1013E 10	165	100.00
SQ	7.6 YRS.	0.2347E 10	251	100.00

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ACCOUNT 484 TRANSPORTATION EQUIPMENT 01430

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SQ	7.5 YRS.	0.4134E 09	104	100.00
S6	6.9 YRS.	0.4202E 09	105	100.00
S5	6.9 YRS.	0.5930E 09	125	100.00
R5	6.8 YRS.	0.6273E 09	128	100.00
L5	6.9 YRS.	0.6989E 09	135	100.00
S4	6.8 YRS.	0.8145E 09	146	100.00
R4	6.7 YRS.	0.8679E 09	151	100.00
L4	7.0 YRS.	0.9191E 09	155	100.00
S3	6.9 YRS.	0.1064E 10	167	100.00
SC	7.9 YRS.	0.1075E 10	168	100.00
R3	6.7 YRS.	0.1086E 10	169	100.00
O4	10.9 YRS.	0.1090E 10	169	96.92
O2	8.4 YRS.	0.1100E 10	170	100.00
R0.5	7.8 YRS.	0.1102E 10	170	100.00
O3	9.4 YRS.	0.1104E 10	170	100.00
L3	7.3 YRS.	0.1143E 10	173	100.00
R1	7.6 YRS.	0.1150E 10	174	100.00
S2.5	7.0 YRS.	0.1151E 10	174	100.00
R2.5	6.8 YRS.	0.1159E 10	174	100.00
R1.5	7.3 YRS.	0.1195E 10	177	100.00
L0	8.0 YRS.	0.1219E 10	179	100.00
R2	7.0 YRS.	0.1226E 10	179	100.00
S2	7.1 YRS.	0.1244E 10	181	100.00
S0	7.5 YRS.	0.1253E 10	181	100.00
L0.5	7.9 YRS.	0.1270E 10	183	100.00
S0.5	7.5 YRS.	0.1283E 10	184	100.00
S1.5	7.2 YRS.	0.1284E 10	184	100.00
L2	7.6 YRS.	0.1296E 10	184	100.00
L1.5	7.6 YRS.	0.1310E 10	185	100.00
S1	7.4 YRS.	0.1319E 10	186	100.00
L1	7.7 YRS.	0.1334E 10	187	100.00

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ACCOUNT 484 TRANSPORTATION EQUIPMENT 01450

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SQ	7.5 YRS.	0.4134E 09	111	100.00
S6	6.9 YRS.	0.4315E 09	113	100.00
S5	6.9 YRS.	0.6193E 09	136	100.00
R5	6.8 YRS.	0.6557E 09	140	100.00
L5	6.9 YRS.	0.7324E 09	148	100.00
S4	6.8 YRS.	0.8554E 09	160	100.00
R4	6.7 YRS.	0.9089E 09	165	100.00
L4	7.0 YRS.	0.9685E 09	170	100.00
S3	6.9 YRS.	0.1119E 10	183	100.00
R3	6.6 YRS.	0.1141E 10	184	100.00
SC	7.7 YRS.	0.1171E 10	187	100.00
R0.5	7.6 YRS.	0.1196E 10	189	100.00
S2.5	6.9 YRS.	0.1212E 10	190	100.00
L3	7.3 YRS.	0.1216E 10	190	100.00
R2.5	6.7 YRS.	0.1220E 10	191	100.00
R1	7.5 YRS.	0.1241E 10	192	100.00
O2	8.1 YRS.	0.1252E 10	193	100.00
R1.5	7.2 YRS.	0.1276E 10	195	100.00
R2	7.0 YRS.	0.1297E 10	197	100.00
S2	7.0 YRS.	0.1312E 10	198	100.00
O3	9.0 YRS.	0.1347E 10	200	100.00
L0	7.8 YRS.	0.1347E 10	200	100.00
S0	7.4 YRS.	0.1348E 10	200	100.00
S1.5	7.1 YRS.	0.1361E 10	201	100.00
O4	10.4 YRS.	0.1374E 10	202	98.14
S0.5	7.3 YRS.	0.1375E 10	202	100.00
L0.5	7.7 YRS.	0.1386E 10	203	100.00
L2	7.5 YRS.	0.1388E 10	203	100.00
S1	7.3 YRS.	0.1406E 10	205	100.00
L1.5	7.5 YRS.	0.1408E 10	205	100.00
L1	7.6 YRS.	0.1441E 10	207	100.00

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ACCOUNT 484 TRANSPORTATION EQUIPMENT 01470

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SQ	7.4 YRS.	0.4538E 09	123	100.00
S6	6.9 YRS.	0.4640E 09	124	100.00
S5	6.9 YRS.	0.6491E 09	147	100.00
R5	6.7 YRS.	0.6848E 09	151	100.00
L5	6.9 YRS.	0.7678E 09	160	100.00
S4	6.8 YRS.	0.8874E 09	172	100.00
R4	6.6 YRS.	0.9395E 09	177	100.00
L4	7.0 YRS.	0.1014E 10	184	100.00
S3	6.9 YRS.	0.1161E 10	197	100.00
R3	6.7 YRS.	0.1177E 10	198	100.00
S2.5	6.9 YRS.	0.1260E 10	205	100.00
R2.5	6.7 YRS.	0.1263E 10	205	100.00
L3	7.2 YRS.	0.1291E 10	208	100.00
SC	7.5 YRS.	0.1303E 10	209	100.00
R0.5	7.4 YRS.	0.1307E 10	209	100.00
R1	7.3 YRS.	0.1335E 10	211	100.00
R1.5	7.1 YRS.	0.1348E 10	212	100.00
R2	6.9 YRS.	0.1349E 10	212	100.00
S2	6.9 YRS.	0.1368E 10	214	100.00
O2	7.8 YRS.	0.1411E 10	217	100.00
S1.5	7.0 YRS.	0.1426E 10	218	100.00
S0	7.3 YRS.	0.1449E 10	220	100.00
S0.5	7.3 YRS.	0.1464E 10	221	100.00
S1	7.1 YRS.	0.1485E 10	223	100.00
L2	7.3 YRS.	0.1488E 10	223	100.00
L0	7.6 YRS.	0.1490E 10	223	100.00
L0.5	7.5 YRS.	0.1516E 10	225	100.00
L1.5	7.3 YRS.	0.1517E 10	225	100.00
O3	8.7 YRS.	0.1548E 10	227	100.00
L1	7.4 YRS.	0.1559E 10	228	100.00
O4	10.0 YRS.	0.1577E 10	230	99.02

