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June 1, 2017

Mr. Daniel P. Wolf Executive Secretary Minnesota Public Utilities Commission 121 Seventh Place East, Suite 350 St. Paul, MN 55101-2147

RE: Five-Year Depreciation Study Docket No. G004/D-17-

Dear Mr. Wolf:

Great Plains Natural Gas Co. (Great Plains), a Division of MDU Resources Group, Inc., herewith electronically files its Five-Year Depreciation Study pursuant to Minnesota Rules parts 7825.0500 to 7825.0700.

The Deprecation Study is Great Plains' five-year study reflecting plant in service and book deprecation reserve balances at December 31, 2016. Overall, application of the proposed depreciation rates results in an increase of \$39,719 from current rates. The composite annual depreciation rate under present rates is 4.23 percent, while the proposed composite depreciation rate is 4.31 percent.

The most notable depreciation changes occurred in the following accounts:

- Account 376.00 Mains-Steel
- Account 376.10 Mains-Plastic (PE)
- Account 378.00 Measuring and Regulating Station Equipment
- Account 381.00 Meters
- Account 396.00 Power Operated Equipment

A detailed narrative of the changes to these accounts is located on pages 1-3 through 1-5 of the attached Depreciation Study.

Great Plains requests that the depreciation rates in this annual study be certified effective as of January 1, 2017.

If you have any questions regarding this study, please contact me at (701) 222-7854, or Brian M. Meloy, at (612) 335-1451.

Sincerely,

/s/ Tamie A. Aberle

Tamie A. Aberle Director of Regulatory Affairs

cc: Brian M. Meloy



GREAT PLAINS NATURAL GAS COMPANY

Depreciation Study As of December 31, 2016

Earl M. Robinson, Principal David A. Sheffer, Principal

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May 23, 2017

Ms. Tammy Nygard, Controller Montana-Dakota Utilities Company 400 North Fourth Street Bismarck, ND 58501

RE: Great Plains Natural Gas Company-Depr Study

Dear Ms. Nygard:

In accordance with your authorization, we previously prepared a depreciation study related to the utility plant in service of Great Plains Natural Gas Company as of December 31, 2016 based upon the December 31, 2016 depreciation parameters, applied to the Company's plant in service balances as of December 31, 2016. Our findings and recommendations, together with supporting schedules and exhibits, are set forth in the accompanying report.

Summary schedules have been prepared to illustrate the impact of instituting the proposed annual depreciation rates as a basis for the Company's annual depreciation expense as compared to the rates presently utilized. The application of the present rates to the Company's depreciable plant in service as of December 31, 2016 results in an annual depreciation expense of \$2,047,922. In comparison, the application of the proposed depreciation rates to the depreciable plant in service at December 31, 2016 results in an annual depreciation expense of \$2,087,640 which is a limited increase of \$39,719 from current rates. The composite annual depreciation rate under present rates is 4.23 percent, while the proposed composite depreciation rate is 4.31 percent.

Section 2 of our report contains the summary schedules showing the results of our service life and salvage studies and summaries of presently utilized depreciation rates. The subsequent sections of the report present a detailed outline of the methodology and procedures used in the study together with supporting calculations and analyses used in the development of the results.

Respectfully submitted,

EARL M. ROBINSON, CDP

&

DAVID A. SHEFFER



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SECTION 1



GREAT PLAINS NATURAL GAS COMPANY

December 31, 2016 Depreciation Study

Executive Summary

Table 1 on pages 2-1 to 2-2 is a comparative summary which illustrates the effect of instituting the updated depreciation rates. The schedule includes a comparison of the annual depreciation rates and annual depreciation expense under both present and proposed depreciation rates applied using the Straight Line Method for each depreciable property group of the Great Plains Natural Gas Division (the "Company") plant in service as of December 31, 2016. Both the present and proposed depreciation rates were developed utilizing the Straight Line (SL) Method, Broad Group (BG) Procedure, and the Average Remaining Life (ARL) Technique.

Table 2 - Plant Only on pages 2-3 to 2-5 (which is the development of average remaining life depreciation rates for the Plant Only recovery component) provides a calculation of the plant only depreciation rates utilizing the detailed life estimates and service life parameters (Iowa Curves) utilized in preparing the Average Remaining Life depreciation rates for each property group. The schedule incorporates the detailed data and narrative of the study results set forth in Sections 4 through 7. The developed depreciation rates were determined by using the Company's historical investment data together with the applicable plant only component of the Company's book depreciation reserves.

Table 2 - Gross Salvage on pages 2-6 through 2-8 is a similar table to Table 2 - Plant Only, except that this table develops the component level depreciation rates for the recovery of the gross salvage portion of the property cost.

Table 2 - Cost of Removal on pages 2-9 through 2-11 summarizes the depreciation recovery rates for the cost of removal segment of the total plant cost.

Table 3 on pages 2-12 and 2-13 contains a summary of the Company's December 31, 2016 plant in service per books versus the plant in service per the depreciation rate calculations.

Table 4 on pages 2-14 and 2-15 contains a summary of the Company's December 31, 2016 depreciation reserve per books versus the depreciation reserves per the depreciation rate calculations.

The various schedules comprising Table 5 on pages 2-16 to 2-21 summarize the development of the annual amortization amounts for each of the general plant accounts for which the depreciation amortization approach is being used. Thus, the accounting procedure for these property items, is that the investments within each vintage of the applicable property group are amortized over a predetermined time period. Once attaining the stated amortization period age the asset's original cost investment are fully amortized, and accordingly, are retired from the company's books and records. The property accounts for which asset investment is being amortized includes Account 391, 394, 397, and 398.

Table 6 on pages 2-22 and 2-23 contains a schedule of the Company's December 31, 2016 plant in service activity.

Table 7 Plant Only on pages 2-24 and 2-25 contains a schedule of base reserve only accumulated provision for plant only ended December 31, 2016.

Table 7 Gross Salvage on pages 2-26 and 2-27 contains a schedule of the gross salvage related accumulated depreciation ended December 31, 2016.

Table 7 Cost of Removal on pages 2-28 and 2-29 contains a schedule of the accumulated depreciation for the removal cost ended December 31, 2016.

Table 8 on pages 2-30 through 2-32 contains a summary table of the depreciation

parameters underlying the Company's prior depreciation rates as well as also provides similar information relative to the current depreciation parameters and depreciation rates.

The most notable depreciation changes occurred relative to Account 376.00-Mains-Steel, Account 376.10-Mains-Plastic (PE), Account 378.00 - Measuring and Regulating Station Equipment, Account 381.00 - Meters, and Account 396.00 - Power Operated Equipment.

The proposed depreciation rate for Account 376.00 – Mains-Steel, declined from 2.99 percent to 2.10 percent. The proposed/estimated future average service life is an Iowa 63-R3 life and curve while the current underlying depreciation life parameters are an Iowa 54-R3 life and curve. Conversely, the estimated future negative net salvage remained at the same negative -55 percent as incorporated within the present depreciation rate. The ARL and related depreciation rate reduction is being driven by the longer estimated average service life on a going forward basis.

The proposed depreciation rate for Account 376.10 – Mains-Plastic (PE), increased from 2.99 percent to 3.31 percent. Based upon the Company's actual historical plant in service and net salvage data service life, and net salvage parameters were estimated for the property group as outlined in section 4 of this depreciation study report. Both the proposed and current underlying average service life for this property group is an Iowa 45-R4 life and curve. The future net salvage underlying the proposed depreciation rates is the same negative -55 percent as that underlying the current depreciation rate. Therefore, the proposed depreciation rate is the product of the change of the vintage plant in service and corresponding book depreciation reserve.

The depreciation rate relative to Account 378.00 – Measuring & Regulating Station Equipment increased from 2.34 percent to 12.55 percent. The current underlying average service life was 40 years and the underlying net salvage factor is negative -15 percent. In prior periods it was envisioned that many of the Company's district regulator stations would be rebuilt and used

for longer periods of time. Conversely, management envisions that with the completion of the PVC replacement program, in subsequent years, the distribution system operating pressures will be up rated, thus minimizing the need for any potential further use of the Distribution Measuring and Regulating Station Equipment. Accordingly, the average remaining life for this property group investment is linked to the estimated 5 year ARL of the PVC program,

The depreciation rate relative to Account 381.00 - Meters increased from 8.58 percent to 9.91 percent. Account 382 – Meter Installations is combined with Account 381 – Meters. In the course of purchasing Meters the Company capitalizes the estimated installation cost as an added cost of the meter, thus, no Meter Installation cost is retired from service until the Meter is physically retired.

The Company implemented an AMR system through the installation of ERTs on its gas meters. While ERT's have been installed on the Company's gas Meters, in conjunction with the Company's PVC replacement program customer sites are being visited with the purpose of installing a current technology Meter bar. In conjunction with the visit, the Meter bar is replaced, plus the existing House Regulator is replaced, and the old Regulator is being junked/retired. If the Meter at the customer location is a 2000 or newer vintage, the Meter is transferred to the newly installed Meter bar. If it is a 1999 or older vintage Meter, the existing Meter is replaced with a new Meter. The replaced Meter is returned to the Company Meter Shop. The returned Meters (prior to 2000 vintage) are tested, and have been experiencing retirements of approximately 70%. Accordingly, the overall life of the Meters property group is based upon a weighting of 20 years for the retained (in place) Meters (2000 and subsequent vintage), plus 20 years for the non-retired PVC program replaced Meters, and 5 years average remaining life for the 70% portion of Meters being replaced in conjunction with the PVC

program. That is, those Meters which are being returned to the shop for inspection/testing and potential retirement.

For the ERT's that have been added to the existing Meters, it is estimated that the ERT's battery life is anticipated to be 20 years. Also, there will be a level of ERT failures earlier in life which will require an earlier replacement of the Meter/ERT unit. Thus the overall average remaining life of the Meter account is 7.01 years.

The depreciation rate relative to Account 396.00 – Power Operated Equipment Account declined from 3.23 percent to negative -2.89 percent. There is an equipment supplier program that enables the Company to rapidly replace much of this equipment, with the Company currently receiving an exceptionally high level of gross salvage upon replacement/retirement of the property. The program is anticipated to continue into the foreseeable future.

The current estimated average service life is 8 years and the net salvage factor is estimated at 25 percent. The average service life underlying the proposed depreciation rate is six (6) years and the estimated future net salvage is 65 percent. The current depreciation rate change, to a negative depreciation rate, is the product of the fact that the average service life of the property group is very short, the level of received gross salvage has been occurring at a very high level, thus the present book depreciation reserve is much higher than required to fully recover the plant investment over the life of the property group investment.

Various of the remaining account/sub-account investments experienced increases and/or declines in recommended depreciation rates to a lesser degree, as noted per Table 1 of this report. This revision in annual depreciation rates and expense is the result of both changes in the estimated service lives and salvage factors, and reflects the impact of the Company's property changes since the most recent study.

With regard to the inclusion of higher negative net salvage levels in the development of

proposed depreciation rates, the level of experienced net salvage should simply be a benchmark from which to estimate future net salvage. It is highly likely that the negative net salvage amounts experienced even recently will simply be the floor above which future negative net salvage levels will increase to a higher level. To appropriately and proportionately allocate the true total asset cost (original cost adjusted for net salvage) over its applicable service life, proper consideration must be given in each accounting period, to the total costs that are anticipated to occur relative to the Company's assets that provide customer service.

The utilization of the recommended depreciation rates based upon the Straight Line Average Remaining Life Procedure results in the setting of depreciation rates which will continuously true up the Company's level of capital recovery over the life of each asset group. Application of this procedure, which is based upon the current best estimates of service life together with the Company's plant in service and accrued depreciation, produces annual depreciation rates that will result in the Company recovering 100 percent of its investment -- no more, no less.

It is recommended that the Company continue to apply depreciation rates and maintain its book depreciation reserve on an account-level basis. The maintenance of the book reserve on an account-level basis requires both the development of annual depreciation expense and distribution of other reserve account charges to an individual level. Maintaining the Company's depreciation records in this detail will aid in completing the various rate studies and, most importantly, clearly identifies the Company's level of capital recovery relative to each category of plant investment.

The general drivers for the proposed depreciation rates include an assessment of the Company's historical experience with regard to achieved service lives and net salvage factors. In addition, consideration is given to current and anticipated events which are anticipated to impact

the Company's ability to recover its fixed capital costs related to utility plant in service utilized to provide service to the Company's customers.

Applying the proposed depreciation/amortization rates to the Company's December 31, 2016 plant in service produces annual depreciation expense of \$2,087,640 which is a limited increase of \$39,719 from current depreciation rates.

The following summary compares the present and updated composite depreciation rates for general information purposes only. The <u>Composite Depreciation Rate</u> should not be applied to the total Company investment inasmuch as the non-proportional change in plant investment as a result of property additions or retirements would render the composite rate inappropriate. The Table 1 (of Section 2) lists the annual depreciation rates for each property account/group.

Present Depreciation Rates

Depreciable Plant In Service
at December 31, 2016 \$48,442,790

Annual Depreciation Expense \$2,047,922

Composite Annual Depreciation Rate 4.23%

Proposed Depreciation Rates

Depreciable Plant In Service
at December 31, 2016 \$48,442,790

Annual Depreciation Expense \$2,087,640

Composite Annual Depreciation Rate 4.31%

SECTION 2

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service as of December 31, 2016 and Related Annual Depreciation Expense Under Present and Proposed Rates

								Proposed Rates					
		Original	Present		Proposed Pla	Plant Only Rates	Proposed Gros	Gross Salv Rates	Proposed (COR Rates	Total Proposed Rates	sed Rates	Net
Account No. (a)	Description (b)	12/31/16 (c)	Rate % (d)	Annual Accrual (e)	Rate %	Annual Accrual (g)	Rate %	Accrual (i)	Rate %	Annual Accrual (k)	Rate %	Accrual (m)	Cnange Depr Exp (n)
	DEPRECIABLE PLANT												
365.20	Transmission Plant Rights of Way	158,152.03	1.24%	1,961.09	1.21%	1,913.64	0.00%	0.00	0.00%	0.00	1.21%	1,913.64	(47.45)
367.00 367.4042 367.45 367.50 367.6061	TRANSMISSION MAINS Transmission Mains 2 Railroad, River & Highway Crossings Anodes and Cathodic Protection Valves 1 Farm & Side Taps	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	1.38% 1.38% 1.38% 1.38%	19,934.04 864.21 18.30 43.96 411.44	1,40% 0.74% 1,49% -1,41% 0.00%	20,222.94 463.42 19.76 (44.92)	-0.03% -0.09% -0.12% -0.19%	(433.35) (56.36) (1.59) (6.05) (38.76)	0.08% -0.43% -0.53% -1.57%	1,155.60 (269.28) (7.03) (50.02)	1.45% 0.22% 0.84% -3.17%	20,945.19 137.77 11.14 (100.99) (289.20)	1,011.15 (726.44) (7.16) (144.95) (700.64)
	Total Transmission Mains	1,541,445.63	1.38%	21,271.95	1.34%	20,661.20	-0.03%	(536.11)	0.04%	578.83	1.34%	20,703.91	(568.04)
369.00	Meas & Reg Station Equipment	820,969.58	3.01%	24,711.18	2.27%	18,636.01	%00.0	0.00	0.34%	2,791.30	2.61%	21,427.31	(3,283.87)
	Total Transmission Plant	2,520,567.24	1.90%	47,944.22	1.63%	41,210.85	-0.02%	(536.11)	0.13%	3,370.13	1.75%	44,044.86	(3,899.36)
374.20 375.00	Distribution Plant Rights of Way Distr. Meas & Reg Station Structures	17,653.59 32,251.03	2.14% 2.84%	377.79 915.93	2.11%	372.49 867.55	%00.0 0.00%	0.00	0.00%	0.00	2.11%	372.49 915.93	(5.30)
376.00 376.10 376.11 376.28-50 376.28-50 376.55	Mains Steel Mains Plastic Mains Plastic Mains - PVC Valves Railroad, River & Highway Crossings Anodes and Cathodic Protection Pipeline Markers	3,681,756.47 12,067,385.57 1,151,401.15 134,310.35 399,866.60 81,169.34	2 99% 2 99% 2 99% 2 99% 2 99% 2 99%	110,084.52 360,814.83 34,426.89 4,015.88 11,956.01 2,426.96 5.14	1.24% 2.09% 0.89% 1.28% 1.67% -0.01%	45,653.78 252,208.36 10,247.47 1,719.17 6,677.77 (8.12)	0.00% 0.00% 0.00% 0.00% 0.00%	0.00 0.00 (115.14) 0.00 0.00 (8.12)	0.86% 1.22% 2.45% 1.19% 1.21% 1.71%	31,663.11 147,222.10 28,209.33 1,598.29 4,838.39 1,388.00 (0.38)	2.10% 3.31% 3.33% 2.47% 2.88% 1.69% -36.13%	77,316.89 399,430.46 38,341.66 3,317.47 11,516.16 1,371.76 (62.05)	(32.767.63) 38,615.63 3,914.77 (698.41) (439.85) (1,055.20) (67.19)
	Total Mains	17,516,061.23	2.99%	523,730.23	1.81%	316,436.87	0.00%	(123.38)	1.23%	214,918.84	3.03%	531,232.35	7,502.12
378.00 379.00	Meas & Reg Station Equip-General Meas & Reg Station Equip-City Gate	501,025.62 442,661.26	2.34% 3.47%	11,724.00 15,360.35	8.79% 3.43%	44,040.15 15,183.28	0.00%	0.00	3.76% 0.44%	18,838.56 1,947.71	12.55% 3.87%	62,878.72 17,130.99	51,154.72 1,770.64
380.00 380.10 380.11 380.5560	Services Steel Services Plastic Services Plastic Services - PVC Dattic Services - And Cathodic Protection	1,076,486.26 12,550,273.57 788,764.40 69,491.30	4.10% 4.10% 4.10%	44,135.94 514,561.22 32,339.34 2,849.14	1.42% 2.32% 0.88% 2.50%	15,286.10 291,166.35 6,941.13 1,737.28	0.00% 0.00% 0.00%	00.0	1.01% 1.72% 0.26% 1.75%	10,872.51 215,864,71 2,050,79 1,216.10	2.43% 4.04% 1.14% 4.25%	26,158.62 507,031.05 8,991.91 2,953.38	(17,977.32) (7,530.17) (23,347.43) 104.24
	Total Services	14,485,015.53	4.10%	593,885.64	2.18%	315,130.86	0.00%	0.00	1.59%	230,004.11	3.76%	545,134.96	(48,750.68)
381.00	Meters & Meter Installations	6,324,475.10	8.58%	542,639.96	7.03%	444,610.60	0.02%	1,264.90	2.86%	180,879.99	9.91%	626,755.48	84,115.52

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service as of December 31, 2016 and Related Annual Depreciation Expense Under Present and Proposed Rates

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Account <u>No.</u>	Description (h)	Original Cost 12/31/16	Estimate Net Si	Estimated Future Net Salvage Met Salvage Amount (d) (e)	Original Cost Less Salvage	Book Depreciation Reserve	Original Cost Less Book <u>Depr Reserve</u>	A.S.L./ Survivor Curve	Average Remaining Life	Annual Depreciation Accrual	Annual Deprecation Rate
	DEPRECIABLE PLANT	Đ	Đ	D)	ē	(h)		8)	È	E
365.20 Right	<u>Transmission Plant</u> Rights of Way	158,152.03	%0	0.00	158,152.03	122,071.44	36,080.59	50-R2.5	18.87	1,912.06	1.21%
TRANSMI 367.00 Transmission Mair 367.40.42 Railroad, River & H 367.45 Anodes and Catho 367.50 Valves 367.60-61 Farm & Side Taps	TRANSMISSION MAINS 367.00 Transmission Mains 367.4042 Railroad, River & Highway Crossings 367.45 Anodes and Cathodic Protection 367.50 Valves 367.6061 Farm & Side Taps	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	%0 %0	0.00 0.00 0.00 0.00	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	1,050,618.15 58,733.88 1,211.86 3,378.61 29,814.19	393,877.54 3,890.13 114.01 -192.93 0.19	50-R3 40-R2 25-R3 40-R3 30-R4	19.41 8.44 5.78 4.31 6.22	20,292.51 460.92 19.73 44.76 0.03	1.40% 0.74% 1.49% -1.41% 0.00%
Tota	Total Transmission Mains	1,541,445.63		0.00	1,541,445.63	1,143,756.69	397,688.94		19.19	20,728.43	1.34%
369.00 Mea	369.00 Meas & Reg Station Equipment	820,969.58	%0	0.00	820,969.58	196,017.52	624,952.06	40-R0.5	33.60	18,599.76	2.27%
Tota	Total Transmission Plant	2,520,567.24		0.00	2,520,567.24	1,461,845.65	1,058,721.59		25.67	41,240.25	1.64%
374.20 Right 375.00 Distr	Distribution Plant Rights of Way Distr. Meas & Reg Station Structures	17,653.59 32,251.03	%0 %0	00.00	17,653.59 32,251.03	8,417.11 24,951.67	9,236.48 7,299.36	50-R2.5 85-S1.5	24.74 8.42	373.34 866.91	2.11%
Mair 376.00 Steel M 376.10 Plastic 376.20 Valves 376.28-50 Railroa 376.55 Anodes	Mains 376.00 Steel Mains 376.10 Plastic Mains 376.11 Plastic Mains - PVC 376.20 Valves 376.28-50 Railroad, River & Highway Crossings 376.55 Anodes and Cathodic Protection 376.56 Pipeline Markers	3,681,756.47 12,067,385,57 1,151,401.15 134,310.35 399,866.60 81,169.34	%%%%% %000	0.00 0.00 0.00 0.00 0.00 0.00	3,681,756.47 12,067,385.57 1,151,401.15 134,310.35 399,866.60 81,169.34	2,166,708,12 2,863,882,58 1,100,179,54 105,769,90 250,946,94 81,234,68	1,515,048.35 9,203,502.99 51,221.61 28,540.45 148,919.66 -65.34	63-R3 45-R4 (2) 45-R3 45-R3 25-R3 20-R3	33.25 36.43 5.00 16.56 22.34 5.98	45,565,36 252,635,27 10,244,32 1,723,46 6,666.05 -10,93	1.24% 2.09% 0.89% 1.28% 1.67% -0.01%
Ė	Total Mains	17,516,061.23		0.00	17,516,061.23	6,568,933.52	10,947,127.71		34.56	316,761.98	1.81%

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Annual Deprecation Rate (1)	8.79% 3.43%	1.42% 2.32% 0.88% 2.50%	2.17%	7.03% (5.91% 2.51% . 4.35% 0.00%	2.95%	1.75% 0.00%	1.75%	2.98% 13.51% 12.66% 7.64%	3.33%	6.25% 25.00% 0.00%	13.91%
Annual Depreciation Accrual (k)	44,064.55 15,199.46	15,337.00 290,671.46 6,921.12 1,734.55	314,664.12	444,740.51	46,157.51 4,081.41 401.41 0.00	1,187,311.22	37,886.14	37,886.14	1,184.34 187,341.47 121,741.77 348,153.73	1,576,705.20	6,053.03 16,729.67 0.00	22,782.70
Average Remaining Life (j)	5.00 21.14	22.80 30.64 5.00 12.36	29.59	7.01	7.01 37.49 15.92 5.37	20.57	32.51 0.00	32.51	4.95 4.28 4.18	17.78	N/A 0.0	4.07
A.S.L./ Survivor Curve	(3) 28-R3	50-R2.5 40-R3 (2) 25-R3		(4)	(4) 40-S4 25-R3 30-R3) 45-R4		12-R1 7-L2 6-L0		000	
Original Cost Less Book <u>Depr Reserve</u> (h)	220,322.77 321,316.67	349,683.55 8,906,173.54 34,605.59 21,439.00	9,311,901.69	3,119,801.25	323,789.41 153,012.09 6,390.44 0.00	24,420,197.87	1,231,678.39 (1) 0.00	1,231,678.39	5,862.50 801,821.51 508,880.59 2,548,242.99	28,027,162.45	40,883.20 51,946.00 -0.26	92,828.94
Book Depreciation Reserve (9)	280,702.85 121,344.59	726,802.71 3,644,100.03 754,158.81 48,052.30	5,173,113.84	3,204,673.85	456,788.21 9,772.32 2,844.67 11,498.48	15,863,041.11	935,628.58 0.00	935,628.58	33,897.59 584,371.80 452,969.82 2,006,867.79	19,331,754.55	55,965.28 14,972.69 0.26	70,938.23
Original Cost Less Salvage (f)	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764.40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98	2,167,306.97	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	47,358,917.00	96,848.48 66,918.69 0.00	163,767.17
Estimated Future Net Salvage Manunt (d) (e)	00.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.00
Estim Ne	%0 %0	%0 %0		%0	%% 0000	%0	%0 %0					
Original Cost 12/31/16 (c)	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764.40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98	2,167,306.97	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	47,358,917.00	96,848.48 66,918.69 0.00	163,767.17
Description (b)	Meas & Reg Station Equip-General Meas & Reg Station Equip-City Gate	Services 380.00 Steel Services 380.10 Plastic Services 380.11 Plastic Services - PVC 380.5560 Anodes and Cathodic Protection	Total Services	Meters & Meter Installations	House Regulators Industrial Meas. & Reg. Station Equipmer Cathodic Protection Equipment Other Equipment	TOTAL Distribution Plant	General Plant GENERAL STRUCTURES 390.0001 General Structures & Improvements 390.02 Leasehold Improvements	Total General Structures	Trailers Transportation Equipment Power Operated Equipment Sub-Total Depr General Plant	Sub-Total Depreciable Plant	OFFICE FURNITURE & EQUIPMENT Office Furniture & Equipment Computer & Electronic Equipment Other Computer Equipment	Total Office Fumiture & Equipment
Account <u>No.</u> (a)	378.00 379.00	380.00 380.10 380.11 380.5560		381.00	383.00 385.00 387.10 387.20		390.0001 390.02		392.10 392.20 396.00		391.10 391.30 391.50	

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Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

		Door Deblec	ation ness	פו גם מוות אג	eraye nemaning	DOOR Deplecation reserve alla Average nemining Lives as of December 31, 2010	01, 4010					
Account	nt Description	Original Cost	Estimated Future Net Salvage Met Salvage	d Future <u>alvage</u> Amount	Original Cost Less Salvage	Book Depreciation Reserve	Original Cost Less Book Depr Reserve	A.S.L./ Survivor	Average Remaining	Annual Depreciation Accrual	Annual Deprecation Rate	
(a)		(0)		(e)	(f)	(b)	(h)	(<u>(i)</u>	(K)	(=)	
394.00 397.00 398.00	Tools, Shop & Garage Equipment Communication Equipment Miscellaneous Equipment	565,184.90 303,582.84 51,338.57	%0 %0	0.00	565,184.90 303,582.84 51,338.57	193,912.79 177,503.05 16,287.45	371,272.11 126,079.79 35,051.12	000	4 4 4 2 Z Z	28,259.25 16,865.71 2,053.54	5.00% 5.56% 4.00%	* * *
	TOTAL General Plant Sub-Total Amortizable Plant TOTAL Depreciable Plant	5,638,984.26 1,083,873.48 48,442,790.48	%0	0.00	5,638,984.26 1,083,873.48 48,442,790.48	2,465,509.31 458,641.52 19,790,396.07	3,173,474.95 625,231.96 28,652,394.41		7.59 8.94 17.40	418,114.93 69,961.20 1,646,666.40	7.41% 6.45 % 3.40 %	
	NON-DEPRECIABLE PLANT											
304.00 365.10 374.10 389.00	0 Land & Land Rights-Production0 Land & Land Rights-Transmission0 Land & Land Rights-Distribution0 Land & Land Rights-General	0.00 5,584.70 2,978.43 48,658.66										
	Total Land	57,221.79										
301.00 302.00 303.00	INTANGIBLE PLANT O Organization Pranchises & Consents Miscellaneous Intangible Plant	5,006.20 73,680.11 2,419,099.03										
	Total Intangible Plant	2,497,785.34										
	TOTAL Non-Depreciable Plant	2,555,007.13										
	TOTAL Plant in Service	50,997,797.61										

(2) Based Upon PVC Conversion Program
 (3) Based Upon Anticipated District Regulator Change Out/Eliminations
 (4) Based Upon 20 ERT Batter Life and Remaining PVC Program Term 2016-2026
 * Proposed Amortization Rates.

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Annual Deprecation Rate (1)	%00 ^{.0}	%00.0 %00.0 %00.0	0.00%	0.02%	%00.0 %00.0 %00.0	0.00%	%00 [.] 0	0.00%	-2.02% 4.67% -15.55% -4.72%	-0.45%	%00.0 %00.0 0.00	%00.0
Annual Depreciation Accrual (k)	0.00	-0.26 -0.96 -1.22 -0.03	-2.47	1,082.08	0.00	935.85	0.00	00:00	-803.23 -64,775.39 -149,570.04 -215,148.66	-214,735.19	0.00	0.00
Average Remaining Life (i)	5.00	22.80 30.64 5.00 12.36		7.01	7.01 37.49 15.92 5.37	5.51	32.51 0.00	0.00	4.95 4.28 4.18	4.24	A/N 0.0	0.00
A.S.L./ Survivor Curve	(3) 28-R3	50-R2.5 40-R3 (2) 25-R3		(4)	(4) 40-S4 25-R3 30-R3		45-R4		12-R1 7-L2 6-L0		000	
Est'd Salvage Less Book <u>Depr Reserve</u> (h)	0.00	-5.88 -29.49 -6.10	-41.87	7,590.65	00.00	5,160.11	0.00 (1)	0.00	-3,976.01 -277,238.66 -625,202.77 -906,417.44	-910,191.57	0.00	0.00
Book Depreciation Reserve (g)	0.00	5.88 29.49 6.10 0.39	41.88	-7,590.65	0.00	-5,160.10	0.00	0.00	0.00	3,774.14	0.00	0.00
Original Cost Less Salvage (f)	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764.40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98	2,167,306.97	2,167,306.97	35,784.08 1,108,954.65 336,647.64 3,648,693.34	46,452,499.56	96,848.48 66,918.69 0.00	163,767.17
Estimated Future Net Salvage Mount (d) (e)	0.00	0.00	00.00	0.00	0.00	00.00	0.00	00.00	3,976.01 277,238.66 625,202.77 906,417.44	906,417.44	0.00	0.00
Estima Net 3 %	%0	%0 %0 %0		%0	%0 %0	%0	%0 0		10% 20% 65%		%0 0	
Original Cost 12/31/16 (c)	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764.40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98	2,167,306.97	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	47,358,917.00	96,848.48 66,918.69 0.00	163,767.17
t <u>Description</u> (b)	Meas & Reg Station Equip-General Meas & Reg Station Equip-City Gate	Services 380.00 Steel Services 380.10 Plastic Services 380.11 Plastic Services - PVC 380.5560 Anodes and Cathodic Protection	Total Services	Meters & Meter Installations	House Regulators Industrial Meas. & Reg. Station Equipmen Cathodic Protection Equipment Other Equipment	TOTAL Distribution Plant	General Plant GENERAL STRUCTURES 390.0001 General Structures & Improvements 390.02 Leasehold Improvements	Total General Structures	Trailers Transportation Equipment Power Operated Equipment Sub-Total Depr General Plant	Sub-Total Depreciable Plant	OFFICE FURNITURE & EQUIPMENT Office Furniture & Equipment Computer & Electronic Equipment Other Computer Equipment	Total Office Furniture & Equipment
Account <u>No.</u> (a)	378.00 379.00	380.00 380.10 380.11 380.556		381.00	383.00 385.00 387.10 387.20		390.0007 390.02		392.10 392.20 396.00		391.10 391.30 391.50	

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

		* * *					
	Annual Deprecation Rate (1)	%00.0 %00.0	-3.82% 0.00% -0.44%				
	Average Annual Remaining Depreciation I Life Accrual (i) (k)	0.00	-215,148.66 0.00 -214,735.19				
		N N N					
	A.S.L./ Survivor Curve	000					
mber 31, 2016	Est'd Salvage Less Book <u>Depr Reserve</u> (h)	0.00	-906,417.44 0.00 -910,191.57				
ives as oi Dece	Book Depreciation Reserve (9)	0.00	0.00 0.00 3,774.14				
Dook Deprecation reserve and Average Remaining Lives as of December 51, 2016	Original Cost Less Salvage (1)	565,184.90 303,582.84 51,338.57	4,732,566.82 1,083,873.48 47,536,373.04				
eserve and Ave	Estimated Future Net Salvage % Amount (d) (e)	0.00	906,417.44 0.00 906,417.44				
r Hones	Estima Net 3 (d)	%0 %0					
pook Debra	Original Cost 12/31/16 (c)	565,184.90 303,582.84 51,338.57	5,638,984.26 1,083,873.48 48,442,790.48		0.00 5,584.70 2,978.43 48,658.66	57,221.79	5,006.20 73,680.11 2,419,099.03
	Description (b)	Tools, Shop & Garage Equipment Communication Equipment Miscellaneous Equipment	TOTAL General Plant Sub-Total Amortizable Plant TOTAL Depreciable Plant	NON-DEPRECIABLE PLANT	Land & Land Rights-Production Land & Land Rights-Transmission Land & Land Rights-Distribution Land & Land Rights-General	Total Land	INTANGIBLE PLANT Organization Franchises & Consents Miscellaneous Intangible Plant
	Account No.	394.00 T 397.00 C 398.00 N	<i>-</i> ₩ -		304.00 L 365.10 L 374.10 L 389.00 L	Г	301.00 C 302.00 F 303.00 N

(2) Based Upon PVC Conversion Program
 (3) Based Upon Anticipated District Regulator Change Out/Eliminations
 (4) Based Upon 20 ERT Batter Life and Remaining PVC Program Term 2016-2026
 * Proposed Amortization Rates.

2,555,007.13

TOTAL Non-Depreciable Plant

Total Intangible Plant

TOTAL Plant in Service

50,997,797.61

2,497,785.34

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Annual Deprecation Rate (1)		%00:0	0.08% -0.43% -0.53% -1.57%	0.04%	0.34%	0.14%	0.00%	0.86% 1.22% 2.45% 1.19% 1.71% -0.22%	1.23%
Annual Depreciation De Accrual (k)		0.00	1,225.35 -272.06 -7.03 -49.98 -250.88	645.40	2,802.62	3,448.02	0.00	31,758.48 147,029.23 28,249.53 1,604.36 4,820.86 1,390.19	214,852.26
Average Remaining Life (j)		18.87	19.41 8.44 5.78 4.31 6.22	30.48	33.60	33.02	24.74 8.42	33.25 36.43 5.00 16.56 22.34 5.98	
A.S.L./ Survivor Curve		50-R2.5	50-R3 40-R2 25-R3 40-R3 30-R4		40-R0.5		50-R2.5 85-S1.5	63-R3 45-R4 (2) 45-R3 45-R1.5 25-R3	
Est'd COR Less Book <u>Depr Reserve</u> (h)		0.00	23,784.09 -2,296.22 -40.63 -215.42 -1,560.49	19,671.32	94,168.06	113,839.38	0.00 395.32	1,055,969,48 5,356,274,67 141,247.64 26,568,21 107,697.98 8,313.32	6,696,071.05
Book Depreciation Reserve (9)		00.00	265,115.05 14,821.02 305.80 852.56 7,523.37	288,617.81	-12,071.10	276,546.71	0.00	968,996,58 1,280,787,39 492,022,99 47,302,48 112,228,65 36,329,82	2,937,762.62
Original Cost Less COR (f)		158,152.03	1,733,394.83 75,148.81 1,591.04 3,822.82 35,777.26	1,849,734.76	903,066.54	2,910,953.33	17,653.59 33,863.58	5,706,722.53 18,704,447.63 1,784,671.78 208,181.04 619,793.23 125,812.48	27,149,894.90
Estimated Future Cost of Removal Amount (e)		00.00	-288,899.14 -12,524.80 -265.17 -637.14 -5,962.88	-308,289.13	-82,096.96	-390,386.09	0.00 -1,612.55	-2,024,966.06 -6,637,062.06 -633,270.63 -73,870.69 -219,926.63 -44,643.14	-9,633,833.67
Estim Cost % (d)		%0	-20% -20% -20% -20%		-10%		0% -5%	-55% -55% -55% -55% -55%	
Original Cost 12/31/16 (c)		158,152.03	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	1,541,445.63	820,969.58	2,520,567.24	17,653.59 32,251.03	3,681,756.47 12,067,385.57 1,151,401.15 134,310.35 399,866.60 81,169.34	17,516,061.23
Description (b)	DEPRECIABLE PLANT	<u>Transmission Plant</u> Rights of Way	TRANSMISSION MAINS 367.00 Transmission Mains 367.4042 Railroad, River & Highway Crossings 367.45 Anodes and Cathodic Protection 367.50 Valves 367.6061 Farm & Side Taps	Total Transmission Mains	Meas & Reg Station Equipment	Total Transmission Plant	Distribution Plant Rights of Way Distr. Meas & Reg Station Structures	Mains 376.00 Steel Mains 376.10 Plastic Mains 376.11 Plastic Mains - PVC 376.20 Valves 376.28-50 Railroad, River & Highway Crossings 376.55 Anodes and Cathodic Protection 376.56 Pipeline Markers	Total Mains
Account No.		365.20	367.00 Transm 367.40-42 Railroa 367.45 Anodes 367.50 Valves 367.60-61 Farm &		369.00		374.20 375.00	376.00 376.10 376.11 376.20 376.2850 376.55	

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

Annual Deprecation Rate (1)	3.76% 0.44%	1.01% 1.72% 0.26% 1.75%	1.58%	2.86%	0.71% 0.00% 0.00% 0.00%	1.62%	0.00% 0.00%	%00.0	0.00% 0.00% 0.00%	1.38%	0.00% 0.00% 0.00%	%00.0
Annual Depreciation D Accrual (k)	18,815.96 1,945.28	10,833.72 215,507.49 2,025.25 1,219.32	229,585.77	180,780.83	5,563.73 0.00 0.00 0.00	651,590.78	0.00	0.00	0.00	655,038.80	0.00	0.00
Average Remaining Life	5.00	22.80 30.64 5.00 12.36		7.01	7.01 37.49 15.92 5.37	23.04	32.51 0.00	0.00	4.95 4.28 4.18	23.09	N/N/O.0	0.00
A.S.L./ Survivor Curve	(3) 28-R3	50-R2.5 40-R3 (2) 25-R3		(4)	(4) 40-S4 25-R3 30-R3		45-R4		12-R1 7-L2 6-L0		000	
Est'd COR Less Book Depr Reserve (h)	94,079.78 41,123.29	247,008.85 6,603,149.39 10,126.24 15,070.75	6,875,355.24	1,268,155.82	39,028.88 0.00 0.00 0.00	15,014,209.38	0.00 (1)	0.00	0.00	15,128,048.76	0.00	0.00
Book Depreciation Reserve (g)	31,176.63 -18,990.23	560,355.85 2,809,555.79 581,447.06 37,047.73	3,988,406.42	312,962.96	0.00	7,252,535.63	0.00	0.00	0.00	7,529,082.34 15,128,048.76	0.00	0.00
Original Cost Less COR (f)	626,282.03 464,794.32	1,883,850.96 21,962,978.75 1,380,337.70 121,609.78	25,348,777.19	7,905,593.88	819,606.50 162,784.41 9,235.11 11,498.48	62,549,983.99	2,167,306.97	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	70,016,048.10	96,848.48 66,918.69 0.00	163,767.17
Estimated Future Cost of Removal Amount (e)	-125,256.41 -22,133.06	-807,364.70 -9,412,705.18 -591,573.30 -52,118.48	-10,863,761.66	-1,581,118.78	-39,028.88 0.00 0.00 0.00	-22,266,745.01	0.00	0.00	0.00	-22,657,131.10	0.00	0.00
Estim Cost %	-25% -5%	-75% -75% -75% -75%		-25%	-5% 0% 0%	%0	% 0		%0 %0		%% 0	
Original Cost 12/31/16 (c)	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764.40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98	2,167,306.97	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	47,358,917.00	96,848.48 66,918.69 0.00	163,767.17
Description (b)	Meas & Reg Station Equip-General Meas & Reg Station Equip-City Gate	Services 380.00 Steel Services 380.10 Plastic Services 380.11 Plastic Services - PVC	Total Services	Meters & Meter Installations	House Regulators Industrial Meas. & Reg. Station Equipment Cathodic Protection Equipment Other Equipment	TOTAL Distribution Plant	General Plant GENERAL STRUCTURES 390.0001 General Structures & Improvements 390.02 Leasehold Improvements	Total General Structures	Trailers Transportation Equipment Power Operated Equipment Sub-Total Depr General Plant	Sub-Total Depreciable Plant	OFFICE FURNITURE & EQUIPMENT Office Furniture & Equipment Computer & Electronic Equipment Other Computer Equipment	Total Office Furniture & Equipment
Account <u>No.</u> (a)	378.00 379.00	380.00 380.10 380.11 380.5560		381.00	383.00 385.00 387.10 387.20		390.0001 390.02		392.10 392.20 396.00		391.10 391.30 391.50	

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service and Calculation of Annual Depreciation Rates and Depreciation Expense Based Upon Utilization of Book Deprecation Reserve and Average Remaining Lives as of December 31, 2016

		* * *		
	Annual Deprecation Rate (l)	%00.0 %00.0	0.00% 0.00% 1.35%	
	Annual Depreciation Accrual (k)	0.00	0.00 0.00 655,038.80	
	Average Remaining Life	4 4 4 2 2 2	0.0 0.0 23.09	
	A.S.L./ Survivor Curve (i)	000		
	Est'd COR Less Book Depr Reserve (h)	00:00	0.00 0.00 15,128,048.76	
	Book Depreciation Reserve (g)	00.0	0.00 0.00 0.00 0.00 7,529,082.34 15,128,048.76	
)	Original Cost Less COR	565,184.90 303,582.84 51,338.57	5,638,984.26 1,083,873.48 71,099,921.58	
	Estimated Future Cost of Removal Amount (e)	0.00	0.00 0.00 -22,657,131.10	
	Estim Cost % (d)	%% 0	%0	
-	Original Cost 12/31/16	565,184.90 303,582.84 51,338.57	5,638,984.26 1,083,873,48 48,442,790.48	0.00 5,584.70 2,978.43 48,658.66
	Description (b)	Tools, Shop & Garage Equipment Communication Equipment Miscellaneous Equipment	TOTAL General Plant Sub-Total Amortizable Plant TOTAL Depreciable Plant NON-DEPRECIABLE PLANT	Land & Land Rights-Production Land & Land Rights-Transmission Land & Land Rights-Distribution Land & Land Rights-General
	Account <u>No.</u> (a)	394.00 T 397.00 C 398.00 N	- W E	304.00 L 365.10 L 374.10 L 389.00 L

0.00 5,584.70 2,978.43 48,658.66	57,221.79	5,006.20 73,680.11 2,419,099.03	2,497,785.34
Land & Land Rights-Production Land & Land Rights-Transmission Land & Land Rights-Distribution Land & Land Rights-General	Total Land	INTANGIBLE PLANT Organization Franchises & Consents Miscellaneous Intangible Plant	Total Intangible Plant
304.00 365.10 374.10 389.00		301.00 302.00 303.00	

2,555,007.13 50,997,797.61

TOTAL Non-Depreciable Plant

TOTAL Plant in Service

(2) Based Upon PVC Conversion Program
 (3) Based Upon Anticipated District Regulator Change Out/Eliminations
 (4) Based Upon 20 ERT Batter Life and Remaining PVC Program Term 2016-2026
 * Proposed Amortization Rates.

