



## Pennsylvania Compensation Rating Bureau

The Widener Building • 6th Floor  
One South Penn Square • Philadelphia, PA 19107-3577  
(215)568-2371 • FAX (215)564-4328 • www.pcrb.com

November 13, 2001

### VIA HAND DELIVERY

The Honorable M. Diane Koken  
Insurance Commissioner  
Commonwealth of Pennsylvania  
Insurance Department  
1311 Strawberry Square  
Harrisburg, PA 17120

Attention: Chester J. Szczepanski

RE: Proposal C-343 - April 1, 2002 Loss Cost Filing

Dear Commissioner Koken:

On behalf of the members of the Pennsylvania Compensation Rating Bureau (PCRB), I am filing herewith workers compensation loss costs, rating values and rules proposed to be **effective 12:01 a.m., April 1, 2002** with respect to new and renewal policies having normal anniversary rating dates on or after that date.

This filing proposes an overall average increase in loss costs (prior to application of assessment for the Office of the Small Business Advocate, Pennsylvania Construction Classification Premium Adjustment Program, Merit Rating Plan off-balance and Certified Safety Committee loadings) of 2.12 percent effective April 1, 2002.

In the course of preparing this filing the PCRB has given considerable thought to the question of whether, how and to what extent PCRB loss cost filings can and should include a separate and specific provision for extraordinary catastrophes. While this consideration is clearly not limited to terrorist attacks, the potential for loss events in historically unprecedented amounts, possibly arising from any of a variety of causes, has been clearly demonstrated by the events of September 11, 2001.

The PCRB has not included any specific or extraordinary catastrophe provision in this filing as presented herein. However, the PCRB continues to actively explore this issue and hereby specifically reserves its right to amend this filing during the period it remains pending before the Insurance Commissioner or to submit another separate filing or filings at any time, reflecting such approaches and parameters responsive to these contingencies as may be deemed appropriate.

This letter and its attachments present a discussion and explanation of the filing's supporting analysis and conclusions based thereon and are presented in the following topical sequence:

- Summary
- Principal Findings and Conclusions
- Recognition of Effects of Prior Legislation
- Loss Development
- Trend
- Indicated Change in Loss Costs
- Employer Assessment Factor & Loss Cost Loadings
- Experience Rating Plan Procedures & Parameters
- Excess Loss (Pure Premium) Factors, State and Hazard Group Relativities and Loss Elimination Ratios
- Optional Retrospective Loss Development Factors
- Classification Loss Cost Relativities
- Manual Language Revisions

## **SUMMARY**

In preparing and reviewing supporting information for this filing the Bureau has attempted to identify and estimate the relative contributions to the filed overall loss cost indication arising from several factors. The resulting attribution of effects upon the overall loss cost indication is set forth below:

1) Changes in indemnity loss experience from provisions in approved April 1, 2001 loss costs	0.961661
2) Changes in medical loss experience from provisions in approved April 1, 2001 loss costs	0.976104
3) Changes in trend rate and period from provisions in approved April 1, 2001 loss costs	1.087589
4) Changes in estimated effects of Act 44 of 1993 on indemnity losses from provisions in approved April 1, 2001 loss costs	1.000281
5) Indicated change in loss costs effective April 1, 2002 (1) x (2) x (3) x (4)	1.0212

Line 5) above combines the separate effects described in Lines 1) through 4) by compounding the individual increases or reductions in loss cost indications, resulting in the proposed loss cost increase of 2.12 percent ( $1.0212 - 1.0000 = 0.0212$ ).

## **PRINCIPAL FINDINGS AND CONCLUSIONS**

The following comments summarize the most important considerations and concepts pertinent to each of the specific factors contributing to the overall loss cost indication as set forth above.

### Changes in Indemnity Loss Experience from Provisions in Approved April 1, 2001 Loss Costs

This is the most favorable single factor in the proposed loss cost revision. The PCRB's analysis of the most recent available experience data for indemnity benefits produces significantly more favorable results than the expectations underlying approval of the current schedule of loss costs. Consistent with the practice adopted for the April 1, 2001 filing, the PCRB has adjusted available historical data to be consistent with provisions of Act 57 of 1996 (Act 57) as part of the analysis supporting this filing. Certain provisions of Act 44 of 1993 (Act 44), which were susceptible to estimation, were directly applicable to indemnity benefits. Those provisions have been accounted for in this filing, as they were in previous filings, by application of a "savings factor" to trended loss ratios estimated on a pre-Act 44 basis.

