NORTHERN UTILITIES, INC.
NEW HAMPSHIRE DIVISION

DOCKET 11-069

ATTACHMENT PMN-2

DEPRECIATION ACCRUAL RATE STUDY

Depreciation Accrual Rates
Based on Gas Plant in Service
At December 31, 2010

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APPENDIX

LETTER OF TRANSMITTAL

MANAGEMENT APPLICATIONS CONSULTING, INC.

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April 15, 2011

Mr. Dan Main
Assistant Controller
Unitil Services Corporation
6 Liberty Lane West
Hampton, NH 03842

Dear Mr. Main:

In accordance with your authorization, Management Applications Consulting, Inc. (MAC) has completed a depreciation rate study of the depreciable gas utility property of the Northern Utilities, Inc. New Hampshire Division ("the Company") on plant in service as of December 31, 2010. The results of this study are presented in the attached report.

This study was accomplished by our organization, with the assistance of your staff and others within your organization. Our depreciation study develops accrual rates defined as straight line, broad group, whole life using the family of Iowa curves.

We appreciate the opportunity to have been of service.

Respectfully,

Management Applications Consulting, Inc.

Paul M. Normand
Principal

Enclosures

I. FOREWORD

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This report presents the results of detailed studies of the relevant characteristics of the depreciable gas plant in service of Northern Utilities, Inc., New Hampshire Division. The recommendations regarding annual depreciation accrual calculations have been developed on plant in service at December 31, 2010, and are applicable until subsequent studies indicate the need for revision. In our opinion, based on our analyses, experience and judgment, the straight line, broad group, whole life depreciation accrual rates developed herein will provide for the proper and timely recovery of capital invested in the depreciable gas properties of the Company.

II. SUMMARY

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A. FINDINGS

Management Applications Consulting, Inc. ("MAC") has completed a study of the service life characteristics of certain capital investments of Northern Utilities, Inc. New Hampshire Division ("the Company") gas property as of December 31, 2010. The study develops average service lives, mortality characteristics, net salvage estimates, whole life accrual rates. Additional information is also provided for the average remaining lives, amortization of the reserve variance, and accrual rates with amortization for each depreciable investment group (subaccounts and accounts).

1. Average Service Life (ASL)

This study results in differences in average service life estimates from those on which the existing accrual rates are based. The following tabulation shows the dollar-weighted composite average service life of the Company's functional plant using EOY 2010 plant balances.

	Proposed	Prior Study @ 12/31/00	Prior Study @ 12/31/06
Distribution	39.2 yr.	40.1	39.3
General	14.3 yr.	12.9	13.4
Total	36.6 yr.	37.7	36.4

It should be noted that our unit of measure is the (original cost) dollar; that is, we do not estimate the life of meters as opposed to services as opposed to mains, etc. Furthermore, the average dollar service life estimates we develop are typically at the plant account level, as opposed to the property unit level. The account-by-account detail and results are provided in the attached whole life with amortization of reserve variance, Schedule of Depreciation Accrual Rates @ 12/31/10 (Schedule A).

2. Curve Types

The most commonly recognized curve type or frequency distribution is the "bell curve." Our depreciation study used a group of well recognized distributions known as Iowa curves which were developed in the 1920s and 1930s at Iowa State University and we believe they are the most widely used and accepted curves in the industry for establishing survivor curves and average service lives.

This study deals with most property at the plant account (or sub account) level, so our assumed distributions (Iowa curves) are for each entire plant account (or sub account) and every vintage within each account.

3. Net Salvage

Over the past two or more decades, a marked trend towards less positive net salvage has developed, and in most cases, negative net salvage has appeared (cost of removal exceeding gross salvage receipts, i.e., higher net removal cost). As most of the costs to remove or costs to retire are labor related, this is a natural result of increasing labor costs. Increasing environmental regulations have also contributed to lower gross salvage and higher costs to retire.

The overall objective of depreciation is to recover the original cost investment less any salvage values plus the removal cost, which objective is in accord with the various Uniform Systems of Accounts. The accrual rates developed in this study reflect net salvage values based upon the most recent actual historical experience of the Company, modified by our judgment and experience.

In order to provide additional information with respect to the cost of removal ("COR") component included in the proposed Accrual Rates of Schedule A in the net salvage of column (6), a separate calculation was undertaken to isolate the COR component which is shown in column (18) of Schedule A. The actual calculations for supporting these COR have been provided in Appendix A.

The following table compares the functional composite proposed Net Salvage % to the current Net Salvage %, based upon dollar weighting with EOY 2010 balances:

NET SALVAGE COMPARISON

	Proposed %	**Current %**
Distribution	(35.0)	(37.3)
General	0.4	0.7
Total	(33.5)	(35.9)

4. Magnitude of Depreciation Accrual Expense

The following table provides a total plant functional level comparison of the depreciation accrual expense developed by applying the effective current and proposed plant account level accrual rates of this study to the year-end 2010 balances:

Northern Utilities, Inc. New Hampshire Division
Depreciation Accrual Rates Based on
Gas Plant in Service at December 31, 2010

Plant Function	Balance at 12/31/10 $000	Proposed Accrual Rate, %	Current Accrual Rate, %	Estimated Accruals/w Proposed Rates ($000)	Estimated Accruals/w Current Rates ($000)
Distribution	119.4	3.37	3.49	4,006.4	4,153.6
General	5.0	6.97	7.50	350.2	376.7
Total	124.4	3.52	3.66	4,356.6	4,530.3

Note that the proposed whole life results are taken from the attached Schedule A (columns 1 and 8) of this depreciation accrual rate study. The proposed accrual rates are developed using the broad group procedure, straight line method and the whole life technique. The current accrual rates are taken from the attached Schedule B which is based upon a prior study.

Our Schedule B comparison of proposed and current accrual rates results in an annual depreciation expense reduction of $173,658 or 3.8% less based on plant balances ending 12/31/2010.

5. Proposed Accrual Rates

Our study developed two separate accrual rate schedules (previously referred to) for each Gas Plant account as follows:

Schedule A Schedule of Depreciation Accrual Rates – Column 8 of this schedule presents the proposed whole life accrual rates; Column 15 presents the annual amortization amounts we propose to eliminate the calculated reserve variance (Column 13) using a remaining life technique.

Schedule B Schedule of Current vs. Proposed Whole Life Accrual Rates.