Original Cost Per Company Books, Adjustments, And Original Cost Per Depreciation Study as of December 31, 2016

Account No.		Original Cost Per Co. Books 12/31/16	(Pending) Retirements	Company Pending Ret. Adjustments	Original Cost Per Depr Study Data 12/31/16
(a)	(b)	(c)	(d)	(e)	(f)
	DEPRECIABLE PLANT				
	Transmission Plant				
365.20	Rights of Way	158,152.03			158,152.03
367.00	TRANSMISSION MAINS Transmission Mains	1,444,495.69			1,444,495.69
	2 Railroad, River & Highway Crossings	62,624.01			62,624.01
367.45 367.50	Anodes and Cathodic Protection	1,325.87 3,185.68			1,325.87 3,185.68
	1 Farm & Side Taps	29,814.38			29,814.38
307.000	1,541,445.65	23,014.30			20,014.00
	Total Transmission Mains	1,541,445.63	0.00	0.00	1,541,445.63
369.00	Meas & Reg Station Equipment	820,969.58			820,969.58
	Total Transmission Plant	2,520,567.24	0.00	0.00	2,520,567.24
	Distribution Plant				
374.20	Rights of Way	17,653.59			17,653.59
375.00	Distr. Meas & Reg Station Structures	32,251.03			32,251.03
	9				
	Mains				
376.00	Steel Mains	3,681,756.47			3,681,756.47
376.10	Plastic Mains	12,067,385.57			12,067,385.57
376.11	Plastic Mains - PVC	1,151,401.15			1,151,401.15
376.20		134,310.35			134,310.35
376.2850	D Railroad, River & Highway Crossings Anodes and Cathodic Protection	399,866.60 81,169.34			399,866.60 81,169.34
376.55	Pipeline Markers	171.75			171.75
370.30	17,516,061.25	171.75			171.75
	Total Mains	\$17,516,061.23	\$0.00	\$0.00	\$17,516,061.23
		, , ,	·	•	, , ,
378.00	Meas & Reg Station Equip-General	501,025.62			501,025.62
379.00	Meas & Reg Station Equip-City Gate	442,661.26			442,661.26
	0 .				
380.00	Services	4 076 406 06			4.076.406.06
380.00	Steel Services Plastic Services	1,076,486.26 12,550,273.57			1,076,486.26 12,550,273.57
380.10	Plastic Services - PVC	788,764.40			788,764.40
	Anodes and Cathodic Protection	69,491.30			69,491.30
000.00 .00	14,485,015.53	00, 10 1.00			00,101.00
	Total Services	\$14,485,015.53	\$0.00	\$0.00	\$14,485,015.53
381.00	Meters & Meter Installations	6,324,475.10			6,324,475.10
383.00	House Regulators	780,577.62			780,577.62
385.00	Industrial Meas. & Reg. Station Equipment	162,784.41			162,784.41
387.10	Cathodic Protection Equipment	9,235.11			9,235.11
387.20	Other Equipment	11,498.48			11,498.48
	TOTAL Distribution Plant	40,283,238.98	0.00	0.00	40,283,238.98

Original Cost Per Company Books, Adjustments, And Original Cost Per Depreciation Study as of December 31, 2016

Account No.	Description	Original Cost Per Co. Books 12/31/16	(Pending) Retirements	Company Pending Ret. Adjustments	Original Cost Per Depr Study Data 12/31/16
(a)	(b)	(c)	(d)	(e)	(f)
(ω)	General Plant	(0)	(4)	(5)	(.)
	GENERAL STRUCTURES				
390 00- 01	1 General Structures & Improvements	2,167,306.97			2,167,306.97
	Leasehold Improvements	0.00			0.00
330.02	2,167,306.97	0.00			0.00
	Total General Structures	2,167,306.97	0.00	0.00	2,167,306.97
	Total General Structures	2,107,300.37	0.00	0.00	2,101,300.31
392.10	Trailers	39,760.09			39,760.09
392.20	Transportation Equipment	1,386,193.31		0.00	1,386,193.31
396.00	Power Operated Equipment	961,850.41		0.00	961,850.41
000.00	Sub-Total Depr General Plant	4,555,110.78	0.00	0.00	4,555,110.78
	Sub-Total Dept General Flant	4,333,110.76	0.00	0.00	4,333,110.76
	Sub-Total Depreciable Plant	47,358,917.00	0.00	0.00	47,358,917.00
	20p.0018.010 1 18.11	,555,511155	0.00	0.00	,000,011100
	OFFICE FURNITURE & EQUIPMENT				
391.10	Office Furniture & Equipment	96,848.48			96,848.48
391.30	Computer & Electronic Equipment	66,918.69			66,918.69
391.50	Other Computer Equipment	0.00			0.00
391.30	Other Computer Equipment	0.00			0.00
	Total Office Furniture & Equipment	163,767.17	0.00	0.00	163,767.17
	Total Office I diffiture & Equipment	103,707.17	0.00	0.00	100,707.17
394.00	Tools, Shop & Garage Equipment	565,184.90			565,184.90
397.00	Communication Equipment	303,582.84			303,582.84
398.00		51,338.57			51,338.57
398.00	Miscellaneous Equipment	51,338.57			,
	TOTAL Canaral Plant	E 630 004 36	0.00	0.00	0.00
	TOTAL General Plant	5,638,984.26	0.00	0.00	5,638,984.26
	Sub-Total Amortizable Plant	1,083,873.48	0.00	0.00	1,083,873.48
	TOTAL Depreciable Plant	48,442,790.48	0.00	0.00	48,442,790.48
	NON-DEPRECIABLE PLANT				
	NON-DEFRECIABLE FEANT				
304.00	Land & Land Rights-Production	0.00			0.00
365.10	Land & Land Rights-Troudction Land & Land Rights-Transmission	5,584.70			5,584.70
374.10	Land & Land Rights-Distribution	2,978.43			2,978.43
					,
389.00	Land & Land Rights-General	48,658.66			48,658.66
	Total Land	57,221.79	0.00	0.00	57,221.79
	Total Land	51,221.19	0.00	0.00	51,221.19
	INTANGIBLE PLANT				
301.00	Organization	5,006.20			5,006.20
302.00	Franchises & Consents	73,680.11			73,680.11
303.00		2,419,099.03			2,419,099.03
303.00	Miscellaneous Intangible Plant	2,419,099.03			2,419,099.03
	Total Intangible Plant	2,497,785.34	0.00	0.00	2,497,785.34
	rotal intaligible Flant	2,431,100.34	0.00	0.00	2,431,100.04
	TOTAL Non-Depreciable Plant	2,555,007.13	0.00	0.00	2,555,007.13
	1017 E Horr Depresidate Flam	2,000,007.10	0.00	0.00	2,000,007.10
	TOTAL Plant in Service	50,997,797.61	0.00	0.00	50,997,797.61
		,,. ••.	2.30	2.20	,,

Great Plains Natural Gas Company

Summary of Book Depreciation Reserves Relative To Original Cost of Utility Plant in Service, Adjustments, And Depreciation Reserves Per Depreciation Study as of December 31, 2016

COR Depr Reserve Per Depr Study 12/31/16 (i)		0.00	265,115.05 14,821.02 305.80 852.56 7,523.37	288,617.82	(12,071.10)	276,546.72	0.00	968,996.58 1,280,787.39 420,022.99 47,302.48 112,228.65 36,329.82 94.71	2,937,762.61	31,176.63 (18,990.23)	560,355.85 2,809,555.79 581,447.06 37,047.73	3,988,406.42	312,962.96	0.00	7,252,535.62
COR				288,617.81					2,937,762.62			3,988,406.42			
Gross Salvage Depr Reserve Per Books 12/31/16 (i)		0.00	8,206.71 458.79 9.47 26.39 232.89	8,934.24	0.00	8,934.24	0.00	787.88 1,041.40 400.06 38.46 91.25 29.54 0.08	2,388.67	0.00	5.88 29.49 6.10 0.39	41.87	(7,590.65)	00.00	(5,160.11)
Gross Salv Control				8,934.24					2,388.67			41.87			
Plant Only Depr Reserve Per Books 12/31/16 (h)		122,071.44	1,050,618.15 58,733.88 1,211.86 3,378.61 29,814.19	1,143,756.69	196,017.52	1,461,845.65	8,417.11 24,951.67	2,166,708.12 2,863,882.58 1,100,179.54 105,769.90 250,946.94 81,234.68	6,568,933.52	280,702.85 121,344.59	726,802.71 3,644,100.03 754,158.81 48,052.30	5,173,113.84	3,204,673.85	456,788.21 9,772.32 2,844.67 11,498.48	15,863,041.11
Plant Only Control				1,143,756.69					6,568,933.52			5,173,113.84			
Total Depr Reserve Per Books 12/31/16 (g)		122,071.44	1,323,939.90 74,013.69 1,527.13 4,257.56 37,570.45	1,441,308.74	183,946.42	1,747,326.60	8,417.11 26,168.90	3,136,492.59 4,145,711.37 1,592,602.59 1,592,602.69 117,594.04 306,55	9,509,084.81	311,879.48 102,354.36	1,287,164.44 6,453,685.31 1,335,611.97 85,100.42	9,161,562.13	3,510,046.16	456,788.21 9,772.32 2,844.67 11,498.48	23,110,416.63
Calculated Depr. Reserve 12/31/16			1,060,615,96 59,292.80 1,223.39 3,410.76 30,097.91	1,154,640.82		1,154,640.82		2,694,907.28 3,562,038.62 1,368,380,82 13,1554,44 312,122.67 101,038.03	8,170,305.25		1,024,779.06 5,138,117.07 1,063,350.68 67,752.90	7,293,999.71			15,464,304.96
Salvage %			-20% -20% -20% -20%					.55% .55% .55% .55% .55% .55%			-75% -75% -75% -75%		-25%		
A.S.L./ Curve (d)			50-R3 40-R2 25-R3 40-R3 30-R4					63-R3 45-R4 56-R4 45-R3 45-R3 25-R3			50-R2.5 40-R3 48-R3 25-R3		(4)		
Original Cost Per Co. Books 12/31/16 (c)		158,152.03	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	1,541,445.63	820,969.58	2,520,567.24	17,653.59 32,251.03	3,681,756,47 12,067,385,57 1,151,401.15 134,310.35 399,866,60 81,169.34	17,516,061.23	501,025.62 442,661.26	1,076,486.26 12,550,273.57 788,764,40 69,491.30	14,485,015.53	6,324,475.10	780,577.62 162,784.41 9,235.11 11,498.48	40,283,238.98
Description (b)	DEPRECIABLE PLANT	Transmission Plant Rights of Way	TRANSMISSION MAINS 367.00 Transmission Mains 367.40-42 Railroad, River & Highway Crossings 367.45 Anodes and Cathodic Protection 367.50 Valves 367.60-61 Farm & Side Taps	Total Transmission Mains	Meas & Reg Station Equipment	Total Transmission Plant	Distribution Plant Rights of Way Distr. Meas & Reg Station Structures	Mains 376.00 Steet Mains 376.10 Plastic Mains 376.11 Plastic Mains - PVC 376.22 Valiroad, River & Highway Crossings 376.25 Anodes and Cathodic Protection 376.55 Pipeline Markers	Total Mains	Meas & Reg Station Equip-General Meas & Reg Station Equip-City Gate	Services 380.00 Steel Services 380.10 Plastic Services 380.11 Plastic Services - PVC 380.55-60 Anodes and Cathodic Protection	Total Services	Meters & Meter Installations	House Regulators Industrial Meas. & Reg. Station Equipment Cathodic Protection Equipment Other Equipment	TOTAL Distribution Plant
Account No.		365.20	367.00 - 367.40 - 42 367.45 / 367.50 367.60 - 61	-	369.00	-	374.20 375.00	376.00 376.10 376.10 376.28 376.28 376.55 376.55 376.55		378.00 379.00	380.00 380.10 380.11 380.5560		381.00	383.00 1 385.00 1 387.10 0	-

Great Plains Natural Gas Company

Summary of Book Depreciation Reserves Relative To Original Cost of Utility Plant in Service, Adjustments, And Depreciation Reserves Per Depreciation Study as of December 31, 2016

COR Depr Reserve Per Depr Study 12/31/16 ()	0.00	0.00	0.00 0.00 0.00 0.00	7,529,082.34	0.00	0.00	0.00	0.00 0.00 7,529,082.34		0.00	0.00	0.00	0.00	0.00	7,529,082.34
COR	0.00	00:00													
Gross Salvage Depr Reserve Per Books 12/31/16 (i)	0.00	00.00	0.00 0.00 0.00 0.00	3,774.13	0.00	0.00	0.00	0.00 0.00 3,774.13		0.00 0.00 0.00 0.00	00.00	0.00	00.00	0.00	3,774.13
Gross Salv Control	0.00	0.00													
Plant Only Depr Reserve Per Books 12/31/16 (h)	935,628.58 0.00	935,628.58	33,897.59 584,371.80 452,969.82 2,006,867.79	19,331,754.55	55,965.28 14,972.69 0.26	70,938.23	193,912.79 177,503.05 16,287.45	2,465,509.31 458,641.52 19,790,396.07		0.00	00:00	5,006.20 73,680.11 360,835.13	439,521.44	439,521.44	20,229,917.51
Plant Only Control	935,628.58	935,628.58													
Total Depr Reserve Per Books 12/31/16 (9)	935,628.58 0.00	935,628.58	33,897.59 584,371.80 452,969.82 2,006,867.79	26,864,611.02	55,965.28 14,972.69 0.26	70,938.23	193,912.79 177,503.05 16,287.45	2,465,509.31 458,641.52 27,323,252.54		0.00 0.00 0.00 0.00	0.00	5,006.20 73,680.11 360,835.13	439,521.44	439,521.44	27,762,773.98
Calculated Depr. Reserve 12/31/16 (f)	601,606.58	601,606.58	601,606.58	17,220,552.36				601,606.58 0.00 17,220,552.36							
A.S.L./ Salvage Curve %	45-R4 0%														
Original Cost Per Co. Books 12/31/16 (c)	2,167,306.97 (1)	2,167,306.97	39,760.09 1,386,193.31 961,850.41 4,555,110.78	47,358,917.00	96,848.48 66,918.69 0.00	163,767.17	565,184.90 303,582.84 51,338.57	5,638,984.26 1,083,873.48 48,442,790.48		0.00 5,584.70 2,978.43 48,658.66	57,221.79	5,006.20 73,680.11 2,419,099.03	2,497,785.34	2,555,007.13	50,997,797.61 ary.
Description (b)	General Plant GENERAL STRUCTURES General Structures & Improvements Leasehold Improvements	Total General Structures	Trailers Transportation Equipment Power Operated Equipment Sub-Total Depr General Plant	Sub-Total Depreciable Plant	OFFICE FURNITURE & EQUIPMENT Office Funiture & Equipment Computer & Electronic Equipment Other Computer Equipment	Total Office Furniture & Equipment	Tools, Shop & Garage Equipment Communication Equipment Miscellaneous Equipment	TOTAL General Plant Sub-Total Amortizable Plant TOTAL Depreciable Plant	NON-DEPRECIABLE PLANT	Land & Land Rights-Production Land & Land Rights-Transmission Land & Land Rights-Distribution Land & Land Rights-General	Total Land	INTANGIBLE PLANT Organization Franchises & Consents Miscellaneous Intangible Plant	Total Intangible Plant	TOTAL Non-Depreciable Plant	TOTAL Plant in Service (1) Interim Retirement Rate. Service Lives Vary
Account No.	390.0001 390.02		392.10 392.20 396.00		391.10 391.30 391.50		394.00 397.00 398.00			304.00 365.10 374.10 389.00		301.00 302.00 303.00			

Great Plains Natural Gas Company

Summary or Original Cost of Utility Plant in Service as of December 31, 2016 and Related Annual Depreciation/Amortization Expense Under Present Rates and Proposed Amortization

		Original	Pres	Present Rates	Proposed Amortization	nortization	Net Change
Account	Description	Cost 12/31/16	Rate %	Annual	Rate %	Annual	Depr/Amort Expense
(a)	(q)	(c)	(p)	(e)	(f)	(b)	(h)
	DEPRECIABLE PLANT						
391.10	OFFICE FURNITURE & EQUIPMENT Office Furniture & Equipment	96,848.48	6.25%	6,053.03	6.25%	6,053.03	0.00
391.30	Computer & Electronic Equipment Other Computer Equipment	66,918.69	25.00%	16,729.67	25.00%	16,729.67	0.00
2							
	Total Office Furniture & Equipment	163,767.17	13.91%	22,782.70	13.91%	22,782.70	00.0
394.00		565,184.90		28,259.25	2.00%	28,259.25	0.00
397.00	Communication Equipment	303,582.84	2.56%	16,865.71	2.56%	16,865.71	00.0
398.00	Miscellaneous Equipment	51,338.57	4.00%	2,053.54	4.00%	2,053.54	0.00
	Sub-Total Amortizable Plant	1,083,873.48	6.45%	69,961.20	6.45%	69,961.20	0.00

Table 5

Account 391.10 - Office Furniture & Equipment
Development of Annual Amortization Amount Over Estimated Average Life of Property

Average Service Life: 16 Years

		12/31/2016	Remaining	Remaining	Annual
	Original	Accum.	Amount To	Amortization	Amortization
Year	Cost	Reserve	Be Amortized	Period	Amount
2001	2,917.57	2,772.38	145.19	0.80	182.35
2002	7,641.54	6,927.04	714.50	1.50	477.60
2003	8,738.97	7,331.01	1,407.96	2.58	546.19
2004	548.36	420.22	128.14	3.74	34.27
2005	8,405.76	5,926.18	2,479.58	4.72	525.36
2006	1,020.83	657.12	363.71	5.70	63.80
2007	29,164.21	17,400.81	11,763.40	6.45	1,822.76
2008	15,785.78	8,395.30	7,390.48	7.49	986.61
2009	1,449.56	682.80	766.76	8.46	90.60
2010	2,389.63	952.23	1,437.40	9.62	149.35
2011	5,149.75	1,736.40	3,413.35	10.61	321.86
2012	5,179.29	1,453.02	3,726.27	11.51	323.71
2013	-	-	-	-	-
2014	8,457.23	1,310.77	7,146.46	13.52	528.58
2015	-	-	-	-	-
2016_	-			-	
_	96,848.48	55,965.28	40,883.20		6,053.03
Composite Depr. Ra	nte	6,053.03 /	96,848.48	= 6.25%	

2-17

Table 5

Account 391.30 - Computer & Electronic Equipment
Development of Annual Amortization Amount Over Estimated Average Life of Property

Average Service Life: 4 Years

	Original	12/31/2016 Accum.	Remaining Amount To	Remaining Amortization	Annual Amortization
Year	Cost	Reserve	Be Amortized	Period	Amount
2013	5,301.77	3,658.09	1,643.68	1.24	1,325.44
2014	-	-	-	-	-
2015	61,616.92	11,314.60	50,302.32	3.27	15,404.23
2016	-	-	-	-	-
	66,918.69	14,972.69	51,946.00		16,729.67
Composite Depr. R	ate	16,729.67	66,918.69	= 25.00%	

Account 394.10 - Tools, Shop & Garage Equipment
Development of Annual Amortization Amount Over Estimated Average Life of Property

Average Service Life: 20 Years

		12/31/2016	Remaining	Remaining	Annual
	Original	Accum.	Amount To	Amortization	Amortization
Year	Cost	Reserve	Be Amortized	Period	Amount
2000	53,370.43	42,514.04	10,856.39	4.07	2,668.52
2001	19,329.73	14,464.56	4,865.17	5.03	966.49
2002	22,549.99	15,785.64	6,764.35	6.00	1,127.50
2003	43,960.29	28,623.54	15,336.75	6.98	2,198.01
2004	16,735.02	10,099.13	6,635.89	7.93	836.75
2005	33,532.87	18,617.28	14,915.59	8.90	1,676.64
2006	17,480.80	8,861.32	8,619.48	9.86	874.04
2007	13,031.67	5,976.84	7,054.83	10.83	651.58
2008	13,260.15	5,366.46	7,893.69	11.91	663.01
2009	10,100.22	3,648.00	6,452.22	12.78	505.01
2010	17,250.11	5,396.84	11,853.27	13.74	862.51
2011	33,124.55	8,789.57	24,334.98	14.69	1,656.23
2012	61,302.98	13,079.30	48,223.68	15.73	3,065.15
2013	12,834.35	2,168.65	10,665.70	16.62	641.72
2014	51,798.37	6,055.77	45,742.60	17.66	2,589.92
2015	20,004.03	1,441.19	18,562.84	18.56	1,000.20
2016	125,519.34	3,024.66	122,494.68	19.52	6,275.97
_	565,184.90	193,912.79	371,272.11	<u> </u>	28,259.25
Composite Depr.	Rate	28,259.25 /	565,184.90 =	5.00%	

Account 397 - Communication Equipment

Development of Annual Amortization Amount Over Estimated Average Life of Property

Average Service Life: 18 Years

		12/31/2016	Remaining	Remaining	Annual
	Original	Accum.	Amount To	Amortization	Amortization
Year	Cost	Reserve	Be Amortized	Period	Amount
2000	5,175.22	4,838.72	336.50	1.17	287.51
2001	7,624.07	7,076.40	547.67	1.29	423.56
2002	11,369.56	11,479.96	(110.40)	(0.17)	631.64
2003	5,701.24	4,172.48	1,528.76	4.83	316.74
2004	183,273.60	125,338.28	57,935.32	5.69	10,181.87
2005	-	-	-		-
2006	-	-	-		-
2007	-	-	-		-
2008	15,081.38	6,621.16	8,460.22	10.10	837.85
2009	-	-	-		-
2010	9,894.78	3,137.17	6,757.61	12.29	549.71
2011	-	-	-		-
2012	65,462.99	14,838.88	50,624.11	13.92	3,636.83
2013	-	-	-		-
2014	-	-	-		-
2015	-	-	-		-
2016	-	-	<u> </u>		
	303,582.84	177,503.05	126,079.79		16,865.71
Composite Depr. F	Rate	16,865.71 /	303,582.84 =	5.56%	

Great Plains Natural Gas Company

Table 5

Account 398 - Miscellaneous Equipment
Development of Annual Amortization Amount Over Estimated Average Life of Property

Average Service Life: 25 Years

Year	Original Cost	12/31/2016 Accum. Reserve	Remaining Amount To Be Amortized		Remaining Amortization Period	Annual Amortization Amount
2006	8.332.68	3,272.50	5,060.18		15.18	333.31
2007	-	-	-			-
2008	43,005.89	13,014.95	29,990.94		17.43	1,720.24
	51,338.57	16,287.45	35,051.12			2,053.54
Composite Depr. Rate	e	2,053.54 /	51,338.57	=	4.00%	

	Sum of		_		
Row Labels	beginning_balan ce	Sum of additions	Sum of retirements	Sum of total transfers	Sum of ending_balance
Gas Distribution	37,557,261.74	3,258,636.57	(529,680.88)	-	40,286,217.43
374-G-Land	2,978.43	-	-	-	2,978.43
374-G-Land Rights	17,653.59	-	-	-	17,653.59
375-G-Structures & Improvements	32,251.03	_	-	-	32,251.03
376-G-Mains	16,255,198.18	1,360,190.00	(99,326.93)	-	17,516,061.25
378-G-Measure/Regulation Distributi	479,649.61	27,684.21	(6,308.20)	-	501,025.62
379-G-Measure/Regulation City Gate	436,905.19	5,756.07	-	-	442,661.26
380-G-Services	13,042,343.03	1,645,027.68	(202,355.18)	-	14,485,015.53
381-G-Meters	6,348,056.00	150,248.03	(173,828.93)	-	6,324,475.10
382-G-Meter Set Installation	-	-	-	-	-
383-G-Service Regulators	788,428.22	37,951.71	(45,802.31)	-	780,577.62
385-G-Industrial Meas. & Reg Stn Eq	131,005.54	31,778.87	-	-	162,784.41
387-G-Cathodic Protection Equipment	11,294.44	-	(2,059.33)	-	9,235.11
387-G-Other Distribution Equipment	11,498.48	-	-	-	11,498.48
Gas General	5,746,742.08	621,351.03	(653,313.79)	(27,136.40)	5,687,642.92
389-G-Land & Land Rights	48,658.66	-	-	-	48,658.66
390-G-Structures & Improvements	2,166,045.11	4,336.44	(3,074.58)	-	2,167,306.97
391-G-Comp Equip-Server & Workstati	75,837.38	-	(8,918.69)	-	66,918.69
391-G-Comp. Equip-Mainframe & Othe	r 3,494.21	-	(3,494.21)	-	-
391-G-Office Furn & Equip	97,597.77	-	(749.29)	-	96,848.48
392-G-Trailers	39,760.09	-	-	-	39,760.09
392-G-Transportation Equipment	1,460,131.65	213,699.72	(260,501.66)	(27,136.40)	1,386,193.31
393-G-Stores Equipment	-	-	-	-	-
394-G-Tools,Shop,Garage Equip	439,665.56	125,519.34	-	-	565,184.90
395-G-Laboratory Equipment	-	-	-	-	-
396-G-Power Operated Equipment	952,374.56	258,553.93	(370,733.24)	-	840,195.25
396-G-Trailers-Work Equipment	108,255.68	19,241.60	(5,842.12)	-	121,655.16
397-G-Network Equipment	100,500.50	-	-	-	100,500.50
397-G-Radio Comm Equip-Fixed	116,257.41	-	-	-	116,257.41
397-G-Radio Comm Equip-Mobile	59,341.35	-	-	-	59,341.35
397-G-Scada System	-	-	-	-	-
397-G-Telephone & Telex Equip	27,483.58	-	-	-	27,483.58
398-G-Miscellaneous Equipment	51,338.57	-	-	-	51,338.57
Gas Intangible	2,496,108.41	1,676.93	-	-	2,497,785.34
301-G-Organization	5,006.20	-	-	-	5,006.20
302-G-Franchises	73,680.11	-	-	-	73,680.11
303-G-Misc. Intangible Plant	2,417,422.10	1,676.93	-	-	2,419,099.03
Gas Manuf. Production	0.00	0.00	0.00	0.00	0.00
304-G-Gas-Land and Land Rights	-	-	-	-	-
305-G-Structures And Improvements	-	-	-	-	-
311-G-Liquified Petro. Propane	-	-	-	-	-
320-G-Other Gas Production	-	-	-	-	-
Gas Regulatory ARO	28,994.63	3,462,694.97	(105,098.27)	-	3,386,591.33
388-G-Aro Distribution Plant	28,994.63	3,462,694.97	(105,098.27)	-	3,386,591.33

Row Labels	Sum of beginning_balan ce	Sum of additions	Sum of retirements	Sum of total transfers	Sum of ending_balance
Gas Transmission	2,526,151.96	-	-	-	2,526,151.96
365-G-Land	5,584.70	-	-	-	5,584.70
365-G-Land Rights	158,152.03	-	-	-	158,152.03
367-G-Mains	1,541,445.65	-	-	-	1,541,445.65
369-G-Measuring/Regulating Equipmen	820,969.58	-	-	-	820,969.58
Non-Utility	-	-	-	-	-
394-N-Tools,Shop,Garage Equip	-	-	-	-	-
Grand Total	48,355,258.82	7,344,359.50	(1,288,092.94)	(27,136.40)	54,384,388.98

GPNG

ACCOUNT #1082 & 1112-Base Reserve Only* SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

•								
FERC		Balance	Reclass/	Original Cost	Removal		Deprec.	GPNG
Account	Account Description	01-01-16	Transfers	of Retirements	Cost	Salvage	Provision	12/31/2016
301	Organization Intangible Plant	\$ (15,006,20)	¥	¥	·	¥	¥	\$ (5,006,20)
3		(0,000.20)	1	1	· •	· •	•	
302	302 Franchises and Consents Intangi	(73,680.11)	•	•	1	1	•	(73,680.11)
303	303 Miscellaneous Intangible Plant	(199,421.66)	-	-	-	-	(161,413.47)	(360,835.13)
-	TOTAL GAS INTANGIBLE PLANT	(278,107.97)		•	1	1	(161,413.47)	(439,521.44)
305	305 Structures & Improvements	(0.00)		•		•		(0.00)
3111	3111 Liquified Petro. Propane	(00:0)	,	٠	٠	,	,	(00.0)
320 (320 Other Gas Production	0.00	•	,	•	•	•	0:00
۰.	TOTAL GAS PRODUCTION PLANT	(0.00)			1	1		(0.00)
24	I							
3652	3652 Land Rights	(120,062.88)	1	1	•	1	(2,008.56)	(122,071.44)
3671	3671 Mains	(1,122,947.13)	1	1	1	1	(20,809.56)	(1,143,756.69)
3691	3691 Meas. & Reg. Station Eqiup.	(173,440.83)	1	•	1	1	(22,576.69)	(196,017.52)
-	TOTAL GAS TRANSMISSION PLANT	(1,416,450.84)	ı	ı	•	1	(45,394.81)	(1,461,845.65)
3742 L	3742 Land Rights	(8,035.75)		ı	1	,	(381.36)	(8,417.11)
375	375 Structures & Improvements	(24,080.95)	•	•	•	•	(870.72)	(24,951.67)
376	376 Mains	(6,395,150.48)	•	99,326.93	1	1	(273,109.97)	(6,568,933.52)
378	378 Meas. & Reg. Station EqiupGer	(275,569.53)	•	6,308.20	•	•	(11,441.52)	(280,702.85)
379	379 Meas. & Reg. Station EqiupCity	(107,562.57)	•	1	1	1	(13,782.02)	(121,344.59)
380	380 Services	(5,081,056.85)	1	202,355.18	1	1	(294,412.17)	(5,173,113.84)
381	381 Meters	(2,975,237.13)	1	173,828.93	1	1	(403,265.65)	(3,204,673.85)
382	382 Meter Set Installation	(0.00)	•	1	1	1	•	(0.00)
383 (383 Service Regulators	(453,225.01)	•	45,802.31	1,130.74	1	(50,496.25)	(456,788.21)
385	385 Industrial Meas. & Reg. Station E	(6,436.90)	•	•	1	1	(3,335.42)	(9,772.32)
3871 (3871 Cathodic Protection Equipment	(4,774.35)	•	2,059.33	297.42	1	(427.07)	(2,844.67)
3872 (3872 Other Distribution Equipment	(11,498.48)	•	•	1	1	•	(11,498.48)
388	388 ARO	(10,041.16)	(1,335,677.93)	76,103.64	ı	ı	•	(1,388,693.13)
	TOTAL GAS DISTRIBUTION PLANT	(15,352,669.16)	(1,335,677.93)	605,784.52	1,428.16	1	(1,051,522.15)	(17,251,734.24)
390 (390 Structures & Improvements	(901,855.56)	,	3,074.58	411.90	1	(37,259.50)	(935,628.58)

GPNG
ACCOUNT #1082 & 1112-Base Reserve Only*
SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

											(452,969.82)					(177,503.05)			(21,618,610.64) Plant	(3,774.13) Gross Salv (7.529.082.34) COR	(29,151,467.11)	
GPNG	12/31/2016	(55 965 28)	(14.972.69)	(0.26)	(33,897.59)	(584,371.80)	0.00	(193,912.79)	0.00	(35,311.11)	(417,658.71) \$	(70,925.37)	(14,751.40)	(23,679.33)		(68,146.95) \$	(16,287.45)	(2,465,509.31)	€9	s s	. S	
Deprec.	Provision	(6 076 44)	(11 185 24)	(698.88)	(2,107.32)	(115,632.92)	1	(20,643.10)	•	(6,295.64)	(49,494.87)	(6,463.92)	(3,299.28)	(1,526.64)	4,839.20	(5,587.80)	(2,053.56)	(263,485.91)	(1,521,816.34) \$(21,618,610.64)	(2.073.205.66) \$(29.151.467.11)	(2.073,205.66) \$(29,151,467.11)	- E
	Salvage	ı	,	,	1	(47,100.00)		(3,350.00)	•	(920:00)	(180,962.00)		•	•	•	•	•	(232,362.00)	\$ (232,362.00) \$	\$ (232.452.84) \$	\$ (232,452.84) \$	
Removal	Cost	1	,	1	1	,	1	1	,	,	,	1	,	•	•		•	411.90	1,840.06	155.307.10	155,307.10	
Original Cost	of Retirements	749.29	8.918.69	3,494.21		260,501.66	•	•	•	5,842.12	370,733.24	•	•	•	•		•	653,313.79	\$ 1,259,098.31 \$	\$ 1.259.098.31 \$		
Reclass/	Transfers	,	,	,	1	7,419.25	•	•		•	•	•				•		7,419.25	,258.68)	.258.68)	.258.68)	,
Balance	01-01-16	(50 638 13)	(12,706,14)	(2,795.59)	(31,790.27)	(689,559.79)	0.00	(169,919.69)	0.00	(33,907.59)	(557,935.08)	(64,461.45)	(11,452.12)	(22, 152.69)	(4,839.20)	(62,559.15)	(14,233.89)	(2,630,806.34)	(19,678,034.31) \$	\$ (26.812.877.66) \$ (1.328	(26.812.877.66) \$	
	Account Description	3911 Office Furniture & Equipment	3913 Computer Equipment-PC	3915 Other Computer Equipment	3921 Transportation Equipment- Traile	3922 Transportation Equipment- Vehic	393 Stores Equipment	3941 Miscellaneous Tools	395 Laboratory Equipment	3961 Work Equipment Trailers	3962 Power Operated Equipment	3971 Communications Equipment-Fixe	3972 Communications Equipment-Mok	3973 General Telephone Communicati	3976 SCADA System	3978 Network Equipment	398 Miscellaneous Equipment	TOTAL GAS GENERAL PLANT	TOTAL GAS PLANT IN SE \$ (19,678,034.31) \$ (1,328	BASE + COR + SALV \$	RESERVE =	
FERC	Account	3911	3913	3915 C	3921 T	3922 T	393 S	3941 №	395 ∟	3961	3962 F	3971 C	3972 C	3973 G	3976 S	3978 ∧	398 ∿	-		m	_	

* Base Reserve includes COR and Salvage for accounts in which separate COR and Salvage depreciation rates are not maintained

GPNG ACCOUNT #1082 SALVAGE* SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION

FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

FERC Balance Deprec. GPNG 01-01-16 Provision 12/31/2016 Account **Account Description** Salvage 301 Organization Intangible Plant 302 Franchises and Consents Intangible Plant 303 Miscellaneous Intangible Plant **TOTAL GAS INTANGIBLE PLANT** 305 Structures & Improvements 3111 Liquified Petro. Propane 320 Other Gas Production **TOTAL GAS PRODUCTION PLANT** 3652 Land Rights 3671 Mains (9,550.80)616.56 (8,934.24)3691 Meas. & Reg. Station Eqiup. **TOTAL GAS TRANSMISSION PLANT** (8,934.24) (9,550.80)616.56 3742 Land Rights 375 Structures & Improvements 376 Mains (2,388.67)(2,388.67)378 Meas. & Reg. Station Eqiup.-General 379 Meas. & Reg. Station Eqiup.-City Gate 380 Services (41.87)(41.87)381 Meters 10,233.82 7,590.65 (90.84)(2,552.33)382 Meter Set Installation 0.00 0.00 383 Service Regulators 385 Industrial Meas. & Reg. Station Equipment 3871 Cathodic Protection Equipment 3872 Other Distribution Equipment 388 ARO **TOTAL GAS DISTRIBUTION PLANT** 7.803.28 (90.84)(2.552.33)5.160.11 390 Structures & Improvements 3911 Office Furniture & Equipment 3913 Computer Equipment-PC 3915 Other Computer Equipment 3921 Transportation Equipment- Trailers 3922 Transportation Equipment- Vehicles 393 Stores Equipment 3941 Miscellaneous Tools 395 Laboratory Equipment 3961 Work Equipment Trailers

GPNG

ACCOUNT #1082 SALVAGE* SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

FERC		Balance		Deprec.	GPNG
Account	Account Description	01-01-16	Salvage	Provision	12/31/2016
3962	Power Operated Equipment	-	-	-	-
3971	Communications Equipment-Fixed Radios	-	-	-	-
	Communications Equipment-Mobile Radios	_	_	-	-
	General Telephone Communication Equipment	_	_	-	_
	Network Equipment	_	_	_	_
	Miscellaneous Equipment	_	_	_	_
	TOTAL GAS GENERAL PLANT	-	-	-	-
	TOTAL GAS PLANT IN SERVICE	\$ (1,747.52) \$	(90.84)	\$ (1,935.77) \$	(3,774.13)

^{*} In May 2014 all salvage was reclassified from the 1087 account to the 1082 account

GPNG ACCOUNT #1087 COST OF REMOVAL SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

FERC **GPNG Balance** Removal Deprec. 12/31/2016 Account **Account Description** 01-01-16 Cost **Provision** Organization Intangible Plant 301 \$ Franchises and Consents Intangible Plant 302 Miscellaneous Intangible Plant 303 TOTAL GAS INTANGIBLE PLANT Structures & Improvements 305 Liquified Petro. Propane 3111 Other Gas Production 320 TOTAL GAS PRODUCTION PLANT 3652 Land Rights Mains 3671 (288,772.01)154.20 (288,617.81)Meas. & Reg. Station Egiup. 13,851.60 3691 271.98 (2,052.48)12,071.10 TOTAL GAS TRANSMISSION PLANT (274,920.41)271.98 (1,898.28)(276,546.71)Land Rights 3742 Structures & Improvements 375 (1,172.11)(45.12)(1,217.23)376 Mains (2,795,640.25)62,301.22 (204,423.59)(2,937,762.62)Meas. & Reg. Station Eqiup.-General 378 (29,711.79)698.54 (2,163.38)(31,176.63)Meas. & Reg. Station Egiup.-City Gate 379 20,575.39 18,990.23 (1,585.16)Services 380 (3,825,887.74)63,241.33 (225,760.01)(3,988,406.42)Meters 26.953.97 381 (226, 338.92)(113,578.01)(312,962.96)Meter Set Installation 382 (0.00)(0.00)Service Regulators 383 Industrial Meas. & Reg. Station Equipment 385 Cathodic Protection Equipment 3871 Other Distribution Equipment 3872 **ARO** 388 TOTAL GAS DISTRIBUTION PLANT (6,858,175.42) 153.195.06 (547,555.27) (7,252,535.63)Structures & Improvements 390 Office Furniture & Equipment 3911 3913 Computer Equipment-PC Other Computer Equipment 3915 Transportation Equipment-Trailers 3921 Transportation Equipment- Vehicles 3922 Stores Equipment 393 3941 Miscellaneous Tools Laboratory Equipment 395 Work Equipment Trailers 3961 Power Operated Equipment 3962

GPNG

ACCOUNT #1087 COST OF REMOVAL SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2016

FERC		Balance	Removal	Deprec.	GPNG
Account	Account Description	01-01-16	Cost	Provision	12/31/2016
3971	Communications Equipment-Fixed Radios	-	-	-	-
3972	Communications Equipment-Mobile Radios	-	-	-	-
3973	General Telephone Communication Equipment	-	-	-	-
3978	Network Equipment	-	-	-	-
398	Miscellaneous Equipment	_	-	-	_
	TOTAL GAS GENERAL PLANT	-	-	-	-
	TOTAL GAS PLANT IN SERVICE	\$ (7,133,095.83)	\$ 153,467.04	\$ (549,453.55)	\$ (7,529,082.34)

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service as of December 31, 2016 and Present and Proposed Parameters

	Annual Depr Rate		1.21%	1.45% 0.22% 0.84% -3.17% -0.97%	1.34%	2.61%	1.75%	2.11% 2.84%	2.10% 3.31% 3.33% 2.47% 2.88% 1.69%	3.03%
								E	(5)	
S	Average Remaining Life		18.87	19.41 8.44 5.78 4.31		33.60		24.74 8.42	33.25 36.43 5.00 16.56 22.34 5.98	
Proposed Parameters	A.S.L./ Survivor Curve	€	50-R2.5	50-R3 40-R2 25-R3 40-R3 30-R4		40-R0.5		50-R2.5 85-S1.5	63-R3 45-R4 (2) 45-R3 45-R1.5 25-R3	
ropose	Gross COR 8 %	È	%0	-20% -20% -20% -20%		-10%		0% -2%	-55% -55% -55% -55% -55% -55%	
<u>a</u>	SOR		%0	%%% 0000		%0		%% 0	%%%%%%	
	Net Salvage W/ COR W/O C 	3	%0	-20% -20% -20% -20% -20%		-10%		%g- -2%	. 55% . 55% . 55% . 55% . 55%	
	Present Depr <u>Rate</u> (h)	Ê	1.24%	1.38% 1.38% 1.38% 1.38%	1.38%	3.01%	1.90%	2.14% 2.84%	2.99% 2.99% 2.99% 2.99% 2.99% 2.99%	2.99%
Sec	A.S.L./ Survivor Curve	(a)	50-R2.5	50-R3 40-R2 25-R3 40-R3 30-R4		35-R1		50-R2.5 85-S1.5	54-R3 45-R4 (2) 47-R3 40-R1 25-R3	
Present Parameters	Gross COR 8 ⊕	3	%0	-20% -20% -20% -20% -20%		-5%		0% -5% (1)	.55% .55% .55% .55% .55% .55%	
Prese	8 1 -	2	%0	%% 0000		%0		%0 %0	%%%%%%	
	Net Salvage W/COR W/OC % (a) (b)	ĵ.	%0	-20% -20% -20% -20% -20%		%9-		%g- %9-	65% 65% 65% 65% 65% 65%	
	Original Cost 12/31/16	2	158,152.03	1,444,495.69 62,624.01 1,325.87 3,185.68 29,814.38	1,541,445.63	820,969.58	2,520,567.24	17,653.59 32,251.03	3,681,756.47 12,067,385.57 1,151,401.15 134,310.35 399,866.60 81,169.34	17,516,061.23
	Description (b)	DEPRECIABLE PLANT	Transmission Plant Rights of Way	TRANSMISSION MAINS Transmission Mains Railroad, River & Highway Crossings Anodes and Cathodic Protection Valves Farm & Side Taps	Total Transmission Mains	Meas & Reg Station Equipment	Total Transmission Plant	Distribution Plant Rights of Way Distr. Meas & Reg Station Structures	Steel Mains Plastic Mains Plastic Mains Plastic Mains - PVC Valves Raliroad, River & Highway Crossings Anodes and Cathodic Protection Pipeline Markers	Total Mains
	Account No.	5	365.20	367.00 367.40-42 367.45 367.50 367.60-61		369.00		374.20 375.00	376.00 376.10 376.11 376.28 376.28-50 376.55	
					2	2-30)			

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service as of December 31, 2016 and Present and Proposed Parameters

		•			Present Parameters	ers				Proposed	Proposed Parameters	ers		
Account No.	nt <u>Description</u> (b)	Original Cost 12/31/16 (c)	Net Salvage W/ COR W/O C % (d) (e)	W/O COR % (e)	Gross <u>COR</u> - (f)	A.S.L./ Survivor Curve (g)	Present Depr <u>Rate</u> (h)	Net Salvage <u>W/ COR</u> <u>W/O C</u> (i) (i) (i)	alvage W/O COR // (j)	Gross <u>COR</u> % (k)	A.S.L./ Survivor Curve (I)	Average Remaining Life (m)	4	Annual Depr Rate (n)
378.00 379.00	0 Meas & Reg Station Equip-General 0 Meas & Reg Station Equip-City Gate	501,025.62 442,661.26	-15% -2%	%0 %0	-15% -2%	40-R4 30-R4	2.34% 3.47%	-25% -5%	%0 0	-25% -5%	(3) 28-R3	5.00	(3)	12.55% 3.87%
380.00 380.10 380.11 380.55-60	Services O Steel Services O Plastic Services - PVC 1 Plastic Services - PVC	1,076,486.26 12,550,273.57 788,764,40 69,491.30	-75% -75% -75% -75%	%0 %0	-75% -75% -75% -75%	38-R2 37-R5 (2) 25-R3	4.10% 4.10% 4.10% 4.10%	-75% -75% -75% -75%	%% %0	-75% -75% -75% -75%	50-R2.5 40-R3 (2) 25-R3	22.80 30.64 5.00 12.36	(2)	2.43% 4.04% 1.14% 4.25%
	Total Services	14,485,015.53					4.10%							3.76%
381.00	0 Meters	6,324,475.10	-15%	%0	-15%	(4)	8.58%	-25%	%0	-25%	(4)	7.01	(4)	9.91%
383.00 385.00 387.10 387.20	House Regulators Industrial Meas. & Reg. Station Equipn Cathodic Protection Equipment Other Equipment	780,577.62 162,784.41 9,235.11 11,498.48	%0 %0	%0 %0	* %0	(4) 40-S4 25-R3 30-R3	5.64% 2.49% 4.05% 0.00%	-5% 0% 0%	%0 %0	%0 0 0 0 0 0	(4) 40-S4 25-R3 30-R3	7.01 37.49 15.92 5.37	(4)	6.62% 2.51% 4.35% 0.00%
	TOTAL Distribution Plant	40,283,238.98					4.31%							4.57%
390.0001 390.02	General Plant GENERAL STRUCTURES .01 General Structures & Improvements 2 Leasehold Improvements	2,167,306.97	%0 %0	%0 %0	%0 0	45-R3 10-R4	1.72%	%0 %0	%0 %0	%0 0	45-R4	32.51 0.00		1.75% 0.00%
	Total General Structures	2,167,306.97					1.72%							1.75%
392.10 392.20 396.00	0 Trailers 0 Transportation Equipment 0 Power Operated Equipment Sub-Total Depr General Plant	39,760.09 1,386,193.31 961,850.41 4,555,110.78	0% 20% 25%	0% 20% 25%	%0 %0	12-R1 7-L2 8-L0	3.75% 8.88% 3.23%	10% 20% 65%	10% 20% 65%	%0 %0	12-R1 7-L2 6-L0	4.95 4.28 4.18		0.96% 8.84% -2.89%
	Sub-Total Depreciable Plant	47,358,917.00					4.18%							4.26%
391.10 391.30 391.50	OFFICE FURNITURE & EQUIPMENT Office Furniture & Equipment Computer & Electronic Equipment Other Computer Equipment	96,848.48 66,918.69 0.00	%0 %0	%0 %0	%0 0		6.25% 25.00% 20.00%	%0 %0	%0 %0	%0 0		Z Z Z Z Z Z		6.25% 25.00% 0.00%
	Total Office Furniture & Equipment	163,767.17					13.91%							13.91%

Great Plains Natural Gas Company

Summary of Original Cost of Utility Plant in Service as of December 31, 2016 and Present and Proposed Parameters

	Annual Depr Rate ⁽ⁿ⁾	5.00% 5.56% 4.00%	3.60% 6.45% 4.31%							
ars	Average Remaining Life (m)	V								
Proposed Parameters	A.S.L./ Survivor Curve									
Proposed	Gross COR (x)	%0 %0								
	alvage W/O COR % (i)	%0 %0								
	Net Salvage W/ COR W/O C (i) (j)	%0 0								
	Present Depr <u>Rate</u> (h)	5.00% 5.56% 4.00%	4.66% 6.45% 4.23%							
ers	A.S.L./ Survivor Curve									
Present Parameters	Gross COR (f)	%0 0								
Prese	8	%0 0								, 2016-2026
	Net Salvage W/ COR W/O C 	%0 %0								/Eliminations rogram Term
	Original Cost 12/31/16 (c)	565,184.90 303,582.84 51,338.57	5,638,984.26 1,083,873.48 48,442,790.48		0.00 5,584.70 2,978.43 48,658.66	57,221.79	5,006.20 73,680.11 2,419,099.03	2,497,785.34	2,555,007.13	50,997,797.61 ives Vary. gram egulator Change Out id Remaining PVC P
	Description (b)	Tools, Shop & Garage Equipment Communication Equipment Miscellaneous Equipment	TOTAL General Plant Sub-Total Amortizable Plant TOTAL Depreciable Plant	NON-DEPRECIABLE PLANT	Land & Land Rights-Production Land & Land Rights-Transmission Land & Land Rights-Distribution Land & Land Rights-General	Total Land	INTANGIBLE PLANT Organization Franchises & Consents Miscellaneous Intangible Plant	Total Intangible Plant	TOTAL Non-Depreciable Plant	TOTAL Plant in Service 50,997,797.61 (1) Interim Retirement Rate. Service Lives Vary. (2) Based Upon PVC Conversion Program (3) Based Upon Anticipated District Regulator Change Out/Eliminations (4) Based Upon 20 ERT Batter Life and Remaining PVC Program Term 2016-2026
	Account <u>No.</u> (a)	394.00 397.00 398.00			304.00 365.10 374.10 389.00	.	301.00 302.00 303.00			

SECTION 3



Great Plains Natural Gas Company

General

This report sets forth the results of our study of the depreciable property of Great Plains Natural Gas Company (or the Company) as of December 31, 2016 and contains the basic parameters (recommended average service lives and life characteristics) for the proposed average remaining life depreciation rates. All average service lives set forth in this report are developed based upon plant in service as of December 31, 2016.

The scope of the study included an analysis of Great Plains Natural Gas Company's historical data through December 31, 2016, discussions with Company management and staff to identify prior and prospective factors affecting the Company's plant in service, as well as interpretation of past service life data experience and future life expectancies to determine the appropriate average service lives of the Company's surviving plant. The service lives and life characteristics resulting from the in-depth study were utilized together with the Company's plant in service and book depreciation reserve to determine the recommended Average Remaining Life (ARL) depreciation rates related to the Company's plant in service as of December 31, 2016.

In preparing the study, the Company's historical investment data were studied using various service life analysis techniques. Further, discussions were held with the Great Plains' management to obtain an overview of the Company's facilities and to discuss the general scope of operations together with other factors which could have a bearing on the service lives of the Company's property. Finally, the study results were tempered by information gathered during plant inspection tours of a representative portion of the Company's property.

The Company maintains property records containing a summary of its fixed capital investments by property account. This investment data was analyzed and summarized by property group and/or sub group and vintage then utilized as a basis for the various depreciation calculations.

Depreciation Study Overview

There are numerous methods utilized to recover property investment depending upon the goal. For example, accelerated methods such as double declining balance and sum of years digits are methods used in tax accounting to motivate additional investments. Broad Group (BG) and Equal Life Group (ELG) are both Straight Line Grouping Procedures recognized and utilized by various regulatory jurisdictions depending upon the policy of the specific agency.

The Straight Line Group Method of depreciation utilized in this study to develop the recommended depreciation rates is the Broad Group Procedure together with the Average Remaining Life Technique. The use of this procedure and technique is based upon recovering the net book cost (original cost less book reserve) of the surviving plant in service over its estimated remaining useful life. Any variance between the book reserve and an implied theoretical calculated reserve is compensated for under this procedure. That is, as the Company's book reserve increases above or declines below the theoretical reserve at a specific point in time, the Company's average remaining life depreciation rate in subsequent years will be increased or decreased to compensate for the variance, thereby, assuring full recovery of the Company's investment by the end of the property's life.

The Company, like any other business, includes as an annual operating expense

an amount which reflects a portion of the capital investment which was consumed in providing service during the accounting period. The annual depreciation amount to be recognized is based upon the remaining productive life over which the un-depreciated capital investment needs to be recovered. The determination of the productive remaining life for each property group usually includes an in-depth study of past experience in addition to estimates of future expectations.

Annual Depreciation Accrual

Through the utilization of the Average Remaining Life Technique, the Company will recover the un-depreciated fixed capital investment in the appropriate amounts as annual depreciation expense in each year throughout the remaining life of the property. The procedure incorporates the future life expectancy of the property, the vintaged surviving plant in service, and estimated net salvage, together with the book depreciation reserve balance to develop the annual depreciation rate for each property account. Accordingly, the ARL technique meets the objective of providing a straight line recovery of the un-depreciated fixed capital property investment.

As indicated, the use of the Average Remaining Life Technique results in charging the appropriate annual depreciation amounts over the remaining life of the property to insure full recovery by the end of the life of the property. The annual expense is calculated on a Straight Line Method rather than by the previously mentioned, "sum of the years digits" or "double declining balance" methods, etc. The "group" refers to the method of calculating annual depreciation on the summation of the investment in any one depreciable group or plant account rather than calculating depreciation for each individual unit.

Under Broad Group Depreciation some units may be over depreciated and other units may be under depreciated at the time when they are retired from service, but overall, the account is fully depreciated when average service life is attained. By comparison, Equal Life Group depreciation rates are designed to fully accrue the cost of the asset group by the time of retirement. For both the Broad Group and Equal Life Group Procedures the full cost of the investment is credited to plant in service when the retirement occurs and likewise the depreciation reserve is debited with an equal retirement cost. No gain or loss is recognized at the time of property retirement because of the assumption that the retired property was at average service life.

Group Depreciation Procedures

Group depreciation procedures are utilized to depreciate property when more than one item of property is being depreciated. Such a procedure is appropriate because all of the items within a specific group typically do not have identical service lives, but have lives which are dispersed over a range of time. Utilizing a group depreciation procedure allows for a condensed application of depreciation rates to groups of similar property in lieu of extensive depreciation calculations on an item by item basis. The two more common group depreciation procedures are the Broad Group (BG) and Equal Life Group (ELG) approach.

In developing depreciation rates using the Broad Group procedure, the annual depreciation rate is based on the average life of the overall property group, which is then applied to the group's surviving original cost investment. A characteristic of this procedure is that retirements of individual units occurring prior to average service life will be under depreciated, while individual units retired after average service life will be over

depreciated when removed from service, but overall, the group investment will achieve full recovery by the end of the life of the total property group. That is, the under recovery occurring early in the life of the account is balanced by the over recovery occurring subsequent to average service life. In summary, the cost of the investment is complete at the end of the property's life cycle, but the rate of recovery does not match the consumption pattern which was used to provide service to the company's customers.