In addition to statutory changes, indemnity experience is affected by a variety of additional factors. These include ongoing interpretation and administration of various provisions of the Workers Compensation Act. The initiation and/or continuation of various accident prevention and loss management programs by the Commonwealth, insurers and employers may affect loss experience. Economic conditions and fraud detection, prosecution and/or prevention initiatives have potential direct and indirect influences on the workers compensation system of the Commonwealth and its costs. Circumstances in the administrative system by means of which claims for work-related injuries and illnesses are processed and disputes pertaining thereto are resolved may alter system experiences and costs. These and other similar considerations are reflected in experience data and are thereby incorporated into the loss development analyses performed in conjunction with each PCRB loss cost filing.

The net effect of all factors that have affected indemnity loss experience in the current filing is to reduce the overall loss cost indication by approximately 3.83 points.

### Changes in Medical Loss Experience from Provisions in Approved April 1, 2001 Loss Costs

Consistent with the approach adopted in the April 1, 2001 Loss Cost Filing, the PCRB has continued to state medical loss experience on a post-Act 44 basis. While the PCRB's analysis of medical loss experience suggests that the favorable effects of Act 44 of 1993 on workers compensation medical costs in Pennsylvania remain substantially in place, this approach precludes a separate analysis of the direct effects of that important legislation on current and prospective loss cost levels.

While certain specific provisions of the Workers Compensation Act and supporting administrative system are specific to medical benefits instead of indemnity benefits, medical losses are generally subject to influence by the same system considerations as enumerated above for indemnity losses. The PCRB's most recent evaluation of medical loss experience shows

a nominal reduction in loss cost levels from those contemplated in the April 1, 2001 filing, resulting in an incremental decrease in the overall loss cost indication of approximately 2.39 points.

#### Changes in Trend Rate and Period from Provisions in Approved April 1, 2001 Loss Costs

In the April 1, 2001 Loss Cost Filing the PCRB's trend provisions were based in part upon separate analysis of claim frequency experience for the Pennsylvania workers compensation system. Based on available data from both internal and external sources, the PCRB had established loss ratio trends that projected observed claim frequency trends through January 1, 1999. The April 1, 2001 filing then anticipated that further improvement in claim frequency would moderate somewhat, resulting in frequency changes at the annual rates of -5.0 percent for Calendar Year 1999, -4.5 percent for Calendar Year 2000 and -4.0 percent for the period from January 1, 2001 through March 31, 2002.

For this filing, the PCRB has updated the available information from both internal and external sources pertaining to claim frequency that had been used in previous filings and applied the most recent available data to its trend analysis. Consistent with the collective indications of this supporting information, the PCRB has used actual claim frequency experience through January 1, 2000. For trend periods subsequent to January 1, 2000 the PCRB has applied annual trend rates for claim frequency of -4.3 percent for 2000, -3.0 percent for 2001 and -1.0 percent for 2002 and the First Quarter of 2003.

Components of trend other than claim frequency, referred to herein as "severity trend" for sake of brevity, have been reviewed using commonly accepted and applied trend models applied to the PCRB's estimated ultimate on-level loss ratios adjusted for effects of previous changes in claim frequency. Testing done by the PCRB in regard to this trend analysis indicates that results are improved by virtue of the separation of trend into frequency and severity components instead of treating loss ratios alone.

The trend models thus produced show severity trends moving upward. For indemnity loss the historical and projected severity increases are approximately 2.8 percent. For medical loss the historical and projected severity increases are eight percent per year.

On balance, the favorable, albeit declining, claim frequency trend provisions and the generally increasing claim severity trends applied in this filing to the mid-point of the proposed schedule of loss costs add approximately 8.76 points to the proposed change in loss costs from those approved effective April 1, 2001.

#### Changes in Estimated Effects of Act 44 of 1993 on Indemnity Losses from Provisions in Approved April 1, 2001 Loss Costs

While Act 44 of 1993 primarily addressed issues of medical care for workers compensation, that law also included some limited features that affected indemnity benefits. These features were two-fold. First, the elimination of an absolute minimum indemnity benefit regardless of pre-injury wages and, second, an increase in the allowable payment for burial expenses in death cases.

In combination these law changes produced a reduction of slightly more than one-half of one percent in loss costs. In prior filings the PCRB has elected to adjust indemnity experience incurred after the effective date of Act 44 to a pre-Act 44 basis. Appropriate loss development and trend analyses were performed using the resulting, adjusted data. An Act 44 savings factor was finally applied to the resultant loss ratios prior to deriving annual loss cost change indications. This filing continues that approach and has not revised the savings factor itself. However, because the estimated proportion of total loss costs which are attributable to indemnity benefits has decreased in this filing as compared to the April 1, 2001 revision, the Act 44 savings has a nominally smaller impact on overall loss costs than was previously the case. For this filing, this factor produces an incremental increase of approximately 0.03 percent in the overall loss cost indication.

