Pennsylvania "F" Class Filing
Proposed Effective Date February 1, 2003

Discussion of Exhibits

Exhibit 1 - Indicated Change in Rate Level

Exhibit 1 attached shows the derivation of an increase of 10.52% in collectible premium for Pennsylvania "F" Class business. On a manual basis the indicated change is +9.75%.

The procedure for developing the indicated change in Exhibit 1 is the same as that used in the 2000 Pennsylvania "F" Class filing. Derivation of the trended loss ratios on line (1) is described in Exhibit 5.

Based on the payroll credibility table used in the class ratemaking portion of the Pennsylvania April 1, 2002 loss cost filing, the indicated overall credibility weight for "F" Class exposures would be 14%. A credibility weight of 25% was judgmentally selected to assign greater weight to the experience since "F" Class filings have not been prepared annually. The complement of credibility (75%) has been assigned to the loss ratio underlying the current rates. Line (4) shows the projected credibility weighted loss ratio.

The credibility weighted loss ratio is adjusted to include loss adjustment expenses (line (5)) and fixed expenses (line (7)). The total on line (8) is then compared to the permissible loss, loss adjustment and fixed expense ratio (line (9)) to produce the indication on line (10). Derivation of lines (5), (7) and (9) are discussed under the caption "Expenses" below.

The indicated change in collectible premium is converted to an indicated change in manual rate level (line (13)) by adjusting for the change in the off-balance of the experience rating plan (collectible premium ratio). The proposed collectible premium ratio is drawn from the Pennsylvania April 1, 2002 loss cost filing.

Losses

Exhibit 5 - Analysis of Experience

Exhibit 5 presents a review of "F" Class experience as reported under the Unit Statistical Plan. Experience for the most recent available years through 1999 was newly extracted for the current revision. This recent data has been supplemented by prior experience included in our 1997 and 2000 "F" Class filing. Page 1 of Exhibit 5 shows reported standard earned premiums (1988 to 1999) and indemnity incurred losses (1986 to 1999). The step shaped line separating successive evaluations for a given policy period indicates that the data was extracted from either the 1997 filing (above the lines), the 2000 review (between the two lines) or the current review (below the lines). Page 2 shows similar detail for “F” Class medical experience.

Page 3 shows the age-to-age incurred loss development factors for indemnity losses from first through tenth report. Shaded development factors represent ratios of losses whose successive evaluations were drawn from two different reviews (1997 - 2000 or 2000 - 2002). The shaded factors were not used in the analysis because the data from the 1997 filing was not re-extracted and edited and may therefore have a degree of inconsistency with data recently extracted. Average age-to-age factors for the latest three years available, the latest five years available, and for all eight available years are shown. The selected age-to-age factors for indemnity are derived on page 5 and are the result of fitting the age-to-age factors for the latest three available years to a curve and also projecting a tail factor (8^{th}-to-ultimate) based on that curve. The bottom section of page 3 shows incurred loss development factors to an ultimate reporting level. Medical incurred loss development factors are derived on page 4 in a similar manner except the age-to-age factors for the latest five years (available for 1^{st} –5^{th} reports) or three years (available for 5^{th}-8^{th} reports) were used to fit to a curve.

Page 5 shows the derivation of selected age-to-age development factors. Residuals (LDF-1) of average age-to-age loss development factors are fitted to a curve of the form $y = a + b/x$. An average factor of 1.0000 was chosen for the 10^{th} to 11^{th} development stage to improve the fit and shape of the resulting curve. A tail factor was selected by compounding the age-to-age factors for successive stages beyond eighth report after first eliminating fitted points that fell below 1.0000. Similar calculations are shown for medical losses on page 6.

Ultimate on-level loss ratios are calculated on page 7 for indemnity, medical and in total. Page 8 shows a graph of the resulting projected ultimate loss ratios.

An analysis of loss ratio trend is summarized on page 9. Linear and exponential trend lines were used to project trended loss ratios for indemnity and medical using combinations of policy years ranging from three to ten points. Three year average loss ratios, and 0% annual trend, were selected for both indemnity and medical losses. The resulting trended loss ratios of 48.09% for indemnity and 15.33% for medical were carried to line (1) of Exhibit 1.

Expenses

Exhibit 2 - Expense Loading

Expense provisions are presented in Exhibit 2 and are broadly categorized as Loss and Loss Adjustment, Fixed expenses, and Variable expenses. Variable expenses are those expenses which are expected to remain a constant percentage of premium, regardless of the overall premium level or premium change. Fixed expenses are considered to be a function of changes in payroll levels and/or expense costs independent of changes in premium levels. Fixed expenses are, therefore, separately trended.

The first column of Exhibit 2 shows expense provisions prior to trending, where trending refers to the separate trending applicable to fixed expenses. Provision for the Security Fund (1.00%) and Taxes (2.00%) are based on current assessment levels. Miscellaneous taxes, also included in "Taxes" is estimated to be 0.40%. Provision for General Expense, Other Acquisition, Premium Discount, and Commissions are derived in Exhibit 3 - Expense Study.