Under the average service life procedure, the annual depreciation rate is calculated by the following formula:

The application of the broad group procedure to life span groups results in each vintage investment having a different average service life. This circumstance exists because the concurrent retirement of all vintages at the anticipated retirement year results in truncating and, therefore, restricting the life of each successive year's vintage investment. An average service life is calculated for each vintage investment in accordance with the above formula. Subsequently, a composite service life and depreciation rate is calculated relative to all vintages within the property group by weighting the life for each vintage by the related surviving vintage investment within the group.

In the Equal Life Group, the property group is subdivided, through the use of plant life tables, into equal life groups. In each equal life group, portions of the overall property group includes that portion which experiences the life of the specific sub-group. The relative size of each sub-group is determined from the overall group life characteristic (property dispersion curve). This procedure both overcomes the disadvantage of

voluminous record requirements of unit depreciation, as well as eliminates the need to base depreciation on overall lives as required under the broad group procedure. The application of this procedure results in each sub-group of the property having a single life. In this procedure, the full cost of short lived units is accrued during their lives leaving no under accruals to be recovered by over accruals on long lived plant. The annual depreciation for the group is the summation of the depreciation accruals based on the service life of each Equal Life Group.

The ELG Procedure is viewed as being the more definitive procedure for identifying the life characteristics of utility property and as a basis for developing service lives and depreciation rates, nevertheless, the Broad Group procedure is more widely utilized throughout the utility industry by regulatory commissions as a basis for depreciation rates. That is, the ELG Procedure is more definitive because it allocates the capital cost of a group property to annual expense in accordance with the consumption of the property group providing service to customers. In this regard, the company's customers are more appropriately charged with the cost of the property consumed in providing them service during the applicable service period. The more timely return of plant cost is accomplished by fully accruing each unit's cost during its service life, thereby not only reducing the risk of incomplete cost recovery, but also resulting in less return on rate base over the life of a depreciable group. The total depreciation expense over the life of the property is the same for all procedures which allocate the full capital cost to expense, but at any specific point in time, the depreciated original cost is less under the ELG procedure than under the BG procedure. This circumstance exists because under the equal life group procedure, the rate base is not maintained at a level of greater than the future service

value of the surviving plant as is the case when using the average service life procedure.

Consequently, the total return required from the ratepayers is less under the ELG procedure.

While the Equal Life Group procedure has been known to depreciation experts for many years, widespread interest in applying the procedure developed only after high speed electronic computers became available to perform the large volume of arithmetic computations required in developing ELG based depreciation lives and rates. The table on the following page illustrates the procedure for calculating equal life group depreciation accrual rates and summarizes the results of the underlying calculations. Depreciation rates are determined for each age interval (one year increment) during the life of a group of property which was installed in a given year or vintage group. The age of the vintage group is shown in column (A) of the ELG table. The percent surviving at the beginning of each age interval is determined from the lowa 10-R3 survivor curve which is set forth in column (B). The percent retired during each age interval, as shown in column (C), is the difference between the percent surviving at successive age intervals. Accordingly, the percentage amount of the vintage group retired defines the size of each equal life group. For example, during the interval 3 1/2 to 4 1/2, 1.93690 percent of the vintage group is retired at an average age of four years. In this case, the 1.93690 percent of the group experiences an equal life of four years. Likewise, 3.00339 percent is retired during the interval 4 1/2 to 5 1/2 and experiences a service life of five years. Furthermore, 4.42969 percent experiences a six-year life; etc. Calculations are made for each age interval from the zero age interval through the end of the life of the

XYZ UTILITY COMPANY
CALCULATION OF ASL, ARL AND ACCRUED DEPRECIATION FACTORS
BASED UPON AN IOWA 10-R3 CURVE USING THE EQUAL LIFE GROUP (ELG) PROCEDURE

Table 9

							EQUAL I	LIFE GROUP PROC	EDURE	
AGE AT BEGIN OF	LIFE TABLE BEGIN OF	RETIREMENT DURING	AVERAGE	AGE OF AMOUNT	AMOUNT FOR EACH <u>LIFE</u>	AMOUNT FOR REMAINING	AVERAGE SERVICE	AVERAGE REMAINING	ELG/ARL DEPR	ACCRUED DEPR RES
INTERVAL	INTERVAL	INTERVAL	SURVIVING	RETIRED	GROUP	LIFE GROUPS	<u>LIFE</u>	<u>LIFE</u>	<u>RATE</u>	<u>FACTOR</u>
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
, ,	` ′	` '	` ′	` ′	` ,	` '	` ,	`,	, ,	, ,
0.0	1.0000000	0.0009198	0.9995401	0.25	0.0009198	0.0583036	8.57	8.57	11.67	0.0000000
0.5	0.9990802	0.0033314	0.9974145	1.0	0.0033314	0.1131019	8.82	8.32	11.34	0.0566975
1.5	0.9957488	0.0065393	0.9924792	2.0	0.0032697	0.1098013	9.04	7.54	11.06	0.1659501
2.5	0.9892095	0.0117037	0.9833577	3.0	0.0039012	0.1062159	9.26	6.76	10.80	0.2700337
3.5	0.9775058	0.0193690	0.9678213	4.0	0.0048422	0.1018442	9.50	6.00	10.52	0.3683062
4.5	0.9581368	0.0300339	0.9431199	5.0	0.0060068	0.0964196	9.78	5.28	10.22	0.4600565
5.5	0.9281029	0.0442969	0.9059545	6.0	0.0073828	0.0897248	10.10	4.60	9.90	0.5447146
6.5	0.8838060	0.0631367	0.8522377	7.0	0.0090195	0.0815237	10.45	3.95	9.57	0.6217794
7.5	0.8206693	0.0876232	0.7768577	8.0	0.0109529	0.0715375	10.86	3.36	9.21	0.6906424
8.5	0.7330461	0.1166879	0.6747022	9.0	0.0129653	0.0595783	11.32	2.82	8.83	0.7505770
9.5	0.6163582	0.1431836	0.5447664	10.0	0.0143184	0.0459365	11.86	2.36	8.43	0.8010714
10.5	0.4731746	0.1533568	0.3964962	11.0	0.0139415	0.0318066	12.47	1.97	8.02	0.8423003
11.5	0.3198178	0.1363216	0.2516570	12.0	0.0113601	0.0191557	13.14	1.64	7.61	0.8753616
12.5	0.1834962	0.0975199	0.1347363	13.0	0.0075015	0.0097249	13.85	1.35	7.22	0.9022159
13.5	0.0859763	0.0559043	0.0580242	14.0	0.0039932	0.0039775	14.59	1.09	6.85	0.9254232
14.5	0.0300720	0.0244398	0.0178521	15.0	0.0016293	0.0011663	15.31	0.81	6.53	0.9473077
15.5	0.0056322	0.0055324	0.0028660	16.0	0.0003458	0.0001788	16.03	0.53	6.24	0.9667657
16.5	0.0000998	0.0000998	0.0000499	17.0	0.0000059	0.0000029	17.00	0.50	5.88	0.9705882
17.5	0.0000000	0.0000000	0.0000000	18.0	0.0000000	0.0000000				
		1.0000000				1.0000000				

vintage group. The average service life for each age interval's equal life group is shown in column (E) of the table. The amount to be accrued annually for each equal life group is equal to the percentage retired in the equal life group divided by its service life. In as much as additions and retirements are assumed, for calculation purposes, to occur at midyear only one-half of the equal life group's annual accrual is allocated to expense

during its first and last years of service life. The accrual amount for the property retired during age interval 0 to .5 must be equal to the amount retired to insure full recovery of that component during that period. The accruals for each equal life group during the age intervals of the vintage group's life cycle are shown in column (F). The total accrual for a given year is the summation of the equal life group accruals for that year. For example, the total accrual for the second year, as shown in column (G), is 11.31019 percent and is the sum of all succeeding years remaining equal life group accruals plus one half of the current years life group accrual listed in column (F). For the zero age interval year, the total accrual is equal to one half of the sum of all succeeding years remaining equal life accruals plus the amount for the zero interval equal life group accrual. The one half year accrual for the zero age interval is consistent with the half year convention relative to property during its installation year. The sum of the annual accruals for each age interval contained in column (G) total to 1.000 demonstrating that the developed rates will recover 100% of plant no more and no less. The annual accrual rate which will result in the accrual amount is the ratio of the accrual amount (11.31019 percent) to the average percent surviving during the interval, column (D), (99.74145 percent), which is a rate of 11.34% (column J). Column (J) contains a summary of the accrual rates for each age interval of the property groups life cycle based upon an Iowa 10-R3 survivor curve.

Remaining Life Technique

In the Average Remaining Life depreciation technique, the annual accrual is calculated according to the following formula where, (A) the annual depreciation for each group equals, (D) the depreciable cost of plant less (U) the accumulated provision for depreciation less (S) the estimated future net salvage, divided by (R) the composite

remaining life of the group:

$$A = \underline{D - U - S}$$

The annual accrual rate (a) is expressed as a percentage of the depreciable plant balance by dividing the equation by (D) the depreciable cost of plant times 100:

(a) =
$$\frac{D - U - S}{R} \times \frac{1}{D} \times 100$$

As further indicated by the equation, the accumulated provision for depreciation by vintage is required in order to calculate the remaining life depreciation rate for each property group. In practice, most often such detail is not available; therefore, composite remaining lives are determined for each depreciable group, (i.e., property account).

The remaining life for a depreciable group is calculated by first determining the remaining life for each vintage year in which there is surviving investment. This is accomplished by solving the area under the survivor curve selected to represent the average life and life characteristic of the property account. The remaining life for each vintage is determined by dividing (D) the depreciable cost of each vintage, by (L) its average service life, and multiplying this ratio by its average remaining life (E). The composite remaining life of the group (R) equals the sums of products divided by the sum of the quotients:

R Group =
$$\sum_{\sum} \frac{D/L \times E}{D/L}$$

The account level accumulated provision for depreciation, which was the basis for developing the composite average remaining life accrual and annual depreciation rate for each property account as per this report, was obtained from the Company's books and records.

Salvage

Net salvage is the difference between gross salvage, or what is received when an asset is disposed of, and the cost of removing it from service. Salvage experience is normally included with the depreciation rate so that current accounting periods reflect a proportional share of the ultimate abandonment and removal cost or salvage received at the end of the property service life. Net salvage is said to be positive if gross salvage exceeds the cost of removal, but if cost of removal exceeds gross salvage the result is then negative salvage.

The cost of removal includes such costs as demolishing, dismantling, tearing down, disconnecting or otherwise removing plant, as well as normal environmental clean up costs associated with the property. Salvage includes proceeds received for the sale of plant and materials or the return of equipment to stores for reuse.

Net salvage experience is studied for a period of years to determine the trends which have occurred in the past. These trends are considered together with any changes that are anticipated in the future to determine the future net salvage factor for remaining life depreciation purposes. The net salvage percentage is determined by relating the total net positive or negative salvage to the book cost of the property investment.

Many retired assets generate little, if any, positive salvage. Instead, many of the Company's asset property groups generate negative net salvage at end of their life as a result of the cost of removal (retirement).

The method used to estimate the retirement cost is a standard analysis approach which is used to identify a company's historical experience with regard to what the end of life cost will be relative to the cost of the plant when first placed into service.

This information, along with knowledge about the average age of the historical retirements that have occurred to date, enables the depreciation professional to estimate the level of retirement cost that will be experienced by the Company at the end of each property group's useful life. The study methodology utilized has been extensively set forth in depreciation textbooks and has been the accepted practice by depreciation professionals for many decades. Furthermore, the cost of removal analysis approach is the current standard practice used for mass assets by essentially all depreciation professionals in estimating future net salvage for the purpose of identifying the applicable depreciation for a property group. There is a direct relationship to the installation of specific plant in service and its corresponding removal in that the installation is its beginning of life cost while the removal is its end of life cost. Also, it is important to note that average remaining life based depreciation rates incorporate future net salvage which is routinely more representative of recent versus long-term past average net salvage.

The Company's historical net salvage experience was analyzed to identify the historical net salvage factor for each applicable property group. This analysis routinely identifies that historical retirements have occurred at average ages significantly prior to the property group's average service life. This occurrence of historical retirements, at an age which is significantly younger than the average service life of the property category, clearly demonstrates that the historical data does not appropriately recognize the true level of retirement cost at the end of the property's useful life. An additional level of cost to retire will occur due to the passage of time until all the current in service plant is retired at end of life. That is, the level of retirement costs will increase over time until the average service life is attained. The estimated additional inflation, within the estimate of retirement

cost, is related to those additional year's cost increases (primarily higher labor costs over time) that will occur prior to the end of the property group's average life.

To provide an additional explanation of the issue, several general principles surrounding property retirements and related net salvage need to be highlighted. Those are that as property continues to age, the retirement of assets, if generating positive salvage when retired, will typically generate a lower percent of positive salvage. By comparison, if the class of property is one that typically generates negative net salvage (cost of removal), with increasing age at retirement the negative percentage as related to original cost will typically be greater. This situation is routinely driven by the higher labor cost with the passage of time.

Next, a simple example will aid in a better understanding of the above discussed net salvage analysis and the required adjustment to the historical analysis results. Assume the following scenario. A company has two (2) cars, Car #1 and Car #2, each purchased for \$20,000. Car #1 is retired after 2 years and Car #2, is retired after 10 years. Accordingly, the average life of the two cars is six (6) years (2 Yrs. Plus 10 Yrs./2). Car #1 generates 75% salvage or \$15,000 when retired and Car #2 generates 5% salvage or \$1,000 when retired.

<u>Unit</u>	<u>Cost</u>	Ret. Age (Yrs)	% Salv.	Salvage Amount
Car # 1	\$20,000	2	75%	\$15,000
<u>Car # 2</u>	20,000	<u>10</u>	<u>5%</u>	1,000
Total	40,000	6	40%	16,000

Assume an analysis of the experienced net salvage at year three (3). Based upon the Car #1 retirement, which was retired at a young age (2 Yrs.) as compared to the

average six (6) year life of the property group, the analysis indicates that the property group would generate 75% salvage. This analysis indication is incorrect and is the result of basing the estimate on incomplete data. That is, the estimate is based upon the salvage generated from a retirement that occurred at an age which is far less than the average service life of the property group. The actual total net salvage, that occurred over the average life of the assets (which experienced a six (6) year average life for the property group) is 40% as opposed to the initial incorrect estimate of 75%.

This is exactly the situation with the majority of the Company's historical net salvage data except that most of the Company's plant property groups routinely experience negative net salvage (cost of removal) as opposed to positive salvage.

The total end of life net salvage amount must be incorporated in the development of annual depreciation rates to enable the Company to fully recover its total plant life costs. Otherwise, upon retirement of the plant, the Company will incur end of life costs without having recovered those plant related costs from the customers who benefitted from the use of the expired plant.

With regard to location type properties (e.g. generation facilities, etc.) a company will routinely experience both interim and terminal net salvage. Interim net salvage occurs in conjunction with interim retirements that occur throughout the life of the asset group. This net salvage activity (routinely and largely cost of removal) is attributable to the removal of components within the Company's facilities to enable the placement of a new asset component. Interim net salvage is routinely negative given the care required in removing the defective component so as not to damage the remaining plant in service. Interim net salvage is applicable to the estimated interim retirement assets.

The terminal net salvage component is attributable to the end of life costs incurred (less any gross salvage received) to disconnect, remove, demolish and/or dispose of the operating asset. Terminal net salvage is attributable to those assets remaining in service subsequent to the occurrence of interim retirements.

The total net salvage incorporated into the depreciation rate for location type plant account investments is the sum of interim and terminal net salvage. Both of the items must be incorporated in the development of annual depreciation rates to enable the Company to fully recover its total plant life costs. Otherwise, upon retirement of the plant, the Company will incur end of life costs without having recovered those plant related costs from the customers who benefitted from the use of the expired facility.

Service Lives

Several factors contribute to the length of time or average service life which the property achieves. The three (3) major categories under which these factors fall are: (1) physical; (2) functional, and; (3) contingent casualties.

The physical category includes such things as deterioration, wear and tear and the action of the natural elements. The functional category includes inadequacy, obsolescence and requirements of governmental authorities. Obsolescence occurs when it is no longer economically feasible to use the property to provide service to customers or when technological advances have provided a substitute of superior performance. The remaining factor of contingent casualties relates to retirements caused by accidental damage or construction activity of one type or another.

In performing the life analysis for any property being studied, both past experience and future expectations must be considered in order to fully evaluate the circumstances

which may have a bearing on the remaining life of the property. This ensures the selection of an average service life which best represents the expected life of each property investment.

Survivor Curves

The preparation of a depreciation study or theoretical depreciation reserve typically incorporates smooth curves to represent the experienced or estimated survival characteristics of the property. The "smoothed" or standard survivor curves generally used are the family of curves developed at Iowa State University which are widely used and accepted throughout the utility industry.

The shape of the curves within the lowa family are dependent upon whether the maximum rate of retirement occurs before, during or after the average service life. If the maximum retirement rate occurs earlier in life, it is a left (L) mode curve; if occurring at average life, it is a symmetrical (S) mode curve; if it occurs after average life, it is a right (R) mode curve. In addition, there is the origin (O) mode curve for plant which has heavy retirements at the beginning of life.

Many times, actual Company data has not completed its life cycle, therefore, the survivor table generated from the Company data is not extended to zero percent surviving. This situation requires an estimate be made with regard to the remaining segment of the property group's life experience. Furthermore, actual Company experience is often erratic, making its utilization for average service life estimating difficult. Accordingly, the lowa curves are used to both extend Company experience to zero percent surviving as well as to smooth actual Company data.

Study Procedures

Several study procedures were used to determine the prospective service lives recommended for the Company's plant in service. These include the review and analysis of historical retirements, current and future construction, historical experience and future expectations of salvage and cost of removal as related to plant investment. Service lives are affected by many different factors, some of which can be obtained from studying plant experience, others which may rely heavily on future expectations. When physical aspects are the controlling factor in determining the service life of property, historical experience is a valuable tool in selecting service lives. In the case where changing technology or a less costly alternative develops, then historical experience is of lesser value.

While various methods are available to study historical data, the principal methods utilized to determine average service lives for a Company's property are the Retirement Rate Method, the Simulated Plant Record Method, the Life Span Method, and the Judgment Method.

Retirement Rate Method - The Retirement Rate Method uses actual Company retirement experience to develop a survivor curve (Observed Life Table) which is used to determine the average service life being experienced in the account under study. Computer processing provides the opportunity to review various experience bands throughout the life of the account to observe trends and changes. For each experience band studied, the "observed life table" is constructed based on retirement experience within the band of years. In some cases, the total life of the account has not been achieved and the experienced life table, when plotted, results in a "stub curve." It is this "stub curve" or total life curve, if achieved, which is matched or fitted to a standard

Survivor curve. The matching process is performed both by computer analysis, using a least squares technique, and by manually plotting observed life tables to which smooth curves are fitted. The fitted smooth curve provides the basis to determine the average service life of the property group under study.

Simulated Balances Method - In this method of analysis, simulated surviving balances are determined for each balance included in the test band by multiplying each proceeding year's original gross additions installed by the Company by the appropriate factor of each Standard Survivor Curve, summing the products, and comparing the results with the related year end plant balance to determine the "best fitting" curve and life within the test period. Various test bands are reviewed to determine trends or changes to indicated service lives in various bands of years. By definition, the curve with the "best fit" is the curve which produces simulated plant balances that most closely matches the actual plant balances as determined by the sum of the "least squares". The sum of the "least squares" is arrived at by starting with the difference between the simulated balances and the actual balance for a given year, squaring the difference, and the curve which produces the smallest sum (of squared difference) is judged to be the "best fit".

Period Retirements Method - The application of the Period Retirements Method is similar to the "Simulated Plant Balances" Method, except the procedure utilizes a Standard Survivor Curve and service life to simulate annual retirements instead of balances in performing the "least squares" fitting process during the test period. This procedure does tend to experience wider fluctuations due to the greater variations in level of experienced retirements versus additions and balances thereby producing greater variation in the study results.

Life Span Method - The Life Span or Forecast Method is a method utilized to study various accounts in which the expected retirement dates of specific property or locations can be reasonably estimated. In the Life Span Method, an estimated probable retirement year is determined for each location of the property group. An example of this would be a structure account, in which the various segments of the account are "life spanned" to a probable retirement date which is determined after considering a number of factors, such as management plans, industry standards, the original construction date, subsequent additions, resultant average age and the current - as well as the overall - expected service life of the property being studied. If, in the past, the property has experienced interim retirements, these are studied to determine an interim retirement rate. Otherwise, interim retirement rate parameters are estimated for properties which are anticipated to experience such retirements. The selected interim service life parameters (lowa curve and life) are then used with the vintage investment and probable retirement year of the property to determine the average remaining life as of the study date.

Judgment Method - Standard quantitative methods such as the Retirement Rate Method, Simulated Plant Record Method, etc. are normally utilized to analyze a Company's available historical service life data. The results of the analysis together with information provided by management as well as judgment are utilized in estimating the prospective recommended average service lives. However, there are some circumstances where sufficient retirements have not occurred, or where prospective plans or guidelines are unavailable. In these circumstances, judgment alone is utilized to estimate service lives based upon service lives used by other utilities for this class of plant as well as what is considered to be a reasonable life for this plant giving consideration to

the current age and use of the facilities.

SECTION 4

Great Plains Natural Gas Company

Study Analysis & Results

ACCOUNT - 365.20 Transmission Rights of Way

Historical Experience

Plant Statistics Plant Balance = \$158,152

Average Age of Survivors = 40.3 years Original Gross Additions = \$158,152 Oldest Surviving vintage = 1965

Retirements = \$0 or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16
 1987-16

 N/A
 N/A
 N/A

Gross Salvage Trend Analysis

20 Year
N/A

15 Year
N/A

N/A

N/A

N/A

N/A

Forecasted Net Salvage: N/A

Future Expectations and Considerations

The annual investments in this account have been limited. Accordingly, an insufficient level of historical data is available to produce any meaningful service life indications. Therefore the life was based upon general industry information and future expectations for the property group.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 50-R2.5

Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 50-R2.5

Net Salv: 0%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 1.21 % 1.24 % Av. Remaining Life 18.87 years N/A

ACCOUNT - 367.00 Transmission Mains

Historical Experience

Plant Statistics Plant Balance = \$1,444,496

Average Age of Survivors = 38.2 years Original Gross Additions = \$1,464,476 Oldest Surviving Vintage = 1966

Retirements = \$19,981 or 1.4% of historical additions.

Average Age of Retirements = 35.1 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (77-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
0% 0% 0% 1977-16
-81%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -140%

Future Expectations and Considerations

The investment in Transmission gas mains is related to mains, crossings, and taps, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into five (5) subaccount categories which include Transmission Mains, Railroad, River, and Highway Crossings, Anodes and Cathodic Protection, Valves, Farm and Side Taps. The various analyzed components within the account recognizes that the various Company investments represent property of somewhat different use categories and/or equipment types. That is for example, the piping installed in various types of Crossing is subject to increased risk. Likewise, the useful life of Taps, etc. are estimated to be different from the life of the piping.

While the retirements from this property class, which have occurred throughout the account's history have generally been limited and have produced no significant levels of salvage, it is anticipated that due to factors including government regulations, environment concerns and related requirements, and safety requirements, etc. the company will incur costs in the process of retiring this property class at the end of its useful life. That is, to meet the requirements of the pending pipeline integrity rule, the Company anticipates incurring various costs along with the need to abandon various segments of pipe. Furthermore, at the end of the future life of the transmission main property the Company will incur work efforts and related costs in the process of abandoning and/or removing the facilities. Such tasks will include but not be limited to completing environmental tests, physically disconnecting and cutting the pipe at numerous locations, purging the gas from the line, filling and capping the property to meet safety requirements.

As the property continues to age, additional activities will likely occur. Appropriate adjustments and plans will be incorporated in upcoming depreciation studies.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 50-R3 Net Salv: -20%

Proposed Depreciation Parameters

ASL/Curve: 50-R3 Net Salv: -20%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 1.45 % 1.38 % Av. Remaining Life 19.41 years N/A

ACCOUNT - 367.40, 367.41 & 367.42 Railroad, River & Highway Crossings

Historical Experience

Plant Statistics Plant Balance = \$62,624

Average Age of Survivors = 47.2 years Original Gross Additions = \$62,624 Oldest Surviving Vintage = 1966

Retirements = \$0 or 0\% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (77-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
0% 0% 0% 1977-16
-81%

Gross Salvage Trend Analysis

20 Year 0% 15 Year 10 Year 5 Year 0% 0% 0%

Forecasted Net Salvage: -140%

Future Expectations and Considerations

The investment in gas mains is related to mains, crossings, and taps, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into five (5) sub-account categories which include Transmission Mains, Railroad, River, and Highway Crossings, Anodes and Cathodic Protection, Valves, Farm and Side Taps. The various analyzed components within the account recognizes that the various Company investments represent property of somewhat different use categories and/or equipment types. That is for example, the piping installed in various types of Crossing is subject to increased risk. Likewise, the useful life of Taps, etc. are estimated to be different from the life of the piping.

While the retirements from this property class, which have occurred throughout the account's history have generally been limited and have produced no significant levels of salvage, it is anticipated that due to factors including government regulations, environment concerns and related requirements, and safety requirements, etc. the company will incur costs in the process of retiring this property class at the end of its useful life. That is, to meet the requirements of the pending pipeline integrity rule, the Company anticipates incurring various costs along with the need to abandon various segments of pipe. Furthermore, at the end of the future life of the transmission main property the Company will incur work efforts and related costs in the process of abandoning and/or removing the facilities. Such tasks will include but not be limited to completing environmental tests, physically disconnecting and cutting the pipe at numerous locations, purging the gas from the line, filling and capping the property to meet safety requirements.

As the property continues to age, additional activities will likely occur. Appropriate adjustments and plans will be incorporated in upcoming depreciation studies.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 40-R2 Net Salv: -20%

Proposed Depreciation Parameters

ASL/Curve: 40-R2 Net Salv: -20%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 0.22% 1.38 % Av. Remaining Life 8.44 years N/A

ACCOUNT - 367.45 Anodes & Cathodic Protection

Historical Experience

Plant Statistics Plant Balance = \$1,326

Average Age of Survivors = 25.6 years Original Gross Additions = \$1,326 Oldest Surviving Vintage = 1977

Retirements = \$0 or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (77-16)

Three Year Average Net Salvage Percent

2012-14
0%
0%
0%
0%

Full Depth
1977-16
-81%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -140%

Future Expectations and Considerations

The investment in gas mains is related to mains, crossings, and taps, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into five (5) sub-account categories which include Transmission Mains, Railroad, River, and Highway Crossings, Anodes and Cathodic Protection, Valves, Farm and Side Taps. The various analyzed components within the account recognizes that the various Company investments represent property of somewhat different use categories and/or equipment types. That is for example, the piping installed in various types of Crossing is subject to increased risk. Likewise, the useful life of Taps, etc. are estimated to be different from the life of the piping.

While the retirements from this property class, which have occurred throughout the account's history have generally been limited and have produced no significant levels of salvage, it is anticipated that due to factors including government regulations, environment concerns and related requirements, and safety requirements, etc. the company will incur costs in the process of retiring this property class at the end of its useful life. That is, to meet the requirements of the pending pipeline integrity rule, the Company anticipates incurring various costs along with the need to abandon various segments of pipe. Furthermore, at the end of the future life of the transmission main property the Company will incur work efforts and related costs in the process of abandoning and/or removing the facilities. Such tasks will include but not be limited to completing environmental tests, physically disconnecting and cutting the pipe at numerous locations, purging the gas from the line, filling and capping the property to meet safety requirements.

As the property continues to age, additional activities will likely occur. Appropriate adjustments and plans will be incorporated in upcoming depreciation studies.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -20%

Proposed Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -20%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 0.84 % 1.38 % Av. Remaining Life 5.78 years N/A

ACCOUNT - 367.50 Valves

Historical Experience

Plant Statistics Plant Balance = \$3,186

Average Age of Survivors = 50.5 years Original Gross Additions = \$3,186 Oldest Surviving Vintage = 1966

Retirements = \$0 or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (77-16)

Three Year Average Net Salvage Percent

2012-14
0%
0%
2014-16
0%
1977-16
-81%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -140%

Future Expectations and Considerations

The investment in gas mains is related to mains, crossings, and taps, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into five (5) sub-account categories which include Transmission Mains, Railroad, River, and Highway Crossings, Anodes and Cathodic Protection, Valves, Farm and Side Taps. The various analyzed components within the account recognizes that the various Company investments represent property of somewhat different use categories and/or equipment types. That is for example, the piping installed in various types of Crossing is subject to increased risk. Likewise, the useful life of Taps, etc. are estimated to be different from the life of the piping.

While the retirements from this property class, which have occurred throughout the account's history have generally been limited and have produced no significant levels of salvage, it is anticipated that due to factors including government regulations, environment concerns and related requirements, and safety requirements, etc. the company will incur costs in the process of retiring this property class at the end of its useful life. That is, to meet the requirements of the pending pipeline integrity rule, the Company anticipates incurring various costs along with the need to abandon various segments of pipe. Furthermore, at the end of the future life of the transmission main property the Company will incur work efforts and related costs in the process of abandoning and/or removing the facilities. Such tasks will include but not

be limited to completing environmental tests, physically disconnecting and cutting the pipe at numerous locations, purging the gas from the line, filling and capping the property to meet safety requirements.

As the property continues to age, additional activities will likely occur. Appropriate adjustments and plans will be incorporated in upcoming depreciation studies.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 40-R3 Net Salv: -20%

Proposed Depreciation Parameters

ASL/Curve: 40-R3 Net Salv: -20%

New Rate @New Parameters Old Rate @ Old Parameters

Rate -3.17 % 1.38 % Av. Remaining Life 4.31 years N/A

ACCOUNT – 367.60 & 367.61 Farm & Side Taps

Historical Experience

Plant Statistics Plant Balance = \$29,814

Average Age of Survivors = 32.5 years Original Gross Additions = \$30,883 Oldest Surviving Vintage = 1966

Retirements = \$1,068 or 3.5% of historical additions.

Average Age of Retirements = 16.3 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 30-R4 - FTA 20 Years

Net Salvage: (77-16)

Gross Salvage Trend Analysis

20 Year 0% 15 Year 10 Year 5 Year 0% 0%

Forecasted Net Salvage: -140%

Future Expectations and Considerations

The investment in gas mains is related to mains, crossings, and taps, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into five (5) sub-account categories which include Transmission Mains, Railroad, River, and Highway Crossings, Anodes and Cathodic Protection, Valves, Farm and Side Taps. The various analyzed components within the account recognizes that the various Company investments represent property of somewhat different use categories and/or equipment types. That is for example, the piping installed in various types of Crossing is subject to increased risk. Likewise, the useful life of Taps, etc. are estimated to be different from the life of the piping.

While the retirements from this property class, which have occurred throughout the account's history have generally been limited and have produced no significant levels of salvage, it is anticipated that due to factors including government regulations, environment concerns and related requirements, and safety requirements, etc. the company will incur costs in the process of retiring this property class at the end of its useful life. That is, to meet the requirements of the pending pipeline integrity rule, the Company anticipates incurring various costs along with the need to abandon various segments of pipe. Furthermore, at the end of the future life of the transmission main property the Company will incur work efforts and related costs in the process of abandoning and/or removing the facilities. Such tasks will include but not

be limited to completing environmental tests, physically disconnecting and cutting the pipe at numerous locations, purging the gas from the line, filling and capping the property to meet safety requirements.

As the property continues to age, additional activities will likely occur. Appropriate adjustments and plans will be incorporated in upcoming depreciation studies.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 30-R4 Net Salv: -20%

Proposed Depreciation Parameters

ASL/Curve: 30-R4 Net Salv: -20%

New Rate @New Parameters Old Rate @ Old Parameters

Rate -0.97 % 1.38 % Av. Remaining Life 6.22 years N/A

ACCOUNT - 369.00 Measuring & Regulating Stations Equipment

Historical Experience

Plant Statistics Plant Balance = \$820,970

Average Age of Survivors = 10.8 years Original Gross Additions = \$840,106 Oldest Surviving Vintage = 1966

Retirements = \$117,744, or 14% of historical additions.

Average Age of Retirements = 14.6 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 40-R0.5

Net Salvage: (76-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
0% -1% -5% 1976-16
-15%

Gross Salvage Trend Analysis

20 Year 0% 15 Year 10 Year 5 Year 0% 0%

Forecasted Net Salvage: -33%

Future Expectations and Considerations

The measuring and regulating equipment is utilized to regulate gas pressure in conjunction with its transmission line as it related to the Company's various service areas to the appropriate level to meet the customer needs. As the Company continues to upgrade and/or modify its operating pressure within its service territory, ongoing changes will be required to the Company's existing measuring and regulating facilities. Several larger additions and related retirements occurred during the 1990's. Likewise, it is anticipated that further changes will continue as the Company continues to maintain and/or upgrade its system and provide improved customer service in future years.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 35-R1 Net Salv: -5%

Proposed Depreciation Parameters

ASL/Curve: 40-R0.5 Net Salv: -10%

 Rate
 2.61 %
 3.01%

 Av. Remaining Life
 33.60 years
 N/A

ACCOUNT - 374.20 Distribution Rights of Way

Historical Experience

Plant Statistics Plant Balance = \$17,654

Average Age of Survivors = 30.2 years Original Gross Additions = \$12,577 Oldest Surviving Vintage = 1969

Retirements = \$200 or 1.6% of historical additions.

Average Age of Retirements = 12.5 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16

 N/A
 N/A
 N/A

Gross Salvage Trend Analysis

 $\begin{array}{ccc} \underline{20 \ Year} & \underline{15 \ Year} & \underline{10 \ Year} & \underline{5 \ Year} \\ N/A & N/A & N/A & N/A \end{array}$

Forecasted Net Salvage: N/A

Future Expectations and Considerations

The investment originally analyzed within this account totals only \$17,654 with no experienced historical data, therefore the life of the property was based upon the analysis and consideration of the Company's general historical experience in other property accounts, as well as general industry information.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 50-R2.5

Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 50-R2.5

Net Salv: 0%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	2.11 %	2.14 %
Av. Remaining Life	24.74 years	N/A

ACCOUNT - 375.00 Meas. & Regulating Station Structures

Historical Experience

Plant Statistics Plant Balance = \$32,251

Average Age of Survivors = 23.4 years Original Gross Additions = \$55,683 Oldest Surviving Vintage = 1985

Retirements = \$0 or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1985 – 2016 (Full Depth) N/A - Interim Retirement Rate

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16

 N/A
 N/A
 N/A

Gross Salvage Trend Analysis

<u>20 Year</u> <u>15 Year</u> <u>10 Year</u> <u>5 Year</u> <u>N/A</u> <u>N/A</u>

Forecasted Net Salvage: N/A

Future Expectations and Considerations

This account contains limited investments for property at the Company's distribution measuring & regulating station structures located throughout the Company's operating system. Each property location's investment was life spanned forty (40) years to its applicable probable retirement year plus an interim retirement rate representative of an Iowa 85-S1.5 was estimated as the applicable interim retirement rate for the property group.

Life Analysis Method: Retirement Rate Method (Actuarial)--Life Span Method

Average Remaining Life Development: Life Span Method

Current Depreciation Parameters

ASL/Curve: 85-S1.5

Net Salv: -5%

Proposed Depreciation Parameters

ASL/Curve: 85-S1.5

Net Salv: -5%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	2.84 %	2.84 %
Av. Remaining Life	8.42 years	N/A

ACCOUNT - 376.00 Steel Mains

Historical Experience

Plant Statistics Plant Balance = \$3,681,756

Average Age of Survivors = 33.3 years Original Gross Additions = \$3,562,705 Oldest Surviving Vintage = 1960

Retirements = \$284,014, or 8% of historical additions.

Average Age of Retirements = 27.6 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 63-R3 - FTA 45 Years

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16

-48% -55% -50% -36%

Gross Salvage Trend Analysis
Vear 15 Vear 10 Vear 5 Vear

<u>20 Year</u> <u>15 Year</u> <u>10 Year</u> <u>5 Year</u> <u>0.08%</u> <u>0%</u> <u>0.28%</u> <u>0.84%</u>

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC, Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. However, an amount approaching 40 percent of the property in service was constructed using Plastic-PVC pipe.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 54-R3 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 63-R3 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 2.10 % 2.99 % Av. Remaining Life 33.25 years N/A

ACCOUNT – 376.10 Plastic Mains

Historical Experience

Plant Statistics Plant Balance = \$12,067,386

Average Age of Survivors = 8.8 years Original Gross Additions = \$12,446,256

Oldest Surviving Vintage = 1966

Retirements = \$174,466, or 1.4% of historical additions.

Average Age of Retirements = 16.5 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 45-R4

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-48% -55% -50% -36%

Full Depth
1967-16
-36%

Gross Salvage Trend Analysis

 20 Year
 15 Year
 10 Year
 5 Year

 0.08%
 0%
 0.28%
 0.84%

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC, Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. However, an amount approaching 40 percent of the property in service was constructed using Plastic-PVC pipe.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 45-R4 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 45-R4 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 3.31 % 2.99 % Av. Remaining Life 36.43 years N/A

ACCOUNT - 376.11 Plastic Mains - PVC

Historical Experience

Plant Statistics Plant Balance = \$1,151,401

Average Age of Survivors = 47.8 years Original Gross Additions = \$1,480,889 Oldest Surviving Vintage = 1966

Retirements = \$423,903, or 28.6% of historical additions.

Average Age of Retirements = 37.5 years

Historical

Retirement Rate

Experience Bands 1966-2016 (Full Depth) Company PVC Replacement Program

Net Salvage: (67-16)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	2013-15	2014-16	1967-16
-48%	-55%	-50%	-36%

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. However, an amount approaching 40 percent of the property in service was constructed using Plastic-PVC pipe.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company

management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

The average remaining life of PVC mains was, therefore, determined based upon the overall retirement of the current property investment within a 15 year period (from the 2011 year in which the PVC replacement program was initiated), with the property now having an estimated average remaining life of 5 years.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 45-L5 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: N/A Replacement Program

Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 3.33 % 2.99 % Av. Remaining Life 5 years—Repl Program N/A

ACCOUNT - 376.20 Mains - Valves

Historical Experience

Plant Statistics Plant Balance = \$134,310

Average Age of Survivors = 34.3 years Original Gross Additions = \$156,677 Oldest Surviving Vintage = 1966

Retirements = \$37,735, or 24.1% of historical additions.

Average Age of Retirements = 26.2 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 45-R3

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16

-48% -55% -50% -36%

Gross Salvage Trend Analysis

<u>20 Year</u> <u>15 Year</u> <u>10 Year</u> <u>5 Year</u> <u>0.08%</u> <u>0.84%</u>

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, P,lastic-PVC Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. However, an amount approaching 40 percent of the property in service was constructed using Plastic-PVC pipe.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 47-R3 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 45-R3 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 2.47 % 2.99 % Av. Remaining Life 16.56 years N/A

ACCOUNT - 376.28, 376.30, 376.40, & 376.50 Railroad, River & Highway Crossings

Historical Experience

Plant Statistics Plant Balance = \$399.867

Average Age of Survivors = 32.2 years Original Gross Additions = \$467,607 Oldest Surviving Vintage = 1966

Retirements = \$95,141, or 20.4% of historical additions.

Average Age of Retirements = 13.6 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) 45-R1.5 - FTA 30 Years

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16

-48% -55% -50% -36%

Gross Salvage Trend Analysis

 20 Year
 15 Year
 10 Year
 5 Year

 0.08%
 0%
 0.28%
 0.84%

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. However, an amount approaching 40 percent of the property in service was constructed using Plastic-PVC pipe.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 40-R1 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 45-R1.5 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 2.88 % 2.99 % Av. Remaining Life 22.34 years N/A

ACCOUNT - 376.55 Anodes & Cathodic Protection

Historical Experience

Plant Statistics Plant Balance = \$81,169

Average Age of Survivors = 28.0 years Original Gross Additions = \$70,043 Oldest Surviving Vintage = 1970.

Retirements = \$580, or 0.8% of historical additions.

Average Age of Retirements = 17.6 years

Historical

Retirement Rate

Experience Bands 1970 – 2016 (Full Depth) N/A

Net Salvage: (67-16)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	<u>2013-15</u>	<u>2014-16</u>	<u> 1967-16</u>
-48%	-55%	-50%	-36%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0.08% 0.28% 0.84%

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC, Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. With regard to Plastic Mains, a large portion of Mains property in service was initially constructed using Plastic-PVC pipe. Notwithstanding current ongoing program to replace all PVC material on an accelerated basis, more than 28% of present Mains remaining in service are PVC material.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company

management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 1.69 % 2.99 % Av. Remaining Life 5.98 years N/A

ACCOUNT - 376.56 Pipeline Markers

Historical Experience

Plant Statistics Plant Balance = \$172

Average Age of Survivors = 37.6 years

Original Gross Additions = \$172 Oldest Surviving Vintage = 1976

Retirements = \$0, or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16

-48% -55% -50% -36%

Gross Salvage Trend Analysis

<u>20 Year</u> <u>15 Year</u> <u>10 Year</u> <u>5 Year</u> <u>0.08%</u> <u>0.84%</u>

Forecasted Net Salvage: -99%

Future Expectations and Considerations

The investment in gas mains is related to several types of pipe, as well as other appurtenant equipment. Accordingly, the investment in the account has been segmented into seven (7) sub-account categories which include Steel, Plastic, Plastic-PVC, Valves, River and Railroad Crossings, Anodes and Cathodic Protection and Pipeline Markers. The Company's mains investment has continually grown over the years since late 1966 through the present day. The compound growth rate of the total account investment over the history has aggregated approximately eleven (11) percent.

As of December 31, 2016 the Company has approximately 512 miles of distribution main in service. Of the miles of Mains currently in service the overwhelming majority of the Mains are of 4 Inch or smaller diameter. That is, more than 90% of the current Mains are of those smaller sizes. Similarly, more than 70% of the Mains are plastic Material while the remaining current Mains were installed using Steel pipe. With regard to Plastic Mains, a large portion of Mains property in service was initially constructed using Plastic-PVC pipe. Notwithstanding current ongoing program to replace all PVC material on an accelerated basis, more than 28% of present Mains remaining in service are PVC material.

That is, in the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management, the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company has implemented a program to eliminate PVC pipe from its service territory over time. The overall plan is to annually replace approximately 60,000 feet of PVC pipe (about a 15 year timeframe from the 2011 start date of the replacement program).

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 20-R3 Net Salv: -55%

Proposed Depreciation Parameters

ASL/Curve: 20-R3 Net Salv: -55%

New Rate @New Parameters Old Rate @ Old Parameters

Rate -36.13 % 2.99 % Av. Remaining Life 0.65 years N/A

ACCOUNT - 378.00 Meas. & Regulating Station Equipment-General

Historical Experience

Plant Statistics Plant Balance = \$501,026

Average Age of Survivors = 20.7 years Original Gross Additions = \$576,876 Oldest Surviving Vintage = 1966

Retirements = \$99,852, or 17.1% of historical additions.

Average Age of Retirements = 31.4 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) Impacted by PVC Replacement Program.

Net Salvage: (74-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-15% -22% -30% 1974-16
-34%

Net Salvage Trend Analysis

20 Year 0% 15 Year 10 Year 5 Year
0% 0% 0%

Forecasted Net Salvage: -77%

Future Expectations and Considerations

All of the Company's current district regulator stations will be directly impacted by the PVC 15 year program through 2026 and related pressure upgrades. There will be no need for any use of essentially all of the existing district regulator facilities, thus minimizing the need for the facilities, with the result that at the completion of the PVC replacement program, the existing facilities are anticipated to be retired from service resulting in an average remaining life of 5 years.

Life Analysis Method: Retirement Rate Method (Actuarial)—PVC Program

Average Remaining Life Development: Full Mortality—PVC Program

Current Depreciation Parameters

ASL/Curve: 40-R4 Net Salv: -15%

Proposed Depreciation Parameters

ASL/Curve: N/A-Company PVC Replacement Program.

Net Salv: -25%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	12.55 %	2.34%
Av. Remaining Life	5 years	N/A

ACCOUNT - 379.00 Meas. & Regulating Station Equipment-City Gate

Historical Experience

Plant Statistics Plant Balance = \$442,661

Average Age of Survivors = 7.6 years Original Gross Additions = \$702,839 Oldest Surviving Vintage = 1977

Retirements = \$155,952, or 22.2% of historical additions.

Average Age of Retirements = 27.5 years

Historical

Retirement Rate

Experience Bands 1971 – 2016 (Full Depth) 28-R3

Net Salvage: (93-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16 1993-16
-22% -22% 0% -17%

Gross Salvage Trend Analysis

20 Year 0% 10 Year 5 Year
0% 0% 0%

Forecasted Net Salvage: -24%

Future Expectations and Considerations

This property investment is related to a city gate stations which were installed at various intermittent years throughout the history of the property account. Some limited ongoing upgrades and/or changes are anticipated to occur during future years. Such changes are not anticipated to be significantly different than what has occurred during prior years.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 30-R4 Net Salv: -2%

Proposed Depreciation Parameters

ASL/Curve: 28-R3 Net Salv: -5%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	3.87 %	3.47 %
Av. Remaining Life	21.14 years	N/A

ACCOUNT - 380.00 Steel Services

Historical Experience

Plant Statistics Plant Balance = \$1,076,486

Average Age of Survivors = 32.9 years Original Gross Additions = \$1,250,599 Oldest Surviving Vintage = 1966

Retirements = \$224,792, or 18% of historical additions.

Average Age of Retirements = 17.8 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 50-R2.5

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-47% -47% -32% 1967-16
-48%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -93%

Future Expectations and Considerations

During the Company's overall history, the total investment in this account has grown at approximately seven (7) percent per year. Along with the increased growth in investment, the Company's replacement of existing facilities has continued to result in increased levels of retirements over the Company's recent history. The historical analysis identified that during earlier periods the annual average age of retirements had remained relatively constant. During the last several years, while the average age of retirements have increased somewhat, the level of retirements have increased.

The Company's investment in services is comprised of several categories of material types, namely, Steel, Plastic, Plastic-PVC, along with generally limited investments in Anodes and Cathodic Protection. An analysis was performed using various reports, as well as other internal data sources, to identify the investment levels for each material type. As of December 31, 2016 the Company's plant in service investment includes more than 25,500 customer services. Of the Services currently in service, more than 96% of the current Services are of smaller diameter sizes of 1 Inch or smaller diameter. Similarly, approaching 85% of the Services are plastic material (PE & PVC) while the remaining current Services were installed using Steel pipe. However, an amount of about twenty-seven (27) percent of the property in service was constructed using Plastic-PVC pipe.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

4-37

Current Depreciation Parameters

ASL/Curve: 38-R2 Net Salv: -75%

Proposed Depreciation Parameters

ASL/Curve: 50-R2.5

Net Salv: -75%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 2.43 % 4.10 % Av. Remaining Life 22.80 years N/A

ACCOUNT – 380.10 Plastic Services

Historical Experience

Plant Statistics Plant Balance = \$12,550,274

Average Age of Survivors = 10.3 years Original Gross Additions = \$13,824,621

Oldest Surviving Vintage = 1966

Retirements = \$667,234, or 4.8% of historical additions.

Average Age of Retirements = 17.4 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 40-R3

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-47% -47% -32% 1967-16
-48%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -93%

Future Expectations and Considerations

During the Company's overall history, the total investment in this account has grown at approximately seven (7) percent per year. Along with the increased growth in investment, the Company's replacement of existing facilities has continued to result in increased levels of retirements over the Company's recent history. The historical analysis identified that during earlier periods the annual average age of retirements had remained relatively constant. During the last several years, while the average age of retirements have increased somewhat, the level of retirements have increased.

The Company's investment in services is comprised of several categories of material types, namely, Steel, Plastic, Plastic-PVC, along with generally limited investments in Anodes and Cathodic Protection. An analysis was performed using various reports, as well as other internal data sources, to identify the investment levels for each material type. As of December 31, 2016 the Company's plant in service investment includes more than 25,500 customer services. Of the Services currently in service, more than 96% of the current Services are of smaller diameter sizes of 1 Inch or smaller diameter. Similarly, approaching 85% of the Services are plastic material (PE & PVC) while the remaining current Services were installed using Steel pipe. However, an amount of about twenty-seven (27) percent of the property in service was constructed using Plastic-PVC pipe.