The following tables summarize our proposed accrual rate results as presented on the attached depreciation Schedule A along with the current accrual rates utilized by the Company:

Northern Utilities, Inc. New Hampshire Division
Depreciation Accrual Rates Based on
Gas Plant in Service at December 31, 2010

Gas Plant Account	Proposed Accrual Rate w/ Net Salvage (%)	Current Accrual Rate w/ Net Salvage (%)
Distribution		
375.20	1.75	2.86
375.70	1.75	2.63
376.20	2.78	2.78
376.30	F.D.	N/A
376.40	3.05	2.78
376.50	8.34	8.34
376.60	6.25	6.95
376.80	F.D.	N/A
378.20	3.50	3.50
380.00	3.89	4.62
381.00	3.33	3.33
382.00	3.33	3.44
383.00	2.86	3.33
386.00	10.00	10.00
General		
391.10	8.16	9.09
391.11	10.00	10.00
394.00	5.26	5.41
396.00	6.00	6.67
397.00	8.33	10.00
397.35	6.67	6.67

Note: F.D. = Fully Depreciated
N/A = Not Applicable

B. RECOMMENDATIONS

Based on our results of analyzing the Company's depreciable property, we recommend that the Company:

1. Request approval of the accrual rates shown in Column 8 of the whole life accrual rate schedule (Schedule A) included in this report plus the annual amounts of Column 15 to amortize the indicated reserve variance amounts.

2. Undertake future reviews of these accrual rates on a periodic basis, typically every five to seven years.

3. Account 393 is fully depreciated. However, we propose that any future additions to this plant account use a whole life rate of 7.69% based on a 13-year ASL.

Our review of Accounts 376.30, Mains, Bare Steel, and 376.80, Mains, Cast Iron, shows them to be fully depreciated.

III. INTRODUCTION

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A. STUDY AUTHORIZATION

In the first quarter of 2011, Management Applications Consulting, Inc. (MAC), of Reading, Pennsylvania was authorized to conduct a depreciation rate study of Northern Utilities, Inc.'s New Hampshire Division gas utility properties.

The study included detailed analyses of the depreciable gas plant in service at December 31, 2010, for the purpose of recommending depreciation accrual rates reflective of current facts and projections. The techniques used were those generally recognized and accepted in the industry, and included analyses of historical plant investment experience of the Company, forecasts of expected capital expenditures, and reviews of recent available cost of removal and salvage experience. Consideration also was given to the likely near-term impact of changing technology and its influence as to obsolescence.

B. DESCRIPTION OF DEPRECIATION

Depreciation is the process by which capital invested in depreciable assets is recovered; complete recovery is not automatic even though the depreciation accrual rates are carefully determined. Depreciation expense is one of the largest single items on a utility's income statement.

The overall objective of depreciation is to provide an orderly recovery of capital investment in depreciable property in a systematic and rational manner over a life term that assures full recovery of that investment. Regulatory accounting also provides for the amortization of any costs of removal expected to be incurred less anticipated salvage, i.e., net salvage, at the time the property is finally retired from service by incorporating net salvage adjustments into the annual depreciation accrual rates. This approach ensures that these costs will be properly recovered in an equitable manner from those using the facilities over the useful service life of an asset.

There are several definitions of depreciation. The definitions promulgated by the Federal Energy Regulatory Commission (FERC) and the National Association of Regulatory Utility Commissioners (NARUC) are essentially identical. Following is the NARUC definition:

> "*'Depreciation', as applied to depreciable electric (gas) plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric (gas) plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by*

insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities (and in the case of natural gas companies, the exhaustion of natural resources)."

C. GENERAL APPROACH TO CONDUCTING DEPRECIATION STUDIES

The MAC depreciation studies are consistent with the generally accepted approaches employed in the industry to determine appropriate annual depreciation accrual rates. In addition to reviewing and analyzing historical accounting records, engineering judgment is used in assessing historical experience as a possible indicator of the future. To this end, MAC becomes familiar with the property and its operations via site inspections and discussions with appropriate management personnel as to past practices and experience, as well as future plans and expectations, which could have had or may yet affect mortality patterns, average service lives, cost of removal or salvage. These approaches to preparing a depreciation study are typical of industry practices and provide a solid foundation for life and net salvage estimation.

D. DEPRECIATION SYSTEM

Our depreciation system for this study consisted of using a straight line method, broad group procedure, average whole life technique which uses the same accrual factor each year over the service life of the various plant accounts and subaccounts being analyzed. Due to the existence of very large quantities of assets, utility plant is generally grouped into broad groups of plant accounts and subaccounts in which the unit of measure is the original cost dollar.

Depreciable plant must be recovered over a defined period of time, and our depreciation model used the whole life technique for calculating the annual accrual rates proposed. These rates are derived by using an estimated service life and include the estimated net salvage for each plant account:

$$\text{Whole Life Accrual Rate} = \frac{100\% - \text{Net Salvage (NS)\%}}{\text{Average Service Life (ASL), Years}}$$

The account-by-account results are presented in the attached Schedule A. Schedule A, "Schedule of Depreciation Accrual Rates" develops the proposed accrual rates in column 8 which rates have the net salvage factored into them. A separate column 18 has been provided which identifies the cost of removal (COR) component included in the proposed accrual rates of column 8. Appendix A presents the derivation of these COR factors.

IV. DEVELOPMENT OF DEPRECIATION STUDY

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A. DATABASE

The starting point of our depreciation study is the development of a database which includes the Company's additions, retirements, adjustments, transfers and plant balances by depreciable account and subaccount. Within the depreciation study database, we refer to each separately identified group of assets as a data set. A data set may include the plant investment history for one primary plant account or subaccount or even one location or material type within the account.

The Company provided semi-actuarial historical data for the gas plant database to 12/31/2010. Each data set is readily accessible for analysis by its identifying account and location number.

B. ANALYSIS OF HISTORY

The historical life analysis employed in this study was the Simulated Plant-Balances (SPR-BAL). The SPR-BAL analysis was introduced in 1947 by Mr. Alex Bauhan of Public Service Electric and Gas and is widely used and accepted in the industry.