### **RECOGNITION OF EFFECTS OF PRIOR LEGISLATION**

The predominant legislative changes which must be recognized in preparing and reviewing this filing are Act 44 and Act 57.

Act 44 included the medical cost containment features listed below:

- Implementation of a reimbursement mechanism related to the Medicare system of compensating providers of medical goods and services
- Authorization of administrative systems providing both utilization review and peer review of the necessity, appropriateness and reasonableness of fees for medical services
- Authorization for coordinated care organizations intended to provide comprehensive medical services that recognize timely return to work for injured workers as a primary objective of the workers compensation system
- Extension of the period of time within which employers may direct injured workers to use medical practitioners selected from a listing of qualified practitioners provided by the employer from 14 to 30 days

In preparing its April 1, 1999 Loss Cost Filing the PCRB adopted an approach of stating experience incurred prior to the implementation of this law on an effective "post-Act 44" basis. Prior to adopting this approach the PCRB had performed extensive testing of this approach and comparison of results obtained thereby to alternative methods incorporated in previous loss cost filings. This filing continues the procedures implemented in the April 1, 1999 filing. This analytical approach precludes a new and independent evaluation of the continuing effects of Act 44 on loss costs for each filing. However, it also has many substantial benefits, including efficiency, tractability and the elimination of otherwise remaining requirements to "adjust" the most recent and critical calendar years' experience for effects of law changes occurring several years ago.

In its February 1, 1997 Loss Cost Filing the PCRB had estimated effects of three key provisions of Act 57 on prospective loss costs. Those provisions were as follow:

- Section 204 - Allows for offsets to workers compensation indemnity benefits otherwise payable to recognize Social Security old age benefits, certain employer-funded pension benefits and/or severance benefits.
- Section 306 - Applies the American Medical Association Guides for the Evaluation of Permanent Impairment to determinations of which cases will be qualified for total disability benefits and, alternatively, which cases will be treated as permanent partial disability cases.
- Section 309 - Revises the procedures applicable to the establishment of workers' wages for purposes of determining indemnity benefit rates.

In the April 1, 1998, April 1, 1999, April 1, 2000 and April 1, 2001 loss cost filings, various technical updates and/or revisions to the original estimates of effects of this legislation were incorporated as appropriate.

For reasons analogous to those supporting adjustment of prior medical experience to a post-Act 44 basis in preparing the April 1, 1999 Loss Cost Filing, the PCRB adopted a comparable approach for indemnity experience as respects Act 57 in the April 1, 2000 Loss Cost Filing. As was the case in the transition for medical experience, the PCRB had previously extensively tested its adjustment of prior data. The PCRB had previously tested these adjustments for sensitivity and had verified the equivalence of this approach to the prior procedure. That prior procedure continued to adjust experience incurred after the effective date of the law to a pre-Act 57 basis, producing preliminary filing estimates and then applying savings factors to arrive at a final loss cost indication.

It should be understood that the transition of the PCRB's filing analyses from "pre-law" to "post-law" bases for Acts 44 and 57 does not remove or reduce the favorable impacts of these two important pieces of workers compensation legislation from the filing indications. Neither does this change signal deterioration in the PCRB's perspective about the magnitude of the effects that these laws have had and continue to have on Pennsylvania loss costs. Rather, these analytical changes simply allow the effects of these laws to be incorporated more directly and efficiently into ongoing loss cost filings' supporting information.

The Table I prepared from reported financial data in support of this filing and stated on a post-Act 44 basis for medical losses and a post-Act 57 basis for indemnity losses, as described above, is shown in Exhibit 5 of the enclosures to this filing. Details of adjustment of reported indemnity and medical data is provided in Exhibit 5.

As respects the small effects of Act 44 on indemnity losses, the PCRB has continued the procedure of applying adjustment factors to more recent experience to state all historical data on a pre-Act 44 basis and then has applied savings factors in the final derivation of loss cost indications.

## **LOSS DEVELOPMENT**

While the establishment of appropriate levels of loss costs is ultimately a prospective process, a great deal of the supporting analysis and information required in this endeavor pertains to the estimation of loss experience for PRIOR policy periods. Proper evaluation of previous loss experience establishes reference points from which projections of future loss cost requirements can be made and in the context of which such projections can be reviewed for reasonableness. In simple terms, future loss cost needs cannot reasonably be estimated without first establishing what prior loss cost experience has been.