In the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management,

the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company implemented a program to eliminate PVC Services from its service territory over time. In concert with the replacement/elimination of PVC Mains the Company will likewise be eliminating PVC Services from its distribution system. The elimination of PVC Services during the 15 year time frame will require the removal of less than 500 PVC Services per year. The average remaining life of PVC mains was, therefore, determined based upon the overall retirement of the current property investment within a 15 year period, from the initiation of the PVC replacement program. The average remaining life of the property is estimated at 5 years.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 37-R5 Net Salv: -75%

Proposed Depreciation Parameters

ASL/Curve: 40-R3 Net Salv: -75%

New Rate @New Parameters	Old Rate @ Old Parameters

Rate 4.04 % 4.10 % Av. Remaining Life 30.64 years N/A

ACCOUNT - 380.11 Plastic Services - PVC

Historical Experience

Plant Statistics Plant Balance = \$788,764

Average Age of Survivors = 45.8 years Original Gross Additions = \$1,491,554 Oldest Surviving Vintage = 1966

Retirements = \$648,770, or 43.5% of historical additions.

Average Age of Retirements = 34.1 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) Company PVC Replacement Program

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-47% -47% -32% 1967-16
-48%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -93%

Future Expectations and Considerations

During the Company's overall history, the total investment in this account has grown at approximately seven (7) percent per year. Along with the increased growth in investment, the Company's replacement of existing facilities has continued to result in increased levels of retirements over the Company's recent history. The historical analysis identified that during earlier periods the annual average age of retirements had remained relatively constant. During the last several years, while the average age of retirements have increased somewhat, the level of retirements have increased.

The Company's investment in services is comprised of several categories of material types, namely, Steel, Plastic, Plastic-PVC, along with generally limited investments in Anodes and Cathodic Protection. An analysis was performed using various reports, as well as other internal data sources, to identify the investment levels for each material type. As of December 31, 2016 the Company's plant in service investment includes more than 25,500 customer services. Of the Services currently in service, more than 96% of the current Services are of smaller diameter sizes of 1 Inch or smaller diameter. Similarly, approaching 85% of the Services are plastic material (PE & PVC) while the remaining current Services were installed using Steel pipe. However, an amount of about twenty-seven (27) percent of the property in service was constructed using Plastic-PVC pipe.

In the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management,

the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company implemented a program to eliminate PVC Services from its service territory over time. In concert with the replacement/elimination of PVC Mains the Company will likewise be eliminating PVC Services from its distribution system. The elimination of PVC Services during the 15 year time frame will require the removal of less than 500 PVC Services per year. The average remaining life of PVC mains was, therefore, determined based upon the overall retirement of the current property investment within a 15 year period, from the initiation of the PVC replacement program. The average remaining life of the property is estimated at 5 years.

Life Analysis Method: Retirement Rate Method (Actuarial) -- Company PVC Replacement Program

Old Rate @ Old Parameters

Average Remaining Life Development: Full Mortality -- Company PVC Replacement Program

Current Depreciation Parameters

ASL/Curve: 30-R4 Net Salv: -75%

Proposed Depreciation Parameters

ASL/Curve: N/A Replacement Program

Net Salv: -75%

Rate	1.14%	4.10 %
Av. Remaining Life	5 years	N/A

New Rate @New Parameters

ACCOUNT - 380.55, 380.60 Anodes & Cathodic Protection

Historical Experience

Plant Statistics Plant Balance = \$69,491

Average Age of Survivors = 22.4 years Original Gross Additions = \$69,491 Oldest Surviving Vintage = 1971

Retirements = \$0, or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Retirement Rate

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: (67-16)

Three Year Average Net Salvage Percent

2012-14 2013-15 2014-16
-47% -47% -32% 1967-16
-48%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

0% 0% 0%

Forecasted Net Salvage: -93%

Future Expectations and Considerations

During the Company's overall history, the total investment in this account has grown at approximately seven (7) percent per year. Along with the increased growth in investment, the Company's replacement of existing facilities has continued to result in increased levels of retirements over the Company's recent history. The historical analysis identified that during earlier periods the annual average age of retirements had remained relatively constant. During the last several years, while the average age of retirements have increased somewhat, the level of retirements have increased.

The Company's investment in services is comprised of several categories of material types, namely, Steel, Plastic, Plastic-PVC, along with generally limited investments in Anodes and Cathodic Protection. An analysis was performed using various reports, as well as other internal data sources, to identify the investment levels for each material type. As of December 31, 2016 the Company's plant in service investment includes more than 25,500 customer services. Of the Services currently in service, more than 96% of the current Services are of smaller diameter sizes of 1 Inch or smaller diameter. Similarly, approaching 85% of the Services are plastic material (PE & PVC) while the remaining current Services were installed using Steel pipe. However, an amount of about twenty-seven (27) percent of the property in service was constructed using Plastic-PVC pipe.

In the process of constructing its distribution system, the Company has utilized two (2) types of plastic pipe, namely PVC and PE pipe. In recent years concern has been voiced within the regulatory arena about the longer term life of the installed base of PVC pipe. Based upon discussions with Company management,

the Company believes that in future years the Minnesota Office of Pipeline Safety may require a replacement program for PVC pipe.

Accordingly, the Company implemented a program to eliminate PVC Services from its service territory over time. In concert with the replacement/elimination of PVC Mains the Company will likewise be eliminating PVC Services from its distribution system. The elimination of PVC Services during the 15 year time frame will require the removal of less than 500 PVC Services per year. The average remaining life of PVC mains was, therefore, determined based upon the overall retirement of the current property investment within a 15 year period, from the initiation of the PVC replacement program. The average remaining life of the property is estimated at 5 years.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -75%

Proposed Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: -75%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	4.25 %	4.10 %
Av. Remaining Life	12.36 years	N/A

ACCOUNT - 381.00 Meters & Meter Installations

Historical Experience

Plant Statistics Plant Balance = \$6,324,475

Average Age of Survivors = 15.6 years Original Gross Additions = \$6,022,446 Oldest Surviving Vintage = 1965

Retirements = \$808,799 or 13.4% of historical additions.

Average Age of Retirements = 28.6 years

Historical

Experience Bands 2012 – 2016 (Full Depth) Impacted by PVC Replacement Program

Net Salvage: (73-16)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	2013-15	<u>2014-16</u>	<u>1973-16</u>
-62%	-66%	-31%	-24%

Gross Salvage Trend Analysis

20 Year 0% 15 Year 10 Year 5 Year 0% 0%

Forecasted Net Salvage: -66%

Future Expectations and Considerations

Consistent with the practice of the parent Company's other gas entity, Account 382 – Meter Installations is combined with Account 381 – Meters. In the course of purchasing Meters and the Company capitalizes the estimated installation cost as an added cost of the meter. Thus, no Meter Installation cost is retired from service until the Meter is physically retired.

While ERT's have been installed on the Company's gas Meters, in conjunction with the Company's PVC replacement program all customer sites are being visited with the purpose of installing a current technology Meter bar. In conjunction with the visit, the Meter bar is replaced, plus the existing House Regulator is replaced, and the old Regulator being is junked/retired. If the Meter at the customer location is a 2000 or newer vintage, the Meter is transferred to the newly installed Meter bar. If it is a 1999 or older vintage Meter, the existing Meter is replaced with a new Meter. The replaced Meter is returned to the Company Meter Shop. The returned Meters (prior to 2000 vintage) are tested, and have been experiencing retirements of approximately 70%. Accordingly, the overall life of the Meters property group is based upon a weighting of 20 years for the retained (in place) Meters (2000 and subsequent vintage), plus 20 years for the non-retired PVC program replaced Meters, and 5 years average remaining life for the 70% portion of (Meters being replaced in conjunction with the PVC program). That is, those Meters which are being returned to the shop for inspection/testing and potential retirement).

For the ERT's that have been added to the existing Meters, it is estimated that the ERT's battery life is anticipated to be 20 years. Also, there will be a level of ERT failures earlier in life which will require an

earlier replacement of the Meter/ERT unit. Thus the overall average remaining life of the Meter account is 7.01 years.

Life Analysis Method: Retirement Rate Method (Actuarial) -- Company PVC Replacement Program

Average Remaining Life Development: Full Mortality -- Company PVC Replacement Program

Current Depreciation Parameters

ASL/Curve: 40-R2.5 Net Salv: -15%

Proposed Depreciation Parameters

ASL/Curve: Impacted by PVC Replacement Program

Net Salv: -25%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 9.91 % 8.58 % Av. Remaining Life 7.01 years N/A

ACCOUNT - 383.00 House Regulators

Historical Experience

Plant Statistics Plant Balance = \$780,579

Average Age of Survivors = 18.4 years Original Gross Additions = \$758,792 Oldest Surviving Vintage = 1966

Retirements = \$172,938, or 22.8% of historical additions.

Average Age of Retirements = 35.2 years

Historical

Experience Bands 1966 – 2016 (Full Depth) Impacted by PVC Replacement Program

Net Salvage: (78-16)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	2013-15	<u>2014-16</u>	<u>1978-16</u>
0.3%	-16%	-13%	-10%

Gross Salvage Trend Analysis

20 Year
0.06%

15 Year
10 Year
15%
5 Year
0.05%

Forecasted Net Salvage: -20%

Future Expectations and Considerations

Consistent with the practice of the parent Company's other gas entity, Account 384 – House Regulator Installations is combined with Account 383 – House Regulators. Thus, no Regulator Installation cost is retired from service until the Regulator is physically retired.

In conjunction with the Company's PVC replacement program all customer sites are being visited with the purposed of installing a current technology Meter bar. In conjunction with the visit, the Meter bar is replaced, plus the existing House Regulator is replaced, and the old Regulator is being junked/retired.

Life Analysis Method: Retirement Rate Method (Actuarial) -- Impacted by PVC Replacement Program

Average Remaining Life Development: Full Mortality -- Impacted by PVC Replacement Program

Current Depreciation Parameters

ASL/Curve: 40-S4 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: N/A PVC Replacement Program

Net Salv: -5%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	6.62 %	5.64%
Av. Remaining Life	7.01 years	N/A

ACCOUNT - 385.00 Industrial Meas. & Reg. Station Equipment

Historical Experience

Plant Statistics Plant Balance = \$162,784

Average Age of Survivors = 2.6 years Original Gross Additions = \$153,520 Oldest Surviving Vintage = 1985

Retirements = \$0, or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16
 1988-16

 N/A
 N/A
 N/A

Forecasted Net Salvage: N/A

Future Expectations and Considerations

The Company's investment within this account is related to a minor investment related to Industrial Measuring & Regulating Equipment.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 40-S4 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 40-S4 Net Salv: 0%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 2.51 % 2.49% Av. Remaining Life 37.49 years N/A

4-49

ACCOUNT – 387.10 Cathodic Protection Equipment

Historical Experience

Plant Statistics Plant Balance = \$9,235

Average Age of Survivors = 10.1 years Original Gross Additions = \$9,235 Oldest Surviving Vintage = 2000

Retirements = \$2,059, or 22.3% of historical additions.

Average Age of Retirements = 31.5 years

Historical

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16
 1988-16

 N/A
 N/A
 N/A

Gross Salvage Trend Analysis

20 Year
N/A

N/A

N/A

N/A

N/A

N/A

Forecasted Net Salvage: N/A

Future Expectations and Considerations

No retirements have occurred during the study period, therefore a life and curve is estimated for this investment based upon the typical content of the property group.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 25-R3 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 25-R3

Net Salv: 0%

New Rate @New Parameters	Old Rate @ Old Parameters

 Rate
 4.35%
 4.05%

 Av. Remaining Life
 15.92 years
 N/A

ACCOUNT – 387.20 Other Equipment

Historical Experience

Plant Statistics Plant Balance = \$11,498

Average Age of Survivors = 31.6 years

Original Gross Additions = \$52 Oldest Surviving Vintage = 1972

Retirements = \$0, or 0% of historical additions.

Average Age of Retirements = 0 years

Historical

Experience Bands 1966 – 2016 (Full Depth) N/A

Net Salvage: N/A

 Three Year Average Net Salvage Percent
 Full Depth

 2012-14
 2013-15
 2014-16
 1988-16

 N/A
 N/A
 N/A

Gross Salvage Trend Analysis

20 Year
N/A

15 Year
N/A

N/A

N/A

N/A

Forecasted Net Salvage: N/A

Future Expectations and Considerations

No retirements have occurred during the study period, therefore a life and curve is estimated for this investment based upon the typical content of the property group.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 30-R3 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 30-R3 Net Salv: 0%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	0 %	0%
Av. Remaining Life	5.37 years	N/A

ACCOUNT - 390.00-.01 General Structures & Improvements

Historical Experience

Plant Statistics Plant Balance = \$2,167,307

> Average Age of Survivors = 13.03 years Original Gross Additions = \$2,206,562 Oldest Surviving Vintage = 1966

Retirements = \$448,600 or 20.3% of historical additions.

Average Age of Retirements = 22.6 years

Historical

Experience Bands 1978 – 2016 (Full Depth) 45-R4

Net Salvage: (77-11)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	<u>2013-15</u>	<u>2014-16</u>	<u>1977-16</u>
0%	0%	-13%	22%

Gross Salvage Trend Analysis 15 Year 10 Year 5 Year 20 Year 21% 8% 0% 21%

Forecasted Net Salvage: -3%

Future Expectations and Considerations

During prior years, the content of the property group has changed in that the property account now contains investments related to a new larger administrative building as well as the adjoining warehouse and service center. Some modest levels of retirement activity have occurred from the property group. Giving consideration to the content of the property group, the available historical retirement data and general industry information, a 45-R4 life and curve is estimated for the property group investment.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 45-R3 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 45-R4

Net Salv: 0%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	1.75%	1.72%
Av. Remaining Life	32.51 years	N/A

ACCOUNT - 392.10 Transportation Equip. - Trailers

Historical Experience

Plant Statistics Plant Balance = \$39,760

Average Age of Survivors = 14.6 years Original Gross Additions = \$324,621 Oldest Surviving Vintage = 1991

Retirements = \$316,042, or 97.4% of historical additions.

Average Age of Retirements = 11.6 years

Historical

Experience Bands 1980 – 2016 (Full Depth) 12-R1

Net Salvage: (09-11)

Forecasted Net Salvage: 0%

Future Expectations and Considerations

This account contains investment related to the Company's work trailers.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 12-R1 Net Salv: 0%

Proposed Depreciation Parameters

ASL/Curve: 12-R1 Net Salv: 10%

New Rate @New Parameters Old Rate @ Old Parameters

Rate 0.96 % 3.75% Ave. Remaining Life 4.95 years N/A

ACCOUNT – 392.20 Transportation Equipment

Historical Experience

Plant Statistics Plant Balance = \$1,386,193

> Average Age of Survivors = 4.0 years Original Gross Additions = \$3,923,698

Oldest Surviving Vintage = 2001

Retirements = \$2,499,121, or 63.7% of historical additions.

Average Age of Retirements = 7.3 years

Historical

1971 – 2016 (Full Depth) 7-L2 Experience Bands

Net Salvage: (08-16)

Three Year Average Net Salvage Percent Full Depth 2012-14 2013-15 2014-16 2008-16 22% 31% 30% 31%

Gross Salvage Trend Analysis

15 Year 10 Year 5 Year 20 Year 24% 32% 32% 32%

Forecasted Net Salvage: 24%

Future Expectations and Considerations

The property group includes vehicles used by the Company's workforce.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 7-L2 Net Salv: 20%

Proposed Depreciation Parameters

ASL/Curve: 7-L2 Net Salv: 20%

> New Rate @New Parameters Old Rate @ Old Parameters

8.84 % Rate 8.88% Ave. Remaining Life N/A 4.28 years

4-57

ACCOUNT - 396.00 Power Operated Equipment

Historical Experience

Plant Statistics Plant Balance = \$961,850

Average Age of Survivors = 5.4 years Original Gross Additions = \$3,268,314 Oldest Surviving Vintage = 1973

Retirements = \$2,426,210, or 74.2% of historical additions.

Average Age of Retirements = 5.7 years

Historical

Experience Bands 1971 – 2016 (Full Depth) 6-L0

Net Salvage: (76-16)

Three Year Av	erage Net S	alvage Percent	Full Depth
<u>2012-14</u>	<u>2013-15</u>	<u>2014-16</u>	<u>1976-16</u>
108%	80%	60%	62%

Gross Salvage Trend Analysis

20 Year 15 Year 10 Year 5 Year

146% 69% 58%

Forecasted Net Salvage: 58%

Future Expectations and Considerations

This investment is related to equipment such as backhoes and other such facilities utilized by the Company's work force. Consistent with the Company's parent, there is a supplier program that rapidly replaces much of this equipment, for which the Company receives an exceptionally high level of net salvage upon retirement of the property. The program is anticipated to continue into the foreseeable future.

Life Analysis Method: Retirement Rate Method (Actuarial)

Average Remaining Life Development: Full Mortality

Current Depreciation Parameters

ASL/Curve: 8-L0 Net Salv: 25%

Proposed Depreciation Parameters

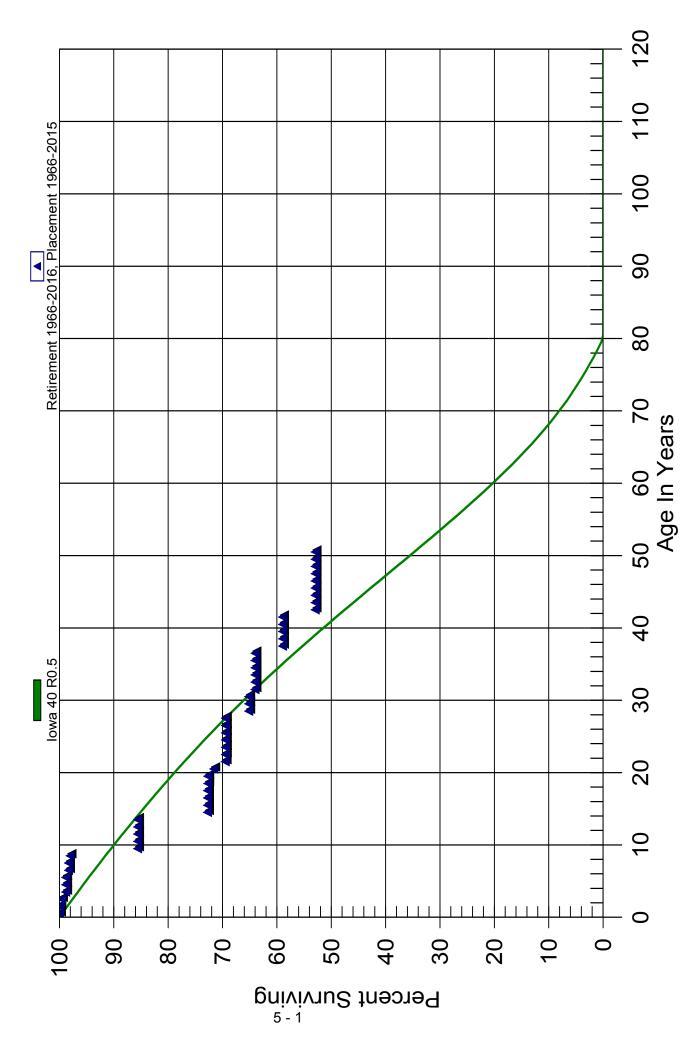
ASL/Curve: 6-L0 Net Salv: 65%

	New Rate @New Parameters	Old Rate @ Old Parameters
Rate	-2.89%	3.23%
Av. Remaining Life	4.18 years	N/A

SECTION 5

Great Plains Natural Gas Company 369.00 MEAS AND REG STATION EQUIPMENT ALL DIVISIONS





369.00 MEAS AND REG STATION EQUIPMENT

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$840,106.00	\$0.00	0.00000	100.00
0.5 - 1.5	\$840,106.00	\$500.00	0.00060	100.00
1.5 - 2.5	\$743,634.30	\$2,300.00	0.00309	99.94
2.5 - 3.5	\$716,440.83	\$5,579.84	0.00779	99.63
3.5 - 4.5	\$809,799.46	\$0.00	0.00000	98.86
4.5 - 5.5	\$688,577.97	\$0.00	0.00000	98.86
5.5 - 6.5	\$688,577.97	\$3,589.50	0.00521	98.86
6.5 - 7.5	\$332,584.49	\$0.00	0.00000	98.34
7.5 - 8.5	\$332,584.49	\$930.99	0.00280	98.34
8.5 - 9.5	\$331,653.50	\$42,098.20	0.12693	98.06
9.5 - 10.5	\$289,555.30	\$0.00	0.00000	85.62
10.5 - 11.5	\$289,555.30	\$0.00	0.00000	85.62
11.5 - 12.5	\$289,555.30	\$0.00	0.00000	85.62
12.5 - 13.5	\$289,555.30	\$0.00	0.00000	85.62
13.5 - 14.5	\$270,587.59	\$40,583.33	0.14998	85.62
14.5 - 15.5	\$230,004.26	\$0.00	0.00000	72.78
15.5 - 16.5	\$230,004.26	\$50.00	0.00022	72.78
16.5 - 17.5	\$229,954.26	\$0.00	0.00000	72.76
17.5 - 18.5	\$220,552.99	\$96.81	0.00044	72.76
18.5 - 19.5	\$218,698.54	\$0.00	0.00000	72.73
19.5 - 20.5	\$212,932.41	\$3,238.34	0.01521	72.73
20.5 - 21.5	\$169,473.11	\$5,000.00	0.02950	71.62
21.5 - 22.5	\$163,701.74	\$20.00	0.00012	69.51
22.5 - 23.5	\$103,985.05	\$0.00	0.00000	69.50
23.5 - 24.5	\$94,691.80	\$0.00	0.00000	69.50
24.5 - 25.5	\$90,714.35	\$0.00	0.00000	69.50
25.5 - 26.5	\$64,628.91	\$0.00	0.00000	69.50
26.5 - 27.5	\$64,628.91	\$0.00	0.00000	69.50
27.5 - 28.5	\$64,628.91	\$4,000.00	0.06189	69.50
28.5 - 29.5	\$56,897.64	\$0.00	0.00000	65.20
29.5 - 30.5	\$56,295.52	\$0.00	0.00000	65.20
30.5 - 31.5	\$56,295.52	\$1,000.00	0.01776	65.20
31.5 - 32.5	\$55,295.52	\$0.00	0.00000	64.04
32.5 - 33.5	\$55,061.82	\$0.00	0.00000	64.04
33.5 - 34.5	\$54,610.00	\$0.00	0.00000	64.04
34.5 - 35.5	\$53,696.76	\$0.00	0.00000	64.04
35.5 - 36.5	\$53,696.76	\$0.00	0.00000	64.04

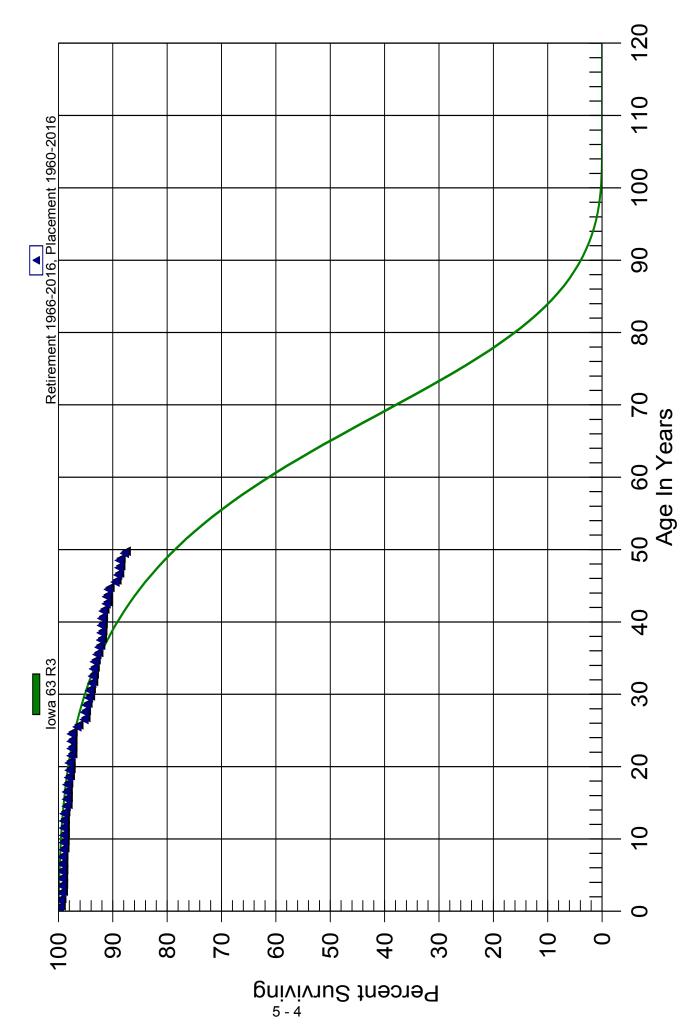
369.00 MEAS AND REG STATION EQUIPMENT

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$53,696.76	\$4,267.88	0.07948	64.04
37.5 - 38.5	\$49,428.88	\$0.00	0.00000	58.95
38.5 - 39.5	\$46,278.64	\$0.00	0.00000	58.95
39.5 - 40.5	\$46,278.64	\$0.00	0.00000	58.95
40.5 - 41.5	\$44,713.41	\$0.00	0.00000	58.95
41.5 - 42.5	\$44,246.30	\$4,489.20	0.10146	58.95
42.5 - 43.5	\$39,757.10	\$0.00	0.00000	52.97
43.5 - 44.5	\$39,757.10	\$0.00	0.00000	52.97
44.5 - 45.5	\$37,818.06	\$0.00	0.00000	52.97
45.5 - 46.5	\$37,818.06	\$0.00	0.00000	52.97
46.5 - 47.5	\$33,872.52	\$0.00	0.00000	52.97
47.5 - 48.5	\$33,872.52	\$0.00	0.00000	52.97
48.5 - 49.5	\$33,872.52	\$0.00	0.00000	52.97
49.5 - 50.5	\$31,450.57	\$0.00	0.00000	52.97

Great Plains Natural Gas Company 376.00 STEEL MAINS **ALL DIVISIONS**





376.00 STEEL MAINS

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$4,080,974.65	\$6,699.73	0.00164	100.00
0.5 - 1.5	\$4,073,962.36	\$4,378.31	0.00107	99.84
1.5 - 2.5	\$4,066,695.52	\$11,298.38	0.00278	99.73
2.5 - 3.5	\$4,055,397.14	\$1,154.93	0.00028	99.45
3.5 - 4.5	\$4,049,383.86	\$987.57	0.00024	99.42
4.5 - 5.5	\$4,032,275.54	\$936.93	0.00023	99.40
5.5 - 6.5	\$4,017,427.32	\$54.40	0.00001	99.38
6.5 - 7.5	\$3,941,407.09	\$900.02	0.00023	99.37
7.5 - 8.5	\$3,937,496.90	\$7,662.86	0.00195	99.35
8.5 - 9.5	\$3,860,761.59	\$1,467.63	0.00038	99.16
9.5 - 10.5	\$3,859,293.96	\$1,214.52	0.00031	99.12
10.5 - 11.5	\$3,857,559.07	\$359.91	0.00009	99.09
11.5 - 12.5	\$3,771,256.08	\$0.00	0.00000	99.08
12.5 - 13.5	\$3,664,310.36	\$2,753.96	0.00075	99.08
13.5 - 14.5	\$3,497,274.72	\$14,801.76	0.00423	99.01
14.5 - 15.5	\$3,479,129.97	\$1,842.57	0.00053	98.59
15.5 - 16.5	\$3,401,791.66	\$20.09	0.00001	98.53
16.5 - 17.5	\$3,395,966.14	\$2,227.00	0.00066	98.53
17.5 - 18.5	\$3,375,500.00	\$10,540.93	0.00312	98.47
18.5 - 19.5	\$3,364,959.07	\$4,592.38	0.00136	98.16
19.5 - 20.5	\$3,090,205.34	\$226.81	0.00007	98.03
20.5 - 21.5	\$3,081,509.85	\$9,598.12	0.00311	98.02
21.5 - 22.5	\$2,928,329.52	\$999.32	0.00034	97.72
22.5 - 23.5	\$2,927,330.20	\$336.94	0.00012	97.68
23.5 - 24.5	\$2,896,988.99	\$644.54	0.00022	97.67
24.5 - 25.5	\$2,823,327.98	\$30,790.67	0.01091	97.65
25.5 - 26.5	\$2,650,853.57	\$35,807.96	0.01351	96.58
26.5 - 27.5	\$2,597,285.55	\$1,770.83	0.00068	95.28
27.5 - 28.5	\$2,589,018.01	\$8,424.73	0.00325	95.21
28.5 - 29.5	\$2,537,045.35	\$12,034.69	0.00474	94.90
29.5 - 30.5	\$2,533,851.09	\$4,191.58	0.00165	94.45
30.5 - 31.5	\$2,512,083.94	\$11,401.48	0.00454	94.30
31.5 - 32.5	\$1,920,288.31	\$2,254.37	0.00117	93.87
32.5 - 33.5	\$1,850,872.27	\$3,419.09	0.00185	93.76
33.5 - 34.5	\$1,781,582.87	\$3,226.69	0.00181	93.59
34.5 - 35.5	\$1,770,300.94	\$9,186.86	0.00519	93.42
35.5 - 36.5	\$1,727,666.27	\$6,494.54	0.00376	92.93

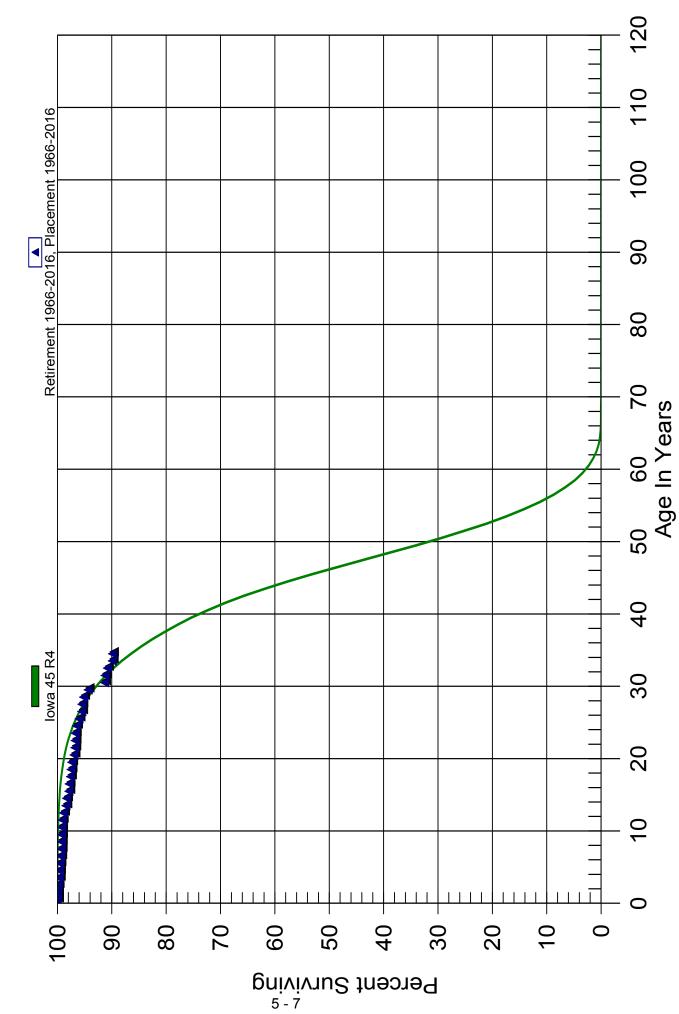
376.00 STEEL MAINS

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$1,696,545.43	\$5,875.64	0.00346	92.58
37.5 - 38.5	\$1,607,015.33	\$1,416.44	0.00088	92.26
38.5 - 39.5	\$1,570,766.55	\$1,217.06	0.00077	92.18
39.5 - 40.5	\$1,567,601.94	\$1,075.42	0.00069	92.11
40.5 - 41.5	\$1,533,523.08	\$4,269.88	0.00278	92.05
41.5 - 42.5	\$1,378,451.84	\$8,704.66	0.00631	91.79
42.5 - 43.5	\$1,355,455.11	\$425.74	0.00031	91.21
43.5 - 44.5	\$1,331,051.18	\$4,911.24	0.00369	91.18
44.5 - 45.5	\$1,313,308.43	\$18,161.67	0.01383	90.85
45.5 - 46.5	\$1,292,626.98	\$7,199.00	0.00557	89.59
46.5 - 47.5	\$1,242,972.19	\$2,828.16	0.00228	89.09
47.5 - 48.5	\$1,183,158.97	\$599.31	0.00051	88.89
48.5 - 49.5	\$1,141,103.10	\$12,437.08	0.01090	88.84
49.5 - 50.5	\$387,208.20	\$189.82	0.00049	87.87
50.5 - 51.5	\$44,676.90	\$0.00	0.00000	87.83
51.5 - 52.5	\$44,676.90	\$0.00	0.00000	87.83
52.5 - 53.5	\$44,676.90	\$0.00	0.00000	87.83
53.5 - 54.5	\$44,676.90	\$0.00	0.00000	87.83
54.5 - 55.5	\$45,803.96	\$0.00	0.00000	87.83
55.5 - 56.5	\$45,803.96	\$0.00	0.00000	87.83

Great Plains Natural Gas Company 376.10 PLASTIC MAINS ALL DIVISIONS





376.10 PLASTIC MAINS

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$12,610,756.25	\$29.78	0.00000	100.00
0.5 - 1.5	\$11,275,145.68	\$2,022.18	0.00018	100.00
1.5 - 2.5	\$9,889,140.29	\$11,786.78	0.00119	99.98
2.5 - 3.5	\$8,381,762.45	\$15,805.07	0.00189	99.86
3.5 - 4.5	\$7,459,546.99	\$3,323.69	0.00045	99.67
4.5 - 5.5	\$6,509,122.24	\$4,521.32	0.00069	99.63
5.5 - 6.5	\$5,762,707.57	\$8,770.25	0.00152	99.56
6.5 - 7.5	\$5,144,669.30	\$4,087.70	0.00079	99.41
7.5 - 8.5	\$4,929,340.07	\$1,189.49	0.00024	99.33
8.5 - 9.5	\$4,344,766.04	\$2,020.92	0.00047	99.31
9.5 - 10.5	\$4,044,810.51	\$879.07	0.00022	99.26
10.5 - 11.5	\$3,822,340.14	\$4,333.66	0.00113	99.24
11.5 - 12.5	\$3,570,937.53	\$8,747.71	0.00245	99.13
12.5 - 13.5	\$2,943,801.60	\$12,855.63	0.00437	98.88
13.5 - 14.5	\$2,813,328.15	\$3,330.99	0.00118	98.45
14.5 - 15.5	\$2,722,532.83	\$12,134.19	0.00446	98.33
15.5 - 16.5	\$2,544,615.08	\$1,345.17	0.00053	97.90
16.5 - 17.5	\$2,537,750.79	\$5,744.30	0.00226	97.84
17.5 - 18.5	\$2,407,950.46	\$2,804.18	0.00116	97.62
18.5 - 19.5	\$2,228,849.93	\$2,686.59	0.00121	97.51
19.5 - 20.5	\$1,918,568.16	\$8,656.94	0.00451	97.39
20.5 - 21.5	\$1,817,217.68	\$2,607.27	0.00143	96.95
21.5 - 22.5	\$1,709,504.98	\$953.08	0.00056	96.81
22.5 - 23.5	\$1,440,481.06	\$636.36	0.00044	96.76
23.5 - 24.5	\$1,243,768.17	\$2,967.52	0.00239	96.72
24.5 - 25.5	\$1,113,610.25	\$5,210.99	0.00468	96.49
25.5 - 26.5	\$1,037,230.79	\$5,382.33	0.00519	96.03
26.5 - 27.5	\$976,276.04	\$160.65	0.00016	95.54
27.5 - 28.5	\$939,341.78	\$3,049.53	0.00325	95.52
28.5 - 29.5	\$895,352.69	\$8,026.91	0.00897	95.21
29.5 - 30.5	\$716,037.75	\$22,871.23	0.03194	94.36
30.5 - 31.5	\$515,723.47	\$530.99	0.00103	91.34
31.5 - 32.5	\$201,842.40	\$936.20	0.00464	91.25
32.5 - 33.5	\$176,898.56	\$1,763.86	0.00997	90.83
33.5 - 34.5	\$129,747.96	\$38.08	0.00029	89.92
34.5 - 35.5	\$108,882.74	\$1,657.90	0.01523	89.89
35.5 - 36.5	\$53,204.84	\$597.86	0.01124	88.52

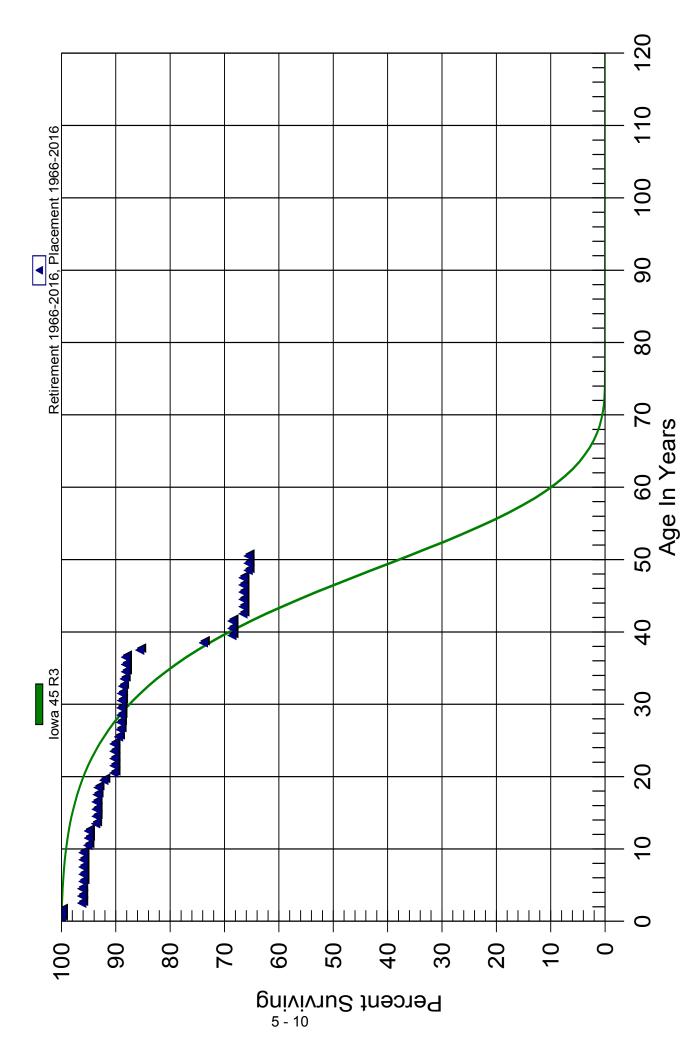
376.10 PLASTIC MAINS

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$44,502.92	\$0.00	0.00000	87.53
37.5 - 38.5	\$3,849.23	\$0.00	0.00000	87.53
38.5 - 39.5	\$434.68	\$0.00	0.00000	87.53
39.5 - 40.5	\$722.17	\$0.00	0.00000	87.53
40.5 - 41.5	\$572.17	\$0.00	0.00000	87.53
41.5 - 42.5	\$788.84	\$0.00	0.00000	87.53
42.5 - 43.5	\$942.84	\$0.00	0.00000	87.53
43.5 - 44.5	\$154.00	\$0.00	0.00000	87.53

Great Plains Natural Gas Company 376.20 MAINS - VALVES **ALL DIVISIONS**





376.20 MAINS - VALVES

Observed Life Table

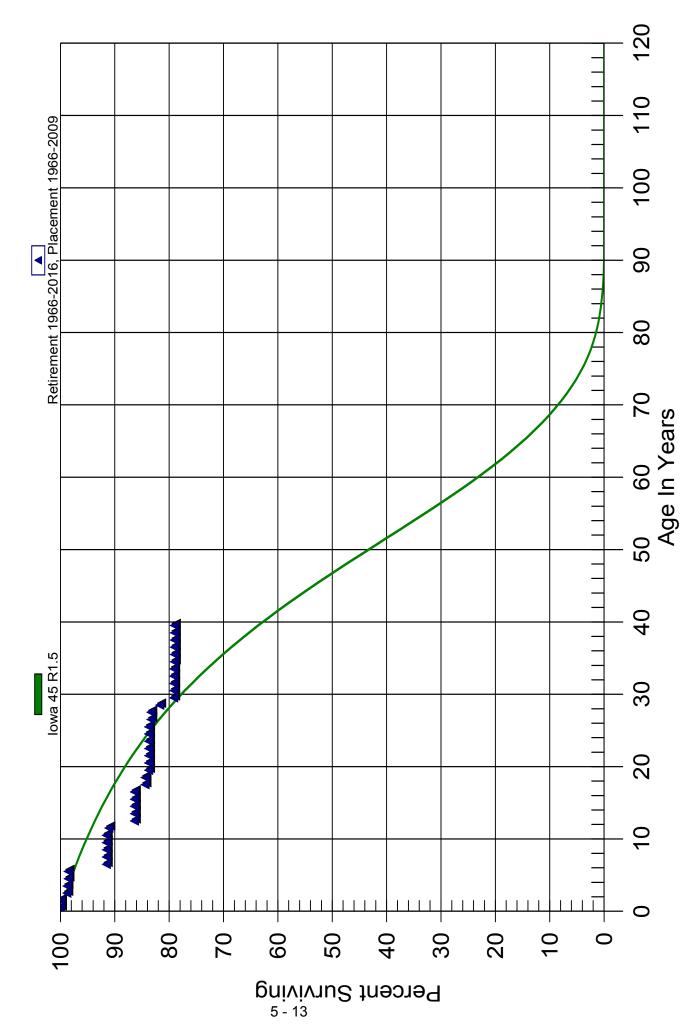
Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$175,137.40	\$0.00	0.00000	100.00
0.5 - 1.5	\$175,137.40	\$0.00	0.00000	100.00
1.5 - 2.5	\$175,137.40	\$6,520.20	0.03723	100.00
2.5 - 3.5	\$168,617.20	\$0.00	0.00000	96.28
3.5 - 4.5	\$168,617.20	\$0.00	0.00000	96.28
4.5 - 5.5	\$168,617.20	\$409.28	0.00243	96.28
5.5 - 6.5	\$168,207.92	\$0.00	0.00000	96.04
6.5 - 7.5	\$168,207.92	\$0.00	0.00000	96.04
7.5 - 8.5	\$168,207.92	\$0.00	0.00000	96.04
8.5 - 9.5	\$168,207.92	\$0.00	0.00000	96.04
9.5 - 10.5	\$168,207.92	\$1,575.71	0.00937	96.04
10.5 - 11.5	\$166,632.21	\$194.47	0.00117	95.14
11.5 - 12.5	\$166,437.74	\$0.00	0.00000	95.03
12.5 - 13.5	\$166,437.74	\$2,329.05	0.01399	95.03
13.5 - 14.5	\$164,108.69	\$161.25	0.00098	93.70
14.5 - 15.5	\$163,947.44	\$0.00	0.00000	93.61
15.5 - 16.5	\$163,947.44	\$0.00	0.00000	93.61
16.5 - 17.5	\$163,947.44	\$313.38	0.00191	93.61
17.5 - 18.5	\$157,165.01	\$286.77	0.00182	93.43
18.5 - 19.5	\$146,126.11	\$1,637.16	0.01120	93.26
19.5 - 20.5	\$139,142.61	\$2,865.03	0.02059	92.22
20.5 - 21.5	\$124,216.43	\$0.00	0.00000	90.32
21.5 - 22.5	\$121,719.01	\$0.00	0.00000	90.32
22.5 - 23.5	\$118,869.68	\$0.00	0.00000	90.32
23.5 - 24.5	\$115,580.99	\$0.00	0.00000	90.32
24.5 - 25.5	\$113,803.06	\$1,053.81	0.00926	90.32
25.5 - 26.5	\$108,865.45	\$331.57	0.00305	89.48
26.5 - 27.5	\$104,046.02	\$77.34	0.00074	89.21
27.5 - 28.5	\$102,688.53	\$101.82	0.00099	89.14
28.5 - 29.5	\$101,292.74	\$0.00	0.00000	89.05
29.5 - 30.5	\$100,383.32	\$116.36	0.00116	89.05
30.5 - 31.5	\$93,066.73	\$0.00	0.00000	88.95
31.5 - 32.5	\$80,672.45	\$194.47	0.00241	88.95
32.5 - 33.5	\$80,475.50	\$257.93	0.00321	88.74
33.5 - 34.5	\$78,728.58	\$194.47	0.00247	88.45
34.5 - 35.5	\$77,275.00	\$0.00	0.00000	88.23
35.5 - 36.5	\$77,220.79	\$0.00	0.00000	88.23

376.20 MAINS - VALVES

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$77,432.99	\$2,314.01	0.02988	88.23
37.5 - 38.5	\$74,760.60	\$10,207.99	0.13654	85.60
38.5 - 39.5	\$64,483.57	\$4,622.34	0.07168	73.91
39.5 - 40.5	\$58,919.75	\$0.00	0.00000	68.61
40.5 - 41.5	\$51,815.35	\$0.00	0.00000	68.61
41.5 - 42.5	\$46,244.47	\$1,361.22	0.02944	68.61
42.5 - 43.5	\$43,504.38	\$0.00	0.00000	66.59
43.5 - 44.5	\$43,504.38	\$0.00	0.00000	66.59
44.5 - 45.5	\$43,504.38	\$0.00	0.00000	66.59
45.5 - 46.5	\$43,462.16	\$0.00	0.00000	66.59
46.5 - 47.5	\$43,281.49	\$0.00	0.00000	66.59
47.5 - 48.5	\$43,027.37	\$609.15	0.01416	66.59
48.5 - 49.5	\$42,418.22	\$0.00	0.00000	65.65
49.5 - 50.5	\$15,424.63	\$0.00	0.00000	65.65

376.28, 376.30, 376.40, 376.50 Original And Smooth Survivor Curves



376.28, 376.30, 376.40, 376.50

Observed Life Table

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$498,365.77	\$0.00	0.00000	100.00
0.5 - 1.5	\$498,365.77	\$0.00	0.00000	100.00
1.5 - 2.5	\$498,365.77	\$5,785.22	0.01161	100.00
2.5 - 3.5	\$492,580.55	\$109.80	0.00022	98.84
3.5 - 4.5	\$492,470.75	\$1,126.44	0.00229	98.82
4.5 - 5.5	\$491,344.31	\$0.00	0.00000	98.59
5.5 - 6.5	\$491,344.31	\$35,009.19	0.07125	98.59
6.5 - 7.5	\$456,335.12	\$0.00	0.00000	91.57
7.5 - 8.5	\$421,515.46	\$0.00	0.00000	91.57
8.5 - 9.5	\$416,082.28	\$0.00	0.00000	91.57
9.5 - 10.5	\$414,757.46	\$0.00	0.00000	91.57
10.5 - 11.5	\$414,757.46	\$2,059.33	0.00497	91.57
11.5 - 12.5	\$412,698.13	\$21,359.64	0.05176	91.11
12.5 - 13.5	\$391,338.49	\$0.00	0.00000	86.40
13.5 - 14.5	\$391,338.49	\$0.00	0.00000	86.40
14.5 - 15.5	\$391,338.49	\$0.00	0.00000	86.40
15.5 - 16.5	\$391,338.49	\$0.00	0.00000	86.40
16.5 - 17.5	\$391,338.49	\$8,889.17	0.02271	86.40
17.5 - 18.5	\$364,323.98	\$0.00	0.00000	84.43
18.5 - 19.5	\$364,323.98	\$2,797.75	0.00768	84.43
19.5 - 20.5	\$355,733.58	\$0.00	0.00000	83.79
20.5 - 21.5	\$353,687.30	\$0.00	0.00000	83.79
21.5 - 22.5	\$293,839.35	\$0.00	0.00000	83.79
22.5 - 23.5	\$290,838.40	\$0.00	0.00000	83.79
23.5 - 24.5	\$285,002.01	\$0.00	0.00000	83.79
24.5 - 25.5	\$281,392.04	\$0.00	0.00000	83.79
25.5 - 26.5	\$275,363.38	\$1,280.85	0.00465	83.79
26.5 - 27.5	\$274,082.53	\$0.00	0.00000	83.40
27.5 - 28.5	\$278,226.76	\$5,493.49	0.01974	83.40
28.5 - 29.5	\$272,733.27	\$8,584.71	0.03148	81.75
29.5 - 30.5	\$264,148.56	\$0.00	0.00000	79.18
30.5 - 31.5	\$254,221.73	\$0.00	0.00000	79.18
31.5 - 32.5	\$165,906.68	\$0.00	0.00000	79.18
32.5 - 33.5	\$148,623.90	\$0.00	0.00000	79.18
33.5 - 34.5	\$146,226.25	\$218.96	0.00150	79.18
34.5 - 35.5	\$145,864.66	\$0.00	0.00000	79.06
35.5 - 36.5	\$145,857.16	\$0.00	0.00000	79.06