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ACCOUNT 484 TRANSPORTATION EQUIPMENT 01490

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 38 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	6.8 YRS.	0.8888E 09	185	100.00
SQ	7.4 YRS.	0.9872E 09	195	100.00
S5	6.7 YRS.	0.1041E 10	200	100.00
R5	6.7 YRS.	0.1045E 10	201	100.00
L5	6.7 YRS.	0.1172E 10	212	100.00
R4	6.5 YRS.	0.1246E 10	219	100.00
S4	6.6 YRS.	0.1248E 10	219	100.00
L4	6.8 YRS.	0.1409E 10	233	100.00
R3	6.4 YRS.	0.1458E 10	237	100.00
S3	6.6 YRS.	0.1498E 10	240	100.00
R2.5	6.4 YRS.	0.1549E 10	244	100.00
S2.5	6.6 YRS.	0.1593E 10	248	100.00
R2	6.5 YRS.	0.1652E 10	252	100.00
R1.5	6.6 YRS.	0.1694E 10	256	100.00
S2	6.6 YRS.	0.1701E 10	256	100.00
L3	6.9 YRS.	0.1710E 10	257	100.00
R0.5	6.9 YRS.	0.1724E 10	258	100.00
SC	7.0 YRS.	0.1732E 10	258	100.00
R1	6.7 YRS.	0.1733E 10	258	100.00
S1.5	6.6 YRS.	0.1770E 10	261	100.00
O2	7.3 YRS.	0.1810E 10	264	100.00
S1	6.6 YRS.	0.1846E 10	267	100.00
S0.5	6.7 YRS.	0.1846E 10	267	100.00
S0	6.8 YRS.	0.1849E 10	267	100.00
L0	7.1 YRS.	0.1881E 10	269	100.00
L2	6.9 YRS.	0.1892E 10	270	100.00
O4	9.7 YRS.	0.1900E 10	271	99.93
L0.5	7.0 YRS.	0.1903E 10	271	100.00
L1.5	6.9 YRS.	0.1910E 10	271	100.00
O3	8.3 YRS.	0.1911E 10	271	100.00
L1	6.9 YRS.	0.1943E 10	274	100.00

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REMAINING LIFE CALCULATION

ACCOUNT 484 TRANSPORTATION EQUIPMENT 01490

REMAINING LIFE AND AGE FOR CURVE, S6 SERVICE LIFE = 7.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	72518	72518	6.50	471.37	36.26
1997	1.5	82126	82125	5.50	451.69	123.19
			154643.		923.05	159.45

REMAINING LIFE = 923.05 / 154.64 = 5.97

AGE = 159.45 / 154.64 = 1.03

ACCOUNT 485 HEAVY WORK EQUIPMENT 01540

ACCOUNT CONTROL CARD

ACCOUNT NAME= 485 EARLIEST ADDITION= 1976 LATEST ADDITION= 1998 EARLIEST BALANCE= 1976 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1976	5400.	1981	10873.	1986	0.	1991	24543.	1996	0.
1977	0.	1982	0.	1987	0.	1992	7567.	1997	2429.
1978	0.	1983	0.	1988	0.	1993	0.	1998	0.
1979	12204.	1984	0.	1989	0.	1994	0.	0	0.
1980	0.	1985	0.	1990	0.	1995	0.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1976	0.	1981	0.	1986	0.	1991	0.	1996	0.
1977	0.	1982	0.	1987	0.	1992	0.	1997	0.
1978	0.	1983	0.	1988	0.	1993	0.	1998	0.
1979	5400.	1984	0.	1989	0.	1994	12763.	0	0.
1980	0.	1985	0.	1990	10314.	1995	0.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1976	5400.	1981	23077.	1986	23077.	1991	37306.	1996	32110.
1977	5400.	1982	23077.	1987	23077.	1992	44873.	1997	34539.
1978	5400.	1983	23077.	1988	23077.	1993	44873.	1998	34539.
1979	12204.	1984	23077.	1989	23077.	1994	32110.	0	0.
1980	12204.	1985	23077.	1990	12763.	1995	32110.	0	0.

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ACCOUNT 485 HEAVY WORK EQUIPMENT 01540

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
SQ	10.4 YRS.	0.0	0	100.00
S6	10.5 YRS.	0.1535E 01	0	100.00
S5	10.7 YRS.	0.3242E 05	2	100.00
R5	11.1 YRS.	0.3637E 06	8	100.00
L5	10.6 YRS.	0.1373E 07	15	100.00
S4	10.7 YRS.	0.1965E 07	18	100.00
R4	11.0 YRS.	0.8289E 07	38	100.00
L4	10.6 YRS.	0.1123E 08	45	100.00
S3	10.9 YRS.	0.1649E 08	54	100.00
S2.5	10.9 YRS.	0.2784E 08	71	100.00
R3	11.1 YRS.	0.2828E 08	71	100.00
L3	10.9 YRS.	0.3591E 08	81	99.83
R2.5	11.2 YRS.	0.4121E 08	86	100.00
S2	11.0 YRS.	0.4201E 08	87	100.00
O4	19.4 YRS.	0.4525E 08	90	73.59
O3	15.2 YRS.	0.4847E 08	94	77.36
S1.5	11.2 YRS.	0.5460E 08	99	100.00
R2	11.3 YRS.	0.5611E 08	101	100.00
O2	12.8 YRS.	0.5638E 08	101	85.96
R1.5	11.5 YRS.	0.6377E 08	107	99.95
L2	11.2 YRS.	0.6458E 08	108	98.08
L0	12.1 YRS.	0.6680E 08	110	89.20
S1	11.2 YRS.	0.6845E 08	111	100.00
SC	11.9 YRS.	0.6851E 08	111	94.87
R0.5	11.7 YRS.	0.7033E 08	113	97.91
L1.5	11.4 YRS.	0.7094E 08	113	96.61
R1	11.5 YRS.	0.7130E 08	114	99.84
L0.5	11.8 YRS.	0.7244E 08	115	92.16
S0.5	11.4 YRS.	0.7394E 08	116	99.95
L1	11.5 YRS.	0.7883E 08	120	94.95
S0	11.6 YRS.	0.7919E 08	120	99.60

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ACCOUNT 485 HEAVY WORK EQUIPMENT 01630