In preparing this filing and, particularly, in regard to the estimation of policy year loss ratios, the PCRB has been mindful of numerous technical and analytical considerations. Among the pertinent processes and procedures applied to this filing are the standards set forth in the Casualty Actuarial Society's "Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves" (Principles). A discussion of those Principles as they pertain to analysis supporting this filing is included as a separate enclosure with this filing.

In recent loss cost filings the PCRB has applied a range of loss estimation approaches separately to indemnity and medical losses prior to selecting policy year ultimate losses for further use in those filings' analyses. The range of approaches that have been used included case-incurred loss development and a series of approaches combining paid and incurred loss development approaches. Those combined methods applied paid loss development for successively longer periods of time before converting paid losses to case-incurred amounts and then applied case-incurred loss development for the balance of the development period to ultimate.

The past practices described above have also been applied in support of this filing. In addition, for this filing the PCRB has included loss estimates derived by averaging results from a case-incurred loss development method and the longest term paid loss development method possible with available data. This last approach is an alternative (and in some respects a more direct) way of balancing the potentially different results from case-incurred and paid loss development methods than the combined development approaches previously applied. Results of selected loss development methods applied in support of this filing are set forth in detail in Exhibits 6, 7 and 10 of the enclosures. This analysis and conclusions drawn there from are further described below:

**Indemnity Losses** - A relatively broad range of results was obtained from the application of the loss development approaches described above to indemnity losses. The incurred loss development method gave the lowest estimates of policy year losses of any method tested, while the approaches using paid loss development tended to produce higher results as the period over which paid loss development was included in the method increased (see Page 10.1, Exhibit 10 of this filing for a graph illustrating some of these differences). This pattern of loss development methods producing higher estimated policy year loss ratios as successively more paid loss development experience is used has been in evidence over many previous PCRB filings.

Based on information obtained in a series of surveys previously conducted of large writers of workers compensation insurance in Pennsylvania, the most recent of which is summarized in a separate enclosure with this filing, the PCRB has concluded that the effects of compromise and release and/or other case settlement activity continue to be an important part of the most recent years of available development experience.

For filings prior to the April 1, 2000 filing the PCRB had generally applied a paid-to-6th report development method. In the April 1, 2000 filing the most recent available financial data fell in the time period(s) during which the application of new loss management tools to old cases was at its highest. As a result, the PCRB used ultimate loss estimates in that filing that were derived by taking the averages of estimates made using the case-incurred development method and the paid-to-6th report development method.

For the April 1, 2001 filing the PCRB believes that to some extent carriers continued to apply compromise and release settlements and other recently available loss management and administrative tools to cases that had been incurred prior to the effective date of Act 57 through Calendar Year 1999. However, the PCRB selected estimates of policy year indemnity losses for this filing that were derived using the paid-to-5th report development method. That selection was based in part on suggestions in available data and surveys of major writers in the Commonwealth that the initial levels of compromise and release settlements being applied to cases incurred prior to the effective date of Act 57 began to decline in 1999.

Throughout the series of filings referenced above, one of the guiding principles followed by the PCRB has been that filing indications should generally be based on a loss development approach that falls into the mid-range of all available methods. As experience has accumulated, this preference has resulted in the use of somewhat different methods or combinations of methods over time, effectively tempering fluctuations that would have occurred if one method had been used regardless of the position of results of that method in the overall range of available methods.

For this filing the PCRB has added a set of ultimate loss estimates derived by averaging the indications separately obtained from the case-incurred loss development method and the longest-term paid loss development method supported by available financial data (a paid-to-20th report method). This approach is another way of recognizing the different results produced by incurred and paid loss data. As the indications so derived fall, as would be expected, in the mid-range of estimates produced for each policy year, the PCRB has selected these average indications as the basis for this filing's subsequent analysis of appropriate loss cost indications.

**Medical Losses** - As has been the case in other recent PCRB loss cost filings, the range of results produced when applying the loss estimation methods described above to medical losses was narrower than was the case for indemnity benefits. (See Page 10.2 of Exhibit 10 of the enclosures to this filing for a graph illustrating some of these differences.) Consistent with the above discussion of loss development for indemnity losses, the PCRB has also selected estimates of prior policy year medical losses based on the average of a case-incurred loss development approach and the longest-term paid loss development method supported by currently available financial data (a paid-to-20th report method) for use in this filing.