376.28, 376.30, 376.40, 376.50

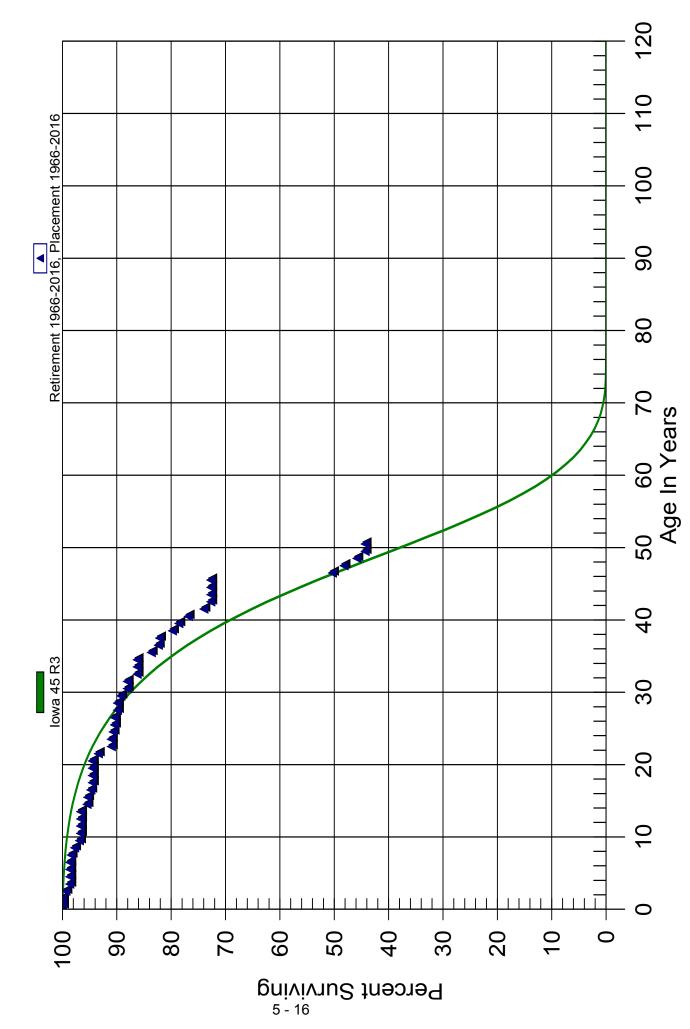
Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2009

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$145,676.82	\$0.00	0.00000	79.06
37.5 - 38.5	\$136,661.94	\$0.00	0.00000	79.06
38.5 - 39.5	\$136,661.94	\$0.00	0.00000	79.06
39.5 - 40.5	\$132,816.80	\$2,426.48	0.01827	79.06
40.5 - 41.5	\$129,337.68	\$0.00	0.00000	77.61
41.5 - 42.5	\$125,707.63	\$0.00	0.00000	77.61
42.5 - 43.5	\$125,690.88	\$0.00	0.00000	77.61
43.5 - 44.5	\$125,690.88	\$0.00	0.00000	77.61
44.5 - 45.5	\$125,690.88	\$0.00	0.00000	77.61
45.5 - 46.5	\$125,392.73	\$0.00	0.00000	77.61
46.5 - 47.5	\$124,159.22	\$0.00	0.00000	77.61
47.5 - 48.5	\$91,852.25	\$0.00	0.00000	77.61
48.5 - 49.5	\$91,443.35	\$0.00	0.00000	77.61
49.5 - 50.5	\$50,228.29	\$0.00	0.00000	77.61

378.00 MEAS & REG STATION EQUIP - GENERAL Great Plains Natural Gas Company **ALL DIVISIONS**

Original And Smooth Survivor Curves



378.00 MEAS & REG STATION EQUIP - GENERAL

Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$601,667.80	\$0.00	0.00000	100.00
0.5 - 1.5	\$573,983.59	\$0.00	0.00000	100.00
1.5 - 2.5	\$565,961.11	\$3,482.13	0.00615	100.00
2.5 - 3.5	\$474,332.55	\$3,417.91	0.00721	99.38
3.5 - 4.5	\$445,487.99	\$0.00	0.00000	98.67
4.5 - 5.5	\$417,937.50	\$54.60	0.00013	98.67
5.5 - 6.5	\$383,147.45	\$0.00	0.00000	98.66
6.5 - 7.5	\$351,659.03	\$900.03	0.00256	98.66
7.5 - 8.5	\$350,759.00	\$2,247.76	0.00641	98.40
8.5 - 9.5	\$348,511.24	\$3,234.79	0.00928	97.77
9.5 - 10.5	\$345,276.45	\$641.64	0.00186	96.87
10.5 - 11.5	\$344,634.81	\$0.00	0.00000	96.69
11.5 - 12.5	\$344,629.54	\$100.00	0.00029	96.69
12.5 - 13.5	\$341,443.64	\$0.00	0.00000	96.66
13.5 - 14.5	\$341,443.64	\$4,169.93	0.01221	96.66
14.5 - 15.5	\$337,273.71	\$390.39	0.00116	95.48
15.5 - 16.5	\$336,883.32	\$1,976.26	0.00587	95.37
16.5 - 17.5	\$330,859.43	\$1,045.78	0.00316	94.81
17.5 - 18.5	\$329,037.24	\$0.00	0.00000	94.51
18.5 - 19.5	\$310,594.81	\$0.00	0.00000	94.51
19.5 - 20.5	\$310,594.81	\$0.00	0.00000	94.51
20.5 - 21.5	\$294,477.65	\$3,447.01	0.01171	94.51
21.5 - 22.5	\$290,603.09	\$7,415.24	0.02552	93.40
22.5 - 23.5	\$283,187.85	\$0.00	0.00000	91.02
23.5 - 24.5	\$276,868.07	\$1,065.41	0.00385	91.02
24.5 - 25.5	\$267,745.07	\$634.29	0.00237	90.67
25.5 - 26.5	\$266,117.74	\$0.00	0.00000	90.45
26.5 - 27.5	\$257,589.46	\$1,564.65	0.00607	90.45
27.5 - 28.5	\$256,024.81	\$0.00	0.00000	89.90
28.5 - 29.5	\$255,408.94	\$1,819.86	0.00713	89.90
29.5 - 30.5	\$253,589.08	\$3,363.03	0.01326	89.26
30.5 - 31.5	\$250,226.05	\$0.00	0.00000	88.08
31.5 - 32.5	\$227,197.60	\$4,681.45	0.02061	88.08
32.5 - 33.5	\$213,040.16	\$0.00	0.00000	86.26
33.5 - 34.5	\$213,013.91	\$0.00	0.00000	86.26
34.5 - 35.5	\$213,013.91	\$6,372.22	0.02991	86.26
35.5 - 36.5	\$205,692.91	\$3,207.60	0.01559	83.68

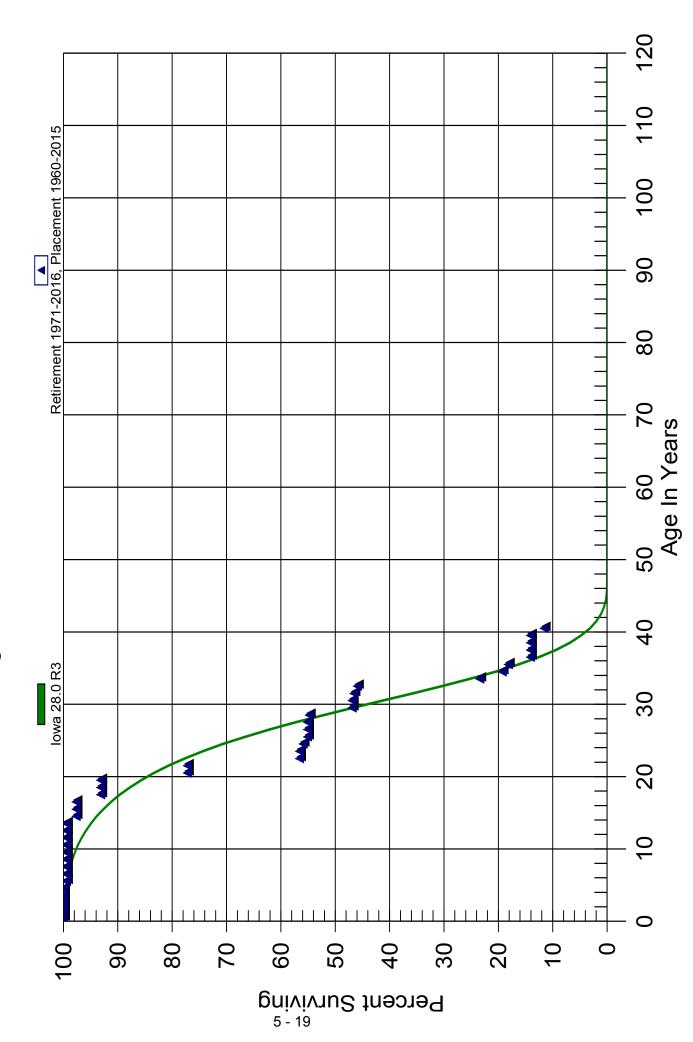
378.00 MEAS & REG STATION EQUIP - GENERAL

Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$203,201.94	\$565.15	0.00278	82.38
37.5 - 38.5	\$201,456.56	\$5,822.77	0.02890	82.15
38.5 - 39.5	\$194,421.59	\$2,852.29	0.01467	79.77
39.5 - 40.5	\$190,495.26	\$4,243.17	0.02227	78.60
40.5 - 41.5	\$163,810.34	\$6,111.44	0.03731	76.85
41.5 - 42.5	\$95,514.72	\$1,626.10	0.01702	73.99
42.5 - 43.5	\$92,128.11	\$0.00	0.00000	72.73
43.5 - 44.5	\$58,966.97	\$0.00	0.00000	72.73
44.5 - 45.5	\$58,768.58	\$0.00	0.00000	72.73
45.5 - 46.5	\$60,250.71	\$18,547.33	0.30784	72.73
46.5 - 47.5	\$41,703.38	\$1,769.79	0.04244	50.34
47.5 - 48.5	\$39,933.59	\$1,961.29	0.04911	48.20
48.5 - 49.5	\$33,758.08	\$1,121.18	0.03321	45.84
49.5 - 50.5	\$7,017.22	\$0.00	0.00000	44.31

379.00 MEAS & REG STATION EQUIP. - CITY GATE Original And Smooth Survivor Curves



379.00 MEAS & REG STATION EQUIP. - CITY GATE

Observed Life Table

Retirement Expr. 1971 TO 2016 Placement Years 1960 TO 2015

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$722,917.62	\$0.00	0.00000	100.00
0.5 - 1.5	\$646,630.37	\$0.00	0.00000	100.00
1.5 - 2.5	\$549,113.66	\$0.00	0.00000	100.00
2.5 - 3.5	\$549,113.66	\$0.00	0.00000	100.00
3.5 - 4.5	\$549,113.66	\$0.00	0.00000	100.00
4.5 - 5.5	\$348,183.67	\$1,812.26	0.00520	100.00
5.5 - 6.5	\$321,881.63	\$0.00	0.00000	99.48
6.5 - 7.5	\$321,881.63	\$0.00	0.00000	99.48
7.5 - 8.5	\$315,099.80	\$0.00	0.00000	99.48
8.5 - 9.5	\$315,099.80	\$0.00	0.00000	99.48
9.5 - 10.5	\$313,469.80	\$0.00	0.00000	99.48
10.5 - 11.5	\$315,099.80	\$0.00	0.00000	99.48
11.5 - 12.5	\$315,099.80	\$0.00	0.00000	99.48
12.5 - 13.5	\$282,608.84	\$0.00	0.00000	99.48
13.5 - 14.5	\$280,514.58	\$5,107.69	0.01821	99.48
14.5 - 15.5	\$275,406.89	\$0.00	0.00000	97.67
15.5 - 16.5	\$275,406.89	\$0.00	0.00000	97.67
16.5 - 17.5	\$275,406.89	\$12,705.20	0.04613	97.67
17.5 - 18.5	\$231,540.45	\$0.00	0.00000	93.16
18.5 - 19.5	\$203,038.83	\$0.00	0.00000	93.16
19.5 - 20.5	\$152,341.75	\$26,071.29	0.17114	93.16
20.5 - 21.5	\$126,270.46	\$0.00	0.00000	77.22
21.5 - 22.5	\$125,984.55	\$33,664.56	0.26721	77.22
22.5 - 23.5	\$92,319.99	\$0.00	0.00000	56.59
23.5 - 24.5	\$92,319.99	\$1,106.75	0.01199	56.59
24.5 - 25.5	\$91,213.24	\$1,304.87	0.01431	55.91
25.5 - 26.5	\$89,908.37	\$0.00	0.00000	55.11
26.5 - 27.5	\$89,908.37	\$0.00	0.00000	55.11
27.5 - 28.5	\$89,908.37	\$515.87	0.00574	55.11
28.5 - 29.5	\$89,392.50	\$12,875.66	0.14404	54.79
29.5 - 30.5	\$76,516.84	\$0.00	0.00000	46.90
30.5 - 31.5	\$76,516.84	\$532.69	0.00696	46.90
31.5 - 32.5	\$58,421.07	\$797.24	0.01365	46.57
32.5 - 33.5	\$57,623.83	\$28,226.35	0.48984	45.94
33.5 - 34.5	\$29,397.48	\$5,188.41	0.17649	23.44
34.5 - 35.5	\$24,209.07	\$1,410.43	0.05826	19.30
35.5 - 36.5	\$22,798.64	\$5,082.05	0.22291	18.17

379.00 MEAS & REG STATION EQUIP. - CITY GATE

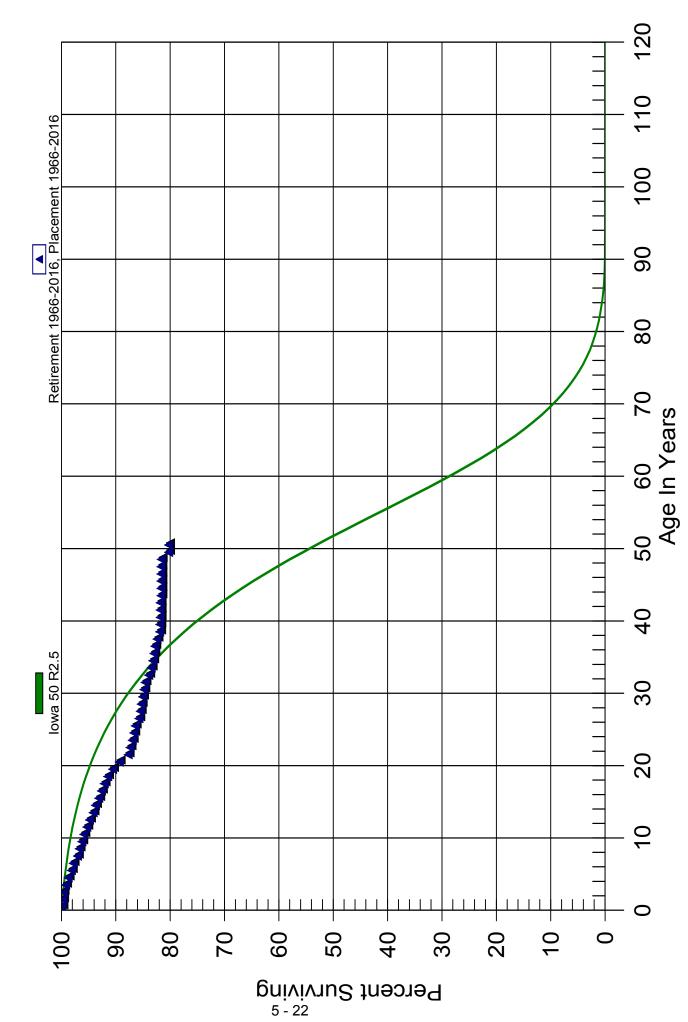
Observed Life Table

Retirement Expr. 1971 TO 2016 Placement Years 1960 TO 2015

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$17,716.59	\$0.00	0.00000	14.12
37.5 - 38.5	\$17,716.59	\$0.00	0.00000	14.12
38.5 - 39.5	\$17,716.59	\$0.00	0.00000	14.12
39.5 - 40.5	\$17,920.79	\$3,229.20	0.18019	14.12

Great Plains Natural Gas Company 380.00 STEEL SERVICES **ALL DIVISIONS**





380.00 STEEL SERVICES

Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$1,461,351.02	\$1,644.49	0.00113	100.00
0.5 - 1.5	\$1,432,199.18	\$1,371.12	0.00096	99.89
1.5 - 2.5	\$1,430,828.06	\$1,301.72	0.00091	99.79
2.5 - 3.5	\$1,429,073.70	\$6,698.80	0.00469	99.70
3.5 - 4.5	\$1,422,374.90	\$6,606.94	0.00465	99.23
4.5 - 5.5	\$1,393,310.65	\$8,157.98	0.00586	98.77
5.5 - 6.5	\$1,385,152.67	\$4,845.70	0.00350	98.19
6.5 - 7.5	\$1,380,306.97	\$10,762.01	0.00780	97.85
7.5 - 8.5	\$1,369,544.96	\$4,858.60	0.00355	97.09
8.5 - 9.5	\$1,364,686.36	\$6,793.37	0.00498	96.74
9.5 - 10.5	\$1,357,892.99	\$5,326.50	0.00392	96.26
10.5 - 11.5	\$1,352,566.49	\$7,489.88	0.00554	95.88
11.5 - 12.5	\$1,345,076.61	\$7,017.95	0.00522	95.35
12.5 - 13.5	\$1,338,058.66	\$9,293.75	0.00695	94.86
13.5 - 14.5	\$1,327,489.93	\$6,184.21	0.00466	94.20
14.5 - 15.5	\$1,315,937.71	\$8,289.90	0.00630	93.76
15.5 - 16.5	\$1,290,397.41	\$6,800.77	0.00527	93.17
16.5 - 17.5	\$1,268,686.76	\$7,425.34	0.00585	92.68
17.5 - 18.5	\$1,255,382.22	\$8,565.42	0.00682	92.13
18.5 - 19.5	\$1,216,579.07	\$11,761.63	0.00967	91.51
19.5 - 20.5	\$1,190,744.78	\$16,440.97	0.01381	90.62
20.5 - 21.5	\$1,161,463.59	\$21,377.01	0.01841	89.37
21.5 - 22.5	\$1,122,194.51	\$4,306.61	0.00384	87.72
22.5 - 23.5	\$1,100,458.82	\$5,031.84	0.00457	87.39
23.5 - 24.5	\$1,071,942.00	\$3,496.06	0.00326	86.99
24.5 - 25.5	\$1,055,497.27	\$3,186.79	0.00302	86.70
25.5 - 26.5	\$1,007,754.34	\$7,709.21	0.00765	86.44
26.5 - 27.5	\$976,885.38	\$2,956.26	0.00303	85.78
27.5 - 28.5	\$932,930.37	\$2,062.86	0.00221	85.52
28.5 - 29.5	\$887,868.55	\$2,475.77	0.00279	85.33
29.5 - 30.5	\$861,794.08	\$2,413.55	0.00280	85.10
30.5 - 31.5	\$835,358.80	\$2,246.85	0.00269	84.86
31.5 - 32.5	\$676,280.72	\$5,370.68	0.00794	84.63
32.5 - 33.5	\$608,655.27	\$3,303.58	0.00543	83.96
33.5 - 34.5	\$563,922.51	\$2,056.55	0.00365	83.50
34.5 - 35.5	\$528,821.74	\$1,204.37	0.00228	83.20
35.5 - 36.5	\$479,248.82	\$1,030.96	0.00215	83.01

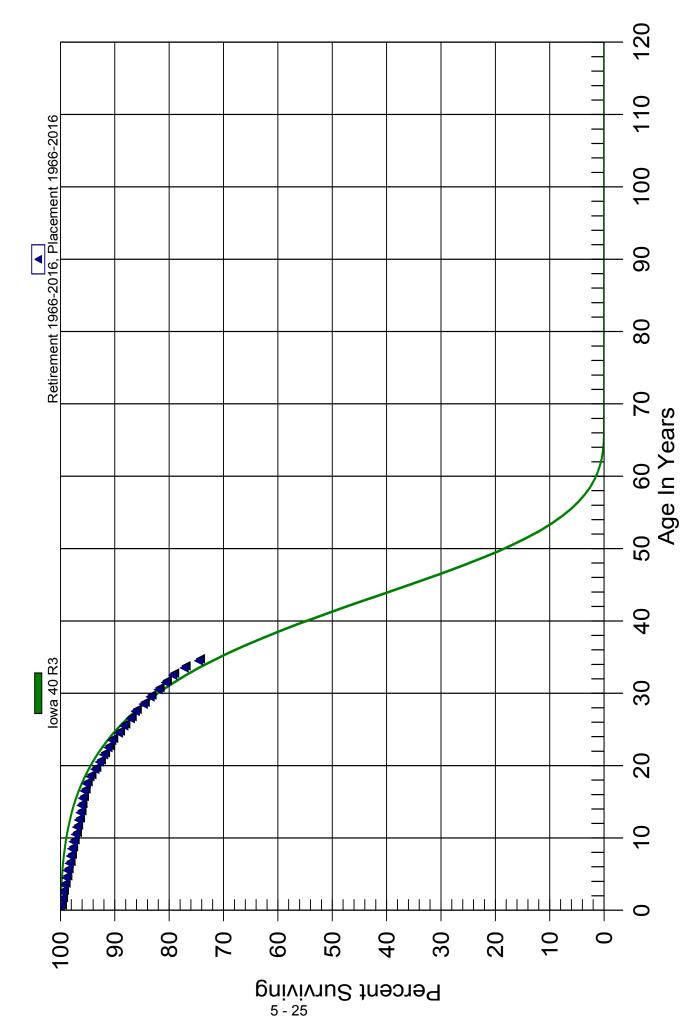
380.00 STEEL SERVICES

Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$409,998.72	\$1,923.56	0.00469	82.83
37.5 - 38.5	\$361,399.19	\$2,232.68	0.00618	82.44
38.5 - 39.5	\$314,925.78	\$106.30	0.00034	81.93
39.5 - 40.5	\$305,361.18	\$172.90	0.00057	81.90
40.5 - 41.5	\$284,814.81	\$0.00	0.00000	81.86
41.5 - 42.5	\$263,172.43	\$0.00	0.00000	81.86
42.5 - 43.5	\$239,063.65	\$432.43	0.00181	81.86
43.5 - 44.5	\$218,207.46	\$0.00	0.00000	81.71
44.5 - 45.5	\$196,039.75	\$0.00	0.00000	81.71
45.5 - 46.5	\$175,510.43	\$0.00	0.00000	81.71
46.5 - 47.5	\$150,014.14	\$0.00	0.00000	81.71
47.5 - 48.5	\$136,506.35	\$96.83	0.00071	81.71
48.5 - 49.5	\$118,376.70	\$1,961.58	0.01657	81.65
49.5 - 50.5	\$2,945.80	\$0.00	0.00000	80.30





380.10 PLASTIC SERVICES

Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$13,892,703.60	\$1,938.97	0.00014	100.00
0.5 - 1.5	\$12,266,589.58	\$23,876.83	0.00195	99.99
1.5 - 2.5	\$10,834,127.05	\$16,653.53	0.00154	99.79
2.5 - 3.5	\$9,418,087.31	\$30,236.28	0.00321	99.64
3.5 - 4.5	\$8,402,953.17	\$25,684.37	0.00306	99.32
4.5 - 5.5	\$7,346,950.34	\$18,798.85	0.00256	99.01
5.5 - 6.5	\$6,946,999.40	\$24,731.48	0.00356	98.76
6.5 - 7.5	\$6,567,807.12	\$16,704.36	0.00254	98.41
7.5 - 8.5	\$6,373,251.48	\$13,597.52	0.00213	98.16
8.5 - 9.5	\$6,095,759.37	\$19,363.78	0.00318	97.95
9.5 - 10.5	\$5,906,481.78	\$24,091.37	0.00408	97.64
10.5 - 11.5	\$5,706,439.49	\$13,426.18	0.00235	97.24
11.5 - 12.5	\$5,481,771.78	\$18,841.39	0.00344	97.01
12.5 - 13.5	\$5,109,835.74	\$16,397.07	0.00321	96.68
13.5 - 14.5	\$4,904,319.31	\$8,708.39	0.00178	96.37
14.5 - 15.5	\$4,647,515.90	\$12,468.23	0.00268	96.20
15.5 - 16.5	\$4,454,966.09	\$14,634.83	0.00329	95.94
16.5 - 17.5	\$4,313,869.99	\$17,037.33	0.00395	95.62
17.5 - 18.5	\$3,964,128.31	\$28,815.12	0.00727	95.25
18.5 - 19.5	\$3,564,763.30	\$33,014.45	0.00926	94.55
19.5 - 20.5	\$3,211,258.54	\$28,436.53	0.00886	93.68
20.5 - 21.5	\$2,923,719.57	\$24,931.24	0.00853	92.85
21.5 - 22.5	\$2,648,390.36	\$22,925.79	0.00866	92.06
22.5 - 23.5	\$2,346,246.13	\$17,675.51	0.00753	91.26
23.5 - 24.5	\$2,082,493.78	\$28,508.04	0.01369	90.57
24.5 - 25.5	\$1,831,308.25	\$20,218.90	0.01104	89.33
25.5 - 26.5	\$1,630,366.76	\$21,825.63	0.01339	88.35
26.5 - 27.5	\$1,415,870.84	\$14,912.06	0.01053	87.16
27.5 - 28.5	\$1,243,645.41	\$21,538.60	0.01732	86.25
28.5 - 29.5	\$1,078,234.90	\$15,797.20	0.01465	84.75
29.5 - 30.5	\$890,951.94	\$15,962.38	0.01792	83.51
30.5 - 31.5	\$689,555.17	\$11,110.30	0.01611	82.01
31.5 - 32.5	\$493,373.74	\$8,310.81	0.01684	80.69
32.5 - 33.5	\$426,355.87	\$11,181.93	0.02623	79.33
33.5 - 34.5	\$338,816.09	\$11,712.66	0.03457	77.25
34.5 - 35.5	\$235,221.63	\$9,041.29	0.03844	74.58
35.5 - 36.5	\$101,534.16	\$4,124.60	0.04062	71.72

380.10 PLASTIC SERVICES

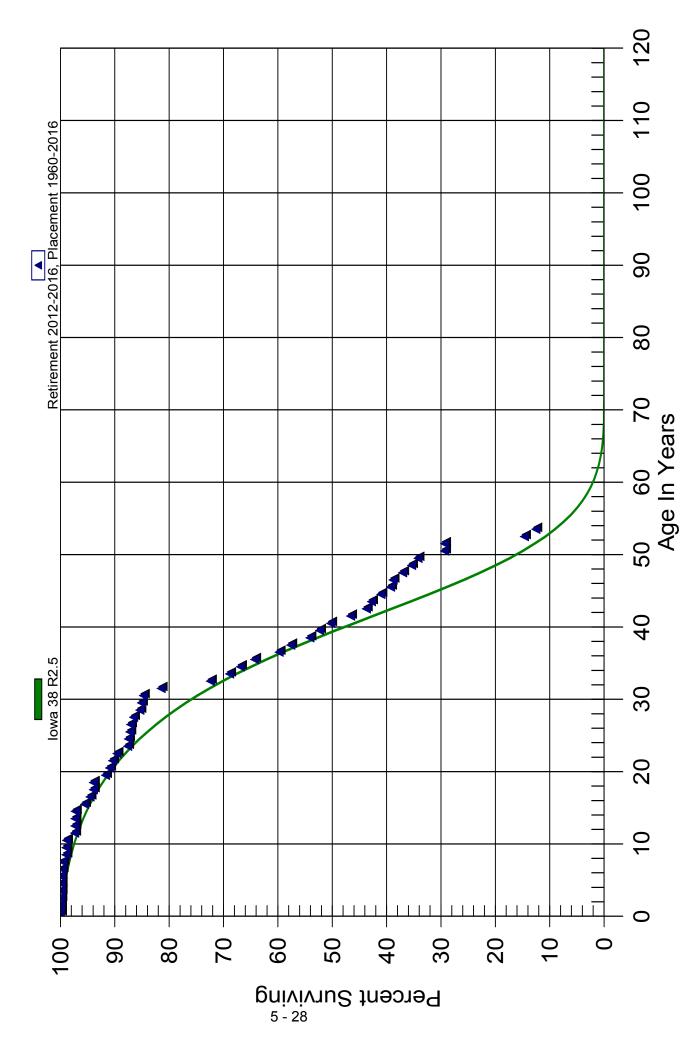
Observed Life Table

Retirement Expr. 1966 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$5,645.49	\$0.00	0.00000	68.80
37.5 - 38.5	\$716.73	\$0.00	0.00000	68.80
38.5 - 39.5	\$3,943.96	\$0.00	0.00000	68.80
39.5 - 40.5	\$4,145.23	\$0.00	0.00000	68.80
40.5 - 41.5	\$4,662.21	\$0.00	0.00000	68.80
41.5 - 42.5	\$2,512.75	\$0.00	0.00000	68.80
42.5 - 43.5	\$2,846.82	\$0.00	0.00000	68.80
43.5 - 44.5	\$2,601.56	\$0.00	0.00000	68.80
44.5 - 45.5	\$2,284.04	\$0.00	0.00000	68.80
45.5 - 46.5	\$2,997.22	\$0.00	0.00000	68.80
46.5 - 47.5	\$3,914.78	\$0.00	0.00000	68.80
47.5 - 48.5	\$7,504.73	\$0.00	0.00000	68.80
48.5 - 49.5	\$6,499.55	\$0.00	0.00000	68.80
49.5 - 50.5	\$1,330.12	\$0.00	0.00000	68.80

Great Plains Natural Gas Company 381.00 METERS & METER INSTALLATIONS **ALL DIVISIONS**





381.00 METERS & METER INSTALLATIONS

Observed Life Table

Retirement Expr. 2012 TO 2016 Placement Years 1960 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$2,429,202.30	\$0.00	0.00000	100.00
0.5 - 1.5	\$2,399,086.36	\$0.00	0.00000	100.00
1.5 - 2.5	\$705,538.58	\$514.71	0.00073	100.00
2.5 - 3.5	\$617,838.22	\$413.47	0.00067	99.93
3.5 - 4.5	\$829,814.03	\$0.00	0.00000	99.86
4.5 - 5.5	\$540,472.01	\$0.00	0.00000	99.86
5.5 - 6.5	\$426,237.53	\$666.95	0.00156	99.86
6.5 - 7.5	\$405,453.42	\$611.71	0.00151	99.70
7.5 - 8.5	\$465,684.98	\$2,557.81	0.00549	99.55
8.5 - 9.5	\$430,193.44	\$0.00	0.00000	99.01
9.5 - 10.5	\$455,303.00	\$595.17	0.00131	99.01
10.5 - 11.5	\$657,989.70	\$9,960.72	0.01514	98.88
11.5 - 12.5	\$654,258.44	\$317.22	0.00048	97.38
12.5 - 13.5	\$534,854.07	\$0.00	0.00000	97.33
13.5 - 14.5	\$488,033.72	\$276.55	0.00057	97.33
14.5 - 15.5	\$510,704.04	\$9,015.47	0.01765	97.28
15.5 - 16.5	\$645,453.42	\$6,713.32	0.01040	95.56
16.5 - 17.5	\$589,200.84	\$3,768.94	0.00640	94.57
17.5 - 18.5	\$645,787.22	\$100.65	0.00016	93.96
18.5 - 19.5	\$683,994.49	\$16,260.86	0.02377	93.95
19.5 - 20.5	\$418,115.44	\$3,372.08	0.00806	91.71
20.5 - 21.5	\$358,196.33	\$2,159.06	0.00603	90.97
21.5 - 22.5	\$457,033.27	\$4,177.61	0.00914	90.43
22.5 - 23.5	\$417,100.65	\$9,133.14	0.02190	89.60
23.5 - 24.5	\$399,477.16	\$629.22	0.00158	87.64
24.5 - 25.5	\$394,799.78	\$1,128.04	0.00286	87.50
25.5 - 26.5	\$379,254.47	\$605.28	0.00160	87.25
26.5 - 27.5	\$492,722.30	\$3,119.35	0.00633	87.11
27.5 - 28.5	\$422,477.26	\$5,643.22	0.01336	86.56
28.5 - 29.5	\$393,596.65	\$1,403.38	0.00357	85.40
29.5 - 30.5	\$348,600.57	\$1,344.12	0.00386	85.10
30.5 - 31.5	\$362,804.61	\$14,041.94	0.03870	84.77
31.5 - 32.5	\$291,437.33	\$32,365.14	0.11105	81.49
32.5 - 33.5	\$303,817.28	\$14,874.85	0.04896	72.44
33.5 - 34.5	\$291,767.63	\$8,518.58	0.02920	68.89
34.5 - 35.5	\$302,897.09	\$11,790.97	0.03893	66.88
35.5 - 36.5	\$270,070.37	\$18,917.89	0.07005	64.28

381.00 METERS & METER INSTALLATIONS

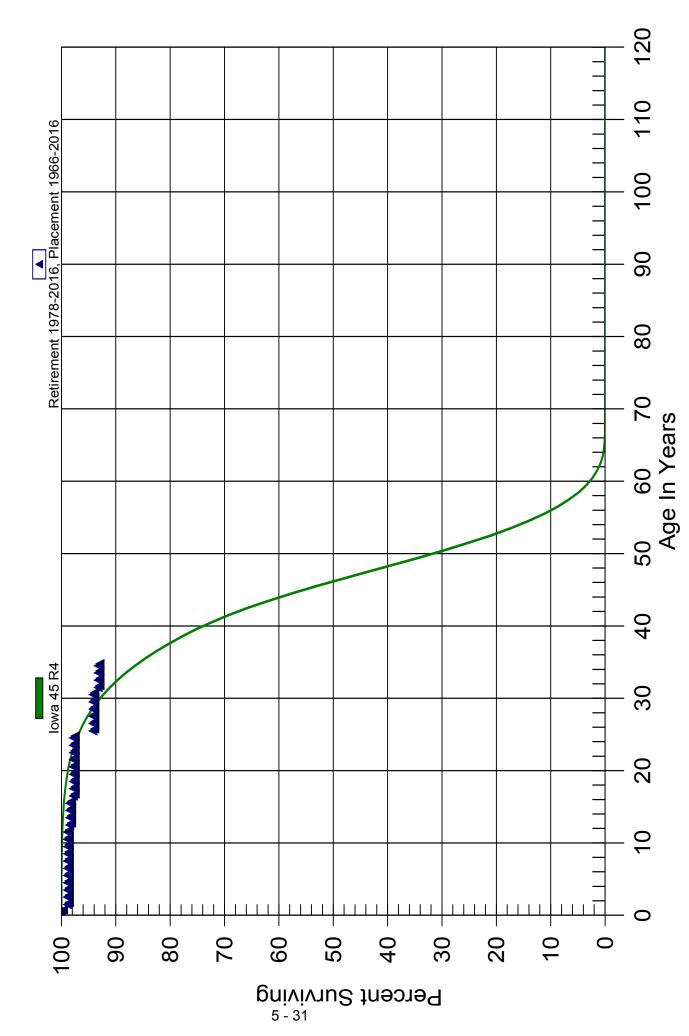
Observed Life Table

Retirement Expr. 2012 TO 2016 Placement Years 1960 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$201,682.77	\$7,195.67	0.03568	59.78
37.5 - 38.5	\$218,889.71	\$13,402.33	0.06123	57.64
38.5 - 39.5	\$212,581.04	\$7,024.74	0.03304	54.11
39.5 - 40.5	\$223,160.31	\$8,651.61	0.03877	52.32
40.5 - 41.5	\$203,836.82	\$14,833.11	0.07277	50.30
41.5 - 42.5	\$198,912.83	\$12,287.85	0.06178	46.64
42.5 - 43.5	\$178,590.14	\$3,948.97	0.02211	43.76
43.5 - 44.5	\$154,001.33	\$6,205.97	0.04030	42.79
44.5 - 45.5	\$123,054.79	\$5,327.35	0.04329	41.06
45.5 - 46.5	\$509,786.11	\$6,141.93	0.01205	39.29
46.5 - 47.5	\$469,901.06	\$21,238.46	0.04520	38.81
47.5 - 48.5	\$411,797.72	\$18,260.23	0.04434	37.06
48.5 - 49.5	\$436,071.41	\$14,566.08	0.03340	35.42
49.5 - 50.5	\$360,716.82	\$51,761.74	0.14350	34.23
50.5 - 51.5	(\$376.68)	\$0.00	0.00000	29.32
51.5 - 52.5	\$170.44	\$85.22	0.50000	29.32
52.5 - 53.5	\$596.54	\$85.22	0.14286	14.66

Great Plains Natural Gas Company 390.00 STRUCTURES AND IMPROVEMENTS ALL DIVISIONS

Original And Smooth Survivor Curves



390.00 STRUCTURES AND IMPROVEMENTS

Observed Life Table

Retirement Expr. 1978 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$1,321,477.54	\$0.00	0.00000	100.00
0.5 - 1.5	\$1,317,141.10	\$14,188.21	0.01077	100.00
1.5 - 2.5	\$1,283,198.38	\$0.00	0.00000	98.92
2.5 - 3.5	\$1,231,401.51	\$0.00	0.00000	98.92
3.5 - 4.5	\$1,263,010.35	\$0.00	0.00000	98.92
4.5 - 5.5	\$1,046,034.81	\$0.00	0.00000	98.92
5.5 - 6.5	\$1,048,952.69	\$0.00	0.00000	98.92
6.5 - 7.5	\$973,128.01	\$0.00	0.00000	98.92
7.5 - 8.5	\$973,128.01	\$0.00	0.00000	98.92
8.5 - 9.5	\$85,515.11	\$0.00	0.00000	98.92
9.5 - 10.5	\$21,830.34	\$0.00	0.00000	98.92
10.5 - 11.5	\$86,742.35	\$0.00	0.00000	98.92
11.5 - 12.5	\$89,808.13	\$408.39	0.00455	98.92
12.5 - 13.5	\$289,965.06	\$0.00	0.00000	98.47
13.5 - 14.5	\$289,965.06	\$0.00	0.00000	98.47
14.5 - 15.5	\$288,637.82	\$0.00	0.00000	98.47
15.5 - 16.5	\$288,637.82	\$1,885.80	0.00653	98.47
16.5 - 17.5	\$81,315.30	\$0.00	0.00000	97.83
17.5 - 18.5	\$81,315.30	\$0.00	0.00000	97.83
18.5 - 19.5	\$81,315.30	\$0.00	0.00000	97.83
19.5 - 20.5	\$81,315.30	\$0.00	0.00000	97.83
20.5 - 21.5	\$81,315.30	\$0.00	0.00000	97.83
21.5 - 22.5	\$78,504.28	\$0.00	0.00000	97.83
22.5 - 23.5	\$78,504.28	\$0.00	0.00000	97.83
23.5 - 24.5	\$76,919.64	\$0.00	0.00000	97.83
24.5 - 25.5	\$80,314.95	\$2,953.73	0.03678	97.83
25.5 - 26.5	\$77,361.22	\$0.00	0.00000	94.23
26.5 - 27.5	\$77,755.81	\$0.00	0.00000	94.23
27.5 - 28.5	\$77,755.81	\$0.00	0.00000	94.23
28.5 - 29.5	\$78,205.81	\$0.00	0.00000	94.23
29.5 - 30.5	\$78,205.81	\$0.00	0.00000	94.23
30.5 - 31.5	\$78,205.81	\$799.89	0.01023	94.23
31.5 - 32.5	\$7,116.48	\$0.00	0.00000	93.27
32.5 - 33.5	\$22,155.07	\$0.00	0.00000	93.27
33.5 - 34.5	\$25,962.61	\$0.00	0.00000	93.27
34.5 - 35.5	\$26,528.45	\$0.00	0.00000	93.27
35.5 - 36.5	\$27,571.72	\$0.00	0.00000	93.27

390.00 STRUCTURES AND IMPROVEMENTS

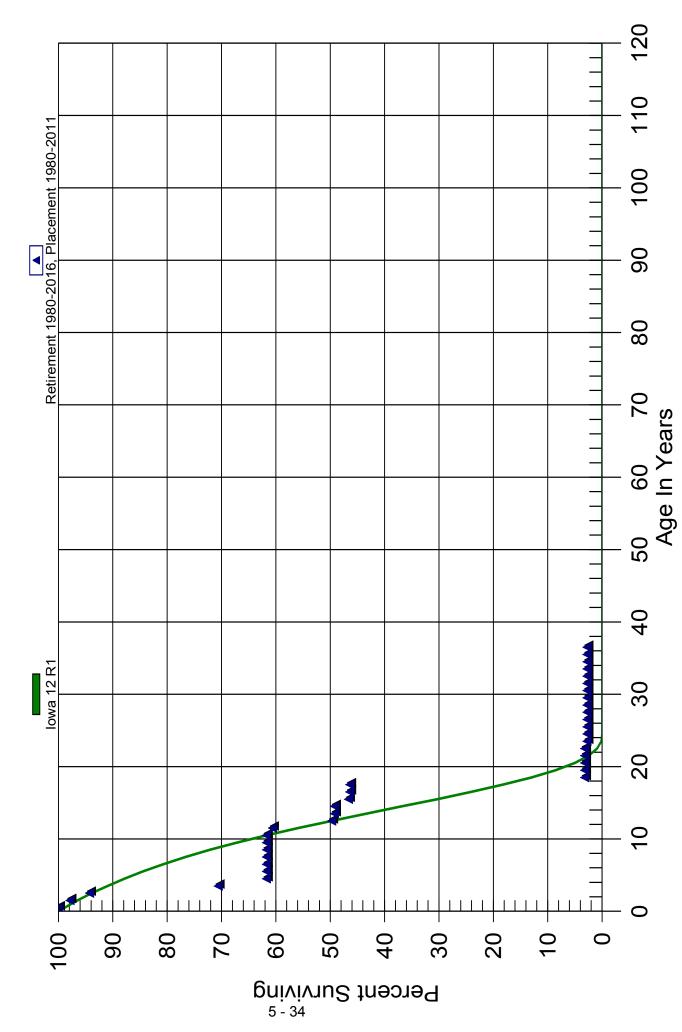
Observed Life Table

Retirement Expr. 1978 TO 2016 Placement Years 1966 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$27,177.13	\$0.00	0.00000	93.27
37.5 - 38.5	\$27,177.13	\$0.00	0.00000	93.27
38.5 - 39.5	\$26,727.13	\$0.00	0.00000	93.27
39.5 - 40.5	\$90,411.90	\$0.00	0.00000	93.27
40.5 - 41.5	\$90,511.90	\$0.00	0.00000	93.27
41.5 - 42.5	\$89,105.68	\$0.00	0.00000	93.27
42.5 - 43.5	\$74,067.09	\$0.00	0.00000	93.27
43.5 - 44.5	\$68,789.19	\$0.00	0.00000	93.27
44.5 - 45.5	\$64,828.04	\$0.00	0.00000	93.27
45.5 - 46.5	\$63,784.77	\$0.00	0.00000	93.27
46.5 - 47.5	\$63,784.77	\$0.00	0.00000	93.27
47.5 - 48.5	\$63,784.77	\$0.00	0.00000	93.27
48.5 - 49.5	\$63,784.77	\$0.00	0.00000	93.27
49.5 - 50.5	\$100.00	\$0.00	0.00000	93.27

Great Plains Natural Gas Company 392.10 TRANSPORTATION EQUIP. - TRAILERS **ALL DIVISIONS**

Original And Smooth Survivor Curves



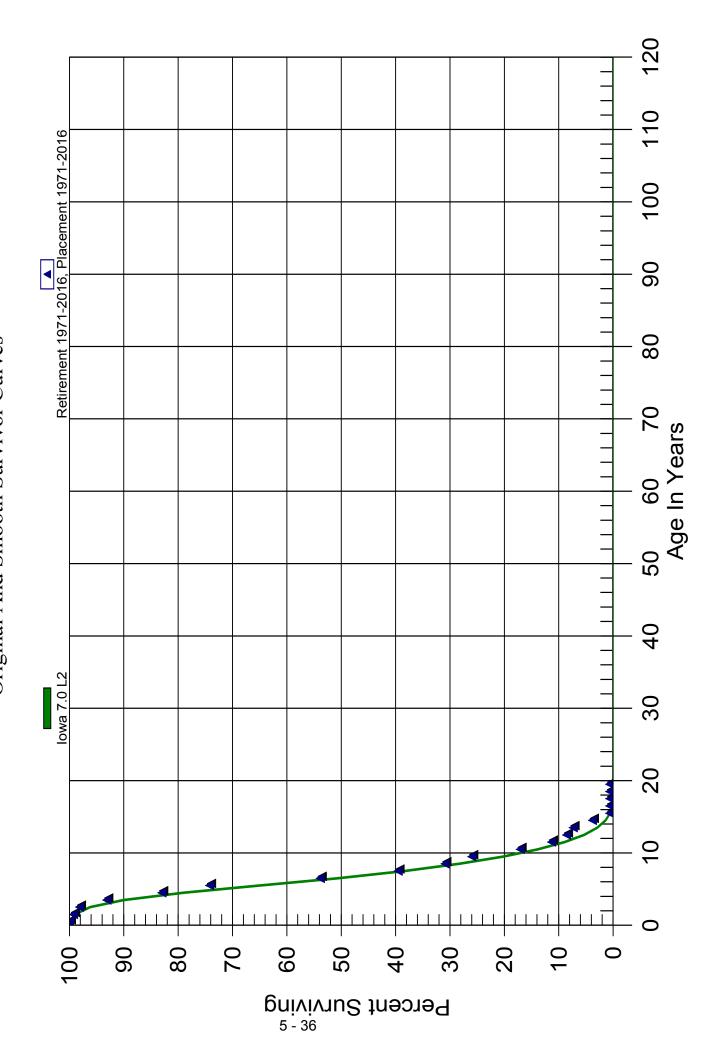
392.10 TRANSPORTATION EQUIP. - TRAILERS

Observed Life Table

Retirement Expr. 1980 TO 2016 Placement Years 1980 TO 2011

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$330,845.41	\$0.00	0.00000	100.00
0.5 - 1.5	\$330,845.41	\$7,047.63	0.02130	100.00
1.5 - 2.5	\$323,797.78	\$11,924.78	0.03683	97.87
2.5 - 3.5	\$311,873.00	\$78,300.00	0.25106	94.27
3.5 - 4.5	\$233,573.00	\$29,252.20	0.12524	70.60
4.5 - 5.5	\$212,913.43	\$0.00	0.00000	61.76
5.5 - 6.5	\$204,453.75	\$0.00	0.00000	61.76
6.5 - 7.5	\$204,453.75	\$0.00	0.00000	61.76
7.5 - 8.5	\$204,453.75	\$0.00	0.00000	61.76
8.5 - 9.5	\$201,931.79	\$0.00	0.00000	61.76
9.5 - 10.5	\$203,651.79	\$0.00	0.00000	61.76
10.5 - 11.5	\$205,297.22	\$3,741.92	0.01823	61.76
11.5 - 12.5	\$201,555.30	\$36,214.99	0.17968	60.63
12.5 - 13.5	\$165,340.31	\$1,720.00	0.01040	49.74
13.5 - 14.5	\$161,974.88	\$0.00	0.00000	49.22
14.5 - 15.5	\$162,900.85	\$8,526.61	0.05234	49.22
15.5 - 16.5	\$154,374.24	\$700.00	0.00453	46.64
16.5 - 17.5	\$153,674.24	\$0.00	0.00000	46.43
17.5 - 18.5	\$147,432.86	\$137,230.34	0.93080	46.43
18.5 - 19.5	\$10,202.52	\$0.00	0.00000	3.21
19.5 - 20.5	\$10,202.52	\$0.00	0.00000	3.21
20.5 - 21.5	\$10,202.52	\$0.00	0.00000	3.21
21.5 - 22.5	\$10,202.52	\$0.00	0.00000	3.21
22.5 - 23.5	\$10,202.52	\$1,383.92	0.13564	3.21
23.5 - 24.5	\$8,818.60	\$0.00	0.00000	2.78
24.5 - 25.5	\$8,118.60	\$0.00	0.00000	2.78
25.5 - 26.5	\$0.00	\$0.00	0.00000	2.78
26.5 - 27.5	\$0.00	\$0.00	0.00000	2.78
27.5 - 28.5	\$0.00	\$0.00	0.00000	2.78
28.5 - 29.5	\$0.00	\$0.00	0.00000	2.78
29.5 - 30.5	\$0.00	\$0.00	0.00000	2.78
30.5 - 31.5	\$0.00	\$0.00	0.00000	2.78
31.5 - 32.5	\$0.00	\$0.00	0.00000	2.78
32.5 - 33.5	\$0.00	\$0.00	0.00000	2.78
33.5 - 34.5	\$0.00	\$0.00	0.00000	2.78
34.5 - 35.5	\$0.00	\$0.00	0.00000	2.78
35.5 - 36.5	\$0.00	\$0.00	0.00000	2.78