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R4	12.0 YRS.	0.9181E 08	92	100.00
S4	12.2 YRS.	0.9569E 08	94	100.00
S3	12.0 YRS.	0.9933E 08	95	100.00
R3	11.9 YRS.	0.9978E 08	96	100.00
L4	12.2 YRS.	0.1040E 09	98	99.95
L5	12.2 YRS.	0.1057E 09	99	100.00
R5	12.2 YRS.	0.1058E 09	99	100.00
S2.5	12.0 YRS.	0.1062E 09	99	99.99
R2.5	11.8 YRS.	0.1078E 09	100	100.00
S5	12.3 YRS.	0.1157E 09	103	100.00
S2	11.9 YRS.	0.1163E 09	103	99.99
R2	11.9 YRS.	0.1183E 09	104	100.00
S1.5	11.8 YRS.	0.1243E 09	107	99.92
R1.5	11.9 YRS.	0.1253E 09	107	99.61
L3	12.0 YRS.	0.1281E 09	109	98.88
R1	11.9 YRS.	0.1330E 09	111	99.33
S1	11.8 YRS.	0.1346E 09	111	99.88
R0.5	12.1 YRS.	0.1365E 09	112	96.15
O2	13.5 YRS.	0.1374E 09	112	83.83
S0.5	11.9 YRS.	0.1388E 09	113	99.32
SC	12.2 YRS.	0.1408E 09	114	92.08
S0	11.9 YRS.	0.1434E 09	115	98.60
O3	16.8 YRS.	0.1447E 09	115	74.40
L0	12.8 YRS.	0.1453E 09	116	86.67
S6	12.4 YRS.	0.1463E 09	116	100.00
O4	21.5 YRS.	0.1470E 09	116	70.98
L0.5	12.5 YRS.	0.1496E 09	117	89.81
L2	12.1 YRS.	0.1500E 09	117	96.15
L1.5	12.1 YRS.	0.1510E 09	118	94.53
L1	12.2 YRS.	0.1552E 09	119	92.85
SQ	13.4 YRS.	0.2199E 09	142	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 485 HEAVY WORK EQUIPMENT 01650

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R2.5	11.9 YRS.	0.1286E 09	98	100.00
R3	11.8 YRS.	0.1298E 09	99	100.00
R2	11.9 YRS.	0.1357E 09	101	100.00
S2.5	11.9 YRS.	0.1423E 09	104	100.00
R1.5	12.0 YRS.	0.1428E 09	104	99.55
S3	11.8 YRS.	0.1457E 09	105	100.00
R4	12.0 YRS.	0.1458E 09	105	100.00
S2	11.9 YRS.	0.1460E 09	105	99.99
S1.5	11.9 YRS.	0.1492E 09	106	99.89
R1	12.1 YRS.	0.1563E 09	109	98.97
S1	12.0 YRS.	0.1592E 09	110	99.73
L4	12.0 YRS.	0.1594E 09	110	99.97
L3	12.1 YRS.	0.1622E 09	111	98.80
S0.5	12.0 YRS.	0.1650E 09	112	98.91
S4	12.0 YRS.	0.1691E 09	113	100.00
R0.5	12.4 YRS.	0.1734E 09	114	94.60
S0	12.1 YRS.	0.1758E 09	115	97.91
L2	12.2 YRS.	0.1808E 09	117	95.68
L1.5	12.3 YRS.	0.1842E 09	118	93.97
L5	12.1 YRS.	0.1872E 09	119	100.00
R5	12.2 YRS.	0.1937E 09	121	100.00
L1	12.5 YRS.	0.1969E 09	122	91.77
L0.5	12.8 YRS.	0.1979E 09	122	88.64
SC	12.5 YRS.	0.1981E 09	122	89.74
O2	14.1 YRS.	0.1992E 09	123	82.14
L0	13.3 YRS.	0.2038E 09	124	84.96
S5	12.1 YRS.	0.2119E 09	127	100.00
O3	17.9 YRS.	0.2341E 09	133	72.30
O4	23.4 YRS.	0.2481E 09	137	68.75
S6	12.3 YRS.	0.2565E 09	139	100.00
SQ	14.7 YRS.	0.9775E 09	272	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 485 HEAVY WORK EQUIPMENT 01670

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 22 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
R1	12.1 YRS.	0.2241E 09	128	98.97
R1.5	11.9 YRS.	0.2242E 09	128	99.67
R0.5	12.2 YRS.	0.2278E 09	129	95.23
R2	11.8 YRS.	0.2325E 09	130	100.00
R2.5	11.9 YRS.	0.2382E 09	132	100.00
SC	12.5 YRS.	0.2423E 09	133	89.74
O2	13.9 YRS.	0.2428E 09	133	82.57
R3	11.8 YRS.	0.2528E 09	136	100.00
S0	12.1 YRS.	0.2549E 09	136	97.91
S0.5	11.9 YRS.	0.2569E 09	137	99.18
L0	13.1 YRS.	0.2616E 09	138	85.45
S1	11.9 YRS.	0.2656E 09	139	99.83
S1.5	11.8 YRS.	0.2658E 09	139	99.93
L0.5	12.8 YRS.	0.2676E 09	139	88.64
O3	17.7 YRS.	0.2716E 09	141	72.62
S2	11.9 YRS.	0.2734E 09	141	99.99
S2.5	11.8 YRS.	0.2755E 09	142	100.00
L1	12.4 YRS.	0.2812E 09	143	92.21
L1.5	12.3 YRS.	0.2817E 09	143	93.96
O4	23.2 YRS.	0.2835E 09	144	69.02
R4	12.0 YRS.	0.2843E 09	144	100.00
S3	11.8 YRS.	0.2845E 09	144	100.00
L2	12.1 YRS.	0.2934E 09	146	96.00
L3	11.9 YRS.	0.2939E 09	146	98.96
L4	12.0 YRS.	0.3009E 09	148	99.97
S4	12.0 YRS.	0.3140E 09	151	100.00
L5	12.1 YRS.	0.3326E 09	156	100.00
R5	12.2 YRS.	0.3390E 09	157	100.00
S5	12.1 YRS.	0.3577E 09	161	100.00
S6	12.3 YRS.	0.4023E 09	171	100.00
SQ	14.7 YRS.	0.1123E 10	286	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 485 HEAVY WORK EQUIPMENT 01670