The analyses are a trial and error procedure in which the survivor statistics for various empirical (Iowa) curves are applied to the actual annual capital addition amounts to generate simulated year-end balances which are then compared to actual year-end balances. The best-fitting life is found for each curve type and the curve-life combinations are then ranked according to the sum of the squared differences between actual and simulated balances. In the procedure, there are three key statistical reliability indications developed for each curve-life combination. They are: the conformance index (C.I.), which is mathematically inter-related to the sum of the squared differences between the book and simulated balances; the retirement index (R.I.); and the cycle index.

The retirement index is the percent retired from the oldest addition with the given indicated curve-life combination. The cycle index is the age of the oldest addition as a percent of the maximum probable life of the given curve-life combination. Maximum Probable Life (MPL) is the age at which the survivor curve drops to zero surviving, e.g., with a standard bell/symmetrical curve, the MPL is twice the average service life.

The findings of life analyses of history, such as the SPR analyses, regrettably are often over-emphasized; however, the key role of the depreciation engineer is life-estimation, not life analysis. The depreciation engineer or depreciation expert must know the

equipment within the group being studied, he must be familiar with the types of life analyses employed, the effect on these life analyses of a number of events, and other considerations, including whether the maximum probable life is realistic for the property. In fact, an understanding of the equipment/property in the given account is the most important point in evaluating statistical life analysis results, such as those of SPR-BAL.

C. SALVAGE, COST OF REMOVAL AND NET SALVAGE ANALYSIS

The Company provided available gross salvage and removal cost for a period of over 20 years for total gas plant; however, salvage and removal cost history by plant account was not readily available. These data were related to the corresponding retirements to develop annual and dollar-weighted, multi-year composite gross salvage, removal cost and net salvage percentage values.

Since the Company provided data for both gross salvage and cost of removal, the net salvage values were simply calculated as their difference:

Net Salvage (NS) = Gross Salvage (GS) – Cost of Removal (COR)

The inclusion of net salvage in determining the annual accrual rate for each account is a well-established and appropriate calculation. Recognizing the uniqueness of each account's NS history in arriving at the final accrual coupled with the corresponding plant balances properly synchronizes and weights the results. This approach ensures that the cost of net salvage is recovered from those generations of customers benefiting from the asset over its service life. Our proposed net salvage percentages are shown in the attached Schedule A of this study.

The most significant outcome of our analyses of the COR/Salvage data is that the 5-, 10-, and 15-year bands analyzed yielded net salvage percents very, very close to the composite of the prior study account level estimates dollar weighted with 2010 account balances. That estimate in composite is (35.9)%.

V. DISCUSSION OF RESULTS

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A. APPLICATION OF COST RECOVERY

In the recovery of capital by public utilities, there are two techniques most commonly employed to determine annual depreciation accruals, the whole life technique and the remaining life technique. The whole life technique involves the application of predetermined depreciation accrual rates (the reciprocal of the estimated average whole life) to the average gross investment in depreciable properties throughout their existence (that is, the life span of any survivors), adjusted for estimated net salvage. The remaining life technique is a function of two variables, the net unrecovered plant investment (plant investment less book reserve less estimated net salvage) and the average remaining life, with the accrual equal to the unrecovered plant divided by the average remaining life. The average remaining life for an investment group is a function of the age distribution of the surviving investment, the average whole life of the group, and the mortality characteristic (curve type, a.k.a. retirement frequency distribution). Although remaining life accrual rates are accepted in most regulatory jurisdictions, New Hampshire is amongst the minority that do not.

Utility property is never static; it is always changing. The components, technology, life expectations, retirement characteristics, salvage receipts, and removal costs are seldom, if ever, constant. Consequently, the purpose of periodic depreciation studies is to detect the changes that have occurred since the last study, to measure the effect of these changes on the recovery of presently surviving capital and to properly revise, based upon current knowledge and expectations, the capital recovery rate(s). Most of the changes that occur are occasioned by the demands of current customers for more reliable equipment, better service, more economical operation, etc. These circumstances, compounded by diminishing gross salvage and increasing cost of removal, often result in cumulative variances between prior recoveries of capital and that which might have been recovered given the present outlook and prospective capital recovery rate. The course of action to be taken when such variances occur is to adopt accrual rates which will first arrest their growth, and second, if possible, dissolve the variances over a reasonable period of time.

There are only two points in the life of depreciable property at which we can be certain exactly what the depreciation reserve should be: 1) when new property is first placed in service, and the reserve is zero, and 2) when the property is finally retired and the costs of retirement are known, and the reserve should again be zero. Any reserve measurement between these two dates is approximate, but cannot be ignored since the primary goal is to charge capital expense to those who use the capital assets. Reserve measurement involves the computation of a theoretical depreciation reserve which is compared to the book reserve, i.e., the Accumulated Provision for Depreciation. Remaining life accrual rates are more appropriate than whole life rates in that they compensate for the indicated reserve variance, although the same effect can be realized by adding the reserve variance

annual amount (column 15) to the whole life accrual of column 9 if the amortization period is the average remaining life.

For mass properties (like mains and services), statistical mortality studies of past retirement experience may provide historical indication of the dispersion of retirements and of average service life, if there has been sufficient retirement activity over a reasonable period of time. Such indication can sometimes provide a guide as to what to expect in the future, but it should not be taken for granted that the future will mirror the past, especially when policies, plans, or external circumstances dictate otherwise. One prime example is cast iron mains. Some utilities have been directed to replace all such mains. In such instances, as well as when reliable retirement experience is lacking, reliance must be placed upon informed judgment in the estimation of average service lives. A basic factor which must be considered in the selection of a reasonable mortality pattern (dispersion) is the probable total life span. The probable total life span is the age at retirement of the oldest survivors of each vintage installation (each year's additions). For example, an Iowa L 0.0 dispersion with a 20-year average life indicates that the longest lived elements of each vintage installation will be about 76 years old at retirement and will require a 5.00% basic whole life accrual rate on average investment balances over a 76-year total span. On the other hand, an S 0.0 dispersion (which is the standard "bell" curve) with a 20-year average life indicates the longest lived elements of each vintage installation will be 40 years old at retirement, similarly requiring a 5.00% accrual rate, but which rate is expected to be applied to average balances over only a 40-year total span.