Great Plains Natural Gas Company ALL DIVISIONS 392.20 TRANSPORTATION EQUIP Original And Smooth Survivor Curves



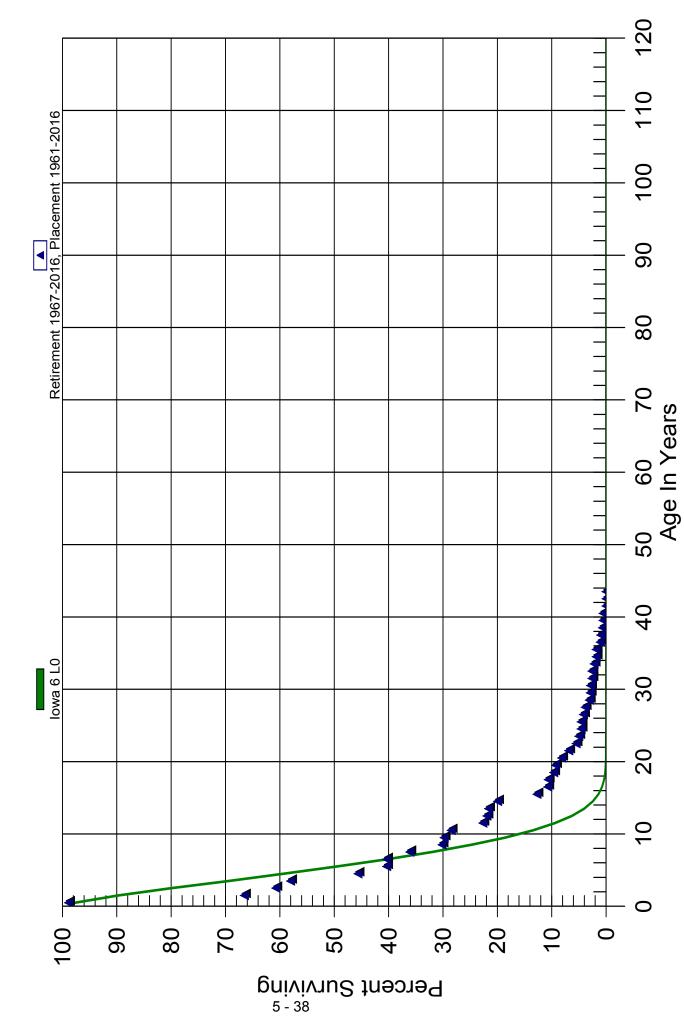
392.20 TRANSPORTATION EQUIP

Observed Life Table

Retirement Expr. 1971 TO 2016 Placement Years 1971 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
0.0 - 0.5	\$3,936,305.21	\$0.00	0.00000	100.00
0.5 - 1.5	\$3,680,130.93	\$27,150.00	0.00738	100.00
1.5 - 2.5	\$3,291,327.31	\$37,382.33	0.01136	99.26
2.5 - 3.5	\$3,196,995.65	\$162,969.03	0.05098	98.13
3.5 - 4.5	\$2,873,919.24	\$312,400.88	0.10870	93.13
4.5 - 5.5	\$2,420,904.10	\$256,802.49	0.10608	83.01
5.5 - 6.5	\$2,010,421.91	\$551,022.12	0.27408	74.20
6.5 - 7.5	\$1,441,266.33	\$383,309.40	0.26595	53.87
7.5 - 8.5	\$888,954.60	\$193,631.02	0.21782	39.54
8.5 - 9.5	\$689,184.17	\$110,355.66	0.16013	30.93
9.5 - 10.5	\$570,602.75	\$195,706.47	0.34298	25.98
10.5 - 11.5	\$372,104.11	\$125,208.18	0.33649	17.07
11.5 - 12.5	\$187,303.76	\$45,890.10	0.24500	11.32
12.5 - 13.5	\$135,094.39	\$19,374.38	0.14341	8.55
13.5 - 14.5	\$107,731.72	\$51,988.87	0.48258	7.32
14.5 - 15.5	\$30,032.33	\$25,092.01	0.83550	3.79
15.5 - 16.5	\$838.20	\$0.00	0.00000	0.62
16.5 - 17.5	\$838.20	\$0.00	0.00000	0.62
17.5 - 18.5	\$838.20	\$0.00	0.00000	0.62
18.5 - 19.5	\$838.20	\$0.00	0.00000	0.62

396.00 POWER OPERATED EQUIPMENT Original And Smooth Survivor Curves



396.00 POWER OPERATED EQUIPMENT

Observed Life Table

Retirement Expr. 1967 TO 2016 Placement Years 1961 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval	
0.0 - 0.5	\$3,400,722.40	\$38,153.71	0.01122	100.00	
0.5 - 1.5	\$3,080,711.53	\$1,007,628.57	0.32708	98.88	
1.5 - 2.5	\$1,993,552.73	\$173,359.93	0.08696	66.54	
2.5 - 3.5	\$1,659,709.27	\$73,610.97	0.04435	60.75	
3.5 - 4.5	\$1,519,703.98	\$324,534.14	0.21355	58.06	
4.5 - 5.5	\$1,165,898.13	\$135,166.91	0.11593	45.66	
5.5 - 6.5	\$993,679.52	\$0.00	0.00000	40.37	
6.5 - 7.5	\$869,924.59	\$91,962.26	0.10571	40.37	
7.5 - 8.5	\$744,579.53	\$121,722.56	0.16348	36.10	
8.5 - 9.5	\$567,055.48	\$7,620.91	0.01344	30.20	
9.5 - 10.5	\$522,524.62	\$22,709.33	0.04346	29.79	
10.5 - 11.5	\$502,780.87	\$102,677.17	0.20422	28.50	
11.5 - 12.5	\$399,838.33	\$13,386.21	0.03348	22.68	
12.5 - 13.5	\$356,269.32	\$4,824.38	0.01354	21.92	
13.5 - 14.5	\$377,494.77	\$28,726.68	0.07610	21.62	
14.5 - 15.5	\$327,576.23	\$118,883.66	0.36292	19.98	
15.5 - 16.5	\$208,692.57	\$32,478.32	0.15563	12.73	
16.5 - 17.5	\$161,604.46	\$1,368.89	0.00847	10.75	
17.5 - 18.5	\$154,306.65	\$14,768.66	0.09571	10.65	
18.5 - 19.5	\$138,286.48	\$5,022.25	0.03632	9.63	
19.5 - 20.5	\$142,091.72	\$17,158.09	0.12075	9.28	
20.5 - 21.5	\$101,582.05	\$16,033.36	0.15784	8.16	
21.5 - 22.5	\$73,045.81	\$14,514.88	0.19871	6.88	
22.5 - 23.5	\$112,843.39	\$9,545.42	0.08459	5.51	
23.5 - 24.5	\$77,137.52	\$6,793.62	0.08807	5.04	
24.5 - 25.5	\$70,343.90	\$0.00	0.00000	4.60	
25.5 - 26.5	\$68,189.69	\$6,218.56	0.09120	4.60	
26.5 - 27.5	\$61,971.13	\$4,888.82	0.07889	4.18	
27.5 - 28.5	\$49,071.17	\$9,622.03	0.19608	3.85	
28.5 - 29.5	\$34,406.59	\$1,925.73	0.05597	3.09	
29.5 - 30.5	\$29,610.17	\$514.75	0.01738	2.92	
30.5 - 31.5	\$29,095.42	\$2,685.73	0.09231	2.87	
31.5 - 32.5	\$26,409.69	\$0.00	0.00000	2.61	
32.5 - 33.5	\$26,409.69	\$3,965.64	0.15016	2.61	
33.5 - 34.5	\$22,444.05	\$3,910.28	0.17422	2.21	
34.5 - 35.5	\$16,348.36	\$0.00	0.00000	1.83	
35.5 - 36.5	\$16,348.36	\$6,575.37	0.40220	1.83	

396.00 POWER OPERATED EQUIPMENT

Observed Life Table

Retirement Expr. 1967 TO 2016 Placement Years 1961 TO 2016

Age Interval	\$ Surviving At Beginning of Age Interval	\$ Retired During The Age Interval	Retirement Ratio	% Surviving At Beginning of Age Interval
36.5 - 37.5	\$8,784.15	\$735.32	0.08371	1.09
37.5 - 38.5	\$2,556.62	\$855.09	0.33446	1.00
38.5 - 39.5	\$1,701.53	\$285.91	0.16803	0.67
39.5 - 40.5	\$1,415.62	\$0.00	0.00000	0.55
40.5 - 41.5	\$1,415.62	\$1,375.80	0.97187	0.55
41.5 - 42.5	\$39.82	\$0.00	0.00000	0.02
42.5 - 43.5	\$39.82	\$0.00	0.00000	0.02

SECTION 6

365.20 RIGHTS OF WAY

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R2.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1965	4,066.02	50.00	81.32	11.28	917.46
1966	107,419.75	50.00	2,148.39	11.72	25,186.31
1967	2,490.06	50.00	49.80	12.18	606.68
1976	3.00	50.00	0.06	17.07	1.02
1981	297.10	50.00	5.94	20.30	120.64
1985	61.73	50.00	1.23	23.11	28.53
2000	2,732.55	50.00	54.65	35.03	1,914.51
2003	41,081.82	50.00	821.63	37.64	30,923.60
Total	158,152.03	50.00	3,163.03	18.87	59,698.77

Composite Average Remaining Life ... 18.87 Years

367.00 TRANSMISSION MAINS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1966	1,022,974.00	50.00	20,459.47	9.86	201,695.99
1970	8,044.40	50.00	160.89	11.85	1,906.62
1971	18,005.73	50.00	360.11	12.40	4,463.93
1972	4,225.53	50.00	84.51	12.96	1,095.21
1976	1,723.25	50.00	34.46	15.39	530.34
1977	2,117.92	50.00	42.36	16.04	679.24
1997	17.37	50.00	0.35	31.60	10.98
2003	73,092.92	50.00	1,461.86	37.03	54,131.14
2013	227,018.27	50.00	4,540.36	46.57	211,434.09
2015	87,276.30	50.00	1,745.53	48.52	84,701.52
Total	1,444,495.69	50.00	28,889.90	19.41	560,649.06

Composite Average Remaining Life ... 19.41 Years

367.40, 367.41, 367.42

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: R2

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1966	53,438.49	40.00	1,335.95	6.85	9,152.27
1976	85.99	40.00	2.15	10.83	23.29
1978	122.93	40.00	3.07	11.80	36.26
1981	7.50	40.00	0.19	13.36	2.50
1986	3,413.47	40.00	85.34	16.25	1,386.73
1990	5,555.63	40.00	138.89	18.81	2,612.29
Total	62,624.01	40.00	1,565.59	8.44	13,213.34

Composite Average Remaining Life ... 8.44 Years

367.45 ANODES AND CATHODIC PROTECTION

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 25 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1977	294.42	25.00	11.78	0.75	8.80
1988	325.80	25.00	13.03	3.64	47.42
1998	705.65	25.00	28.23	8.86	250.15
Total	1,325.87	25.00	53.03	5.78	306.38

Composite Average Remaining Life ... 5.78 Years

367.50 TRANS MAINS - VALVES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1966	3,185.68	40.00	79.64	4.31	343.38
Total	3,185.68	40.00	79.64	4.31	343.38

Composite Average Remaining Life ... 4.31 Years

367.60, 367.61

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 30 Survivor Curve: R4

Year (1)	Original Cost	o o	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
	(2)	(3)	(4)	(5)	(6)
1966	6,982.13	0.00	0.00	0.00	0.00
1977	245.79	30.00	8.19	1.43	11.68
1987	84.97	30.00	2.83	4.64	13.14
1988	14,852.16	30.00	495.07	5.16	2,552.63
1990	1,470.50	30.00	49.02	6.35	311.17
1991	805.75	30.00	26.86	7.00	188.11
1993	510.97	30.00	17.03	8.39	142.94
1994	4,189.75	30.00	139.66	9.12	1,273.84
1996	654.99	30.00	21.83	10.66	232.64
1997	17.37	30.00	0.58	11.46	6.64
otal	29,814.38	27.00	761.07	6.22	4,732.79

Composite Average Remaining Life ... 6.22 Years

369.00 MEAS AND REG STATION EQUIPMENT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: R0.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1966	31,450.57	40.00	786.24	12.54	9,858.09
1967	2,421.95	40.00	60.55	12.97	785.01
1970	3,945.54	40.00	98.64	14.27	1,407.95
1972	1,939.04	40.00	48.47	15.17	735.47
1975	467.11	40.00	11.68	16.56	193.38
1976	1,565.23	40.00	39.13	17.03	666.53
1978	3,150.24	40.00	78.75	18.00	1,417.46
1982	913.24	40.00	22.83	20.00	456.56
1983	451.82	40.00	11.30	20.51	231.68
1984	233.70	40.00	5.84	21.03	122.88
1987	602.12	40.00	15.05	22.63	340.56
1988	3,731.27	40.00	93.28	23.17	2,161.01
1991	26,085.44	40.00	652.11	24.82	16,187.16
1992	3,977.45	40.00	99.43	25.38	2,524.02
1993	9,293.25	40.00	232.32	25.95	6,028.70
1994	46,177.86	40.00	1,154.41	26.52	30,614.46
1995	771.37	40.00	19.28	27.09	522.45
1996	40,220.96	40.00	1,005.49	27.67	27,822.53
1997	5,766.13	40.00	144.15	28.25	4,072.35
1998	1,757.64	40.00	43.94	28.84	1,267.00
1999	9,401.27	40.00	235.02	29.42	6,914.74
2003	18,967.71	40.00	474.18	31.79	15,074.54
2010	352,403.98	40.00	8,809.81	36.01	317,197.21
2012	121,221.49	40.00	3,030.44	37.23	112,808.78
2013	13,188.03	40.00	329.69	37.84	12,474.89
2014	24,893.47	40.00	622.32	38.45	23,930.36
2015	95,971.70	40.00	2,399.21	39.07	93,739.52

369.00 MEAS AND REG STATION EQUIPMENT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Survivor Curve: R0.5

	2					
Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals	
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)	
Total	820,969.58	40.00	20,523.56	33.60	689,555.28	

Composite Average Remaining Life ... 33.60 Years

Average Service Life: 40

374.20 RIGHTS OF WAY

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R2.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1969	2,371.92	50.00	47.44	13.15	623.91
1970	24.30	50.00	0.49	13.66	6.64
1974	385.40	50.00	7.71	15.87	122.33
1975	160.20	50.00	3.20	16.46	52.74
1978	2,137.36	50.00	42.75	18.32	783.24
1979	10.00	50.00	0.20	18.97	3.79
1980	23.00	50.00	0.46	19.63	9.03
1981	1,005.00	50.00	20.10	20.30	408.09
1982	25.00	50.00	0.50	20.99	10.49
1983	4.00	50.00	0.08	21.68	1.73
1984	2.00	50.00	0.04	22.39	0.90
1985	5,449.84	50.00	109.00	23.11	2,518.89
1986	3.00	50.00	0.06	23.84	1.43
1987	11.00	50.00	0.22	24.58	5.41
1988	10.00	50.00	0.20	25.33	5.07
1990	12.00	50.00	0.24	26.86	6.45
1991	437.00	50.00	8.74	27.63	241.53
1992	712.30	50.00	14.25	28.42	404.91
1994	42.00	50.00	0.84	30.03	25.22
1995	1,474.25	50.00	29.48	30.84	909.29
1996	19.50	50.00	0.39	31.66	12.35
1997	226.50	50.00	4.53	32.49	147.19
1998	60.00	50.00	1.20	33.33	40.00
1999	821.72	50.00	16.43	34.18	561.69
2000	19.50	50.00	0.39	35.03	13.66
2007	2,206.80	50.00	44.14	41.20	1,818.45

374.20 RIGHTS OF WAY

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R2.5

Original Avg. Service Avg. Annual Avg. Remaining Future Annual Cost Life Accrual Life Accruals

(2) (3) (4) (5) (6)

(1) (2) (3) (4) (5) (6) Total 17,653.59 50.00 353.07 24.74 8,734.43

Composite Average Remaining Life ... 24.74 Years

Year

375.00 STRUCTURES AND IMPROVEMENTS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
			Crookston		
	urvivor Curve: Retirement Ye	lowa 85 S1.5 ar: 2025			
1985	12,407.54	39.29	315.82	8.36	2,639.75
1995	15,831.90	29.77	531.86	8.43	4,482.56
2011	4,011.59	13.99	286.79	8.49	2,434.92
Total	32,251.03	28.43	1,134.47	8.42	9,557.23
Account Total	32,251.03	28.43	1,134.47	8.42	9,557.23

Composite Average Remaining Life ... 8.42 Years

376.00 STEEL MAINS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 63 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1960	45,803.96	63.00	727.05	16.08	11,691.42
1966	342,341.48	63.00	5,433.98	19.73	107,206.69
1967	741,457.82	63.00	11,769.15	20.38	239,846.55
1968	23,790.28	63.00	377.62	21.05	7,947.53
1969	57,308.35	63.00	909.65	21.72	19,760.85
1970	42,814.96	63.00	679.60	22.41	15,229.60
1971	3,052.57	63.00	48.45	23.11	1,119.73
1972	11,875.01	63.00	188.49	23.82	4,489.24
1973	26,711.82	63.00	424.00	24.54	10,403.94
1974	14,292.07	63.00	226.86	25.27	5,732.21
1975	150,801.36	63.00	2,393.67	26.01	62,249.61
1976	22,543.52	63.00	357.83	26.76	9,574.06
1977	942.95	63.00	14.97	27.51	411.78
1978	32,313.74	63.00	512.92	28.28	14,505.50
1979	18,593.43	63.00	295.13	29.05	8,574.91
1980	24,626.30	63.00	390.89	29.84	11,664.53
1981	27,656.51	63.00	438.99	30.63	13,448.35
1982	8,055.24	63.00	127.86	31.43	4,019.30
1983	45,476.42	63.00	721.85	32.25	23,276.54
1984	67,161.67	63.00	1,066.06	33.06	35,246.02
1985	578,980.15	63.00	9,190.15	33.89	311,447.41
1986	17,575.57	63.00	278.98	34.72	9,687.04
1987	1,392.91	63.00	22.11	35.56	786.30
1988	43,547.93	63.00	691.24	36.41	25,170.36
1989	6,528.35	63.00	103.62	37.27	3,861.93
1990	18,118.86	63.00	287.60	38.13	10,967.11
1991	141,683.74	63.00	2,248.94	39.00	87,718.10

376.00 STEEL MAINS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 63 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1992	73,016.47	63.00	1,158.99	39.88	46,221.66
1993	30,004.27	63.00	476.26	40.77	19,415.06
1995	143,582.21	63.00	2,279.08	42.55	96,983.82
1996	2,977.19	63.00	47.26	43.46	2,053.61
1997	270,161.35	63.00	4,288.27	44.37	190,256.82
1999	18,239.14	63.00	289.51	46.20	13,376.18
2000	5,805.43	63.00	92.15	47.13	4,342.99
2001	75,495.74	63.00	1,198.34	48.06	57,593.03
2002	3,342.99	63.00	53.06	49.00	2,599.98
2003	164,281.68	63.00	2,607.64	49.94	130,223.93
2004	106,945.72	63.00	1,697.55	50.88	86,379.24
2005	85,943.08	63.00	1,364.17	51.84	70,712.19
2006	520.37	63.00	8.26	52.79	436.03
2008	69,072.45	63.00	1,096.39	54.71	59,982.27
2009	3,010.17	63.00	47.78	55.67	2,660.12
2010	75,965.83	63.00	1,205.81	56.64	68,299.62
2011	11,717.28	63.00	185.99	57.61	10,715.39
2012	14,993.69	63.00	237.99	58.59	13,943.54
2013	4,858.35	63.00	77.12	59.56	4,593.35
2015	2,888.53	63.00	45.85	61.52	2,820.88
2016	3,487.56	63.00	55.36	62.51	3,460.30
otal	3,681,756.47	63.00	58,440.49	33.25	1,943,106.61

Composite Average Remaining Life ... 33.25 Years

376.10 PLASTIC MAINS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R4

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1966	201.74	45.00	4.48	4.49	20.13
1967	28,651.33	45.00	636.69	4.82	3,066.53
1968	2,231.11	45.00	49.58	5.16	255.99
1969	170.64	45.00	3.79	5.53	20.98
1972	154.00	45.00	3.42	6.83	23.36
1973	788.84	45.00	17.53	7.33	128.44
1975	572.17	45.00	12.71	8.44	107.31
1977	158.24	45.00	3.52	9.68	34.03
1978	957.48	45.00	21.28	10.33	219.87
1979	39,392.61	45.00	875.39	11.01	9,639.02
1980	8,855.98	45.00	196.80	11.70	2,302.79
1981	48,953.74	45.00	1,087.86	12.41	13,496.18
1982	18,497.66	45.00	411.06	13.13	5,395.88
1983	45,386.74	45.00	1,008.59	13.87	13,985.60
1984	23,234.35	45.00	516.32	14.62	7,548.96
1985	303,331.06	45.00	6,740.66	15.39	103,750.35
1986	178,379.25	45.00	3,963.96	16.18	64,134.07
1987	171,798.81	45.00	3,817.73	16.98	64,837.66
1988	64,328.39	45.00	1,429.51	17.81	25,454.53
1989	47,817.19	45.00	1,062.60	18.64	19,810.05
1990	55,779.72	45.00	1,239.54	19.49	24,164.48
1991	66,588.58	45.00	1,479.74	20.36	30,128.61
1992	110,382.77	45.00	2,452.94	21.24	52,106.64
1993	164,767.72	45.00	3,661.49	22.14	81,050.19
1994	137,228.11	45.00	3,049.50	23.04	70,264.22
1995	103,322.37	45.00	2,296.04	23.96	55,008.11
1996	88,720.16	45.00	1,971.55	24.88	49,061.44

376.10 PLASTIC MAINS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R4

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1997	306,095.22	45.00	6,802.08	25.82	175,647.25
1998	178,185.63	45.00	3,959.66	26.77	105,991.53
1999	112,422.91	45.00	2,498.28	27.72	69,254.13
2000	5,477.10	45.00	121.71	28.68	3,490.80
2001	127,973.84	45.00	2,843.85	29.65	84,312.59
2002	50,311.53	45.00	1,118.03	30.62	34,232.78
2003	118,784.82	45.00	2,639.65	31.60	83,399.98
2004	475,992.10	45.00	10,577.55	32.58	344,567.46
2005	247,068.95	45.00	5,490.40	33.56	184,252.78
2006	221,591.30	45.00	4,924.23	34.55	170,113.64
2007	297,934.61	45.00	6,620.74	35.54	235,271.74
2008	583,384.54	45.00	12,964.04	36.53	473,537.40
2009	211,241.53	45.00	4,694.23	37.52	176,128.41
2010	609,268.02	45.00	13,539.23	38.51	521,462.07
2011	741,893.35	45.00	16,486.44	39.51	651,391.08
2012	947,101.06	45.00	21,046.59	40.51	852,543.89
2013	906,410.39	45.00	20,142.36	41.50	836,007.76
2014	1,495,591.06	45.00	33,235.20	42.50	1,412,597.71
2015	1,384,426.06	45.00	30,764.88	43.50	1,338,324.19
2016	1,335,580.79	45.00	29,679.44	44.50	1,320,753.51
otal	12,067,385.57	45.00	268,162.88	36.43	9,769,296.14

Composite Average Remaining Life ... 36.43 Years

376.20 MAINS - VALVES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1966	15,424.63	45.00	342.77	6.81	2,334.95
1967	26,993.59	45.00	599.86	7.18	4,307.14
1969	254.12	45.00	5.65	7.97	45.03
1970	180.67	45.00	4.01	8.40	33.73
1971	42.22	45.00	0.94	8.85	8.30
1974	1,378.87	45.00	30.64	10.32	316.30
1975	5,570.88	45.00	123.80	10.86	1,343.83
1976	7,104.40	45.00	157.88	11.41	1,801.05
1977	941.48	45.00	20.92	11.98	250.66
1978	69.04	45.00	1.53	12.57	19.29
1979	5.11	45.00	0.11	13.19	1.50
1980	27.02	45.00	0.60	13.82	8.30
1981	54.21	45.00	1.20	14.46	17.43
1982	1,259.11	45.00	27.98	15.13	423.31
1983	538.99	45.00	11.98	15.81	189.38
1984	2.48	45.00	0.06	16.51	0.91
1985	12,394.28	45.00	275.43	17.22	4,742.38
1986	7,200.23	45.00	160.01	17.94	2,870.99
1987	909.42	45.00	20.21	18.68	377.54
1988	1,293.97	45.00	28.75	19.44	558.87
1989	1,280.15	45.00	28.45	20.20	574.67
1990	4,487.86	45.00	99.73	20.98	2,092.14
1991	3,883.80	45.00	86.31	21.77	1,878.65
1992	1,777.93	45.00	39.51	22.57	891.73
1993	3,288.69	45.00	73.08	23.38	1,708.86
1994	821.11	45.00	18.25	24.21	441.70
1995	2,497.42	45.00	55.50	25.04	1,389.76

376.20 MAINS - VALVES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1996	12,061.15	45.00	268.03	25.89	6,938.36
1997	5,346.34	45.00	118.81	26.74	3,177.45
1998	10,752.13	45.00	238.94	27.61	6,597.18
1999	6,469.05	45.00	143.76	28.49	4,095.13
Total	134,310.35	45.00	2,984.67	16.56	49,436.52

Composite Average Remaining Life ... 16.56 Years

376.28, 376.30, 376.40, 376.50

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R1.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1966	50,228.29	45.00	1,116.17	12.06	13,461.73
1967	41,215.06	45.00	915.88	12.47	11,423.51
1968	408.90	45.00	9.09	12.90	117.18
1969	32,306.97	45.00	717.92	13.33	9,570.15
1970	1,233.51	45.00	27.41	13.78	377.64
1971	298.15	45.00	6.63	14.23	94.31
1974	16.75	45.00	0.37	15.68	5.84
1975	3,630.05	45.00	80.67	16.18	1,305.41
1976	1,052.64	45.00	23.39	16.70	390.61
1977	3,845.14	45.00	85.45	17.23	1,471.88
1980	180.34	45.00	4.01	18.88	75.65
1981	7.50	45.00	0.17	19.45	3.24
1982	142.63	45.00	3.17	20.03	63.49
1983	2,397.65	45.00	53.28	20.62	1,098.90
1984	17,282.78	45.00	384.06	21.23	8,152.88
1985	88,315.05	45.00	1,962.53	21.84	42,865.17
1986	9,926.83	45.00	220.59	22.47	4,955.63
1989	4,440.48	45.00	98.68	24.39	2,407.02
1991	6,028.66	45.00	133.97	25.72	3,445.99
1992	3,609.97	45.00	80.22	26.40	2,117.90
1993	5,836.39	45.00	129.70	27.09	3,513.02
1994	72.98	45.00	1.62	27.78	45.05
1995	59,847.95	45.00	1,329.94	28.48	37,877.64
1996	2,046.28	45.00	45.47	29.19	1,327.28
1997	5,792.65	45.00	128.72	29.91	3,849.51
1999	18,125.34	45.00	402.78	31.36	12,629.41
2007	1,324.82	45.00	29.44	37.39	1,100.84

376.28, 376.30, 376.40, 376.50

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R1.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
2008	5,433.18	45.00	120.74	38.17	4,608.61
2009	34,819.66	45.00	773.76	38.95	30,141.67
Total	399,866.60	45.00	8,885.80	22.34	198,497.14

Composite Average Remaining Life ... 22.34 Years

376.55 MAINS - ANODES & CATHODIC PROT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 25 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1970	50.14	0.00	0.00	0.00	0.00
1971	7,462.74	0.00	0.00	0.00	0.00
1972	3,848.94	0.00	0.00	0.00	0.00
1973	2,846.90	0.00	0.00	0.00	0.00
1974	114.03	0.00	0.00	0.00	0.00
1976	274.92	25.00	11.00	0.57	6.23
1977	217.32	25.00	8.69	0.75	6.50
1979	148.66	25.00	5.95	1.20	7.13
1980	771.28	25.00	30.85	1.44	44.55
1981	602.27	25.00	24.09	1.69	40.83
1982	2,501.82	25.00	100.07	1.95	194.87
1983	265.84	25.00	10.63	2.20	23.41
1984	184.01	25.00	7.36	2.46	18.10
1985	14,064.68	25.00	562.59	2.73	1,533.94
1986	2,175.21	25.00	87.01	3.01	261.74
1987	434.57	25.00	17.38	3.31	57.55
1988	604.85	25.00	24.19	3.64	88.04
1989	421.95	25.00	16.88	4.00	67.49
1990	5,180.26	25.00	207.21	4.39	910.09
1991	727.76	25.00	29.11	4.82	140.38
1992	4,698.57	25.00	187.94	5.29	994.38
1993	1,305.77	25.00	52.23	5.80	302.81
1994	151.56	25.00	6.06	6.34	38.45
1995	3,019.85	25.00	120.79	6.92	836.22
1996	2,079.88	25.00	83.20	7.54	627.11
1997	5,289.94	25.00	211.60	8.19	1,731.97
1998	9,313.72	25.00	372.55	8.86	3,301.71

376.55 MAINS - ANODES & CATHODIC PROT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 25 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1999	12,411.90	25.00	496.47	9.57	4,750.01
Total	81,169.34	20.54	2,673.86	5.98	15,983.51

Composite Average Remaining Life ... 5.98 Years

376.56 MAINS - PIPELINE MARKERS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 20 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(<u>1</u>)	(2)	(3)	(4)	(5)	(6)
1976	115.78	0.00	0.00	0.00	0.00
1985	55.97	20.00	2.80	0.65	1.82
Total	171.75	10.00	2.80	0.65	1.82

Composite Average Remaining Life ... 0.65 Years

379.00 MEAS & REG STATION EQUIP. - CITY GATE

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 28 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1977	260.06	28.00	9.29	1.95	18.14
1985	17,563.08	28.00	627.25	4.22	2,646.61
1995	285.91	28.00	10.21	9.39	95.91
1997	31,122.11	28.00	1,111.50	10.79	11,988.84
1998	59.59	28.00	2.13	11.52	24.51
1999	31,161.24	28.00	1,112.90	12.27	13,656.16
2004	32,490.96	28.00	1,160.39	16.33	18,944.63
2009	6,781.83	28.00	242.21	20.79	5,035.95
2011	24,489.78	28.00	874.63	22.67	19,826.25
2012	200,929.99	28.00	7,176.06	23.62	169,508.80
2015	97,516.71	28.00	3,482.73	26.53	92,387.76
tal	442,661.26	28.00	15,809.30	21.14	334,133.57

Composite Average Remaining Life ... 21.14 Years

380.00 STEEL SERVICES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R2.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1966	2,945.80	50.00	58.92	11.72	690.69
1967	113,469.32	50.00	2,269.38	12.18	27,645.79
1968	16,503.30	50.00	330.07	12.66	4,178.07
1969	13,076.63	50.00	261.53	13.15	3,439.65
1970	25,421.29	50.00	508.42	13.66	6,946.46
1971	20,449.22	50.00	408.98	14.19	5,803.62
1972	22,167.71	50.00	443.35	14.73	6,532.62
1973	20,423.76	50.00	408.47	15.29	6,247.58
1974	24,108.78	50.00	482.17	15.87	7,652.57
1975	18,425.62	50.00	368.51	16.46	6,066.52
1976	17,298.60	50.00	345.97	17.07	5,905.13
1977	6,782.51	50.00	135.65	17.69	2,399.45
1978	32,322.80	50.00	646.45	18.32	11,844.76
1979	35,910.73	50.00	718.21	18.97	13,624.52
1980	41,666.55	50.00	833.33	19.63	16,358.47
1981	38,860.85	50.00	777.22	20.30	15,779.73
1982	24,374.79	50.00	487.49	20.99	10,231.32
1983	20,792.89	50.00	415.86	21.68	9,017.36
1984	53,954.80	50.00	1,079.09	22.39	24,162.36
1985	152,515.64	50.00	3,050.31	23.11	70,491.99
1986	20,183.30	50.00	403.66	23.84	9,622.94
1987	20,145.09	50.00	402.90	24.58	9,902.65
1988	39,615.38	50.00	792.31	25.33	20,067.49
1989	35,547.65	50.00	710.95	26.09	18,546.88
1990	15,007.93	50.00	300.16	26.86	8,061.19
1991	42,089.11	50.00	841.78	27.63	23,262.59
1992	11,333.54	50.00	226.67	28.42	6,442.59

380.00 STEEL SERVICES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 50 Survivor Curve: R2.5

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
1993	22,029.42	50.00	440.59	29.22	12,873.72
1994	16,025.75	50.00	320.51	30.03	9,623.44
1995	8,150.64	50.00	163.01	30.84	5,027.17
1996	11,784.16	50.00	235.68	31.66	7,462.12
1997	10,805.51	50.00	216.11	32.49	7,021.93
1998	28,923.27	50.00	578.46	33.33	19,280.89
1999	5,009.49	50.00	100.19	34.18	3,424.25
2000	14,722.38	50.00	294.45	35.03	10,314.98
2001	17,034.40	50.00	340.69	35.89	12,228.30
2002	5,368.01	50.00	107.36	36.76	3,946.71
2003	1,274.98	50.00	25.50	37.64	959.72
2012	22,457.31	50.00	449.15	45.78	20,562.64
2016	27,507.35	50.00	550.15	49.53	27,247.39
tal	1,076,486.26	50.00	21,529.67	22.80	490,898.22

Composite Average Remaining Life ... 22.80 Years

380.10 PLASTIC SERVICES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	<i>(6)</i>
1966	1,330.12	40.00	33.25	4.31	143.37
1967	5,169.43	40.00	129.24	4.59	593.56
1968	1,850.67	40.00	46.27	4.88	225.82
1969	1,503.60	40.00	37.59	5.19	194.95
1970	933.11	40.00	23.33	5.50	128.40
1971	751.94	40.00	18.80	5.84	109.82
1972	1,250.63	40.00	31.27	6.20	193.79
1973	997.20	40.00	24.93	6.58	163.93
1974	712.06	40.00	17.80	6.98	124.17
1975	3,146.66	40.00	78.67	7.40	581.87
1976	1,084.75	40.00	27.12	7.84	212.69
1977	1,871.59	40.00	46.79	8.31	388.88
1978	682.66	40.00	17.07	8.81	150.28
1979	6,093.63	40.00	152.34	9.32	1,420.02
1980	89,053.75	40.00	2,226.34	9.86	21,958.18
1981	110,095.34	40.00	2,752.38	10.43	28,694.15
1982	71,167.73	40.00	1,779.19	11.01	19,592.65
1983	69,167.33	40.00	1,729.18	11.62	20,090.10
1984	53,021.88	40.00	1,325.55	12.25	16,234.52
1985	175,592.91	40.00	4,389.82	12.89	56,602.94
1986	174,581.62	40.00	4,364.54	13.56	59,191.71
1987	169,351.53	40.00	4,233.79	14.25	60,313.19
1988	135,178.75	40.00	3,379.47	14.95	50,518.49
1989	155,235.62	40.00	3,880.89	15.67	60,798.18
1990	178,507.77	40.00	4,462.69	16.40	73,192.80
1991	164,525.63	40.00	4,113.14	17.15	70,537.31
1992	201,199.53	40.00	5,029.98	17.91	90,105.98

380.10 PLASTIC SERVICES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1993	218,779.73	40.00	5,469.49	18.69	102,227.97
1994	219,085.07	40.00	5,477.12	19.48	106,708.70
1995	211,716.62	40.00	5,292.91	20.29	107,373.48
1996	224,044.55	40.00	5,601.11	21.10	118,207.33
1997	283,612.67	40.00	7,090.31	21.93	155,513.95
1998	327,882.30	40.00	8,197.05	22.78	186,694.95
1999	286,384.16	40.00	7,159.60	23.63	169,173.41
2000	82,221.14	40.00	2,055.53	24.49	50,349.36
2001	170,734.49	40.00	4,268.36	25.37	108,289.07
2002	200,516.80	40.00	5,012.92	26.26	131,626.80
2003	189,797.74	40.00	4,744.94	27.15	128,843.97
2004	183,958.86	40.00	4,598.97	28.06	129,052.40
2005	211,241.53	40.00	5,281.03	28.98	153,026.56
2006	175,552.07	40.00	4,388.80	29.90	131,232.52
2007	167,088.67	40.00	4,177.21	30.83	128,800.68
2008	263,846.08	40.00	6,596.15	31.77	209,592.13
2009	176,777.48	40.00	4,419.43	32.72	144,613.27
2010	354,460.80	40.00	8,861.51	33.68	298,424.69
2011	381,152.09	40.00	9,528.80	34.64	330,041.70
2012	1,030,318.46	40.00	25,757.94	35.60	917,033.31
2013	984,897.86	40.00	24,622.43	36.57	900,494.16
2014	1,399,386.21	40.00	34,984.63	37.55	1,313,570.45
2015	1,408,585.70	40.00	35,214.62	38.53	1,356,663.32
2016	1,624,175.05	40.00	40,604.35	39.51	1,604,190.72

380.10 PLASTIC SERVICES

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Survivor Curve: R3

	8	•			
Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
Total	12,550,273.57	40.00	313,756.63	30.64	9,614,206.67

Composite Average Remaining Life ... 30.64 Years

Average Service Life: 40

380.55, 380.60

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 25 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1971	68.27	0.00	0.00	0.00	0.00
1973	1,304.75	0.00	0.00	0.00	0.00
1974	5,847.81	0.00	0.00	0.00	0.00
1975	15,597.34	25.00	623.89	0.50	311.95
1976	10,361.93	25.00	414.48	0.57	234.95
1977	42.21	25.00	1.69	0.75	1.26
1982	845.41	25.00	33.82	1.95	65.85
1983	35.01	25.00	1.40	2.20	3.08
1984	748.66	25.00	29.95	2.46	73.66
1986	132.38	25.00	5.30	3.01	15.93
1990	515.44	25.00	20.62	4.39	90.55
1999	3,603.80	25.00	144.15	9.57	1,379.17
2015	30,388.29	25.00	1,215.53	23.53	28,598.95
otal	69,491.30	19.23	2,490.81	12.36	30,775.35

Composite Average Remaining Life ... 12.36 Years

385.00 INDUSTRIAL MEAS & REG STATION EQUIP

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 40 Survivor Curve: \$4

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1985	4,977.47	40.00	124.44	10.00	1,244.83
2000	110.66	40.00	2.77	23.50	65.02
2014	21,162.64	40.00	529.07	37.50	19,839.97
2015	136,533.64	40.00	3,413.34	38.50	131,413.63
Total	162,784.41	40.00	4,069.61	37.49	152,563.45

Composite Average Remaining Life ... 37.49 Years

387.10 ANODES & CATHODIC PROT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 25 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
2000	5,307.90	25.00	212.32	10.30	2,186.46
2015	3,927.21	25.00	157.09	23.53	3,695.97
Total	9,235.11	25.00	369.40	15.92	5,882.43

Composite Average Remaining Life ... 15.92 Years

387.20 OTHER EQUIPMENT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 30 Survivor Curve: R3

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1972	51.96	30.00	1.73	1.54	2.66
1985	11,446.52	30.00	381.55	5.39	2,056.99
Total	11,498.48	30.00	383.28	5.37	2,059.65

Composite Average Remaining Life ... 5.37 Years

390.00, 390.01

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R4

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
1966	162.04	45.00	3.60	4.49	16.17
1967	63,684.77	45.00	1,415.21	4.82	6,816.13
1971	1,043.27	45.00	23.18	6.36	147.53
1972	3,961.15	45.00	88.03	6.83	600.99
1973	5,277.90	45.00	117.29	7.33	859.35
1974	15,038.59	45.00	334.19	7.87	2,629.06
1975	1,406.22	45.00	31.25	8.44	263.72
1978	450.00	45.00	10.00	10.33	103.33
1980	394.59	45.00	8.77	11.70	102.60
1982	3,395.31	45.00	75.45	13.13	990.43
1983	1,470.36	45.00	32.67	13.87	453.08
1985	71,695.66	45.00	1,593.23	15.39	24,522.55
1989	71,935.28	45.00	1,598.55	18.64	29,801.86
1990	97,496.83	45.00	2,166.59	19.49	42,236.86
1991	5,549.42	45.00	123.32	20.36	2,510.89
1993	3,055.00	45.00	67.89	22.14	1,502.77
1995	2,965.78	45.00	65.91	23.96	1,578.96
1996	8,137.66	45.00	180.84	24.88	4,500.05
2000	226,836.98	45.00	5,040.80	28.68	144,573.25
2001	17,578.74	45.00	390.64	29.65	11,581.34
2002	9,172.24	45.00	203.83	30.62	6,240.94
2003	1,099.87	45.00	24.44	31.60	772.23
2004	6,757.20	45.00	150.16	32.58	4,891.49
2006	238,669.94	45.00	5,303.75	34.55	183,224.76
2008	954,062.70	45.00	21,201.29	36.53	774,419.50
2010	76,867.95	45.00	1,708.17	38.51	65,789.96
2012	218,292.29	45.00	4,850.92	40.51	196,498.31

390.00, 390.01

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 45 Survivor Curve: R4

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)
2014	38,164.50	45.00	848.10	42.50	36,046.68
2015	18,348.29	45.00	407.74	43.50	17,737.29
2016	4,336.44	45.00	96.36	44.50	4,288.30
Total	2,167,306.97	45.00	48,162.15	32.51	1,565,700.39

Composite Average Remaining Life ... 32.51 Years

392.10 TRANSPORTATION EQUIP. - TRAILERS

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 12 Survivor Curve: R1

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals			
<i>(1)</i>	(2)	(3)	(4)	(5)	(6)			
1991	8,118.60	0.00	0.00	0.00	0.00			
1992	700.00	0.00	0.00	0.00	0.00			
1999	7,625.30	12.00	635.33	2.15	1,364.42			
2002	8,592.63	12.00	715.93	3.29	2,356.18			
2008	6,263.88	12.00	521.90	6.29	3,282.77			
2011	8,459.68	12.00	704.85	8.16	5,753.05			
Total	39,760.09	8.00	2,578.01	4.95	12,756.42			

Composite Average Remaining Life ... 4.95 Years

392.20 TRANSPORTATION EQUIP

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 7 Survivor Curve: L2

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
(1)	(2)	(3)	(4)	(5)	(6)
2001	4,102.12	7.00	586.01	0.88	514.79
2002	25,710.52	7.00	3,672.88	1.05	3,868.85
2003	7,988.29	7.00	1,141.17	1.24	1,417.25
2004	6,319.27	7.00	902.74	1.44	1,303.74
2005	12,682.32	7.00	1,811.73	1.66	3,008.68
2006	2,792.17	7.00	398.88	1.89	755.21
2007	8,225.76	7.00	1,175.09	2.14	2,512.68
2008	6,139.41	7.00	877.05	2.39	2,092.92
2009	134,582.74	7.00	19,225.84	2.63	50,534.92
2010	133,774.83	7.00	19,110.42	2.87	54,798.86
2011	116,974.80	7.00	16,710.45	3.13	52,351.95
2012	168,795.26	7.00	24,113.27	3.48	83,998.65
2013	160,107.38	7.00	22,872.16	3.99	91,339.08
2014	40,184.30	7.00	5,740.53	4.71	27,017.82
2015	343,742.27	7.00	49,105.35	5.56	272,947.00
2016	214,071.87	7.00	30,581.27	6.50	198,866.98
otal	1,386,193.31	7.00	198,024.83	4.28	847,329.37

Composite Average Remaining Life ... 4.28 Years

396.00 POWER OPERATED EQUIPMENT

Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: 6 Survivor Curve: L0

Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
1973	39.82	0.00	0.00	0.00	0.00
1979	5,492.21	0.00	0.00	0.00	0.00
1980	988.84	0.00	0.00	0.00	0.00
1982	2,185.41	0.00	0.00	0.00	0.00
1987	2,870.69	0.00	0.00	0.00	0.00
1988	5,042.55	0.00	0.00	0.00	0.00
1989	8,011.14	0.00	0.00	0.00	0.00
1991	2,154.21	0.00	0.00	0.00	0.00
1994	4,509.20	6.00	751.01	0.58	435.11
1995	6,863.33	6.00	1,143.10	0.69	789.43
1996	23,351.58	6.00	3,889.24	0.80	3,118.50
1997	1,149.23	6.00	191.41	0.92	175.38
1998	2,273.06	6.00	378.58	1.04	393.34
1999	4,545.00	6.00	756.98	1.17	885.70
2000	14,609.79	6.00	2,433.28	1.31	3,183.46
2002	19,791.86	6.00	3,296.36	1.61	5,315.22
2005	265.37	6.00	44.20	2.14	94.80
2007	68,224.37	6.00	11,362.86	2.56	29,128.56
2008	23,536.83	6.00	3,920.09	2.80	10,962.87
2009	30,182.80	6.00	5,026.98	3.05	15,319.98
2010	142,799.96	6.00	23,783.52	3.32	78,933.86
2011	37,051.70	6.00	6,171.01	3.61	22,295.00
2013	40,246.50	6.00	6,703.11	4.28	28,685.24
2014	154,277.58	6.00	25,695.13	4.66	119,705.26
2015	79,530.23	6.00	13,245.86	5.09	67,453.20
2016	281,857.16	6.00	46,943.67	5.64	264,600.42

396.00 POWER OPERATED EQUIPMENT

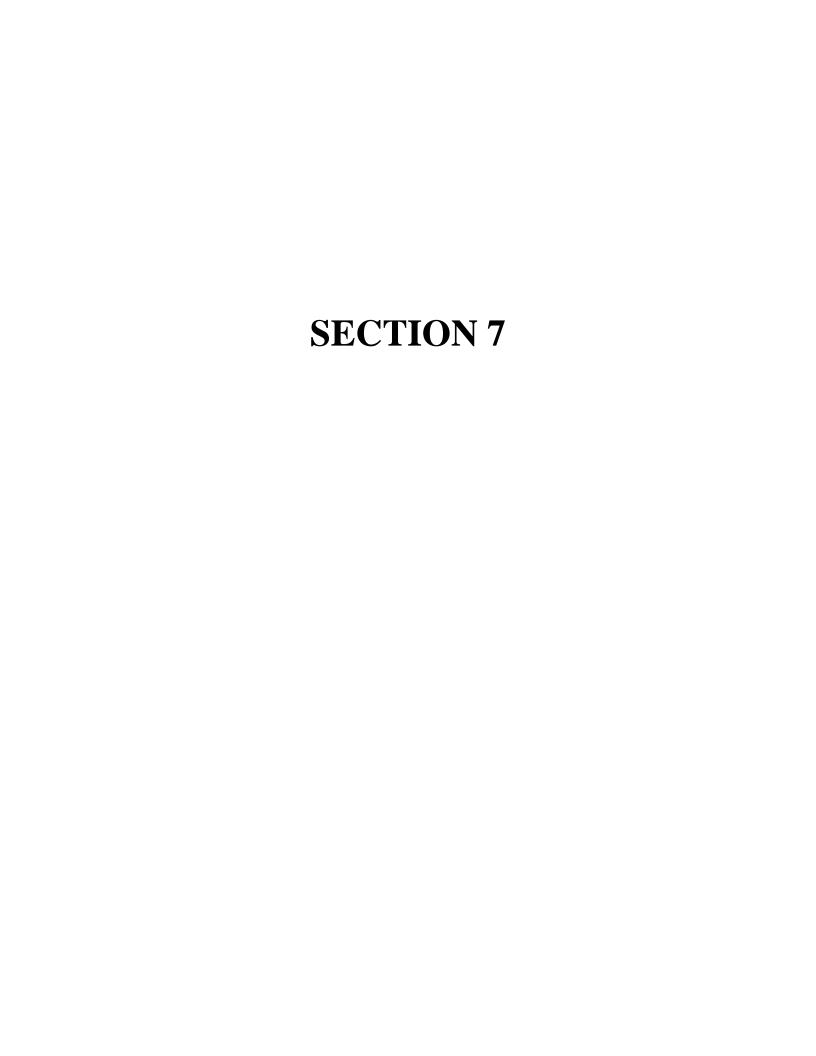
Original Cost Of Utility Plant In Service And Development Of Composite Remaining Life as of December 31, 2016 Based Upon Broad Group/Remaining Life Procedure and Technique