REMAINING LIFE AND AGE FOR CURVE, R1 SERVICE LIFE = 12.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	0	0	11.63	0.0	0.0
1997	1.5	2429	2344	10.91	25.56	3.52
1996	2.5	0	0	10.20	0.0	0.0
1995	3.5	0	0	9.51	0.0	0.0
1994	4.5	0	0	8.82	0.0	0.0
1993	5.5	0	0	8.16	0.0	0.0
1992	6.5	7567	6111	7.51	45.90	39.72
1991	7.5	24543	18815	6.89	129.54	141.11
1990	8.5	0	0	6.28	0.0	0.0
1989	9.5	0	0	5.71	0.0	0.0
1988	10.5	0	0	5.17	0.0	0.0
1987	11.5	0	0	4.65	0.0	0.0
1986	12.5	0	0	4.17	0.0	0.0
1985	13.5	0	0	3.71	0.0	0.0
1984	14.5	0	0	3.28	0.0	0.0
1983	15.5	0	0	2.87	0.0	0.0
1982	16.5	0	0	2.49	0.0	0.0
1981	17.5	10873	1986	2.12	4.22	34.75
1980	18.5	0	0	1.78	0.0	0.0
1979	19.5	12204	1043	1.46	1.52	20.34
1978	20.5	0	0	1.15	0.0	0.0
1977	21.5	0	0	0.86	0.0	0.0
1976	22.5	5400	49	0.54	0.03	1.10
			30348.		206.77	240.55

REMAINING LIFE 206.77 / 30.35 = 6.81

AGE 240.55 / 30.35 = 7.93

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01710

ACCOUNT CONTROL CARD

ACCOUNT NAME= 486 EARLIEST ADDITION= 1964 LATEST ADDITION= 1998 EARLIEST BALANCE= 1964 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1964	206.	1971	0.	1978	441.	1985	797.	1992	0.
1965	1881.	1972	907.	1979	0.	1986	5244.	1993	25547.
1966	45.	1973	1415.	1980	6787.	1987	2181.	1994	25246.
1967	576.	1974	2704.	1981	1625.	1988	1621.	1995	12828.
1968	553.	1975	2460.	1982	8568.	1989	3511.	1996	1379.
1969	0.	1976	2184.	1983	1164.	1990	10566.	1997	4770.
1970	550.	1977	2150.	1984	720.	1991	0.	1998	10340.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1964	0.	1971	0.	1978	0.	1985	1673.	1992	10457.
1965	0.	1972	0.	1979	3261.	1986	2106.	1993	2326.
1966	0.	1973	0.	1980	170.	1987	2227.	1994	0.
1967	0.	1974	0.	1981	983.	1988	440.	1995	354.
1968	0.	1975	0.	1982	304.	1989	0.	1996	5245.
1969	0.	1976	788.	1983	121.	1990	6524.	1997	2179.
1970	0.	1977	0.	1984	3998.	1991	0.	1998	805.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1964	206.	1971	3811.	1978	15284.	1985	24435.	1992	25804.
1965	2087.	1972	4718.	1979	12023.	1986	27573.	1993	49025.
1966	2132.	1973	6133.	1980	18640.	1987	27527.	1994	74271.
1967	2708.	1974	8837.	1981	19282.	1988	28708.	1995	86745.
1968	3261.	1975	11297.	1982	27546.	1989	32219.	1996	82879.
1969	3261.	1976	12693.	1983	28589.	1990	36261.	1997	85470.
1970	3811.	1977	14843.	1984	25311.	1991	36261.	1998	95005.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01710

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.1 YRS.	0.3917E 07	10	100.00
S5	10.2 YRS.	0.6803E 07	13	100.00
L5	10.3 YRS.	0.7190E 07	14	100.00
R5	10.3 YRS.	0.7497E 07	14	100.00
S4	10.3 YRS.	0.8351E 07	15	100.00
R4	10.5 YRS.	0.9538E 07	16	100.00
L4	10.4 YRS.	0.1027E 08	16	100.00
S3	10.4 YRS.	0.1153E 08	17	100.00
S2.5	10.6 YRS.	0.1516E 08	20	100.00
R3	10.7 YRS.	0.1670E 08	21	100.00
L3	10.6 YRS.	0.1789E 08	22	100.00
S2	10.7 YRS.	0.1968E 08	23	100.00
R2.5	11.0 YRS.	0.2338E 08	25	100.00
S1.5	10.9 YRS.	0.2616E 08	26	100.00
L2	11.0 YRS.	0.2904E 08	28	100.00
R2	11.3 YRS.	0.3119E 08	29	100.00
S1	11.1 YRS.	0.3334E 08	30	100.00
SQ	11.0 YRS.	0.3488E 08	31	100.00
L1.5	11.4 YRS.	0.3701E 08	32	100.00
R1.5	11.6 YRS.	0.3789E 08	32	100.00
S0.5	11.4 YRS.	0.4029E 08	33	100.00
R1	11.9 YRS.	0.4488E 08	35	100.00
L1	11.8 YRS.	0.4566E 08	35	100.00
S0	11.7 YRS.	0.4813E 08	36	100.00
L0.5	12.4 YRS.	0.5064E 08	37	99.68
R0.5	12.4 YRS.	0.5146E 08	37	100.00
O2	14.0 YRS.	0.5302E 08	38	95.18
O3	17.7 YRS.	0.5442E 08	38	84.93
O4	23.0 YRS.	0.5525E 08	39	79.33
L0	12.9 YRS.	0.5625E 08	39	98.98
SC	12.9 YRS.	0.5637E 08	39	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01820

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 10 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.1 YRS.	0.2544E 08	26	100.00
S5	10.2 YRS.	0.3891E 08	32	100.00
R5	10.1 YRS.	0.4185E 08	33	100.00
L5	10.2 YRS.	0.4588E 08	35	100.00
S4	10.1 YRS.	0.5313E 08	38	100.00
R4	10.1 YRS.	0.6070E 08	40	100.00
L4	10.3 YRS.	0.6139E 08	41	100.00
S3	10.3 YRS.	0.7059E 08	43	100.00
S2.5	10.3 YRS.	0.7976E 08	46	100.00
L3	10.4 YRS.	0.8393E 08	47	100.00
R3	10.4 YRS.	0.8606E 08	48	100.00
S2	10.4 YRS.	0.9027E 08	49	100.00
R2.5	10.6 YRS.	0.1035E 09	53	100.00
S1.5	10.5 YRS.	0.1038E 09	53	100.00
L2	10.8 YRS.	0.1098E 09	54	100.00
S1	10.7 YRS.	0.1189E 09	57	100.00
R2	10.8 YRS.	0.1222E 09	57	100.00
L1.5	11.1 YRS.	0.1282E 09	59	100.00
S0.5	11.0 YRS.	0.1370E 09	61	100.00
R1.5	11.1 YRS.	0.1426E 09	62	100.00
L1	11.3 YRS.	0.1488E 09	63	100.00
SQ	11.0 YRS.	0.1563E 09	65	100.00
S0	11.3 YRS.	0.1572E 09	65	100.00
R1	11.4 YRS.	0.1635E 09	66	100.00
L0.5	11.9 YRS.	0.1659E 09	67	99.81
L0	12.4 YRS.	0.1842E 09	71	99.34
R0.5	11.8 YRS.	0.1865E 09	71	100.00
O2	13.2 YRS.	0.1958E 09	73	96.50
O3	16.6 YRS.	0.2034E 09	74	86.53
SC	12.3 YRS.	0.2056E 09	75	100.00
O4	21.5 YRS.	0.2078E 09	75	80.68