B. AVERAGE SERVICE LIFE (ASL) AND SURVIVOR CURVES

Survivor curves are graphical representations of the surviving property for each age for the life of a group of assets, such as a plant account. The survivor curve selection from judgment and analyses of the Company's database for each account then establishes the average and remaining life for that group. These survivor curve characteristics are generally best reflected for utility property by the use of a well-established system of generalized survivor curves known in the industry as Iowa curves, as mentioned previously. Each of these curves can be identified by two components in our study. For instance, for Account 380, Services, our recommended curve is an R 2.5 with a 45-year ASL. The 45 years represents the average service life estimate, and the other component is the shape of the curve. Finally, the number following the letter for each retirement frequency curve represents the height of each curve with the higher values representing a reduced range from the ASL to the maximum probable life.

A brief comment here is that an "R" designation indicates a skewness to later retirements while an "L" indicates skewness to earlier retirements; i.e., the mode is at an age to the right or left of the average service life, respectively. For some accounts, we have recommended an "S" type which represents a symmetrical curve with the greatest frequency of retirements occurring at the average service life.

VI. ACCOUNT-BY-ACCOUNT ANALYSIS AND RECOMMENDATIONS

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A. DISTRIBUTION PLANT

Account 375.20 – Structures – City Gate
Account 375.70 – Structures and Improvements – Other

Typical of many structures accounts, the Accounts 375.20 and 375.70 capital activity is very limited. Our database for each account contains only one year with retirements; it is our opinion the database has too few retirements to produce any reliable SPR-BAL analysis.

We propose a 60-year L 0.0 curve as opposed to the 80-year ASL of the prior study. It is our opinion a 60-year ASL is far more realistic.

MAC proposes (5)% net salvage for each account, the same as in the prior study for Account 375.20.

The accrual rate which develops is for both accounts 1.75%.

Account 376 – Mains

Account 376 has the largest portion of depreciable plant at $65.5 million (52.7%) of total depreciable plant of $124.4 million as of 12/31/2010. The majority of this account, $47.6 million, is plastic with the second largest component being coated/wrapped steel, $16.3 million. The remaining plant assets consisting of bare steel, joint seals, cathodic protection, and cast iron total $1.5 million.

Separate SPR analyses for the plant subaccounts for Mains provide us some limited guidance in the life estimates. Accounts 376.30 and 376.80 are fully depreciated, and we therefore are not proposing an accrual rate as shown on Schedule A. Our proposed recommended ASL and Iowa curves for each subaccount are as follows:

Recommended Average Service Lives (ASL) and Iowa Curves

	Subaccount	Prior Study	Proposed	Balance ($M)
376.2	Coated Steel	45 R 3.0	45 R 2.0	$16.3
376.3	Bare Steel	31 L 3.0	F.D.	0.4
376.4	Plastic	45 S 2.0	41 S 1.0	47.6
376.5	C.I. – Joint Seals	15 S 6.0	15 S 5.0	0.5
376.6	Cathodic Protection	18 R 5.0	20 S 5.0	0.5
376.8	Cast Iron	62 S 5.0	F.D.	0.1

The Net Salvage (NS) estimated for each of these six subaccounts remains unchanged at the prior study level of (25)%.

Account 378.20 – Measuring and Regulating Station Equipment

The 1988 to 2010 retirement volume of Account 378.20 is sizable, $228,828, at about 13% of the EOY 2010 account balance. The proposed 30-year R 2.0 Iowa curve is a minor change from the prior study 30-year R 3.0. It is a product of our judgment and to some extent the SPR-BAL life analyses.

Net salvage is estimated at (5)%, no change from the existing estimate.

The whole life accrual rate which develops is 3.50%, the same as the existing.

Account 380.00 – Services

Account 380.00 has the second largest plant balance of all the depreciable gas plant accounts. Large additions occurred in the years 1990 to 2010 which totaled about $27.7 million, which is almost 87% of the account balance. Retirements in our database total only about 5.0% of the 2010 plant balance, that is, the retirements have yet to reflect the large recent additions. The vast majority of services that the Company has are plastic which is equal to 96% of the total number of services.

The SPR-BAL analyses indicate that an increase in life is warranted. We therefore propose a 13% increase from the existing 40-year estimate to a 45-year ASL with an R 2.5 Iowa curve. This revision gives minimal consideration to the fact that recent retirements are non-reflective yet of the 1990-2010 additions.

We propose a minor change from the existing (85)% net salvage to (75)% which still represents a conservative and reasonable estimate, reflective of the higher realized net salvage (less COR).

These changes result in a proposed whole life accrual rate of 3.89% as compared to the existing 4.62%.

Account 381.00 – Meters

The world of utility metering is undergoing significant changes. AMR/AMI is becoming more prevalent for gas meters. The Company has been converting via retrofitting the gas meters with an AMI module.

This type of activity has resulted in (1988-2010) additions which equal about 88% of the 2010 account balance.

The SPR-BAL life analyses results are questionable in that the C.I. values are almost all in the "poor" range. All the R.I. values are in the "excellent" range, and the volume of retirements is minimally significant relative to the account balance. The 1988 to 2010 retirements are 3% of the 2010 account balance.

Reflective of our judgment and the SPR-BAL life analyses, we propose a 30-year ASL with an R 2.0 Iowa curve for Account 381.00 which is no change from the existing 30-year ASL estimate, but a change in Iowa curve.

We propose zero net salvage to properly reflect our recent experience in the industry.

These changes result in a proposed accrual rate of 3.33%, same as the existing rate.

Account 382.00 – Meter Installations

Account 382.00 includes the cost of labor and materials incurred in connection with the original installation of customer meters. Total retirements in the depreciation study database relative to the 2010 plant balance are about 3%. The recent yearly additions are very sizable, sum of 2010-2000 is approximately $7.18 million or about 58% of the 2010 account balance. The 1999-1988 like values are respectively, $4.14 million and 34%, so one can see the recent growth is very substantial.

Based upon our judgment, experience, and the SPR-BAL analyses, we propose a change from the prior authorized 32-year ASL to 33 years and no change in the R 4.0 Iowa curve.

As the equipment which constitutes Account 382.00 is very short lengths of small diameter pipe and fittings, there is almost no gross salvage potential, but there is certainly some cost of removal which is labor charges. We propose no change from the existing estimate of (10)% to net salvage for Account 382.00.

The whole life accrual rate which develops is 3.03%, a decrease from the existing 3.44%.