Survivor Curve: L0

		y y			
Year	Original Cost	Avg. Service Life	Avg. Annual Accrual	Avg. Remaining Life	Future Annual Accruals
<u>(1)</u>	(2)	(3)	(4)	(5)	(6)
Total	961,850.42	4.16	155,736.36	4.18	651,475.34

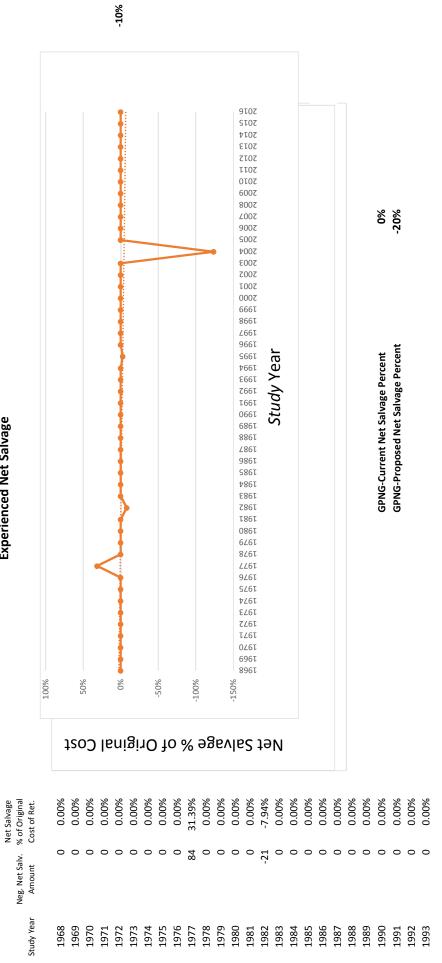
Composite Average Remaining Life ... 4.18 Years

Average Service Life: 6



Great Plains Natural Gas Company 367 Transmission Mains





Net Salvage % of Original Cost of Ret.	0.00%	-2.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-123.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Neg. Net Salv. Amount	0	-14	0	0	0	0	0	0	0	0	-17,117	0	0	0	0	0	0	0	0	0	0	0	0
Study Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

Experienced Net Salvage

Great Plains Natural Gas Company 367 Transmission Mains

367.00, 367.40, 367.41, 367.42, 367.45, 367.50, 367.60, 367.61, 367.62

	Orginal Cost Of	rginal Cost Of Gross Salvage Cost of Rem		<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Annuc	al Activity						
1977	266.87	86.37	32.36%	2.61	0.98%	83.76	31.39%
1978	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1979	1,304.41	0.00	0.00%	0.00	0.00%	0.00	0.00%
1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1982	266.87	13.82	5.18%	35.00	13.11%	(21.18)	-7.94%
1983	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1989	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1995	534.59	16.59	3.10%	30.60	5.72%	(14.01)	-2.62%
1996	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1997	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1998	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1999	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2003	2,395.65	0.00	0.00%	0.00	0.00%	0.00	0.00%
2004	13,821.66	637.35	4.61%	17,754.01	128.45%	(17,116.66)	-123.84%

367.00, 367.40, 367.41, 367.42, 367.45, 367.50, 367.60, 367.61, 367.62

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	Net Salvage	2
<u>Year</u>	Retirements	Amount	<u>%</u>	<u>Amount</u>	<u>%</u>	Amount	<u>%</u>
<u>Annual</u>	<u>Activity</u>						
2005	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2008	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2013	44.60	0.00	0.00%	0.00	0.00%	0.00	0.00%
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2015	2,414.43	0.00	0.00%	0.02	0.00%	(0.02)	0.00%
2016	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%

367.00, 367.40, 367.41, 367.42, 367.45, 367.50, 367.60, 367.61, 367.62

**	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	oval	<u>Net Salva</u>	<u>ze</u>
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Three - Yea	r Rolling Bands						
1977 - 1979	1,571.28	86.37	5.50%	2.61	0.17%	83.76	5.33%
1978 - 1980	1,304.41	0.00	0.00%	0.00	0.00%	0.00	0.00%
1979 - 1981	1,304.41	0.00	0.00%	0.00	0.00%	0.00	0.00%
1980 - 1982	266.87	13.82	5.18%	35.00	13.11%	(21.18)	-7.94%
1981 - 1983	266.87	13.82	5.18%	35.00	13.11%	(21.18)	-7.94%
1982 - 1984	266.87	13.82	5.18%	35.00	13.11%	(21.18)	-7.94%
1983 - 1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1984 - 1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1985 - 1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1986 - 1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1987 - 1989	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1988 - 1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1989 - 1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1990 - 1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1991 - 1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1992 - 1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1993 - 1995	534.59	16.59	3.10%	30.60	5.72%	(14.01)	-2.62%
1994 - 1996	534.59	16.59	3.10%	30.60	5.72%	(14.01)	-2.62%
1995 - 1997	534.59	16.59	3.10%	30.60	5.72%	(14.01)	-2.62%
1996 - 1998	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1997 - 1999	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1998 - 2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
1999 - 2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2000 - 2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2001 - 2003	2,395.65	0.00	0.00%	0.00	0.00%	0.00	0.00%
2002 - 2004	16,217.31	637.35	3.93%	17,754.01	109.48%	(17,116.66)	-105.55%
2003 - 2005	16,217.31	637.35	3.93%	17,754.01	109.48%	(17,116.66)	-105.55%
2004 - 2006	13,821.66	637.35	4.61%	17,754.01	128.45%	(17,116.66)	-123.84%

367.00, 367.40, 367.41, 367.42, 367.45, 367.50, 367.60, 367.61, 367.62

<u>Year</u>	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>val</u>	Net Salvage	<u>e</u>
	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
<u>Three - Yea</u>	r Rolling Bands						
2005 - 2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2006 - 2008	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2007 - 2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2008 - 2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2009 - 2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2010 - 2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%
2011 - 2013	44.60	0.00	0.00%	0.00	0.00%	0.00	0.00%
2012 - 2014	44.60	0.00	0.00%	0.00	0.00%	0.00	0.00%
2013 - 2015	2,459.03	0.00	0.00%	0.02	0.00%	(0.02)	0.00%
2014 - 2016	2,414.43	0.00	0.00%	0.02	0.00%	(0.02)	0.00%

367.00, 367.40, 367.41, 367.42, 367.45, 367.50, 367.60, 367.61, 367.62

*7	Orginal Cost Of		Gross Salv	<u>age</u>	Cost of Rem	<u>oval</u>	<u>Net Salva</u>	<u>ge</u>
<u>Year</u>	Retirements		Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Three - Year	r Rolling Bands							
1977 - 2016	21,049.08		754.13	3.58%	17,822.24	84.67%	(17,068.11)	-81.09%
Trend Analysi	s (End Year)		2016					
*Based Upon	Three - Year Rolling A	verages				<u>Lir</u>	Gross Salvage near Trend Analysis	
Annual Inflation	ce Life (ASL)	2.75%				2002-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend	0.03% 0.00% 0.00%
Years To ASL	ement Age (Yrs)	30.6 18.6				2012-2016	5 - Year Trend	0.00%
Inflation Factor	At 2.75% to ASL	1.65						
For	rcasted_							
Gross Salv (Five Y	rage 0.00 rear Trend))%						
Cost Of Re	moval 140.09	9%						
Net Salvage	e -140.09	9%						

Neg. Net Net Salvage Salv. % of Original Amount Cost of Ret.

Study Year

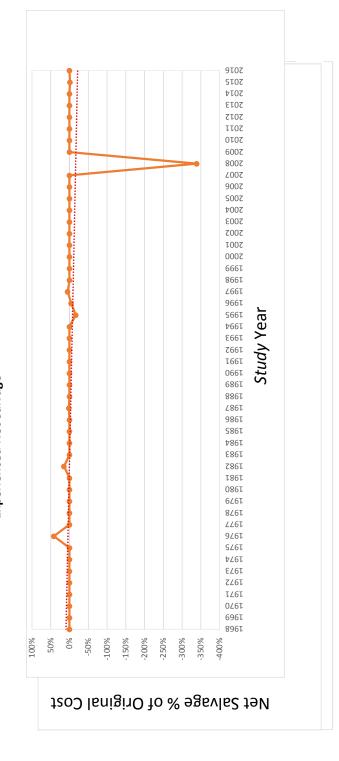
1971 1972

1973 1974 1975 1977 1977

369 Meas. And Reg. Station Equipment **Great Plains Natural Gas Company**

Experienced Net Salvage

-20%



.10%

GPNG-Proposed Net Salvage Percent

0.00% -16.56% -4.34% 4.94% 0.00%

-1,937

1982 1983 1984 1986 1986 1988 1990 1990 1991 1997 1996 1999 2000 2001 2002 2003

0.00% 0.00% 0.00%

0.00% 0.00% 0.00%

GPNG-Current Net Salvage Percent

0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%

1979 1980 1981

```
        2006
        0
        0.00%

        2007
        0
        0.00%

        2008
        -15,225
        -339.15%

        2009
        -165
        0.00%

        2011
        0
        0.00%

        2012
        0
        0.00%

        2013
        0
        0.00%

        2014
        0
        0.00%

        2015
        -130
        -1.48%

        2016
        -272
        0.00%
```

369.00 MEAS AND REG STATION EQUIPMENT

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>oval</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annuc	ul Activity							
1976	1,991.49	1,337.48	67.16%	506.78	25.45%	830.70	41.71%	
1977	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982	50.00	16.92	33.84%	9.54	19.08%	7.38	14.76%	
1983	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987	5,020.00	406.27	8.09%	331.49	6.60%	74.78	1.49%	
1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994	4,096.81	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995	2,300.00	0.48	0.02%	381.34	16.58%	(380.86)	-16.56%	
1996	44,627.20	11.15	0.02%	1,947.80	4.36%	(1,936.65)	-4.34%	
1997	1,500.00	74.15	4.94%	0.00	0.00%	74.15	4.94%	
1998	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003	4,267.88	0.00	0.00%	0.00	0.00%	0.00	0.00%	

369.00 MEAS AND REG STATION EQUIPMENT

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annual</u>	! Activity							
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2008	4,489.20	0.00	0.00%	15,225.00	339.15%	(15,225.00)	-339.15%	
2009	0.00	0.00	0.00%	164.58	0.00%	(164.58)	0.00%	
2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011	40,583.33	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2015	8,818.18	0.00	0.00%	130.35	1.48%	(130.35)	-1.48%	
2016	0.00	0.00	0.00%	271.98	0.00%	(271.98)	0.00%	

369.00 MEAS AND REG STATION EQUIPMENT

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Three - Yea</u>	ur Rolling Bands							
1976 - 1978	1,991.49	1,337.48	67.16%	506.78	25.45%	830.70	41.71%	
1977 - 1979	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978 - 1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979 - 1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980 - 1982	50.00	16.92	33.84%	9.54	19.08%	7.38	14.76%	
1981 - 1983	50.00	16.92	33.84%	9.54	19.08%	7.38	14.76%	
1982 - 1984	50.00	16.92	33.84%	9.54	19.08%	7.38	14.76%	
1983 - 1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984 - 1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985 - 1987	5,020.00	406.27	8.09%	331.49	6.60%	74.78	1.49%	
1986 - 1988	5,020.00	406.27	8.09%	331.49	6.60%	74.78	1.49%	
1987 - 1989	5,020.00	406.27	8.09%	331.49	6.60%	74.78	1.49%	
1988 - 1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989 - 1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990 - 1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991 - 1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992 - 1994	4,096.81	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993 - 1995	6,396.81	0.48	0.01%	381.34	5.96%	(380.86)	-5.95%	
1994 - 1996	51,024.01	11.63	0.02%	2,329.14	4.56%	(2,317.51)	-4.54%	
1995 - 1997	48,427.20	85.78	0.18%	2,329.14	4.81%	(2,243.36)	-4.63%	
1996 - 1998	46,127.20	85.30	0.18%	1,947.80	4.22%	(1,862.50)	-4.04%	
1997 - 1999	1,500.00	74.15	4.94%	0.00	0.00%	74.15	4.94%	
1998 - 2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999 - 2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000 - 2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001 - 2003	4,267.88	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002 - 2004	4,267.88	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003 - 2005	4,267.88	0.00	0.00%	0.00	0.00%	0.00	0.00%	

369.00 MEAS AND REG STATION EQUIPMENT

**	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>oval</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
2004 - 2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005 - 2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2006 - 2008	4,489.20	0.00	0.00%	15,225.00	339.15%	(15,225.00)	-339.15%	
2007 - 2009	4,489.20	0.00	0.00%	15,389.58	342.81%	(15,389.58)	-342.81%	
2008 - 2010	4,489.20	0.00	0.00%	15,389.58	342.81%	(15,389.58)	-342.81%	
2009 - 2011	40,583.33	0.00	0.00%	164.58	0.41%	(164.58)	-0.41%	
2010 - 2012	40,583.33	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011 - 2013	40,583.33	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012 - 2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013 - 2015	8,818.18	0.00	0.00%	130.35	1.48%	(130.35)	-1.48%	
2014 - 2016	8,818.18	0.00	0.00%	402.33	4.56%	(402.33)	-4.56%	

369.00 MEAS AND REG STATION EQUIPMENT

***	Orginal Cost Of	Gross Salv	<u>rage</u>	Cost of Rem	<u>oval</u>	<u>Net Salva</u>	<u>ge</u>
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Three - Year	Rolling Bands						
1976 - 2016	117,744.09	1,846.45	1.57%	18,968.86	16.11%	(17,122.41)	-14.54 %
Trend Analysis	(End Year)	2016					
*Based Upon T	hree - Year Rolling Avera	ges			<u>Li</u>	Gross Salvage near Trend Analysis	
Annual Inflation Average Service		5% 0.0			2002-2016	20 - Year Trend 15 - Year Trend	0.00%
Average Retiren		3.6				10 - Year Trend 5 - Year Trend	0.00% 0.00%
Years To ASL		6.4					
Inflation Factor	At 2.75% to ASL 2	.05					
Fore	<u>casted</u>						
Gross Salva (Five Ye	ear Trend)						
Cost Of Ren	noval 32.99%						
Net Salvage	-32.99%						

Neg. Net Salv. % of Original Study Year

Amount

Cost of Ret.

0.00% -0.21%

-0.35% -2.27% -14.10% -17.64%

20%

11.26% -2.27% 3.78% -119 945

Net Salvage % of Original Cost

%0

-14.80% -15.22% -2.96% 248 -392 -675

1978 1979 1980 1981 1982

-100%

-20%

%09-

-7.99% -4.08% -5.90% -158.88% -210 -7,838 -861 -768 -1,235

-150%

-94.01% -2.34% -29.47% -1,016 -398 -619

-200%

Study Year

-55% -55%

GPNG-Proposed Net Salvage Percent GPNG-Current Net Salvage Percent

8.69%

8,267

-27.92%

1992 1993

-47.84%

-29.25% -5.16% 25.95%

-365 -1,225 -240

1990 1991

1983 1984 1985 1986 1987 1989

7-15

Great Plains Natural Gas Company

376 Mains

Experienced Net Salvage

-0.29%

1969 1970

100%

0 -10 -13 -26 -127 -391

-189

1971 1972 1973 1974 1975 1976 1977

	1
Great Plains Natural Gas Company	
al Gas C	
SNatura	7
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Grea	ŀ

% of Original	Cost of Ret.	-107.31%	-9.35%	-42.96%	-27.58%	-18.76%	-57.60%	-59.45%	-43.54%	0.00%	-35.84%	-102.45%	0.00%	-139.52%	-81.90%	-27.72%	-50.46%	-31.67%	28.14%	-27.34%	-116.21%	-35.55%	-60.13%	-62.72%
Neg. Net Salv.	Amount	-2,161	-1,009	-4,018	-774	-4,924	-6,293	-2,443	-10,221	-87	-5,343	-19,919	0	-10,495	-19,390	-17,139	-8,212	-15,573	13,230	-11,316	-46,184	-51,887	-53,811	-62,301
	Study Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

Great Plains Natural Gas Company 376 Mains

376.00, 376.10, 376.11, 376.13, 376.20, 376.28, 376.30, 376.40, 376.50, 376.55, 376.56

	Orginal Cost Of	Gross Sal	vage	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annua</u>	ul Activity							
1967	162.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1968	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1969	4,498.35	0.00	0.00%	9.65	0.21%	(9.65)	-0.21%	
1970	4,531.90	0.00	0.00%	13.10	0.29%	(13.10)	-0.29%	
1971	7,375.06	0.00	0.00%	25.85	0.35%	(25.85)	-0.35%	
1972	5,601.83	0.00	0.00%	126.93	2.27%	(126.93)	-2.27%	
1973	2,772.00	121.31	4.38%	512.06	18.47%	(390.75)	-14.10%	
1974	1,070.37	101.69	9.50%	290.46	27.14%	(188.77)	-17.64%	
1975	8,389.81	1,507.11	17.96%	562.49	6.70%	944.62	11.26%	
1976	5,259.80	1,146.84	21.80%	1,266.07	24.07%	(119.23)	-2.27%	
1977	6,551.03	481.66	7.35%	233.85	3.57%	247.81	3.78%	
1978	2,578.17	139.29	5.40%	531.62	20.62%	(392.33)	-15.22%	
1979	22,809.39	2,992.17	13.12%	3,667.02	16.08%	(674.85)	-2.96%	
1980	5,818.16	706.62	12.15%	1,567.92	26.95%	(861.30)	-14.80%	
1981	9,615.41	835.54	8.69%	1,603.76	16.68%	(768.22)	-7.99%	
1982	5,134.59	0.00	0.00%	209.64	4.08%	(209.64)	-4.08%	
1983	4,933.23	6,679.87	135.41%	14,517.74	294.28%	(7,837.87)	-158.88%	
1984	20,917.41	638.03	3.05%	1,873.15	8.95%	(1,235.12)	-5.90%	
1985	43,375.04	297.92	0.69%	1,313.43	3.03%	(1,015.51)	-2.34%	
1986	422.97	37.55	8.88%	435.18	102.89%	(397.63)	-94.01%	
1987	2,100.51	96.75	4.61%	715.67	34.07%	(618.92)	-29.47%	
1988	343.44	198.32	57.75%	168.48	49.06%	29.84	8.69%	
1989	762.64	44.07	5.78%	408.94	53.62%	(364.87)	-47.84%	
1990	4,187.31	349.90	8.36%	1,574.87	37.61%	(1,224.97)	-29.25%	
1991	4,650.40	520.29	11.19%	760.32	16.35%	(240.03)	-5.16%	
1992	31,853.59	10,757.37	33.77%	2,490.33	7.82%	8,267.04	25.95%	
1993	3,059.79	88.45	2.89%	942.64	30.81%	(854.19)	-27.92%	
1994	2,013.98	190.24	9.45%	2,351.54	116.76%	(2,161.30)	-107.31%	

376.00, 376.10, 376.11, 376.13, 376.20, 376.28, 376.30, 376.40, 376.50, 376.55, 376.56

	Orginal Cost Of	Gross Salv	<u>rage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annu</u>	nal Activity							
1995	10,677.73	175.41	1.64%	1,184.20	11.09%	(1,008.79)	-9.45%	
1996	9,351.72	419.90	4.49%	4,437.54	47.45%	(4,017.64)	-42.96%	
1997	2,804.69	-102.58	-3.66%	670.97	23.92%	(773.55)	-27.58%	
1998	26,243.42	110.48	0.42%	5,034.77	19.18%	(4,924.29)	-18.76%	
1999	10,925.79	-201.37	-1.84%	6,091.67	55.75%	(6,293.04)	-57.60%	
2000	4,109.03	154.30	3.76%	2,597.30	63.21%	(2,443.00)	-59.45%	
2001	23,477.09	61.70	0.26%	10,282.52	43.80%	(10,220.82)	-43.54%	
2002	0.00	0.00	0.00%	86.92	0.00%	(86.92)	0.00%	
2003	14,906.77	417.06	2.80%	5,759.90	38.64%	(5,342.84)	-35.84%	
2004	19,442.22	0.00	0.00%	19,919.47	102.45%	(19,919.47)	-102.45%	
2005	23,189.19	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2006	7,522.33	310.78	4.13%	10,805.66	143.65%	(10,494.88)	-139.52%	
2007	23,676.15	77.86	0.33%	19,467.64	82.22%	(19,389.78)	-81.90%	
2008	61,822.64	0.00	0.00%	17,139.27	27.72%	(17,139.27)	-27.72%	
2009	16,276.21	0.00	0.00%	8,212.28	50.46%	(8,212.28)	-50.46%	
2010	49,168.12	0.00	0.00%	15,572.79	31.67%	(15,572.79)	-31.67%	
2011	47,021.39	0.00	0.00%	(13,229.98)	-28.14%	13,229.98	28.14%	
2012	41,395.73	0.00	0.00%	11,316.06	27.34%	(11,316.06)	-27.34%	
2013	39,743.05	0.00	0.00%	46,184.24	116.21%	(46,184.24)	-116.21%	
2014	145,944.46	0.00	0.00%	51,887.23	35.55%	(51,887.23)	-35.55%	
2015	89,497.42	2,000.00	2.23%	55,811.22	62.36%	(53,811.22)	-60.13%	
2016	99,326.93	0.00	0.00%	62,301.22	62.72%	(62,301.22)	-62.72%	

376.00, 376.10, 376.11, 376.13, 376.20, 376.28, 376.30, 376.40, 376.50, 376.55, 376.56

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
1967 - 1969	4,660.35	0.00	0.00%	9.65	0.21%	(9.65)	-0.21%	
1968 - 1970	9,030.25	0.00	0.00%	22.75	0.25%	(22.75)	-0.25%	
1969 - 1971	16,405.31	0.00	0.00%	48.60	0.30%	(48.60)	-0.30%	
1970 - 1972	17,508.79	0.00	0.00%	165.88	0.95%	(165.88)	-0.95%	
1971 - 1973	15,748.89	121.31	0.77%	664.84	4.22%	(543.53)	-3.45%	
1972 - 1974	9,444.20	223.00	2.36%	929.45	9.84%	(706.45)	-7.48%	
1973 - 1975	12,232.18	1,730.11	14.14%	1,365.01	11.16%	365.10	2.98%	
1974 - 1976	14,719.98	2,755.64	18.72%	2,119.02	14.40%	636.62	4.32%	
1975 - 1977	20,200.64	3,135.61	15.52%	2,062.41	10.21%	1,073.20	5.31%	
1976 - 1978	14,389.00	1,767.79	12.29%	2,031.54	14.12%	(263.75)	-1.83%	
1977 - 1979	31,938.59	3,613.12	11.31%	4,432.49	13.88%	(819.37)	-2.57%	
1978 - 1980	31,205.72	3,838.08	12.30%	5,766.56	18.48%	(1,928.48)	-6.18%	
1979 - 1981	38,242.96	4,534.33	11.86%	6,838.70	17.88%	(2,304.37)	-6.03%	
1980 - 1982	20,568.16	1,542.16	7.50%	3,381.32	16.44%	(1,839.16)	-8.94%	
1981 - 1983	19,683.23	7,515.41	38.18%	16,331.14	82.97%	(8,815.73)	-44.79%	
1982 - 1984	30,985.23	7,317.90	23.62%	16,600.53	53.58%	(9,282.63)	-29.96%	
1983 - 1985	69,225.68	7,615.82	11.00%	17,704.32	25.57%	(10,088.50)	-14.57%	
1984 - 1986	64,715.42	973.50	1.50%	3,621.76	5.60%	(2,648.26)	-4.09%	
1985 - 1987	45,898.52	432.22	0.94%	2,464.28	5.37%	(2,032.06)	-4.43%	
1986 - 1988	2,866.92	332.62	11.60%	1,319.33	46.02%	(986.71)	-34.42%	
1987 - 1989	3,206.59	339.14	10.58%	1,293.09	40.33%	(953.95)	-29.75%	
1988 - 1990	5,293.39	592.29	11.19%	2,152.29	40.66%	(1,560.00)	-29.47%	
1989 - 1991	9,600.35	914.26	9.52%	2,744.13	28.58%	(1,829.87)	-19.06%	
1990 - 1992	40,691.30	11,627.56	28.58%	4,825.52	11.86%	6,802.04	16.72%	
1991 - 1993	39,563.78	11,366.11	28.73%	4,193.29	10.60%	7,172.82	18.13%	
1992 - 1994	36,927.36	11,036.06	29.89%	5,784.51	15.66%	5,251.55	14.22%	
1993 - 1995	15,751.50	454.10	2.88%	4,478.38	28.43%	(4,024.28)	-25.55%	
1994 - 1996	22,043.43	785.55	3.56%	7,973.28	36.17%	(7,187.73)	-32.61%	

376.00, 376.10, 376.11, 376.13, 376.20, 376.28, 376.30, 376.40, 376.50, 376.55, 376.56

**	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>oval</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
1995 - 1997	22,834.14	492.73	2.16%	6,292.71	27.56%	(5,799.98)	-25.40%	
1996 - 1998	38,399.83	427.80	1.11%	10,143.28	26.41%	(9,715.48)	-25.30%	
1997 - 1999	39,973.90	-193.47	-0.48%	11,797.41	29.51%	(11,990.88)	-30.00%	
1998 - 2000	41,278.24	63.41	0.15%	13,723.74	33.25%	(13,660.33)	-33.09%	
1999 - 2001	38,511.91	14.63	0.04%	18,971.49	49.26%	(18,956.86)	-49.22%	
2000 - 2002	27,586.12	216.00	0.78%	12,966.74	47.00%	(12,750.74)	-46.22%	
2001 - 2003	38,383.86	478.76	1.25%	16,129.34	42.02%	(15,650.58)	-40.77%	
2002 - 2004	34,348.99	417.06	1.21%	25,766.29	75.01%	(25,349.23)	-73.80%	
2003 - 2005	57,538.18	417.06	0.72%	25,679.37	44.63%	(25,262.31)	-43.91%	
2004 - 2006	50,153.74	310.78	0.62%	30,725.13	61.26%	(30,414.35)	-60.64%	
2005 - 2007	54,387.67	388.64	0.71%	30,273.30	55.66%	(29,884.66)	-54.95%	
2006 - 2008	93,021.12	388.64	0.42%	47,412.57	50.97%	(47,023.93)	-50.55%	
2007 - 2009	101,775.00	77.86	0.08%	44,819.19	44.04%	(44,741.33)	-43.96%	
2008 - 2010	127,266.97	0.00	0.00%	40,924.34	32.16%	(40,924.34)	-32.16%	
2009 - 2011	112,465.72	0.00	0.00%	10,555.09	9.39%	(10,555.09)	-9.39%	
2010 - 2012	137,585.24	0.00	0.00%	13,658.87	9.93%	(13,658.87)	-9.93%	
2011 - 2013	128,160.17	0.00	0.00%	44,270.32	34.54%	(44,270.32)	-34.54%	
2012 - 2014	227,083.24	0.00	0.00%	109,387.53	48.17%	(109,387.53)	-48.17%	
2013 - 2015	275,184.93	2,000.00	0.73%	153,882.69	55.92%	(151,882.69)	-55.19%	
2014 - 2016	334,768.81	2,000.00	0.60%	169,999.67	50.78%	(167,999.67)	-50.18%	

376.00, 376.10, 376.11, 376.13, 376.20, 376.28, 376.30, 376.40, 376.50, 376.55, 376.56

Org	inal Cost Of	Gross Salva	<u>age</u>	Cost of Rem	<u>oval</u>	Net Salvage		
Y DAIR -	<u>etirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Year Rolli	ing Bands							
1967 - 2016	977,310.26	31,354.53	3.21%	379,705.60	38.85%	(348,351.07)	-35.64 %	
Trend Analysis (End	Year)	2016						
*Based Upon Three -	Year Rolling Average	s			<u>Lir</u>	Gross Salvage near Trend Analysis		
Annual Inflation Rate Average Service Life (Average Retirement A Years To ASL Inflation Factor At 2.75	ge (Yrs) 13.	1 2 9			2002-2016 2007-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	0.08% 0.00% 0.28% 0.84%	
Forcaste Gross Salvage (Five Year Tr Cost Of Removal Net Salvage	0.84% rend)							

Great Plains Natural Gas Company Trend

	t Salvage
	Net Net
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378 Meas & Reg Station Equipment-General **Great Plains Natural Gas Company**

Experienced Net Salvage

Net Salvage %
Neg Net

Salv.
Amount

Study Year

of Original

Cost of Ret.

0.00% 0.00%

> 1969 1970 1971

0.00% 0.00% 0.00% 00000

******* %0

-100%

-200%

-300%

Net Salvage % of Original Cost

-400%

-200%

%009-

-200%

100%

17.40% 2.33% 69.05% 0.00% 196 101 732 0 0 0 -56 0 0 0 0 0

1972 1973 1974 1975 1976

30.03% 0.00%

1979

1980 1981 1982 1983 1984

7-22

1978

0.00% 0.00% -102.51%

3.15% 0.00% 0.00%

0.00% 0.00%

1985 1986 1987 1988 1989

-11.25%

1990

1991 1992 1993

0.11% 0.00%

0.00%

0.00%

0.00%

GPNG-Current Net Salvage Percent GPNG-Proposed Net Salvage Percent

-15% -25%

91 ST ÞΤ 13 75 ττ 0T 60

72 TΖ 0Z 69 89 *Study* Year

Great Plains Natural Gas Company	Trend Analysis of Experienced Net Salvage
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Net salvage %	of Original	Cost of Ret.	
Neg. Net	Salv.	Amount	
		Study Year	

0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-162.46%	0.00%	%92.629-	-100.00%	0.00%	0.00%	0.00%	0.00%	-14.79%	0.00%	-38.59%	-11.07%
0	0	24	0	0	ø _P	-39	0	0	0	0	-12,560	0	-6,822	-1,950	0	0	0	0	-4,888	-1,736	-5,735	669-
1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

378 Meas & Reg Station Equipment-General

Great Plains Natural Gas Company

378.00 MEAS & REG STATION EQUIP - GENERAL

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annue	al Activity							
1974	1,126.58	258.87	22.98%	62.83	5.58%	196.04	17.40%	
1975	4,355.97	252.53	5.80%	151.09	3.47%	101.44	2.33%	
1976	1,059.55	731.59	69.05%	0.00	0.00%	731.59	69.05%	
1977	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978	1,416.12	430.92	30.43%	5.65	0.40%	425.27	30.03%	
1979	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981	54.60	4.58	8.39%	60.55	110.90%	(55.97)	-102.51%	
1982	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983	1,945.81	397.87	20.45%	336.63	17.30%	61.24	3.15%	
1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988	100.00	0.00	0.00%	11.25	11.25%	(11.25)	-11.25%	
1989	0.00	0.00	0.00%	122.70	0.00%	(122.70)	0.00%	
1990	931.52	2.80	0.30%	1.74	0.19%	1.06	0.11%	
1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996	8,366.87	77.64	0.93%	54.01	0.65%	23.63	0.28%	
1997	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1998	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999	0.00	0.00	0.00%	8.46	0.00%	(8.46)	0.00%	
2000	0.00	0.00	0.00%	39.05	0.00%	(39.05)	0.00%	
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

378.00 MEAS & REG STATION EQUIP - GENERAL

	Orginal Cost Of	Gross Salv	<u>age</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annua</u>	al Activity							
2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005	7,731.37	0.00	0.00%	12,560.38	162.46%	(12,560.38)	-162.46%	
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007	1,003.55	0.00	0.00%	6,821.77	679.76%	(6,821.77)	-679.76%	
2008	1,950.27	0.00	0.00%	1,950.27	100.00%	(1,950.27)	-100.00%	
2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011	6,991.24	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013	33,054.14	0.00	0.00%	4,887.64	14.79%	(4,887.64)	-14.79%	
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2015	14,860.50	0.00	0.00%	5,734.92	38.59%	(5,734.92)	-38.59%	
2016	6,308.20	0.00	0.00%	698.54	11.07%	(698.54)	-11.07%	

378.00 MEAS & REG STATION EQUIP - GENERAL

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Three - Yea</u>	r Rolling Bands							
1974 - 1976	6,542.10	1,242.99	19.00%	213.92	3.27%	1,029.07	15.73%	
1975 - 1977	5,415.52	984.12	18.17%	151.09	2.79%	833.03	15.38%	
1976 - 1978	2,475.67	1,162.51	46.96%	5.65	0.23%	1,156.86	46.73%	
1977 - 1979	1,416.12	430.92	30.43%	5.65	0.40%	425.27	30.03%	
1978 - 1980	1,416.12	430.92	30.43%	5.65	0.40%	425.27	30.03%	
1979 - 1981	54.60	4.58	8.39%	60.55	110.90%	(55.97)	-102.51%	
1980 - 1982	54.60	4.58	8.39%	60.55	110.90%	(55.97)	-102.51%	
1981 - 1983	2,000.41	402.45	20.12%	397.18	19.85%	5.27	0.26%	
1982 - 1984	1,945.81	397.87	20.45%	336.63	17.30%	61.24	3.15%	
1983 - 1985	1,945.81	397.87	20.45%	336.63	17.30%	61.24	3.15%	
1984 - 1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985 - 1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986 - 1988	100.00	0.00	0.00%	11.25	11.25%	(11.25)	-11.25%	
1987 - 1989	100.00	0.00	0.00%	133.95	133.95%	(133.95)	-133.95%	
1988 - 1990	1,031.52	2.80	0.27%	135.69	13.15%	(132.89)	-12.88%	
1989 - 1991	931.52	2.80	0.30%	124.44	13.36%	(121.64)	-13.06%	
1990 - 1992	931.52	2.80	0.30%	1.74	0.19%	1.06	0.11%	
1991 - 1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992 - 1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993 - 1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994 - 1996	8,366.87	77.64	0.93%	54.01	0.65%	23.63	0.28%	
1995 - 1997	8,366.87	77.64	0.93%	54.01	0.65%	23.63	0.28%	
1996 - 1998	8,366.87	77.64	0.93%	54.01	0.65%	23.63	0.28%	
1997 - 1999	0.00	0.00	0.00%	8.46	0.00%	(8.46)	0.00%	
1998 - 2000	0.00	0.00	0.00%	47.51	0.00%	(47.51)	0.00%	
1999 - 2001	0.00	0.00	0.00%	47.51	0.00%	(47.51)	0.00%	
2000 - 2002	0.00	0.00	0.00%	39.05	0.00%	(39.05)	0.00%	
2001 - 2003	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

378.00 MEAS & REG STATION EQUIP - GENERAL

***	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
2002 - 2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003 - 2005	7,731.37	0.00	0.00%	12,560.38	162.46%	(12,560.38)	-162.46%	
2004 - 2006	7,731.37	0.00	0.00%	12,560.38	162.46%	(12,560.38)	-162.46%	
2005 - 2007	8,734.92	0.00	0.00%	19,382.15	221.89%	(19,382.15)	-221.89%	
2006 - 2008	2,953.82	0.00	0.00%	8,772.04	296.97%	(8,772.04)	-296.97%	
2007 - 2009	2,953.82	0.00	0.00%	8,772.04	296.97%	(8,772.04)	-296.97%	
2008 - 2010	1,950.27	0.00	0.00%	1,950.27	100.00%	(1,950.27)	-100.00%	
2009 - 2011	6,991.24	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2010 - 2012	6,991.24	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011 - 2013	40,045.38	0.00	0.00%	4,887.64	12.21%	(4,887.64)	-12.21%	
2012 - 2014	33,054.14	0.00	0.00%	4,887.64	14.79%	(4,887.64)	-14.79%	
2013 - 2015	47,914.64	0.00	0.00%	10,622.56	22.17%	(10,622.56)	-22.17%	
2014 - 2016	21,168.70	0.00	0.00%	6,433.46	30.39%	(6,433.46)	-30.39%	

378.00 MEAS & REG STATION EQUIP - GENERAL

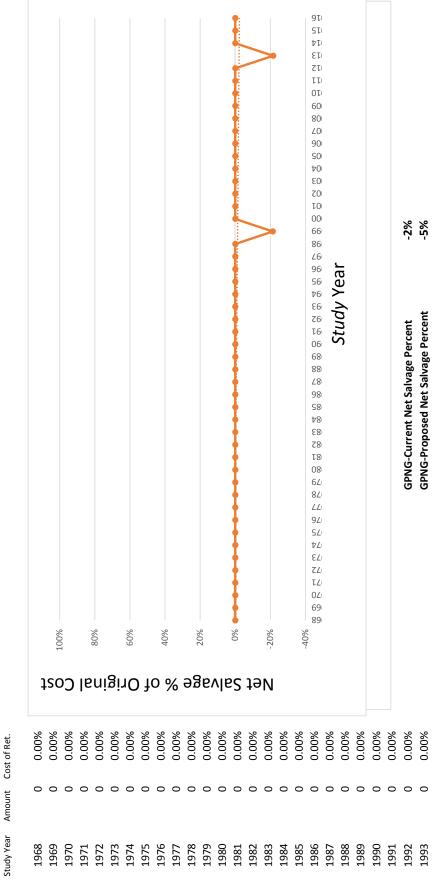
	Orginal Cost Of	•	Gross Salva	age_	Cost of Rem	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	-	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Year	Rolling Bands								
1974 - 2016	91,256.29		2,156.80	2.36%	33,507.48	36.72%	(31,350.68)	-34.35%	
Trend Analysi	s (End Year)		2016						
*Based Upon	Three - Year Rolling A	verages				<u>Lir</u>	Gross Salvage near Trend Analysis		
Years To ASL		2.75% 45.0 17.6 27.4 2.10				2002-2016 2007-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	0.00% 0.00% 0.00% 0.00%	
Gross Salv	moval 77.28	3%							

Great Plains Natural Gas Company Trend Analysis of Experienced Net Salvage

% of Original

Neg. Net Net Salvage

Great Plains Natural Gas Company 379 Meas & Reg Station Equipment-City Gate



379 Meas & Reg Station Equipment-City Gate Great Plains Natural Gas Company

Net Salvage	% of Original	Cost of Ret.
Neg. Net	Salv.	Amount
		Study Year

 Cost of Ret.	
Amount	
tudy Year	

0.00%	000	2014 2015 2016	
0.00%	0 -25,790	2012 2013	
0.00%	0	2011	
0.00%	0	2010	
0.00%	0	2009	
0.00%	0	2008	Λ
0.00%	0	2007	-3
0.00%	0	2006	7
0.00%	0	2002	
0.00%	0	2004	
0.00%	0	2003	
0.00%	0	2002	
0.00%	0	2001	
0.00%	0	2000	
-21.37%	-427	1999	
0.00%	0	1998	
0.00%	0	1997	
0.00%	0	1996	
0.00%	0	1995	
0.00%	0	1994	

0.00%	%00.0	%00.0	%00.0	0.00%	21.37%	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	21.61%	%00.0	%00.0	%00.0
0	0	0	0	0	-427	0	0	0	0	0	0	0	0	0	0	0	0	0	06,730	0	0	0
1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

379.00 MEAS & REG STATION EQUIP. - CITY GATE

	Orginal Cost Of	Gross Salv	age	Cost of Remo	<u>val</u>	<u>Net Salvage</u>			
<u>Year</u>	Retirements	<u>Amount</u>	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>		
<u>Annu</u>	al Activity								
1993	32,800.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1996	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1997	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1998	1,812.26	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1999	2,000.00	0.00	0.00%	427.38	21.37%	(427.38)	-21.37%		
2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2002	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2003	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2005	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2008	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2013	119,339.85	0.00	0.00%	25,790.28	21.61%	(25,790.28)	-21.61%		
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2016	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		

379.00 MEAS & REG STATION EQUIP. - CITY GATE

Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>val</u>	Net Salvage			
<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>		
r Rolling Bands								
32,800.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1,812.26	0.00	0.00%	0.00	0.00%	0.00	0.00%		
3,812.26	0.00	0.00%	427.38	11.21%	(427.38)	-11.21%		
3,812.26	0.00	0.00%	427.38	11.21%	(427.38)	-11.21%		
2,000.00	0.00	0.00%	427.38	21.37%	(427.38)	-21.37%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
119,339.85	0.00	0.00%	25,790.28	21.61%	(25,790.28)	-21.61%		
119,339.85	0.00	0.00%	25,790.28	21.61%	(25,790.28)	-21.61%		
119,339.85	0.00	0.00%	25,790.28	21.61%	(25,790.28)	-21.61%		
0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
	32,800.00 0.00 0.00 1,812.26 3,812.26 3,812.26 2,000.00 0.00 0.00 0.00 0.00 0.00 0.00	Amount Amount	Retirements Amount % 32,800.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 1,812.26 0.00 0.00% 3,812.26 0.00 0.00% 2,000.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 0.00 0.00 0.00% 119,339.85 0.00 0.00% 119,339.85	Amount	Amount	Amount % Amount % Amount % Amount \$2,800.00 0.00 0.00% 0.00 0.00% 0.00 0.00 0.00 0.00 0.00 0.00% 0.00 0.00% 0.00 0.00 0.00 1,812.26 0.00 0.00% 427.38 11.21% (427.38) (427.38) 3,812.26 0.00 0.00% 427.38 11.21% (427.38) (427.38) 2,000.00 0.00 0.00% 0.00 0.00% 0.00		

379.00 MEAS & REG STATION EQUIP. - CITY GATE

**	Orginal Cost Of	Gross S	<u>Salvage</u>	Cost of Rem	oval	<u>Net Salva</u>	<u>ge</u>
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Three - Year R	Colling Bands						
1993 - 2016	155,952.11	C	.00 0.00%	26,217.66	16.81%	(26,217.66)	-16.81%
Trend Analysis (End Year)	2016					
*Based Upon Th	ree - Year Rolling Averaç	jes			<u>Li</u>	Gross Salvage near Trend Analysis	
Annual Inflation R Average Service I Average Retirement Years To ASL	ent Age (Yrs)	5% 8.0 4.5 3.5			1997-2016 2002-2016 2007-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	0.00% 0.00% 0.00% 0.00%
Inflation Factor At	2.75% to ASL 1	44					
Force	asted						
Gross Salvag (Five Yea							
Cost Of Remo	oval 24.22%						
Net Salvage	-24.22%						

Great Plains Natural Gas Company

380 Services

Experienced Net Salvage

Net Salvage	% of Original	Cost of Ret.
	Neg. Net Salv. 9	Amount
		Study Year

-0.48% -5.96% 1969 1970

100%

20%

-13.50% -16.57% -7.33% -10.20% -312

1972

1971

5.33% -12.75% -8.78% -906 -870 814 -882 -911

1973 1974 1975

1976 1977 1978

%0

Net Salvage % of Original Cost

-15.01% -16.20% -1,704

-20%

%08-

9T ST

11 11 11

ΟŢ

-75% -75%

GPNG-Proposed Net Salvage Percent

GPNG-Current Net Salvage Percent

Study Year

-9.64% -11.22% -10.59% -40.29% -1,301 -777 -1,679 -1,297 -4,587 -3,956 -2,570 -2,570

1981

1979 1980

-100%

-150%

-31.96%

-25.61% -26.23%

-200%

-38.33% -61.47% -35.98% -3,564 -8,071

-75.96% -62.56%

-32.88%

-58.39%

-7,036

10,790

-6,098 -9,850

1988 1989 1990 1991 1992 1993

7-34

1982 1983 1984 1985 1986 1987

ns Natural Gas Company	Ilvsis of Experienced Net Salvage
3	Trend Analysis of Ex

Net Salvage % of Original Cost of Ret71 55%	-71.33%	-39.72%	0.09%	-49.18%	-52.52%	-62.93%	-103.77%	-40.75%	-81.58%	-104.64%	0.00%	-124.86%	-140.09%	-65.53%	-96.88%	-85.95%	0.00%	-20.60%	-140.40%	-23.92%	-39.51%	-31.25%
Neg. Net Salv. Amount -11 823	-11,623	-7,154	15	-21,212	-21,228	-10,101	-27,685	-3,609	-40,538	-30,403	0	-35,298	-42,180	-23,549	-15,774	-58,529	0	-9,984	-80,473	-40,880	-80,051	-63,241
Study Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1 2009	5010 35	2011	2012	2013	2014	2015	2016

Great Plains Natural Gas Company 380 Services

380.00, 380.07, 380.09, 380.10, 380.11, 380.55, 380.60, 380.61

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage			
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>		
Annua	al Activity								
	<u>,</u>								
1967	11.10	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1968	193.56	0.00	0.00%	0.00	0.00%	0.00	0.00%		
1969	3,029.03	0.00	0.00%	14.45	0.48%	(14.45)	-0.48%		
1970	3,699.59	0.00	0.00%	220.66	5.96%	(220.66)	-5.96%		
1971	3,666.36	0.00	0.00%	373.87	10.20%	(373.87)	-10.20%		
1972	4,262.85	0.00	0.00%	312.43	7.33%	(312.43)	-7.33%		
1973	6,710.49	220.55	3.29%	1,126.52	16.79%	(905.97)	-13.50%		
1974	5,250.22	283.51	5.40%	1,153.42	21.97%	(869.91)	-16.57%		
1975	15,280.74	2,333.76	15.27%	1,520.05	9.95%	813.71	5.33%		
1976	6,916.41	1,082.61	15.65%	1,964.59	28.40%	(881.98)	-12.75%		
1977	10,381.34	1,105.89	10.65%	2,017.38	19.43%	(911.49)	-8.78%		
1978	10,515.00	1,658.59	15.77%	3,362.18	31.98%	(1,703.59)	-16.20%		
1979	8,669.51	2,048.45	23.63%	3,349.33	38.63%	(1,300.88)	-15.01%		
1980	8,057.70	2,119.77	26.31%	2,896.44	35.95%	(776.67)	-9.64%		
1981	14,963.23	5,935.23	39.67%	7,614.34	50.89%	(1,679.11)	-11.22%		
1982	12,251.22	2,849.13	23.26%	4,146.18	33.84%	(1,297.05)	-10.59%		
1983	11,386.17	1,706.34	14.99%	6,293.42	55.27%	(4,587.08)	-40.29%		
1984	12,379.13	2,107.43	17.02%	6,063.81	48.98%	(3,956.38)	-31.96%		
1985	10,038.54	2,266.14	22.57%	4,836.59	48.18%	(2,570.45)	-25.61%		
1986	8,585.19	1,713.75	19.96%	3,965.53	46.19%	(2,251.78)	-26.23%		
1987	10,101.60	2,061.90	20.41%	5,933.45	58.74%	(3,871.55)	-38.33%		
1988	9,904.65	1,062.82	10.73%	4,626.84	46.71%	(3,564.02)	-35.98%		
1989	13,130.73	1,423.28	10.84%	9,494.24	72.31%	(8,070.96)	-61.47%		
1990	9,262.66	1,384.29	14.94%	8,420.48	90.91%	(7,036.19)	-75.96%		
1991	17,246.78	1,849.07	10.72%	12,639.41	73.29%	(10,790.34)	-62.56%		
1992	18,546.14	2,347.39	12.66%	8,445.47	45.54%	(6,098.08)	-32.88%		
1993	16,868.41	2,082.32	12.34%	11,932.56	70.74%	(9,850.24)	-58.39%		
1994	16,523.81	2,207.32	13.36%	14,030.48	84.91%	(11,823.16)	-71.55%		