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01840

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 15 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.0 YRS.	0.2711E 08	27	100.00
S5	10.1 YRS.	0.4081E 08	33	100.00
R5	10.1 YRS.	0.4407E 08	34	100.00
L5	10.1 YRS.	0.4830E 08	36	100.00
S4	10.1 YRS.	0.5593E 08	39	100.00
R4	10.1 YRS.	0.6386E 08	41	100.00
L4	10.3 YRS.	0.6443E 08	42	100.00
S3	10.2 YRS.	0.7422E 08	45	100.00
S2.5	10.3 YRS.	0.8328E 08	47	100.00
L3	10.4 YRS.	0.8635E 08	48	100.00
R3	10.3 YRS.	0.9002E 08	49	100.00
S2	10.4 YRS.	0.9344E 08	50	100.00
S1.5	10.5 YRS.	0.1065E 09	54	100.00
R2.5	10.6 YRS.	0.1071E 09	54	100.00
L2	10.8 YRS.	0.1120E 09	55	100.00
S1	10.7 YRS.	0.1212E 09	57	100.00
R2	10.7 YRS.	0.1254E 09	58	100.00
L1.5	11.1 YRS.	0.1300E 09	59	100.00
S0.5	11.0 YRS.	0.1389E 09	61	100.00
R1.5	11.0 YRS.	0.1451E 09	63	100.00
L1	11.3 YRS.	0.1504E 09	64	100.00
S0	11.3 YRS.	0.1587E 09	66	100.00
R1	11.3 YRS.	0.1654E 09	67	100.00
L0.5	11.9 YRS.	0.1672E 09	67	99.81
SQ	10.9 YRS.	0.1838E 09	71	100.00
L0	12.4 YRS.	0.1855E 09	71	99.34
R0.5	11.8 YRS.	0.1882E 09	72	100.00
O2	13.4 YRS.	0.1973E 09	73	96.28
O3	16.7 YRS.	0.2066E 09	75	86.29
SC	12.3 YRS.	0.2070E 09	75	100.00
O4	21.7 YRS.	0.2120E 09	76	80.47

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01860

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 20 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.0 YRS.	0.3023E 08	29	100.00
S5	10.1 YRS.	0.4368E 08	35	100.00
R5	10.0 YRS.	0.4674E 08	36	100.00
L5	10.2 YRS.	0.5125E 08	37	100.00
S4	10.1 YRS.	0.5879E 08	40	100.00
R4	10.2 YRS.	0.6647E 08	43	100.00
L4	10.2 YRS.	0.6772E 08	43	100.00
S3	10.3 YRS.	0.7786E 08	46	100.00
S2.5	10.3 YRS.	0.8715E 08	49	100.00
L3	10.5 YRS.	0.9144E 08	50	100.00
R3	10.3 YRS.	0.9306E 08	51	100.00
S2	10.4 YRS.	0.9812E 08	52	100.00
R2.5	10.5 YRS.	0.1115E 09	55	100.00
S1.5	10.5 YRS.	0.1119E 09	56	100.00
L2	10.8 YRS.	0.1190E 09	57	100.00
S1	10.7 YRS.	0.1274E 09	59	100.00
R2	10.8 YRS.	0.1307E 09	60	100.00
L1.5	11.1 YRS.	0.1379E 09	62	100.00
S0.5	11.0 YRS.	0.1458E 09	64	100.00
R1.5	11.0 YRS.	0.1517E 09	65	100.00
L1	11.4 YRS.	0.1597E 09	66	100.00
S0	11.3 YRS.	0.1667E 09	68	100.00
R1	11.3 YRS.	0.1736E 09	69	100.00
L0.5	11.9 YRS.	0.1782E 09	70	99.80
SQ	10.9 YRS.	0.1910E 09	73	100.00
L0	12.5 YRS.	0.1986E 09	74	99.30
R0.5	11.9 YRS.	0.1986E 09	74	100.00
O2	13.4 YRS.	0.2133E 09	77	96.18
SC	12.3 YRS.	0.2198E 09	78	100.00
O3	16.8 YRS.	0.2290E 09	80	86.17
O4	22.0 YRS.	0.2377E 09	81	80.17

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01880

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 30 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.1 YRS.	0.4371E 08	39	100.00
S5	10.1 YRS.	0.5675E 08	44	100.00
R5	10.1 YRS.	0.5933E 08	45	100.00
L5	10.2 YRS.	0.6373E 08	47	100.00
S4	10.1 YRS.	0.7101E 08	49	100.00
R4	10.1 YRS.	0.7852E 08	52	100.00
L4	10.3 YRS.	0.7953E 08	52	100.00
S3	10.3 YRS.	0.8923E 08	55	100.00
S2.5	10.3 YRS.	0.9888E 08	58	100.00
L3	10.5 YRS.	0.1043E 09	60	100.00
R3	10.4 YRS.	0.1048E 09	60	100.00
S2	10.5 YRS.	0.1100E 09	61	100.00
R2.5	10.6 YRS.	0.1237E 09	65	100.00
S1.5	10.7 YRS.	0.1245E 09	65	100.00
L2	10.9 YRS.	0.1337E 09	68	100.00
S1	10.8 YRS.	0.1407E 09	69	100.00
R2	10.8 YRS.	0.1440E 09	70	100.00
L1.5	11.2 YRS.	0.1541E 09	73	100.00
S0.5	11.0 YRS.	0.1611E 09	74	100.00
R1.5	11.1 YRS.	0.1668E 09	76	100.00
L1	11.5 YRS.	0.1774E 09	78	100.00
S0	11.3 YRS.	0.1837E 09	79	100.00
R1	11.4 YRS.	0.1908E 09	81	100.00
SQ	11.0 YRS.	0.1982E 09	83	100.00
L0.5	12.0 YRS.	0.1988E 09	83	99.78
R0.5	11.8 YRS.	0.2192E 09	87	100.00
L0	12.6 YRS.	0.2219E 09	87	99.26
O2	13.5 YRS.	0.2402E 09	91	96.06
SC	12.3 YRS.	0.2445E 09	92	100.00
O3	16.9 YRS.	0.2617E 09	95	86.04
O4	22.2 YRS.	0.2728E 09	97	80.06