Account 383 – House Regulators

There has been little capital activity in Account 383 since 1999, the point of beginning of the account. There are additions in eight of the 12 years (1999-2010), only $828 retired and no retirements since 2005. Our judgment founded estimate is a 35-year ASL with an R 3.0 Iowa curve. Zero net salvage is estimated.

The remaining life accrual rate which develops is 2.86% which is a reduction from the existing 3.33%.

Account 386 – Water Heaters/Conversion Burners

The SPR life analyses of the Account 386 history yield very poor C.I. values, excellent R.I. values in all bands analyzed. The indicated average lives vary from a low 5.1 years to a high of 12.7 years.

We find no compelling reason to revise the prior study finding, a 10-year R 1.5 curve. Given the equipment, a 10-year R 1.5 appears reasonable.

With zero net salvage estimated, the whole life accrual rate is 10.00%.

B. GENERAL PLANT

Account 391.00 – Office Furniture and Equipment

Account 391.00 is divided into two subaccounts: 391.11, Data Handling Equipment, and 391.10, unspecified.

The fit statistics of all SPR analysis bands of each account were similar, i.e., the C.I. values were all very poor and the R.I. values were excellent. The SPR analyses results are hardly conclusive, but they are indicative, in our opinion.

Given the SPR life indications of 4.2 years to 12.8 years, it is our opinion a 12-year S 3.0 curve is reasonable for Account 391.10.

Relative to Account 391.11, Data Handling Equipment, we note that the analyses all produce very poor C.I. values, and therefore, based on our judgment, we propose a 10-year S 3.0 curve for Account 391.11.

The respective proposed accrual rates are 8.16% and 10.00%. The prior study rates were 9.09% and 10.00%.

Account 393 – Stores Equipment

The capital activity of Account 393 is typical of what we see in the industry, i.e., sparse. The history begins with a 1979 addition; the only other additions are in 1988-1994. Retirements occurred only in 1989, 1995, 1998, 2000, 2001, and 2004. Total retirement volume is about $59,700 with $44,688 occurring in 2000.

The sparse activity caused the SPR-BAL C.I. values to be all poor; however, the R.I. values are all excellent. Further, the indicated ASL values range only from 12 to 19 years.

As a result, we propose no change from the prior study finding of a 13-year L 5.0 Iowa curve. Similarly, we propose the same zero net salvage. Given that the account is fully depreciated, our proposal is for any future capital additions as discussed in our recommendations based on a whole life derivation.

The resulting accrual rate is 7.69%.

Account 394.00 – Tools, Shop and Garage Equipment

Our judgment and experience plus the SPR-BAL life analyses of the Company's historical experience lead to essentially no change from the prior study. In that study, the two subaccounts were estimated to have 18- and 19-year average lives which composite to an 18.8-year average. Our proposal is a 19-year average life.

We have changed the existing +2% to a zero net salvage estimate.

The resulting whole life accrual rate is 5.26%.

Account 396.00 – Power Operated Equipment

It is our opinion the prior study estimates of 15-year ASL and 10% salvage are reasonable for this equipment. The whole life accrual rate which results is 6.00%.

Account 397 – Communication Equipment

This account is divided into two subaccounts: 397.00 and 397.35. The latter is the ERTS which communicate the readings of the gas meters to a collection system. Account 397.00 is all other communication equipment.

There are no retirements in the Account 397.35 history, which dates only from 2003. The Account 397.00 history contains retirements in the activity years from 1989-2010. The retirements total approximately $656,000, about 57% of the 2010 account balance.

The SPR-BAL indications all yield very poor C.I. values, 14 or less, versus the 25 value which is the bottom of the fair range; however, the R.I. values are all in the excellent range. The indicated ASL values are all 12 to 14 years, which fits our expectations for this equipment. For 397.00, we propose a change from the prior study 10-year estimate to 12 years.

For Account 397.35, we propose a 15-year SQ value. Zero net salvage is expected for both subaccounts. Zero was also proposed in the prior study. The respective accrual rates for 397.00 and 397.35 are 8.33% and 6.67%.

VII. DESCRIPTION OF SCHEDULES

Northern Utilities, Inc. New Hampshire Division
Depreciation Accrual Rates Based on
Gas Plant in Service at December 31, 2010

Schedule A

Proposed Whole Life Gas Accrual Rates, "Schedule of Depreciation Accrual Rates @ 12/31/10"