The second column of Exhibit 2 shows expenses after trending where trending applies to fixed expenses. The fixed expense trend factor of 4.78% is based on a review of countrywide Workers Compensation dollars of expense for general and other acquisition expenses for the period 1996 through 2000 as compiled by A M Best Company. The payroll trend factor of 4.724% is based on insured payrolls from Unit Statistical Plan data for the five years ending 1998. The trended loss ratio is carried from line 4 of Exhibit 1. Loss adjustment expenses and the federal assessment are functions of losses, with LAE derived in Exhibit 3 and the federal assessment based on the latest available assessment rate.

The last column of Exhibit 2 shows the proposed provision for expenses, consistent with the overall indicated change in rates from Exhibit 1. Premium discount, commissions and taxes remain a constant percentage of premium and are therefore unchanged from column 2. The fixed expense ratios of column 2 are adjusted to the proposed rate level by dividing the column 2 figure by the indicated change from line (10) of Exhibit 1 (i.e. .86 = 0.95/1.1052). The provision for profit (-4.85%), as well as the combined provision for loss and loss related expenses (79.49%) were derived from an Internal Rate of Return model as described in Exhibit 4. The combined provision for loss and loss related expenses of 79.49% was split into the loss (56.20%), loss adjustment expense (9.39%) and the federal assessment (13.90%) components by maintaining a ratio of loss adjustment expense to loss of 16.71% and a ratio of federal assessment expense to loss of 24.74%.

Exhibit 3 - Expense Study

Page 3.1 of Exhibit 3 derives provisions for commission, other acquisition, and general expense exclusive of expense constant dollars. Commissions are related to premium including large deductible business on a net (as reported) basis. Other acquisition and general expense are related to premiums including large deductible business on a gross (before deductible credits) basis. An average factor over the three years 1998 through 2000 is used. Experience for all companies is included.

Loss adjustment expenses for calendar years 1998 through 2000 are related to incurred losses including large deductible business on a gross (before reimbursement) basis. The resulting average factor of 16.71% is shown on page 3.4. Experience for all companies is included.

An average premium discount figure of 9.79% is derived on pages 3.5 through 3.8 of Exhibit 3 based on the total (all classes) Pennsylvania premium for policies with “F” class exposure. An adjustment is then made to account for multi-state risks.

<u>Exhibit 4 - Internal Rate of Return Model</u>

Exhibit 4 presents an internal rate of return model which tracks the premium, loss and expense cash flows of Pennsylvania Workers Compensation “F” Class business for the prospective rating period. The model combines expense assumptions from Exhibit 2, a premium collection pattern, loss and expense payout patterns, and a base standard premium of $1 million to model the net cash flows for “F” Class business.

A profit loading, including a provision for federal taxes, is chosen so that the net cash flows, when discounted to present value, provide a return on equity equal to the projected target rate of return or cost of capital. The cost of capital is derived in the last three pages of Exhibit 4 and is equal to 10.72%.

In the IRR analysis, the profit provision was –4.85%. A loss ratio, including provision for loss, loss adjustment and the federal assessment, and consistent with the other expense values used in the model was also derived and equal to 79.49%. That loss ratio is subsequently split into the loss (56.20%), loss adjustment expense (9.39%), and federal assessment (13.90%) values as indicated in Exhibit 2.

Classification Analysis and Exhibits

The methodology for the derivation of “F” class rates is unchanged from the process used for developing “F” Class rates in 1997 and 2000 and is similar to the process used in the calculation of state-act loss costs. Exhibit 10 - Rate Formulae describes the steps used in the classification ratemaking process. Exhibit 9 - Derivation of “F” Class Rates shows current and proposed rates by class and the respective percentage changes. No classes were subject to capping at the upper or lower allowable ranges. Expected loss rate factors, for use in calculating expected losses for experience rating, are derived in Exhibit 11 - Calculation of Expected Loss Rate Factors. Proposed rating values are shown in Exhibit 12 - Manual Rates and Expected Loss Rates. “F” Classification Exhibits and the “F” Class Book are also included. The Class Book shows the reported and projected experience for each class and the derivation of proposed rates. The “F” Classification Exhibits show various factors used in the class ratemaking process including the payroll credibility table used. The credibility table is the same one used in the April 1, 2002 Pennsylvania State-Act Loss Cost Filing.

U.S. Longshore & Harbor Workers Coverage Factor

Exhibit 6 shows the derivation of a USL&H factor which, when applied to state act class rating values, provides for the pricing of risks with USL&H exposure. The USL&H loading is based on a comparison of average benefit levels by type of injury under the USL&H Act and the Pennsylvania Workers Compensation Act. These average benefit levels are then weighted by type of injury to get an overall benefit level for each coverage.

It is proposed that the USL&H factor be increased from 1.787 to 1.793 (representing a 79.3% load to state act rating values), the increase primarily due to changes in the distribution of losses by type of injury.

Other Exhibits

Exhibit 7 - Table II presents a summary of Unit Statistical Plan experience on a reported and projected basis for "F" class business by type of injury.

Exhibit 8 - Tax Multiplier provides a tax multiplier factor applicable to "F" class exposures for use in retrospective rating. It is proposed that the factor increase from 1.2469 to 1.2692.

Index of Exhibits

A complete list of the enclosed exhibits follows:

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