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01900

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 34 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	10.1 YRS.	0.4371E 08	41	100.00
S5	10.1 YRS.	0.5675E 08	46	100.00
R5	10.1 YRS.	0.5933E 08	47	100.00
L5	10.2 YRS.	0.6373E 08	49	100.00
S4	10.1 YRS.	0.7101E 08	52	100.00
R4	10.1 YRS.	0.7852E 08	55	100.00
L4	10.3 YRS.	0.7953E 08	55	100.00
S3	10.3 YRS.	0.8923E 08	58	100.00
S2.5	10.3 YRS.	0.9888E 08	61	100.00
L3	10.5 YRS.	0.1043E 09	63	100.00
R3	10.4 YRS.	0.1048E 09	63	100.00
S2	10.5 YRS.	0.1100E 09	65	100.00
R2.5	10.6 YRS.	0.1237E 09	69	100.00
S1.5	10.7 YRS.	0.1245E 09	69	100.00
L2	10.9 YRS.	0.1337E 09	71	100.00
S1	10.8 YRS.	0.1407E 09	73	100.00
R2	10.8 YRS.	0.1440E 09	74	100.00
L1.5	11.2 YRS.	0.1541E 09	77	100.00
S0.5	11.0 YRS.	0.1611E 09	78	100.00
R1.5	11.1 YRS.	0.1669E 09	80	100.00
L1	11.5 YRS.	0.1774E 09	82	100.00
S0	11.3 YRS.	0.1838E 09	84	100.00
R1	11.4 YRS.	0.1909E 09	85	100.00
SQ	11.0 YRS.	0.1982E 09	87	100.00
L0.5	12.0 YRS.	0.1988E 09	87	99.78
R0.5	11.8 YRS.	0.2194E 09	92	100.00
L0	12.6 YRS.	0.2220E 09	92	99.26
O2	13.5 YRS.	0.2404E 09	96	96.06
SC	12.3 YRS.	0.2447E 09	97	100.00
O3	16.9 YRS.	0.2620E 09	100	86.04
O4	22.2 YRS.	0.2731E 09	102	80.06

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 486 TOOLS AND WORK EQUIPMENT 01900

REMAINING LIFE AND AGE FOR CURVE, S6 SERVICE LIFE = 10.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	10340	10340	9.50	98.23	5.17
1997	1.5	4770	4770	8.50	40.54	7.15
1996	2.5	1379	1379	7.50	10.34	3.45
1995	3.5	12828	12828	6.50	83.38	44.90
1994	4.5	25246	25246	5.50	138.85	113.61
1993	5.5	25547	25546	4.50	114.96	140.50
1992	6.5	0	0	3.50	0.0	0.0
1991	7.5	0	0	2.50	0.0	0.0
1990	8.5	10566	10322	1.54	15.92	87.74
1989	9.5	3511	2614	0.83	2.16	24.83
1988	10.5	1621	413	0.45	0.19	4.34
1987	11.5	2181	50	0.27	0.01	0.57
1986	12.5	5244	1	0.18	0.00	0.01
1985	13.5	797	0	0.12	0.0	0.0
1984	14.5	720	0	0.08	0.0	0.0
1983	15.5	1164	0	0.0	0.0	0.0
1982	16.5	8568	0	0.0	0.0	0.0
1981	17.5	1625	0	0.0	0.0	0.0
1980	18.5	6787	0	0.0	0.0	0.0
1979	19.5	0	0	0.0	0.0	0.0
1978	20.5	441	0	0.0	0.0	0.0
1977	21.5	2150	0	0.0	0.0	0.0
1976	22.5	2184	0	0.0	0.0	0.0
1975	23.5	2460	0	0.0	0.0	0.0
1974	24.5	2704	0	0.0	0.0	0.0
1973	25.5	1415	0	0.0	0.0	0.0
1972	26.5	907	0	0.0	0.0	0.0
1971	27.5	0	0	0.0	0.0	0.0
1970	28.5	550	0	0.0	0.0	0.0
1969	29.5	0	0	0.0	0.0	0.0
1968	30.5	553	0	0.0	0.0	0.0
1967	31.5	576	0	0.0	0.0	0.0
1966	32.5	45	0	0.0	0.0	0.0
1965	33.5	1881	0	0.0	0.0	0.0
1964	34.5	206	0	0.0	0.0	0.0
			93509.		504.59	432.27

REMAINING LIFE 504.59 / 93.51 = 5.40

AGE 432.27 / 93.51 = 4.62

ACCOUNT 488 COMMUNICATION EQUIPMENT 01940

ACCOUNT CONTROL CARD

ACCOUNT NAME= 488 EARLIEST ADDITION= 1985 LATEST ADDITION= 1998 EARLIEST BALANCE= 1985 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1985	34977.	1988	3161.	1991	0.	1994	0.	1997	86916.
1986	2635.	1989	3793.	1992	1066.	1995	4390.	1998	0.
1987	0.	1990	0.	1993	59864.	1996	12378.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1985	0.	1988	0.	1991	0.	1994	0.	1997	0.
1986	0.	1989	0.	1992	0.	1995	0.	1998	0.
1987	0.	1990	0.	1993	37612.	1996	3161.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1985	34977.	1988	40773.	1991	44566.	1994	67884.	1997	168407.
1986	37612.	1989	44566.	1992	45632.	1995	72274.	1998	168407.
1987	37612.	1990	44566.	1993	67884.	1996	81491.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
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ACCOUNT 488 COMMUNICATION EQUIPMENT 01940