SCHEDULE A

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE

SCHEDULE OF DEPRECIATION ACCRUAL RATES @12/31/10

WHOLE LIFE SCHEDULE WITH AMORTIZATION OF RESERVE VARIANCE

ACCOUNT NUMBER	DESCRIPTION	PLANT BALANCE @12/31/10	DISP TYPE	ASL	ACCRUAL RATE W/O NET SALV.	ACCRUAL WITHOUT NET SALV.	NET SALV. %	SALV. FACTOR	ACCRUAL RATE W/ NET SALV.	ACCRUAL WITH NET SALV.	THEO. RSV. WITHOUT NET SALV.	THEO. RSV. WITH NET SALV.	BOOK RSV. @12/31/10	RESERVE VARIANCE	ARL	AMORT. OF RESERVE VARIANCE	ACCRUAL WITH AMORT.	ACCRUAL RATE W/ AMORT.	COR RATE
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	DISTRIBUTION PLANT																		
375.20 (1308.6)	STRUCTURES-CITY GATE	45,256	L 0.0	60.0	1.67	756	-5	1.05	1.75	792	5,574	5,853	-5,896	11,749	52.6	223	1,015	2.24	0.08%
375.70 (1308.7)	STRUCTURES & IMPROVEMENTS-OTHER	2,775,065	L 0.0	60.0	1.67	46,344	-5	1.05	1.75	48,564	409,810	430,301	743,627	-313,326	51.1	-6,132	42,432	1.53	0.08%
	MAINS																		
376.20 (1356.4)	COATED/WRAPPED	16,320,670	R 2.0	45.0	2.22	362,319	-25	1.25	2.78	453,715	4,928,400	6,160,500	6,071,159	89,341	31.4	2,845	456,560	2.80	0.56%
376.30 (1356.6)	BARE STEEL	367,921	L 3.0	31.0	3.23		-25	1.25	4.04	**FULLY DEPRECIATED**			367,921		**FULLY DEPRECIATED**				
376.40 (1356.7)	PLASTIC	47,629,111	S 1.0	41.0	2.44	1,162,150	-25	1.25	3.05	1,452,688	11,964,419	14,955,524	14,738,635	216,889	30.7	7,065	1,459,753	3.06	0.61%
376.50 (1356.2)	JOINT SEALS	542,145	S 5.0	15.0	6.67	36,161	-25	1.25	8.34	45,215	357,951	447,439	33,810	413,629	5.1	81,104	126,319	23.30	1.67%
376.60 (1356.5)	CATHODIC PROTECTION	517,229	S 5.0	20.0	5.00	25,861	-25	1.25	6.25	32,327	184,847	231,059	165,860	65,199	12.9	5,054	37,381	7.23	1.25%
376.80 (1356.1)	CAST IRON	80,947	S 5.0	62.0	1.61		-25	1.25	2.01	**FULLY DEPRECIATED**			80,947		**FULLY DEPRECIATED**				
	TOTAL ACCOUNT 376	65,458,023		40.9	2.44	1,586,491			3.05	1,983,945	17,435,617	21,794,522	21,458,332	785,058		96,068	2,080,013	3.20	
378.20 (1358.0)	MEASURING & REGULATING STATION EQUIPMENT	1,787,578	R 2.0	30.0	3.33	59,526	-5	1.05	3.50	62,565	714,966	750,714	1,019,359	-268,645	18.0	-14,925	47,640	2.67	0.17%
380.00 (1359.0)	SERVICES	31,874,279	R 2.5	45.0	2.22	707,609	-75	1.75	3.89	1,239,909	7,429,288	13,001,254	13,688,124	-686,870	34.5	-19,909	1,220,000	3.83	1.67%
381.00 (1360.0)	METERS	3,506,040	R 2.0	30.0	3.33	116,751	0	1.00	3.33	116,751	1,173,912	1,173,912	1,743,377	-569,465	20.0	-28,473	88,278	2.52	0.00%
382.00 (1360.0)	METER INSTALLATIONS	12,313,745	R 4.0	33.0	3.03	373,106	-10	1.10	3.33	410,048	3,723,841	4,096,225	4,016,274	79,951	23.0	3,476	413,524	3.36	0.30%
383.00 (1359.0)	HOUSE REGULATORS	222,731	R 3.0	35.0	2.86	6,370	0	1.00	2.86	6,370	40,243	40,243	52,533	-12,290	28.7	-428	5,942	2.67	0.00%
386.00 (1361.0)	WATER HEATERS/CONVERSION BURNERS	1,374,676	R 1.5	10.0	10.00	137,468	0	1.00	10.00	137,468	686,453	686,453	850,835	-164,382	5.0	-32,876	104,592	7.61	0.00%
	TOTAL DEPREC. DISTRIBUTION PLANT	119,357,393		39.2	2.55	3,034,421			3.37	4,006,412	31,619,704	41,979,477	43,566,565	-1,138,220		-2,976	4,003,436	3.37	
	GENERAL PLANT																		
391.10 (1372.1)	OFFICE FURNITURE & EQUIPMENT-UNSPEC.	594,527	S 3.0	12.0	8.33	49,524	2	0.98	8.16	48,513	249,927	244,928	433,264	-188,336	7.0	-26,905	21,608	3.63	0.00%
391.11 (1372.1)	OFFICE FURNITURE & EQUIPMENT-DATA HDL.	7,566	S 3.0	10.0	10.00	757	0	1.00	10.00	757	5,978	5,978	1,785	4,193	2.1	1,997	2,754	36.40	0.00%
394.00 (1375.0)	TOOLS, SHOP & GARAGE EQUIPMENT	874,077	R 3.0	19.0	5.26	45,976	0	1.00	5.26	45,976	287,838	287,838	407,987	-120,149	12.7	-9,461	36,515	4.18	0.00%
396.00 (1377.0)	POWER OPERATED EQUIPMENT	75,266	R 3.0	15.0	6.67	5,020	10	0.90	6.00	4,516	56,026	50,423	45,644	4,779	3.8	1,258	5,774	7.67	0.00%
397.00 (1378.0)	COMMUNICATION EQUIPMENT	1,143,342	R 5.0	12.0	8.33	95,240	0	1.00	8.33	95,240	343,499	343,499	566,739	-223,240	8.4	-26,576	68,664	6.01	0.00%
397.35 (1378.0)	COMMUNICATION EQUIPMENT-ERTS	2,326,975	SQ	15.0	6.67	155,209	0	1.00	6.67	155,209	998,527	998,527	801,918	196,609	8.6	22,862	178,071	7.65	0.00%
	TOTAL DEPREC. GENERAL PLANT	5,021,753		14.3	7.00	351,726			6.97	350,211	1,941,795	1,931,193	2,257,337	-326,144		-36,825	313,386	6.24	
	TOTAL DEPREC. GAS PLANT	124,379,146		36.6	2.73	3,386,147			3.52	4,356,623	33,561,499	43,910,670	45,823,902	-1,464,364		-39,801	4,316,822	3.48	
	INTANGIBLE PROPERTY	-7,885,048																	
	MFG. GAS PRODUCTION PLANT	600,223											587,130						
	PROD LAND	6,816																	
	DISTRIBUTION LAND	107,022																	
	GENERAL LAND	232,947																	
386.00 (1361.0)	DIAMOND BOILER	1,148,341											1,148,341						
391.12 (1372.1)	OFFICE FURN. & EQUIP.-INFORMATION SYSTEMS	0											-3,347						
392.00 (1373.0)	TRANSPORTATION EQUIPMENT	22,974											47,597						
393.00 (1374.0)	STORES EQUIPMENT	31,520											36,157						
	UNFINISHED CONSTRUCTION	3,180,298																	
	TOTAL GAS PLANT	121,824,239											47,639,780						

Note: Any composite accruals and accrual rates exclude fully depreciated accounts.

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WHOLE LIFE SCHEDULE WITH AMORTIZATION OF RESERVE VARIANCE

EXPLANATORY NOTES

The Schedule includes indicated (theoretical) reserves both with and without net salvage, the allocation of the book reserve, and the reserve variance. It also shows the development of the remaining life accruals, in that the remaining life accrual is made up of two components, the normal whole life accrual plus the amortization of any reserve variance.