380.00, 380.07, 380.09, 380.10, 380.11, 380.55, 380.60, 380.61

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>oval</u>	<u>Net Salvage</u>				
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>			
Annu	al Activity									
1995	16,983.65	2,156.45	12.70%	8,347.77	49.15%	(6,191.32)	-36.45%			
1996	18,012.18	1,915.34	10.63%	9,069.64	50.35%	(7,154.30)	-39.72%			
1997	16,398.15	2,853.46	17.40%	2,838.70	17.31%	14.76	0.09%			
1998	43,132.94	3,254.58	7.55%	24,466.39	56.72%	(21,211.81)	-49.18%			
1999	40,416.02	2,140.47	5.30%	23,368.49	57.82%	(21,228.02)	-52.52%			
2000	16,051.10	-476.19	-2.97%	9,624.69	59.96%	(10,100.88)	-62.93%			
2001	26,680.31	452.08	1.69%	28,136.94	105.46%	(27,684.86)	-103.77%			
2002	8,857.36	0.00	0.00%	3,609.10	40.75%	(3,609.10)	-40.75%			
2003	49,694.38	284.38	0.57%	40,822.70	82.15%	(40,538.32)	-81.58%			
2004	29,055.54	0.00	0.00%	30,403.18	104.64%	(30,403.18)	-104.64%			
2005	15,183.30	0.00	0.00%	0.00	0.00%	0.00	0.00%			
2006	28,268.79	0.00	0.00%	35,297.54	124.86%	(35,297.54)	-124.86%			
2007	30,108.54	41.88	0.14%	42,221.64	140.23%	(42,179.76)	-140.09%			
2008	35,935.04	0.00	0.00%	23,549.08	65.53%	(23,549.08)	-65.53%			
2009	16,282.02	0.00	0.00%	15,774.39	96.88%	(15,774.39)	-96.88%			
2010	68,094.39	0.00	0.00%	58,529.30	85.95%	(58,529.30)	-85.95%			
2011	59,917.05	0.00	0.00%	0.00	0.00%	0.00	0.00%			
2012	48,465.38	0.00	0.00%	9,983.90	20.60%	(9,983.90)	-20.60%			
2013	57,316.75	0.00	0.00%	80,473.18	140.40%	(80,473.18)	-140.40%			
2014	170,908.60	0.00	0.00%	40,880.21	23.92%	(40,880.21)	-23.92%			
2015	202,587.79	0.00	0.00%	80,050.50	39.51%	(80,050.50)	-39.51%			
2016	202,355.18	0.00	0.00%	63,241.33	31.25%	(63,241.33)	-31.25%			

380.00, 380.07, 380.09, 380.10, 380.11, 380.55, 380.60, 380.61

Voar	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	<u>Net Salvage</u>			
Year Retirements		Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>		
Three - Yea	ar Rolling Bands								
1967 - 1969	3,233.69	0.00	0.00%	14.45	0.45%	(14.45)	-0.45%		
1968 - 1970	6,922.18	0.00	0.00%	235.11	3.40%	(235.11)	-3.40%		
1969 - 1971	10,394.98	0.00	0.00%	608.98	5.86%	(608.98)	-5.86%		
1970 - 1972	11,628.80	0.00	0.00%	906.96	7.80%	(906.96)	-7.80%		
1971 - 1973	14,639.70	220.55	1.51%	1,812.82	12.38%	(1,592.27)	-10.88%		
1972 - 1974	16,223.56	504.06	3.11%	2,592.37	15.98%	(2,088.31)	-12.87%		
1973 - 1975	27,241.45	2,837.82	10.42%	3,799.99	13.95%	(962.17)	-3.53%		
1974 - 1976	27,447.37	3,699.88	13.48%	4,638.06	16.90%	(938.18)	-3.42%		
1975 - 1977	32,578.49	4,522.26	13.88%	5,502.02	16.89%	(979.76)	-3.01%		
1976 - 1978	27,812.75	3,847.09	13.83%	7,344.15	26.41%	(3,497.06)	-12.57%		
1977 - 1979	29,565.85	4,812.93	16.28%	8,728.89	29.52%	(3,915.96)	-13.24%		
1978 - 1980	27,242.21	5,826.81	21.39%	9,607.95	35.27%	(3,781.14)	-13.88%		
1979 - 1981	31,690.44	10,103.45	31.88%	13,860.11	43.74%	(3,756.66)	-11.85%		
1980 - 1982	35,272.15	10,904.13	30.91%	14,656.96	41.55%	(3,752.83)	-10.64%		
1981 - 1983	38,600.62	10,490.70	27.18%	18,053.94	46.77%	(7,563.24)	-19.59%		
1982 - 1984	36,016.52	6,662.90	18.50%	16,503.41	45.82%	(9,840.51)	-27.32%		
1983 - 1985	33,803.84	6,079.91	17.99%	17,193.82	50.86%	(11,113.91)	-32.88%		
1984 - 1986	31,002.86	6,087.32	19.63%	14,865.93	47.95%	(8,778.61)	-28.32%		
1985 - 1987	28,725.33	6,041.79	21.03%	14,735.57	51.30%	(8,693.78)	-30.27%		
1986 - 1988	28,591.44	4,838.47	16.92%	14,525.82	50.80%	(9,687.35)	-33.88%		
1987 - 1989	33,136.98	4,548.00	13.72%	20,054.53	60.52%	(15,506.53)	-46.80%		
1988 - 1990	32,298.04	3,870.39	11.98%	22,541.56	69.79%	(18,671.17)	-57.81%		
1989 - 1991	39,640.17	4,656.64	11.75%	30,554.13	77.08%	(25,897.49)	-65.33%		
1990 - 1992	45,055.58	5,580.75	12.39%	29,505.36	65.49%	(23,924.61)	-53.10%		
1991 - 1993	52,661.33	6,278.78	11.92%	33,017.44	62.70%	(26,738.66)	-50.77%		
1992 - 1994	51,938.36	6,637.03	12.78%	34,408.51	66.25%	(27,771.48)	-53.47%		
1993 - 1995	50,375.87	6,446.09	12.80%	34,310.81	68.11%	(27,864.72)	-55.31%		
1994 - 1996	51,519.64	6,279.11	12.19%	31,447.89	61.04%	(25,168.78)	-48.85%		

380.00, 380.07, 380.09, 380.10, 380.11, 380.55, 380.60, 380.61

V	Orginal Cost Of	Gross Salve	age_	Cost of Remo	<u>oval</u>	Net Salvage				
<u>Year</u>	<u>Retirements</u>	<u>Amount</u>	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>			
Three - Yea	r Rolling Bands									
1995 - 1997	51,393.98	6,925.25	13.47%	20,256.11	39.41%	(13,330.86)	-25.94%			
1996 - 1998	77,543.27	8,023.38	10.35%	36,374.73	46.91%	(28,351.35)	-36.56%			
1997 - 1999	99,947.11	8,248.51	8.25%	50,673.58	50.70%	(42,425.07)	-42.45%			
1998 - 2000	99,600.06	4,918.86	4.94%	57,459.57	57.69%	(52,540.71)	-52.75%			
1999 - 2001	83,147.43	2,116.36	2.55%	61,130.12	73.52%	(59,013.76)	-70.97%			
2000 - 2002	51,588.77	-24.11	-0.05%	41,370.73	80.19%	(41,394.84)	-80.24%			
2001 - 2003	85,232.05	736.46	0.86%	72,568.74	85.14%	(71,832.28)	-84.28%			
2002 - 2004	87,607.28	284.38	0.32%	74,834.98	85.42%	(74,550.60)	-85.10%			
2003 - 2005	93,933.22	284.38	0.30%	71,225.88	75.83%	(70,941.50)	-75.52%			
2004 - 2006	72,507.63	0.00	0.00%	65,700.72	90.61%	(65,700.72)	-90.61%			
2005 - 2007	73,560.63	41.88	0.06%	77,519.18	105.38%	(77,477.30)	-105.32%			
2006 - 2008	94,312.37	41.88	0.04%	101,068.26	107.16%	(101,026.38)	-107.12%			
2007 - 2009	82,325.60	41.88	0.05%	81,545.11	99.05%	(81,503.23)	-99.00%			
2008 - 2010	120,311.45	0.00	0.00%	97,852.77	81.33%	(97,852.77)	-81.33%			
2009 - 2011	144,293.46	0.00	0.00%	74,303.69	51.49%	(74,303.69)	-51.49%			
2010 - 2012	176,476.82	0.00	0.00%	68,513.20	38.82%	(68,513.20)	-38.82%			
2011 - 2013	165,699.18	0.00	0.00%	90,457.08	54.59%	(90,457.08)	-54.59%			
2012 - 2014	276,690.73	0.00	0.00%	131,337.29	47.47%	(131,337.29)	-47.47%			
2013 - 2015	430,813.14	0.00	0.00%	201,403.89	46.75%	(201,403.89)	-46.75%			
2014 - 2016	575,851.57	0.00	0.00%	184,172.04	31.98%	(184,172.04)	-31.98%			

380.00, 380.07, 380.09, 380.10, 380.11, 380.55, 380.60, 380.61

X 7	Orginal Cost Of	,	Gross Salva	<u>age</u>	Cost of Remo	<u>oval</u>	<u>Net Salvage</u>					
<u>Year</u>	Retirements		Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>				
Three - Year	Rolling Bands											
1967 - 2016	1,468,536.62		54,471.99	3.71%	757,442.79	51.58%	(702,970.80)	-47.87%				
Trend Analysis	(End Year)		2016									
*Based Upon T	hree - Year Rolling A	verages				<u>Lir</u>	Gross Salvage near Trend Analysis					
Annual Inflation	Rate	2.75%					20 - Year Trend	0.00%				
Average Service	e Life (ASL)	36.6					15 - Year Trend 10 - Year Trend	0.00% 0.00%				
Average Retiren	nent Age (Yrs)	14.8				2012-2016	5 - Year Trend	0.00%				
Years To ASL		21.9										
Inflation Factor	At 2.75% to ASL	1.81										
Fore	casted											
Gross Salva (Five Ye	nge 0.00 ear Trend)	0%										
Cost Of Ren	noval 93.3	7%										
Net Salvage												

9T

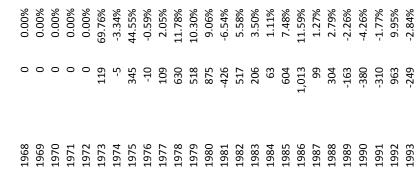
GPNG-Proposed Net Salvage Percent

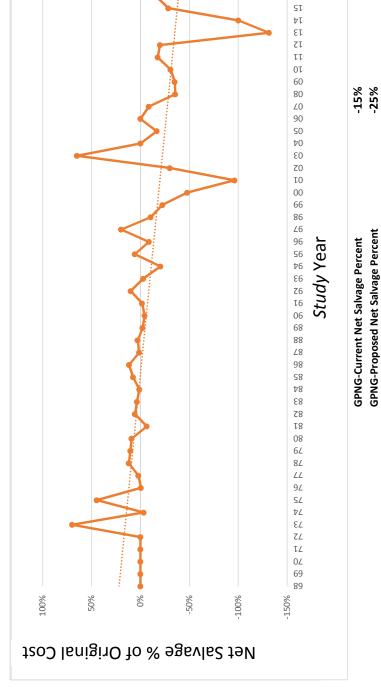
Trend Analysis of Experienced Net Salvage **Great Plains Natural Gas Company**

Great Plains Natural Gas Company

381 Meters

	vage	iginal	Ret.	
1	Net salvage	% of Original	Cost of Ret.	
		Neg. Net Salv.	Amount	
			Study Year	





Trend Analysis of Experienced Net Sa	N	Amount	-2,023 -2	719		7 2,123 19.64%	3 -1,190 -10.51%	9 -2,841 -22.45%	3,803 -47.77%	1 -4,627 -96.19%	2 -837 -30.04%	3 879 64.87%	4 0 0.00%	5 -3,096 -16.74%	90.00 0 9	7 -720 -8.66%	3 -14,503 -35.59%	9 -10,512 -35.09%	0 -14,641 -30.88%	1 -8,375 -17.69%	2 -13,783 -20.01%	3 -26,229 -131.49%	4 -40,540 -100.21%	5 -20,990 -28.59%	5 -26,863 -15.45%
Trend Analysis	Neg. Net	Ĭ		1995	1996	1997 2	1998 -1	1999 -2	20003	20014	2002	2003	2004	2005 -3	2006	2007	2008 -14	2009 -10	2010 -14	2011 -8	2012 -13	2013 -26	2014 -40	2015 -20	2016 -26
																		7_	12						

Great Plains Natural Gas Company 381 Meters

381.00 METERS & METER INSTALLATIONS

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	<u>Amount</u>	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annue	al Activity							
1973	170.56	163.88	96.08%	44.90	26.33%	118.98	69.76%	
1974	152.31	29.01	19.05%	34.09	22.38%	(5.08)	-3.34%	
1975	774.55	489.64	63.22%	144.59	18.67%	345.05	44.55%	
1976	1,762.35	673.74	38.23%	684.10	38.82%	(10.36)	-0.59%	
1977	5,329.02	1,186.34	22.26%	1,077.11	20.21%	109.23	2.05%	
1978	5,345.28	1,473.53	27.57%	843.81	15.79%	629.72	11.78%	
1979	5,031.17	1,389.09	27.61%	870.97	17.31%	518.12	10.30%	
1980	9,657.38	1,943.58	20.13%	1,068.14	11.06%	875.44	9.06%	
1981	6,509.41	1,822.98	28.01%	2,248.98	34.55%	(426.00)	-6.54%	
1982	9,273.91	2,252.51	24.29%	1,735.48	18.71%	517.03	5.58%	
1983	5,896.14	1,700.64	28.84%	1,494.17	25.34%	206.47	3.50%	
1984	5,668.22	2,020.69	35.65%	1,957.63	34.54%	63.06	1.11%	
1985	8,081.45	2,754.86	34.09%	2,150.70	26.61%	604.16	7.48%	
1986	8,741.75	3,348.68	38.31%	2,335.20	26.71%	1,013.48	11.59%	
1987	7,831.96	2,152.70	27.49%	2,053.39	26.22%	99.31	1.27%	
1988	10,877.26	2,828.31	26.00%	2,524.81	23.21%	303.50	2.79%	
1989	7,195.22	2,261.17	31.43%	2,423.97	33.69%	(162.80)	-2.26%	
1990	8,906.80	3,183.76	35.75%	3,563.59	40.01%	(379.83)	-4.26%	
1991	17,528.56	2,614.87	14.92%	2,925.18	16.69%	(310.31)	-1.77%	
1992	9,685.02	2,764.78	28.55%	1,801.49	18.60%	963.29	9.95%	
1993	8,743.42	2,430.86	27.80%	2,679.54	30.65%	(248.68)	-2.84%	
1994	9,873.13	3,302.78	33.45%	5,325.54	53.94%	(2,022.76)	-20.49%	
1995	12,680.57	3,354.60	26.45%	2,636.05	20.79%	718.55	5.67%	
1996	7,110.66	2,309.00	32.47%	2,928.76	41.19%	(619.76)	-8.72%	
1997	10,811.45	3,314.88	30.66%	1,191.58	11.02%	2,123.30	19.64%	
1998	11,327.77	2,603.54	22.98%	3,793.88	33.49%	(1,190.34)	-10.51%	
1999	12,650.25	1,735.96	13.72%	4,576.48	36.18%	(2,840.52)	-22.45%	
2000	7,962.23	-892.36	-11.21%	2,910.99	36.56%	(3,803.35)	-47.77%	

381.00 METERS & METER INSTALLATIONS

	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annua</u>	al Activity							
2001	4,810.23	875.37	18.20%	5,502.28	114.39%	(4,626.91)	-96.19%	
2002	2,785.89	0.00	0.00%	836.81	30.04%	(836.81)	-30.04%	
2003	1,355.00	1,130.94	83.46%	251.91	18.59%	879.03	64.87%	
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005	18,490.04	0.00	0.00%	3,096.00	16.74%	(3,096.00)	-16.74%	
2006	358.09	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007	8,315.63	0.00	0.00%	720.00	8.66%	(720.00)	-8.66%	
2008	40,745.88	0.00	0.00%	14,503.00	35.59%	(14,503.00)	-35.59%	
2009	29,955.12	0.00	0.00%	10,512.00	35.09%	(10,512.00)	-35.09%	
2010	47,416.28	0.00	0.00%	14,641.22	30.88%	(14,641.22)	-30.88%	
2011	47,355.16	0.00	0.00%	8,375.22	17.69%	(8,375.22)	-17.69%	
2012	68,873.87	0.00	0.00%	13,782.56	20.01%	(13,782.56)	-20.01%	
2013	19,947.14	0.00	0.00%	26,229.17	131.49%	(26,229.17)	-131.49%	
2014	40,455.20	0.00	0.00%	40,539.78	100.21%	(40,539.78)	-100.21%	
2015	73,420.08	0.00	0.00%	20,989.69	28.59%	(20,989.69)	-28.59%	
2016	173,828.93	90.84	0.05%	26,953.97	15.51%	(26,863.13)	-15.45%	

381.00 METERS & METER INSTALLATIONS

Year Orginal Cost Of		Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
1973 - 1975	1,097.42	682.53	62.19%	223.58	20.37%	458.95	41.82%	
1974 - 1976	2,689.21	1,192.39	44.34%	862.78	32.08%	329.61	12.26%	
1975 - 1977	7,865.92	2,349.72	29.87%	1,905.80	24.23%	443.92	5.64%	
1976 - 1978	12,436.65	3,333.61	26.80%	2,605.02	20.95%	728.59	5.86%	
1977 - 1979	15,705.47	4,048.96	25.78%	2,791.89	17.78%	1,257.07	8.00%	
1978 - 1980	20,033.83	4,806.20	23.99%	2,782.92	13.89%	2,023.28	10.10%	
1979 - 1981	21,197.96	5,155.65	24.32%	4,188.09	19.76%	967.56	4.56%	
1980 - 1982	25,440.70	6,019.07	23.66%	5,052.60	19.86%	966.47	3.80%	
1981 - 1983	21,679.46	5,776.13	26.64%	5,478.63	25.27%	297.50	1.37%	
1982 - 1984	20,838.27	5,973.84	28.67%	5,187.28	24.89%	786.56	3.77%	
1983 - 1985	19,645.81	6,476.19	32.96%	5,602.50	28.52%	873.69	4.45%	
1984 - 1986	22,491.42	8,124.23	36.12%	6,443.53	28.65%	1,680.70	7.47%	
1985 - 1987	24,655.16	8,256.24	33.49%	6,539.29	26.52%	1,716.95	6.96%	
1986 - 1988	27,450.97	8,329.69	30.34%	6,913.40	25.18%	1,416.29	5.16%	
1987 - 1989	25,904.44	7,242.18	27.96%	7,002.17	27.03%	240.01	0.93%	
1988 - 1990	26,979.28	8,273.24	30.67%	8,512.37	31.55%	(239.13)	-0.89%	
1989 - 1991	33,630.58	8,059.80	23.97%	8,912.74	26.50%	(852.94)	-2.54%	
1990 - 1992	36,120.38	8,563.41	23.71%	8,290.26	22.95%	273.15	0.76%	
1991 - 1993	35,957.00	7,810.51	21.72%	7,406.21	20.60%	404.30	1.12%	
1992 - 1994	28,301.57	8,498.42	30.03%	9,806.57	34.65%	(1,308.15)	-4.62%	
1993 - 1995	31,297.12	9,088.24	29.04%	10,641.13	34.00%	(1,552.89)	-4.96%	
1994 - 1996	29,664.36	8,966.38	30.23%	10,890.35	36.71%	(1,923.97)	-6.49%	
1995 - 1997	30,602.68	8,978.48	29.34%	6,756.39	22.08%	2,222.09	7.26%	
1996 - 1998	29,249.88	8,227.42	28.13%	7,914.22	27.06%	313.20	1.07%	
1997 - 1999	34,789.47	7,654.38	22.00%	9,561.94	27.49%	(1,907.56)	-5.48%	
1998 - 2000	31,940.25	3,447.14	10.79%	11,281.35	35.32%	(7,834.21)	-24.53%	
1999 - 2001	25,422.71	1,718.97	6.76%	12,989.75	51.10%	(11,270.78)	-44.33%	
2000 - 2002	15,558.35	-16.99	-0.11%	9,250.08	59.45%	(9,267.07)	-59.56%	

381.00 METERS & METER INSTALLATIONS

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
2001 - 2003	8,951.12	2,006.31	22.41%	6,591.00	73.63%	(4,584.69)	-51.22%	
2002 - 2004	4,140.89	1,130.94	27.31%	1,088.72	26.29%	42.22	1.02%	
2003 - 2005	19,845.04	1,130.94	5.70%	3,347.91	16.87%	(2,216.97)	-11.17%	
2004 - 2006	18,848.13	0.00	0.00%	3,096.00	16.43%	(3,096.00)	-16.43%	
2005 - 2007	27,163.76	0.00	0.00%	3,816.00	14.05%	(3,816.00)	-14.05%	
2006 - 2008	49,419.60	0.00	0.00%	15,223.00	30.80%	(15,223.00)	-30.80%	
2007 - 2009	79,016.63	0.00	0.00%	25,735.00	32.57%	(25,735.00)	-32.57%	
2008 - 2010	118,117.28	0.00	0.00%	39,656.22	33.57%	(39,656.22)	-33.57%	
2009 - 2011	124,726.56	0.00	0.00%	33,528.44	26.88%	(33,528.44)	-26.88%	
2010 - 2012	163,645.31	0.00	0.00%	36,799.00	22.49%	(36,799.00)	-22.49%	
2011 - 2013	136,176.17	0.00	0.00%	48,386.95	35.53%	(48,386.95)	-35.53%	
2012 - 2014	129,276.21	0.00	0.00%	80,551.51	62.31%	(80,551.51)	-62.31%	
2013 - 2015	133,822.42	0.00	0.00%	87,758.64	65.58%	(87,758.64)	-65.58%	
2014 - 2016	287,704.21	90.84	0.03%	88,483.44	30.76%	(88,392.60)	-30.72%	

381.00 METERS & METER INSTALLATIONS

X 7	Orginal Cost Of	Gross S	Gross Salvage		oval	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Three - Year</u>	Rolling Bands							
1973 - 2016	793,690.34	57,311	.17 7.22%	244,958.73	30.86%	(187,647.56)	-23.64%	
Trend Analysis	(End Year)	2016						
*Based Upon T	hree - Year Rolling Aver	ages			<u>Li</u>	Gross Salvage near Trend Analysis		
Annual Inflation Average Service Average Retirer Years To ASL	e Life (ASL) nent Age (Yrs)	75% 45.0 16.8 28.2 2.15			2002-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	0.00% 0.00% 0.01% 0.03%	
	casted	2.10						
Gross Salva (Five Ye	age 0.03% ear Trend)							
Cost Of Ren Net Salvage								

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9%

GPNG-Proposed Net Salvage Percent GPNG-Current Net Salvage Percent

Study Year

Great Plains Natural Gas Company Trend

Great Plains Natural Gas Company

383 Service Regulators

Experienced Net Salvage

Net Sal	
Experienced	Net Salvage %
d Analysis of Experienced Net Sal	Neg Net
70	

Net Salvage % of Original Cost of Ret. Neg. Net Salv. Amount Study Year

0.00%

1969 1970

100%

0.00% 0.00% 0.00% 0.00% 00000000000000000000000

1971

80%

%09

0.00%

0.00% 0.00%

1972 1973 1974 1975 1976 1977 1978 1979

40%

Net Salvage % of Original Cost

20%

%0

0.00% 0.00% 0.00% 0.00%

0.00% 0.00%

-50%

-40%

0.00% 0.00%

0.00%

0.00% 0.00%

0.00% 0.00%

1985 1986 1987 1988 1989 1990 1991 1992 1993

1984

7-48

1982 1983

Great Plains Natural Gas Company Trend Analysis of Experienced Net Salvage

Net Salvage %	of Original	Cost of Ret.	
	Salv.	Amount	
		Study Year	

0.00%	0.00%	5.26%	-3.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	0.00%	-17.67%	-2.47%
0	0	4	-27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0	-16,875	-1,131
1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

Great Plains Natural Gas Company 383 Service Regulators

383.00 HOUSE REGULATORS

	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annuc	al Activity							
1978	111.71	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980	172.89	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989	1,504.70	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993	845.98	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995	6,849.64	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996	76.57	8.55	11.17%	4.52	5.90%	4.03	5.26%	
1997	724.25	0.00	0.00%	27.17	3.75%	(27.17)	-3.75%	
1998	1,988.84	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999	5,955.74	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002	394.16	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003	402.16	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

383.00 HOUSE REGULATORS

	Orginal Cost Of	Gross Salv	<u>age</u>	Cost of Remo	val	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annua	ıl Activity							
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2008	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013	12,516.30	36.32	0.29%	0.00	0.00%	36.32	0.29%	
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2015	95,484.91	0.00	0.00%	16,874.83	17.67%	(16,874.83)	-17.67%	
2016	45,802.31	0.00	0.00%	1,130.74	2.47%	(1,130.74)	-2.47%	

383.00 HOUSE REGULATORS

	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	ur Rolling Bands							
1978 - 1980	284.60	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979 - 1981	172.89	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980 - 1982	172.89	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981 - 1983	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982 - 1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983 - 1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984 - 1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985 - 1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986 - 1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987 - 1989	1,504.70	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988 - 1990	1,504.70	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989 - 1991	1,504.70	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990 - 1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991 - 1993	845.98	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992 - 1994	845.98	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993 - 1995	7,695.62	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994 - 1996	6,926.21	8.55	0.12%	4.52	0.07%	4.03	0.06%	
1995 - 1997	7,650.46	8.55	0.11%	31.69	0.41%	(23.14)	-0.30%	
1996 - 1998	2,789.66	8.55	0.31%	31.69	1.14%	(23.14)	-0.83%	
1997 - 1999	8,668.83	0.00	0.00%	27.17	0.31%	(27.17)	-0.31%	
1998 - 2000	7,944.58	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999 - 2001	5,955.74	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000 - 2002	394.16	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001 - 2003	796.32	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002 - 2004	796.32	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003 - 2005	402.16	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2004 - 2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2005 - 2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

383.00 HOUSE REGULATORS

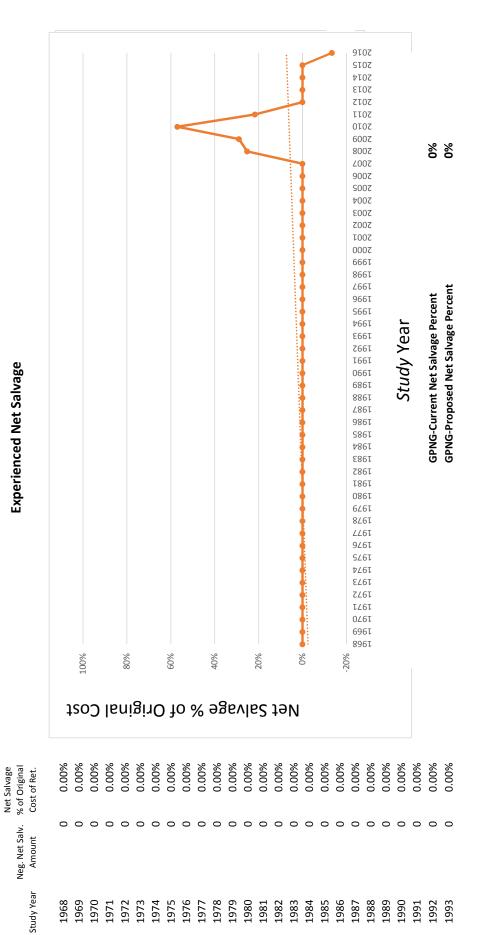
**	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u> <u>Amount</u>		<u>%</u>	
Three - Yea	r Rolling Bands							
2006 - 2008	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007 - 2009	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2008 - 2010	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2009 - 2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2010 - 2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2011 - 2013	12,516.30	36.32	0.29%	0.00	0.00%	36.32	0.29%	
2012 - 2014	12,516.30	36.32	0.29%	0.00	0.00%	36.32	0.29%	
2013 - 2015	108,001.21	36.32	0.03%	16,874.83	15.62%	(16,838.51)	-15.59%	
2014 - 2016	141,287.22	0.00	0.00%	18,005.57	12.74%	(18,005.57)	-12.74%	

383.00 HOUSE REGULATORS

*7	Orginal Cost Of	Gra	oss Salv	<u>age</u>	Cost of Rem	<u>oval</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amou	nt	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Year	Rolling Bands								
1978 - 2016	172,830.16		44.87	0.03%	18,037.26	10.44%	(17,992.39)	-10.41%	
Trend Analysis	s (End Year)	2016							
*Based Upon T	hree - Year Rolling Averaç	jes				<u>Lir</u>	Gross Salvage near Trend Analysis		
Annual Inflation Average Service		5% 0.0					20 - Year Trend 15 - Year Trend	0.06% 0.12%	
Average Retirer	ment Age (Yrs)	5.9					10 - Year Trend 5 - Year Trend	0.15% 0.05%	
Years To ASL Inflation Factor		92							
<u>For</u>	casted								
Gross Salva (Five Ye	age 0.05% ear Trend)								
Cost Of Rer	noval 20.10%								
Net Salvage	-20.05%								

Great Plains Natural Gas Company 390 General Structures

Experienced Net Salvage



8%

Great Plains Natural Gas Company Trend Analysis of Experienced Net Salvage

Great Plains Natural Gas Company 390 General Structures

Experienced Net Salvage

390.00, 390.01

	Orginal Cost Of	Gross Salv	<u>age</u>	Cost of Remo	<u>val</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annud	al Activity							
1977	12,047.77	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982	25,211.84	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983	810.45	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996	2,461.02	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1997	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1998	22,891.15	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000	129,072.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002	767.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003	625.50	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2004	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

390.00, 390.01

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annua	l Activity							
2005	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2008	672,199.77	175,133.00	26.05%	5,571.39	0.83%	169,561.61	25.22%	
2009	59,805.58	17,410.28	29.11%	111.68	0.19%	17,298.60	28.92%	
2010	38,681.66	26,538.47	68.61%	4,492.59	11.61%	22,045.88	56.99%	
2011	69,660.64	17,500.00	25.12%	2,418.70	3.47%	15,081.30	21.65%	
2012	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2016	3,074.58	0.00	0.00%	411.90	13.40%	(411.90)	-13.40%	

390.00, 390.01

	Orginal Cost Of	Gross Salva	<u>ige</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	ur Rolling Bands							
1977 - 1979	12,047.77	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978 - 1980	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979 - 1981	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980 - 1982	25,211.84	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981 - 1983	26,022.29	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982 - 1984	26,022.29	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983 - 1985	810.45	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984 - 1986	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985 - 1987	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986 - 1988	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987 - 1989	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988 - 1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989 - 1991	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990 - 1992	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991 - 1993	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992 - 1994	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993 - 1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994 - 1996	2,461.02	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995 - 1997	2,461.02	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996 - 1998	25,352.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1997 - 1999	22,891.15	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1998 - 2000	151,963.32	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999 - 2001	129,072.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000 - 2002	129,839.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001 - 2003	1,392.50	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2002 - 2004	1,392.50	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003 - 2005	625.50	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2004 - 2006	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

390.00, 390.01

	Orginal Cost Of	Gross Salve	age	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
2005 - 2007	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2006 - 2008	672,199.77	175,133.00	26.05%	5,571.39	0.83%	169,561.61	25.22%	
2007 - 2009	732,005.35	192,543.28	26.30%	5,683.07	0.78%	186,860.21	25.53%	
2008 - 2010	770,687.01	219,081.75	28.43%	10,175.66	1.32%	208,906.09	27.11%	
2009 - 2011	168,147.88	61,448.75	36.54%	7,022.97	4.18%	54,425.78	32.37%	
2010 - 2012	108,342.30	44,038.47	40.65%	6,911.29	6.38%	37,127.18	34.27%	
2011 - 2013	69,660.64	17,500.00	25.12%	2,418.70	3.47%	15,081.30	21.65%	
2012 - 2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013 - 2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014 - 2016	3,074.58	0.00	0.00%	411.90	13.40%	(411.90)	-13.40%	

390.00, 390.01

***	Orginal Cost	t O f	Gross Salv	<u>age</u>	Cost of Remo	<u>oval</u>	Net Salvage		
<u>Year</u>	Retiremen		Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Band	<u>'s</u>							
1977 - 2016	1,037,309	9.13	236,581.75	22.81%	13,006.26	1.25%	223,575.49	21.55%	
Trend Analys	sis (End Year)		2016						
*Based Upon	Three - Year Rolli	ng Averages				<u>Lir</u>	Gross Salvage near Trend Analysis		
Years To ASL	ice Life (ASL) rement Age (Yrs)	2.75% 45.0 19.4 25.6 2.00				2002-2016 2007-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	21.09% 20.72% 7.65% 0.00%	
Gross Salv	Year Trend)	0.00% 2.50% 2.50%							

Trend Analysis of Experienced Net Salvage

392.10 Transportation Equipment-Trailers **Great Plains Natural Gas Company**

Experienced Net Salvage

Neg. Net Salv. % of Original Cost of Ret. Amount

Study Year

0.00% 0.00% 0.00% 0.00% 0.00% 000000000000000000000000

1972 1973

1969 1970 1971 1974 1975 1976

80%

100%

0.00% 0.00% 0.00%

%09

0.00%

40%

Net Salvage % of Original Cost

0.00% 0.00% 0.00%

20%

0.00% 0.00%

1977 1978 1979 1980 1981 1982 1983

%0

0.00% 0.00% 0.00%

7-62

0.00% 0.00%

1985 1986 1987

0.00%

1988 1989

1990

0.00%

0.00% 0.00%

GPNG-Proposed Net Salvage Percent GPNG-Current Net Salvage Percent

0% 10%

9107 2015

6007

966T 966T 766T 266T 766T 066T

686T 886T **4861** 9861 S86T 1983 786T 1861 086T 6**2**6T 879£ 226T 926T SZ6T 744T EZ6T 767 τ26τ 0Δ6τ 696T 896T

Study Year

8%

Net Salvage	% of Original Cost of Ret.	0.00%	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	%00.0	0.00%	0.00%	0.00%	%00.0	%00.0	55.25%	71.22%	%00.0	0.00%	0.00%	0.00%	0.00%	%00.0
	Neg. Net Salv. Amount	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,550	1,225	0	0	0	0	0	0
	Study Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

Great Plains Natural Gas Company 392.10 Transportation Equipment-Trailers

Experienced Net Salvage

392.10 TRANSPORTATION EQUIP. - TRAILERS

	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
<u>Annua</u>	l Activity							
2009	22,714.33	12,550.00	55.25%	0.00	0.00%	12,550.00	55.25%	
2010	1,720.00	1,225.00	71.22%	0.00	0.00%	1,225.00	71.22%	
2011	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012	1,383.92	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2016	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	

392.10 TRANSPORTATION EQUIP. - TRAILERS

X 7	Orginal Cost Of	Gross Salv	<u>age</u>	Cost of Rem	<u>oval</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Year	Rolling Bands							
2009 - 2011	24,434.33	13,775.00	56.38%	0.00	0.00%	13,775.00	56.38%	
2010 - 2012	3,103.92	1,225.00	39.47%	0.00	0.00%	1,225.00	39.47%	
2011 - 2013	1,383.92	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2012 - 2014	1,383.92	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2013 - 2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014 - 2016	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2009 - 2016	25,818.25	13,775.00	53.35%	0.00	0.00%	13,775.00	53.35%	
Trend Analysis		2016				Gross Salvage		
*Based Upon T	Three - Year Rolling Aver	ages			<u>Lir</u>	near Trend Analysis		
Annual Inflation	Rate 2.	.75%			1997-2016	20 - Year Trend	15.98%	
Average Service	e Life (ASL)	12.0				15 - Year Trend	15.98%	
Average Retirer	ment Age (Yrs)	11.6				10 - Year Trend 5 - Year Trend	15.98% 0.00%	
Years To ASL		0.4						
Inflation Factor	At 2.75% to ASL	1.01						
<u>For</u>	casted							
Gross Salva (Five Ye	age 0.00% ear Trend)							
Cost Of Rer	noval 0.00%							
Net Salvage	0.00%							

20%

GPNG-Proposed Net Salvage Percent

GPNG-Current Net Salvage Percent

0.00%

Great Plains Natural Gas Company

392.20 Transportation Equipment-Cars & Trucks **Great Plains Natural Gas Company**

Experienced Net Salvage

Trend Analysis of Experienced Net Salvage 0.00% Neg. Net Net Salvage Salv. % of Original Cost of Ret. 00000000000000000000000 Amount Study Year 1973 1974 1975 1976 1977 1979 1980 1981 1982 1983 1985 1986 1987 1988 1989 1990 1970 1971 1972 7-66

\$8000
tsoJ leniginO fo % egevle2 teN

Great Plains Natural Gas Co	392.20 Transportation Equipment-Cars & Trucks
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Net Salvage % of Original	Cost of Ret.	0.00%	%00.0	%00.0	%00.0	%00.0	%00.0	0.00%	%00.0	%00.0	%00.0	0.00%	%00.0	%00.0	%00.0	%00.0	32.83%	24.36%	41.14%	29.28%	%00.0	33.46%	25.98%	18.08%
Neg. Net N	Amount C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,200	83,656	9,700	2,600	36,050	0	24,700	17,250	47,100
	Study Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

392.20 TRANSPORTATION EQUIP

	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Remo	<u>val</u>	<u>Net Salvage</u>		
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annua	ıl Activity							
2008	-48,137.91	17,200.00	0.00%	0.00	0.00%	17,200.00	0.00%	
2009	254,794.62	83,656.00	32.83%	0.00	0.00%	83,656.00	32.83%	
2010	39,812.64	9,700.00	24.36%	0.00	0.00%	9,700.00	24.36%	
2011	18,474.35	7,600.00	41.14%	0.00	0.00%	7,600.00	41.14%	
2012	123,103.18	36,050.00	29.28%	0.00	0.00%	36,050.00	29.28%	
2013	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2014	73,825.68	24,700.00	33.46%	0.00	0.00%	24,700.00	33.46%	
2015	66,386.68	17,250.00	25.98%	0.00	0.00%	17,250.00	25.98%	
2016	260,501.66	47,100.00	18.08%	0.00	0.00%	47,100.00	18.08%	

392.20 TRANSPORTATION EQUIP

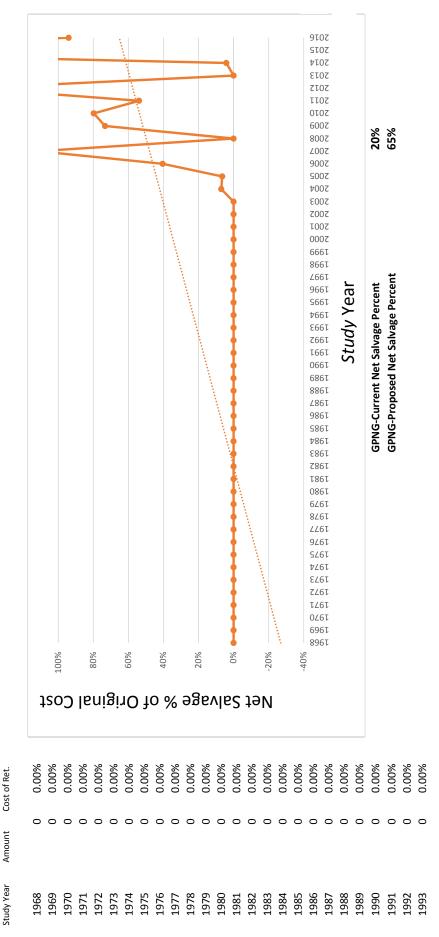
	Orginal Cost Of	Gross Salv	<u>age</u>	Cost of Rem	<u>oval</u>	<u>Net Salva</u>	<u>ige</u>	
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	r Rolling Bands							
2008 - 2010	246,469.35	110,556.00	44.86%	0.00	0.00%	110,556.00	44.86%	
2009 - 2011	313,081.61	100,956.00	32.25%	0.00	0.00%	100,956.00	32.25%	
2010 - 2012	181,390.17	53,350.00	29.41%	0.00	0.00%	53,350.00	29.41%	
2011 - 2013	141,577.53	43,650.00	30.83%	0.00	0.00%	43,650.00	30.83%	
2012 - 2014	196,928.86	60,750.00	30.85%	0.00	0.00%	60,750.00	30.85%	
2013 - 2015	140,212.36	41,950.00	29.92%	0.00	0.00%	41,950.00	29.92%	
2014 - 2016	400,714.02	89,050.00	22.22%	0.00	0.00%	89,050.00	22.22%	
2008 - 2016	788,760.90	243,256.00	30.84%	0.00	0.00%	243,256.00	30.84%	
Trend Analys	sis (End Year)	2016						
*Based Upon	Three - Year Rolling Avera	iges			<u>Lir</u>	Gross Salvage near Trend Analysis		
Annual Inflation	on Rate 2.7	75%			1997-2016	20 - Year Trend	31.53%	
Average Serv	ice Life (ASL)	7.0				15 - Year Trend 10 - Year Trend	31.53% 31.53%	
Average Retir	rement Age (Yrs)	6.0			2012-2016		24.06%	
Years To ASL		1.0						
Inflation Facto	or At 2.75% to ASL	1.03						
Fo	orcasted							
Gross Salv (Five \	vage 24.06% Year Trend)							
Cost Of Re	emoval 0.00%							
Net Salvag	ge 24.06%							

Great Plains Natural Gas Company Trend Analysis of Experienced Net Salvage

Net Salvage Net Salv. % of Original

Great Plains Natural Gas Company 396 Power Operated Equipment

Experienced Net Salvage



Great Plains Natural Gas Company Trend Analysis of Experienced Net Salvage

Net Salvage % of Original	Cost of Ret.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.02%	%05'9	40.48%	111.46%	0.00%	73.33%	79.81%	23.96%	148.95%	0.00%	4.18%	319.65%	94.13%
Neg. Net Salv.	Amount	0	0	0	0	0	0	0	0	0	0	424	30,183	63,510	70,559	167,648	40,264	120,084	111,838	270,801	207,447	11,373	244,604	426,516
	Study Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

Great Plains Natural Gas Company 396 Power Operated Equipment

Experienced Net Salvage

396.00 POWER OPERATED EQUIPMENT

	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	Retirements	<u>Amount</u>	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Annua	ul Activity							
1976	193,678.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1977	13,215.42	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979	8,672.75	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980	10,254.28	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981	8,356.08	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982	4,502.98	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984	23,835.59	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986	32,865.24	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987	2,649.16	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988	38,989.27	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989	2,354.82	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991	28,827.43	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992	2,823.90	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993	21,426.84	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994	1,352.78	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996	23,161.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1997	4,011.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1998	59,064.36	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999	11,132.08	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2000	39,929.14	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2001	19,268.00	6,500.00	33.73%	227.50	1.18%	6,272.50	32.55%	
2002	-3,683.42	0.00	0.00%	0.00	0.00%	0.00	0.00%	
2003	94,579.96	85,121.19	90.00%	0.00	0.00%	85,121.19	90.00%	

396.00 POWER OPERATED EQUIPMENT

	Orginal Cost Of	Gross Sal	<u>vage</u>	Cost of Remo	<u>val</u>	<u>Net Salvage</u>			
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>		
<u>Annua</u>	el Activity								
2004	6,037.28	424.00	7.02%	0.00	0.00%	424.00	7.02%		
2005	464,516.21	30,183.00	6.50%	0.00	0.00%	30,183.00	6.50%		
2006	156,879.90	63,510.00	40.48%	0.00	0.00%	63,510.00	40.48%		
2007	63,302.79	70,559.00	111.46%	0.00	0.00%	70,559.00	111.46%		
2008	-53,189.59	167,648.41	0.00%	0.00	0.00%	167,648.41	0.00%		
2009	54,905.20	40,263.89	73.33%	0.00	0.00%	40,263.89	73.33%		
2010	150,454.37	120,084.07	79.81%	0.00	0.00%	120,084.07	79.81%		
2011	207,254.74	111,837.67	53.96%	0.00	0.00%	111,837.67	53.96%		
2012	181,811.16	270,800.99	148.95%	0.00	0.00%	270,800.99	148.95%		
2013	0.00	207,446.53	0.00%	0.00	0.00%	207,446.53	0.00%		
2014	272,372.41	11,373.49	4.18%	0.00	0.00%	11,373.49	4.18%		
2015	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
2016	453,096.83	426,516.37	94.13%	0.00	0.00%	426,516.37	94.13%		

396.00 POWER OPERATED EQUIPMENT

	Orginal Cost Of	Gross Salve	<u>age</u>	Cost of Remo	<u>val</u>	Net Salvage		
<u>Year</u>	<u>Retirements</u>	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>	
Three - Yea	ur Rolling Bands							
1976 - 1978	206,893.42	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1977 - 1979	21,888.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1978 - 1980	18,927.03	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1979 - 1981	27,283.11	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1980 - 1982	23,113.34	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1981 - 1983	12,859.06	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1982 - 1984	28,338.57	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1983 - 1985	23,835.59	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1984 - 1986	56,700.83	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1985 - 1987	35,514.40	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1986 - 1988	74,503.67	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1987 - 1989	43,993.25	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1988 - 1990	41,344.09	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1989 - 1991	31,182.25	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1990 - 1992	31,651.33	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1991 - 1993	53,078.17	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1992 - 1994	25,603.52	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1993 - 1995	22,779.62	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1994 - 1996	24,513.78	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1995 - 1997	27,172.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1996 - 1998	86,236.36	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1997 - 1999	74,207.44	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1998 - 2000	110,125.58	0.00	0.00%	0.00	0.00%	0.00	0.00%	
1999 - 2001	70,329.22	6,500.00	9.24%	227.50	0.32%	6,272.50	8.92%	
2000 - 2002	55,513.72	6,500.00	11.71%	227.50	0.41%	6,272.50	11.30%	
2001 - 2003	110,164.54	91,621.19	83.17%	227.50	0.21%	91,393.69	82.96%	
2002 - 2004	96,933.82	85,545.19	88.25%	0.00	0.00%	85,545.19	88.25%	
2003 - 2005	565,133.45	115,728.19	20.48%	0.00	0.00%	115,728.19	20.48%	

396.00 POWER OPERATED EQUIPMENT

**	Orginal Cost Of	Gross Salv	<u>rage</u>	Cost of Remo	<u>val</u>	Net Salvage			
<u>Year</u>	Retirements	Amount %		Amount	<u>%</u>	Amount	<u>%</u>		
Three - Yea	r Rolling Bands								
2004 - 2006	627,433.39	94,117.00	15.00%	0.00	0.00%	94,117.00	15.00%		
2005 - 2007	684,698.90	164,252.00	23.99%	0.00	0.00%	164,252.00	23.99%		
2006 - 2008	166,993.10	301,717.41	180.68%	0.00	0.00%	301,717.41	180.68%		
2007 - 2009	65,018.40	278,471.30	428.30%	0.00	0.00%	278,471.30	428.30%		
2008 - 2010	152,169.98	327,996.37	215.55%	0.00	0.00%	327,996.37	215.55%		
2009 - 2011	412,614.31	272,185.63	65.97%	0.00	0.00%	272,185.63	65.97%		
2010 - 2012	539,520.27	502,722.73	93.18%	0.00	0.00%	502,722.73	93.18%		
2011 - 2013	389,065.90	590,085.19	151.67%	0.00	0.00%	590,085.19	151.67%		
2012 - 2014	454,183.57	489,621.01	107.80%	0.00	0.00%	489,621.01	107.80%		
2013 - 2015	272,372.41	218,820.02	80.34%	0.00	0.00%	218,820.02	80.34%		
2014 - 2016	725,469.24	437,889.86	60.36%	0.00	0.00%	437,889.86	60.36%		

396.00 POWER OPERATED EQUIPMENT

**	Orginal Cost Of	Gross Salv	<u>vage</u>	Cost of Rem	<u>oval</u>	Net Sal	<u>vage</u>
<u>Year</u>	Retirements	Amount	<u>%</u>	Amount	<u>%</u>	Amount	<u>%</u>
Three - Year	Rolling Bands						
1976 - 2016	2,598,707.96	1,612,268.61	62.04%	227.50	0.01%	1,612,041.1	1 62.03%
Trend Analysis	(End Year)	2016					
*Based Upon T	hree - Year Rolling Avera	ges			<u>Lir</u>	Gross Salvage near Trend Analysis	<u>s</u>
Annual Inflation Average Service Average Retiren Years To ASL	e Life (ASL) nent Age (Yrs)	5% 7.0 4.0 3.0			2002-2016	20 - Year Trend 15 - Year Trend 10 - Year Trend 5 - Year Trend	165.70% 145.56% 69.38% 57.58%
Inflation Factor	At 2.75% to ASL 1	.08					
Fore	casted						
Gross Salva (Five Ye	nge 57.58% ear Trend)						
Cost Of Ren	noval 0.01%						
Net Salvage	57.57%						