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	8.2 YRS.	0.2288E 08	19	100.00
S5	8.0 YRS.	0.2810E 08	21	100.00
SQ	8.9 YRS.	0.3132E 08	22	100.00
R5	8.0 YRS.	0.3868E 08	24	100.00
L5	7.9 YRS.	0.4727E 08	27	99.99
S4	7.8 YRS.	0.6105E 08	31	100.00
L4	7.9 YRS.	0.1129E 09	42	99.59
R4	8.0 YRS.	0.1218E 09	44	100.00
S3	8.0 YRS.	0.1623E 09	51	99.93
L3	8.1 YRS.	0.2081E 09	57	95.57
S2.5	8.0 YRS.	0.2215E 09	59	99.53
R3	8.0 YRS.	0.2568E 09	64	100.00
S2	8.1 YRS.	0.2880E 09	67	98.82
L2	8.5 YRS.	0.3234E 09	72	89.21
R2.5	8.2 YRS.	0.3450E 09	74	99.06
S1.5	8.3 YRS.	0.3458E 09	74	96.68
L1.5	8.8 YRS.	0.3690E 09	76	85.15
S1	8.5 YRS.	0.3993E 09	80	93.39
O4	20.2 YRS.	0.4148E 09	81	57.95
L1	9.1 YRS.	0.4151E 09	81	80.83
O3	15.1 YRS.	0.4200E 09	82	59.96
L0.5	9.7 YRS.	0.4229E 09	82	75.82
S0.5	8.7 YRS.	0.4287E 09	82	88.59
R2	8.4 YRS.	0.4289E 09	82	97.02
L0	10.3 YRS.	0.4294E 09	82	70.83
O2	11.4 YRS.	0.4470E 09	84	65.76
S0	9.0 YRS.	0.4489E 09	84	82.59
SC	10.2 YRS.	0.4533E 09	85	66.47
R1.5	8.8 YRS.	0.4701E 09	86	90.39
R0.5	9.6 YRS.	0.4760E 09	87	74.19
R1	9.1 YRS.	0.4887E 09	88	83.16

ACCOUNT 488 COMMUNICATION EQUIPMENT 02010

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 14 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S6	7.9 YRS.	0.1599E 09	49	100.00
S5	8.0 YRS.	0.2969E 09	67	100.00
R5	7.9 YRS.	0.3389E 09	71	100.00
L5	8.0 YRS.	0.3756E 09	75	99.98
S4	7.9 YRS.	0.4650E 09	84	100.00
R4	7.8 YRS.	0.5693E 09	93	100.00
L4	8.1 YRS.	0.5704E 09	93	99.35
S3	8.0 YRS.	0.6998E 09	103	99.89
S2.5	8.1 YRS.	0.8115E 09	111	99.41
L3	8.4 YRS.	0.8228E 09	112	94.18
R3	7.9 YRS.	0.8393E 09	113	100.00
S2	8.2 YRS.	0.9336E 09	119	98.57
R2.5	8.2 YRS.	0.9976E 09	123	99.18
S1.5	8.4 YRS.	0.1047E 10	126	95.76
L2	8.8 YRS.	0.1076E 10	128	87.34
R2	8.4 YRS.	0.1153E 10	132	96.82
S1	8.6 YRS.	0.1160E 10	133	92.04
L1.5	9.1 YRS.	0.1182E 10	134	83.09
S0.5	8.9 YRS.	0.1245E 10	138	87.03
R1.5	8.8 YRS.	0.1259E 10	138	90.88
L1	9.5 YRS.	0.1299E 10	140	78.65
S0	9.2 YRS.	0.1327E 10	142	80.91
R1	9.2 YRS.	0.1344E 10	143	82.78
L0.5	10.1 YRS.	0.1351E 10	143	73.32
R0.5	9.7 YRS.	0.1402E 10	146	73.01
L0	10.7 YRS.	0.1410E 10	146	68.49
O2	11.8 YRS.	0.1443E 10	148	63.74
SC	10.6 YRS.	0.1446E 10	148	63.88
SQ	8.6 YRS.	0.1446E 10	148	100.00
O3	16.1 YRS.	0.1465E 10	149	57.50
O4	21.8 YRS.	0.1478E 10	150	55.52

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

REMAINING LIFE CALCULATION

ACCOUNT 488 COMMUNICATION EQUIPMENT 02010

REMAINING LIFE AND AGE FOR CURVE, S6 SERVICE LIFE = 8.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	0	0	7.50	0.0	0.0
1997	1.5	86916	86916	6.50	564.95	130.37
1996	2.5	12378	12378	5.50	68.08	30.94
1995	3.5	4390	4390	4.50	19.75	15.36
1994	4.5	0	0	3.50	0.0	0.0
1993	5.5	59864	59863	2.50	149.66	329.25
1992	6.5	1066	1059	1.51	1.60	6.88
1991	7.5	0	0	0.72	0.0	0.0
1990	8.5	0	0	0.34	0.0	0.0
1989	9.5	3793	23	0.19	0.00	0.22
1988	10.5	3161	0	0.11	0.0	0.0
1987	11.5	0	0	0.07	0.0	0.0
1986	12.5	2635	0	0.0	0.0	0.0
1985	13.5	34977	0	0.0	0.0	0.0
			164629.		804.05	513.03

$$\text{REMAINING LIFE} = \frac{804.05}{164.63} = 4.88$$

$$\text{AGE} = \frac{513.03}{164.63} = 3.12$$

ACCOUNT 490 COMPUTER EQUIPMENT 02050

ACCOUNT CONTROL CARD

ACCOUNT NAME= 490 EARLIEST ADDITION= 1985 LATEST ADDITION= 1998 EARLIEST BALANCE= 1985 LATEST BALANCE= 1998

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998 SPR METHOD= BAL. INPUT METHOD= CARD

INPUT DATA= ADDIT. AND RET.

PLANT ADDITIONS

YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS	YEAR	ADDITIONS
1985	26154.	1988	12913.	1991	10154.	1994	150902.	1997	125885.
1986	10755.	1989	26083.	1992	15154.	1995	19640.	1998	28860.
1987	7321.	1990	41189.	1993	7312.	1996	33864.	0	0.

PLANT RETIREMENTS

YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS	YEAR	RETIREMENTS
1985	0.	1988	835.	1991	0.	1994	0.	1997	78707.
1986	0.	1989	8701.	1992	0.	1995	0.	1998	3085.
1987	0.	1990	17620.	1993	0.	1996	86195.	0	0.