The following is an explanation of each column of the Schedule:

1. Column (1) presents the book balance for each account or sub-account at the indicated date.

2. Column (2) labeled "DISP TYPE" is designated as either Forecast or some selected Iowa curve type as discussed in the text.

3. Column (3) indicates the direct weighted average dollar service life in years for each investment group, except where Column (3) shows "Forecast", in which instance the life is a harmonically weighted average dollar service life. Another exception is any life which is a composite of two or more locations and/or two or more accounts (or sub-accounts), in which case the composite life is a harmonically weighted composite life derived by dividing the sum of accruals for the group into the depreciable balance of Column (1).

4. Column (4) is the unadjusted whole life accrual rate developed by dividing unity by Column (3), and expressing the quotient as a percentage.

5. Column (5) is the whole life accrual with no salvage adjustment, based upon the average service life associated with each investment group. These accruals are developed by multiplying Column (1) by Column (4).

6. Column (6) is the percent net salvage expectation; net salvage equals gross salvage minus removal cost.

7. Column (7) is the salvage factor, derived by subtracting the (signed) net salvage ratio from unity; e.g., a salvage factor of 1.10 is the result of 1.00 minus an expected net salvage ratio of minus 0.10; i.e., 1.00 - (-0.10) = 1.10.

8. Column (8) is the whole life accrual rate, reflecting adjustment for net salvage expectations; it is developed by multiplying Column (4) by Column (7), and expressing the product as a percentage.

WHOLE LIFE SCHEDULE WITH AMORTIZATION OF RESERVE VARIANCE

EXPLANATORY NOTES

9. Column (9) is the whole life accrual, adjusted for net salvage expectations. It is developed by multiplying Column (8) by Column (1).

10. Column (10) shows indicated depreciation reserves, unadjusted for net salvage expectations, calculated on the basis of the average service life and dispersion characteristics (or forecasts) associated with each investment group.

11. Column (11) is the indicated depreciation reserve, adjusted for net salvage expectations by multiplying Column (10) by Column (7).

12. Column (12) "BOOK RSV. @12/31/2010" contains book reserves allocated to accounts, or sub-accounts from the functional book reserve level on the basis of the adjusted indicated reserves in Column (11). If book reserves are known and maintained at a finer level, or only at a larger level, these figures are used or allocated as appropriate.

13. Column (13) shows the difference between adjusted indicated reserves (Column 11) and allocated book reserves (Column 12); i.e., Column (11) minus Column (12).

14. Column (14), "ARL" (Average Dollar Remaining Life) contains the weighted average dollar remaining life. Average remaining life composites for two or more investment groups are derived by dividing unadjusted net plant (Column 1 minus Column 10) by the unadjusted whole life accrual (Column 5).

15. Column (15), "AMORT. OF RESERVE VARIANCE", shows the result of dividing the indicated reserve variance in Column (13) by the estimated remaining life in Column (14).

16. Column (16), "ACCRUAL WITH AMORT," is the sum of the whole life accrual in Column (9) and the indicated reserve variance accrual in Column (15).

17. Column (17), "ACCRUAL RATE W/AMORT," is the result of Column (16) divided by Column (1), with the quotient multiplied by 100 to convert to percentage.

18 The column labeled "COR RATE" is the cost of removal percent that is included in the accrual rate with net salvage.

Northern Utilities, Inc. New Hampshire Division
Depreciation Accrual Rates Based on
Gas Plant in Service at December 31, 2010

Schedule B

"Schedule of Current vs. Proposed Accrual Rates"

SCHEDULE B
NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
DEPRECIATION STUDY AS OF 12/31/2010
SCHEDULE OF CURRENT VS PROPOSED ACCRUAL RATES

ACCOUNT NUMBER	DESCRIPTION	PLANT BALANCE @12/31/2010	CURRENT DEPREC. ACCRUAL RATES	CURRENT ANNUAL DEPREC. ACCRUAL	PROPOSED WHOLE LIFE DEPREC. ACCRUAL RATES WITH NET SALVAGE	PROPOSED WHOLE LIFE ANNUAL DEPREC. ACCRUAL WITH NET SALVAGE	DIFFERENCE BETWEEN PROPOSED WHOLE LIFE AND CURRENT ANNUAL DEPREC. ACCRUAL
		(1)	(2)	(3)	(4)	(5)	(6)
	DISTRIBUTION PLANT						
375.20 (1308.6)	RIGHTS OF WAY	45,256	0.0286	1,294	0.0175	792	-502
375.70 (1308.7)	STRUCTURES & IMPROVEMENTS-OTHER	2,775,065	0.0263	72,984	0.0175	48,564	-24,420
	MAINS						
376.20 (1356.4)	COATED/WRAPPED	16,320,670	0.0278	453,715	0.0278	453,715	0
376.30 (1356.6)	BARE STEEL	367,921	N/A	N/A	N/A	N/A	N/A
376.40 (1356.7)	PLASTIC	47,629,111	0.0278	1,324,089	0.0305	1,452,688	128,599
376.50 (1356.2)	JOINT SEALS	542,145	0.0834	45,215	0.0834	45,215	0
376.60 (1356.5)	CATHODIC PROTECTION	517,229	0.0695	35,947	0.0625	32,327	-3,620
376.80 (1356.1)	CAST IRON	80,947	N/A	N/A	N/A	N/A	N/A
	TOTAL ACCOUNT 376	65,458,023	0.0286	1,858,966	0.0305	1,983,945	124,979
378.20 (1358.0)	MEASURING & REGULATING STATION EQUIPMENT	1,787,578	0.0350	62,565	0.0350	62,565	0
380.00 (1359.0)	SERVICES	31,874,279	0.0462	1,472,592	0.0389	1,239,909	-232,683
381.00 (1360.0)	METERS	3,506,040	0.0333	116,751	0.0333	116,751	0
382.00 (1360.0)	METER INSTALLATIONS	12,313,745	0.0344	423,593	0.0333	410,048	-13,545
383.00 (1359.0)	HOUSE REGULATORS	222,731	0.0333	7,417	0.0286	6,370	-1,047
386.00 (1361.0)	WATER HEATERS/CONVERSION BURNERS	1,374,676	0.1000	137,468	0.1000	137,468	0
	TOTAL DEPREC. DISTRIBUTION PLANT	119,357,393	0.0349	4,153,630	0.0337	4,006,412	-147,218
	GENERAL PLANT						
391.10 (1372.1)	OFFICE FURNITURE & EQUIPMENT-UNSPEC.	594,527	0.0909	54,043	0.0816	48,513	-5,530
391.11 (1372.1)	OFFICE FURNITURE & EQUIPMENT-DATA HDL.	7,566	0.1000	757	0.1000	757	0
394.00 (1375.0)	TOOLS, SHOP & GARAGE EQUIPMENT	874,077	0.0541	47,288	0.0526	45,976	-1,312
396.00 (1377.0)	POWER OPERATED EQUIPMENT	75,266	0.0667	5,020	0.0600	4,516	-504
397.00 (1378.0)	COMMUNICATION EQUIPMENT	1,143,342	0.1000	114,334	0.0833	95,240	-19,094
397.35 (1378.0)	COMMUNICATION EQUIPMENT-ERTS	2,326,975	0.0667	155,209	0.0667	155,209	0
	TOTAL DEPREC. GENERAL PLANT	5,021,753	0.0750	376,651	0.0697	350,211	-26,440
	TOTAL DEPREC. GAS PLANT	124,379,146	0.0366	4,530,281	0.0352	4,356,623	-173,658

Note: Any composite accruals and accrual rates exclude fully depreciated accounts.

APPENDIX A.

Calculation of COR Rates (Schedule A, column 11)

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
GAS
CALCULATION OF COR RATES

A. Proposed COR = x%
B. W.L. Rate w/o COR= 100/ASL
C. W.L. Rate w/ COR = w.l. Rate * COR
D. COR Rate = W.L. Rate w/COR - W.L. Rate w/o COR

DISTRIBUTION PLANT

375.20	ASL=	60.0	N.S.=	-5
A. Proposed COR				5
B. W.L. Rate w/o COR				1.67
C. W.L. Rate w/ COR				1.75
D. COR Rate =				0.08
375.70	ASL=	60.0	N.S.=	-5
A. Proposed COR				5
B. W.L. Rate w/o COR				1.67
C. W.L. Rate w/ COR				1.75
D. COR Rate =				0.08
376.20	ASL=	45.0	N.S.=	-25
A. Proposed COR				25
B. W.L. Rate w/o COR				2.22
C. W.L. Rate w/ COR				2.78
D. COR Rate =				0.56
376.40	ASL=	41.0	N.S.=	-25
A. Proposed COR				25
B. W.L. Rate w/o COR				2.44
C. W.L. Rate w/ COR				3.05
D. COR Rate =				0.61
376.50	ASL=	15.0	N.S.=	-25
A. Proposed COR				25
B. W.L. Rate w/o COR				6.67
C. W.L. Rate w/ COR				8.34
D. COR Rate =				1.67

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
GAS
CALCULATION OF COR RATES

A. Proposed COR = x%
B. W.L. Rate w/o COR= 100/ASL
C. W.L. Rate w/ COR = w.l. Rate * COR
D. COR Rate = W.L. Rate w/COR - W.L. Rate w/o COR

376.60 ASL= 20.0 N.S.= -25

A. Proposed COR	25
B. W.L. Rate w/o COR	5.00
C. W.L. Rate w/ COR	6.25
D. COR Rate =	1.25

378.20 ASL= 30.0 N.S.= -5

A. Proposed COR	5
B. W.L. Rate w/o COR	3.33
C. W.L. Rate w/ COR	3.50
D. COR Rate =	0.17

380.00 ASL= 45.0 N.S.= -75

A. Proposed COR	75
B. W.L. Rate w/o COR	2.22
C. W.L. Rate w/ COR	3.89
D. COR Rate =	1.67

381.00 ASL= 30.0 N.S.= 0

A. Proposed COR	0
B. W.L. Rate w/o COR	3.33
C. W.L. Rate w/ COR	3.33
D. COR Rate =	0.00

382.00 ASL= 33.0 N.S.= -10

A. Proposed COR	10
B. W.L. Rate w/o COR	3.03
C. W.L. Rate w/ COR	3.33
D. COR Rate =	0.30

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
GAS
CALCULATION OF COR RATES

A. Proposed COR = x%
B. W.L. Rate w/o COR= 100/ASL
C. W.L. Rate w/ COR = w.l. Rate * COR
D. COR Rate = W.L. Rate w/COR - W.L. Rate w/o COR

383.00	ASL=	35.0	N.S.=	0

A. Proposed COR	0
B. W.L. Rate w/o COR	2.86
C. W.L. Rate w/ COR	2.86
D. COR Rate =	0.00

386.00	ASL=	10.0	N.S.=	0

A. Proposed COR	0
B. W.L. Rate w/o COR	10.00
C. W.L. Rate w/ COR	10.00
D. COR Rate =	0.00

GENERAL PLANT

391.10	ASL=	12.0	N.S.=	2

A. Proposed COR	0
B. W.L. Rate w/o COR	8.33
C. W.L. Rate w/ COR	8.33
D. COR Rate =	0.00

391.11	ASL=	10.0	N.S.=	0

A. Proposed COR	0
B. W.L. Rate w/o COR	10.00
C. W.L. Rate w/ COR	10.00
D. COR Rate =	0.00

394.00	ASL=	19.0	N.S.=	0

A. Proposed COR	0
B. W.L. Rate w/o COR	5.26
C. W.L. Rate w/ COR	5.26
D. COR Rate =	0.00

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
GAS
CALCULATION OF COR RATES

A. Proposed COR = x%
B. W.L. Rate w/o COR= 100/ASL
C. W.L. Rate w/ COR = w.l. Rate * COR
D. COR Rate = W.L. Rate w/COR - W.L. Rate w/o COR

396.00	ASL=	15.0	N.S.=	10
A. Proposed COR				0
B. W.L. Rate w/o COR				6.67
C. W.L. Rate w/ COR				6.67
D. COR Rate =				0.00
397.00	ASL=	12.0	N.S.=	0
A. Proposed COR				0
B. W.L. Rate w/o COR				8.33
C. W.L. Rate w/ COR				8.33
D. COR Rate =				0.00
397.35	ASL=	15.0	N.S.=	0
A. Proposed COR				0
B. W.L. Rate w/o COR				6.67
C. W.L. Rate w/ COR				6.67
D. COR Rate =				0.00