PLANT BALANCES

YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES	YEAR	BALANCES
1985	26154.	1988	56308.	1991	107413.	1994	280781.	1997	295268.
1986	36909.	1989	73690.	1992	122567.	1995	300421.	1998	321043.
1987	44230.	1990	97259.	1993	129879.	1996	248090.	0	0.

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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ACCOUNT 490 COMPUTER EQUIPMENT 02050

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 5 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S0	6.5 YRS.	0.7856E 10	137	100.00
L1	6.6 YRS.	0.7990E 10	138	96.57
S0.5	6.4 YRS.	0.7994E 10	138	100.00
R1	6.6 YRS.	0.8021E 10	138	100.00
R0.5	6.8 YRS.	0.8025E 10	138	99.64
L0.5	6.9 YRS.	0.8074E 10	138	93.37
R1.5	6.4 YRS.	0.8118E 10	139	100.00
L0	7.2 YRS.	0.8152E 10	139	89.71
S1	6.2 YRS.	0.8153E 10	139	100.00
SC	7.0 YRS.	0.8161E 10	139	96.40
R2	6.2 YRS.	0.8221E 10	140	100.00
L1.5	6.4 YRS.	0.8238E 10	140	98.05
R2.5	6.1 YRS.	0.8288E 10	140	100.00
S1.5	6.1 YRS.	0.8393E 10	141	100.00
R3	6.0 YRS.	0.8401E 10	141	100.00
O2	7.8 YRS.	0.8444E 10	142	85.10
L2	6.2 YRS.	0.8535E 10	142	99.31
S2	6.0 YRS.	0.8652E 10	143	100.00
O3	10.1 YRS.	0.8766E 10	144	74.32
R4	6.0 YRS.	0.8771E 10	144	100.00
O4	13.4 YRS.	0.8883E 10	145	70.13
S2.5	6.0 YRS.	0.8904E 10	145	100.00
S3	5.9 YRS.	0.9200E 10	148	100.00
L3	6.0 YRS.	0.9291E 10	149	99.99
S6	6.3 YRS.	0.9296E 10	149	100.00
R5	6.2 YRS.	0.9446E 10	150	100.00
SQ	6.3 YRS.	0.9533E 10	151	100.00
L4	6.0 YRS.	0.9695E 10	152	100.00
S5	6.3 YRS.	0.9717E 10	152	100.00
S4	6.0 YRS.	0.9749E 10	152	100.00
L5	6.1 YRS.	0.9953E 10	154	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

GAZIFERE-AUG.10,1999

ACCOUNT 490 COMPUTER EQUIPMENT 02120

SIMULATED BALANCES METHOD

NO. OF TEST POINTS= 14 INTERVAL BETWEEN TEST POINTS= 0 LAST TEST POINT= 1998

DISPERSION	AVERAGE SERVICE LIFE	SUM OF SQUARES DIFF.	INDEX OF VARIATION	RET. EXP. INDEX
S0	6.6 YRS.	0.8674E 10	162	100.00
R1	6.7 YRS.	0.8750E 10	163	100.00
S0.5	6.5 YRS.	0.8794E 10	163	100.00
R1.5	6.5 YRS.	0.8848E 10	164	100.00
R0.5	6.9 YRS.	0.8850E 10	164	98.57
L1	6.7 YRS.	0.8920E 10	165	95.99
S1	6.3 YRS.	0.8964E 10	165	100.00
R2	6.3 YRS.	0.8990E 10	165	100.00
L0.5	7.0 YRS.	0.9032E 10	166	92.63
R2.5	6.2 YRS.	0.9112E 10	166	100.00
L1.5	6.5 YRS.	0.9119E 10	166	97.64
SC	7.2 YRS.	0.9142E 10	167	93.56
L0	7.4 YRS.	0.9161E 10	167	88.39
S1.5	6.2 YRS.	0.9219E 10	167	100.00
R3	6.1 YRS.	0.9279E 10	168	100.00
L2	6.3 YRS.	0.9393E 10	169	99.09
O2	8.1 YRS.	0.9447E 10	169	83.92
S2	6.1 YRS.	0.9499E 10	170	100.00
R4	6.1 YRS.	0.9692E 10	172	100.00
S2.5	6.0 YRS.	0.9751E 10	172	100.00
O3	10.5 YRS.	0.9947E 10	174	73.02
S3	6.0 YRS.	0.1005E 11	175	100.00
L3	6.2 YRS.	0.1007E 11	175	99.98
O4	14.0 YRS.	0.1013E 11	175	68.81
R5	6.2 YRS.	0.1041E 11	178	100.00
S6	6.3 YRS.	0.1043E 11	178	100.00
L4	6.1 YRS.	0.1049E 11	179	100.00
S4	6.1 YRS.	0.1061E 11	180	100.00
S5	6.3 YRS.	0.1070E 11	180	100.00
SQ	6.3 YRS.	0.1075E 11	181	100.00
L5	6.1 YRS.	0.1082E 11	181	100.00

DEPRECIATION STUDY
SIMULATED PLANT-RECORD METHOD
IOWA STATE UNIVERSITY

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REMAINING LIFE CALCULATION

ACCOUNT 490 COMPUTER EQUIPMENT 02120

REMAINING LIFE AND AGE FOR CURVE, SQ SERVICE LIFE = 4.0

YEAR INSTALLED	YEARS IN SERVICE	ADDS	PLANT SURVIVING	ESTIMATED FUTURE YEARS	REMAINING LIFE $ X YEARS / $1,000.00	AGE $ X YEARS / $1,000.00
1998	0.5	28860	28860	3.50	101.01	14.43
1997	1.5	125885	125885	2.50	314.71	188.83
1996	2.5	33864	33864	1.50	50.80	84.66
1995	3.5	19640	19640	0.50	9.82	68.74
1994	4.5	150902	0	0.0	0.0	0.0
1993	5.5	7312	0	0.0	0.0	0.0
1992	6.5	15154	0	0.0	0.0	0.0
1991	7.5	10154	0	0.0	0.0	0.0
1990	8.5	41189	0	0.0	0.0	0.0
1989	9.5	26083	0	0.0	0.0	0.0
1988	10.5	12913	0	0.0	0.0	0.0
1987	11.5	7321	0	0.0	0.0	0.0
1986	12.5	10755	0	0.0	0.0	0.0
1985	13.5	26154	0	0.0	0.0	0.0
			208249.		476.34	356.66

REMAINING LIFE = 476.34 / 208.25 = 2.29

AGE = 356.66 / 208.25 = 1.71