## TREND

Insurance experience available for analysis in promulgating loss costs is necessarily limited to policy periods previously completed. On the other hand, the loss costs being determined will apply to some future period. As can be readily seen in the preceding review of policy year loss ratios for this filing, insurance experience often reflects substantive changes over time in response to various economic, legal and social changes. As a result, the establishment of an appropriate overall loss cost change must recognize the time period that is interposed between the historical experience and the application of the new loss costs. This recognition is provided through "trend" analysis, a means of measuring any persistent, systemic changes in experience expected to occur in that interim period of time.

The most commonly applied method of establishing a provision for trend is to attempt to measure year-to-year changes occurring in historical information using mathematical techniques. Based on such measurements, a selected measure(s) is/are applied for the period of time required to connect the available prior experience to the prospective pricing period. The mathematical approaches most often used in this regard involve the fitting of selected curves through the observed historical data and basing the average change or trend rate on the characteristics of the curve(s) which best fit that prior experience.

Two curves usually considered in this type of analysis are a straight line (or "linear" model) and an "exponential" model. The linear model is based on a determination of the constant amount of change in loss ratios which best fits the observed historical data; the exponential model is based on a determination of the constant percentage change in loss ratios which best fits the observed historical data.

In preparing each of the last three Pennsylvania loss cost filings (April 1, 1999, April 1, 2000 and April 1, 2001), the PCRB has separated its trend analysis into two component parts: claim frequency and severity factors. Based on detailed analysis of both internal and outside data pertaining to these phenomena (and, in particular, pertaining to claim frequency), the PCRB has selected different methods and/or parameters to estimate trends for each of these component parts. This approach has allowed the PCRB to capitalize on available external data pertaining to injury and illness counts and claim frequency and ultimately provided a basis for selection of prospective loss ratio trends based on specific analysis and review of claim frequency data and experience.

The trend provisions incorporated into the April 1, 2001 filing were premised on the following assumptions:

- That severity trends as measured within historical loss ratios would continue through the prospective rating period for both indemnity and medical losses.
- That most recent observed rate of improvement in PCRB claim frequency data would apply to January 1, 1999. For subsequent periods the PCRB anticipated that claim frequency would continue to improve, but at rates that would show continuing declines. The selected rates of change in claim frequency used in that filing were as summarized below:

Calendar Year 1999: -5.0 percent  
Calendar Year 2000: -4.5 percent  
Calendar Year 2001 and the First Quarter of 2002: -4.0 percent

Based on separate measures of policy year loss ratio trend and claim frequency trend, implied severity trends have been identified in the supporting information for this filing. The indicated severity trend inherent in PCRB indemnity experience is equivalent to an annual increase of approximately +2.8 percent per year.

As has been the case in prior filings, the PCRB does not have available additional external or internal data that would support a judgmental deviation from observed historical severity trends in the PCRB's own experience data. As a result, the PCRB has applied a measurement of historical severity trend for indemnity benefits based on a seven-point linear trend model fitted through the "severity ratios" estimated for indemnity benefits consistent with ultimate on-level loss ratios and observed historical changes in claim frequency.

The PCRB has extensively reviewed both its own data and external information regarding claim frequency in the preparation of this filing. The most significant external information available to the PCRB was the Department of Labor and Industry's counts of work injuries and illnesses. This information was available in an extensive time series by calendar year, by fiscal year for some more recent time periods, and for the six months ending June 30, 2001.

The PCRB also obtained non-Federal employment payrolls for Pennsylvania for use in computing the frequencies of work injuries and illnesses reflected in the Department of Labor and Industry counts. The Bureau of Labor Statistics compiled this payroll data.

Because the Department of Labor and Industry data is available for more recent periods than the PCRB's internal data, it has been used in previous filings as a partial basis for selection of probable future trends as respects claim frequency. In supplying the PCRB with injury and illness counts for the six months ending June 30, 2001, however, representatives of the Department advised the PCRB that the apparent increase in counts (the first such change since 1990) could be attributable to an undetermined extent to changes in reporting practices among the data sources for the Department's records. The PCRB has been further informed that the types of changes contemplated in providing this underlying information would have been expected to result in higher reported counts than would have occurred under a continuation of previous reporting procedures, even without an actual increase in the numbers of reportable cases.

The PCRB's internal data compares indemnity claims incurred to expected losses at a constant (current) loss cost level. As has been the case in previous filings, this data appears to track the Department of Labor and Industry data quite closely but with persistently lower rates of decline in claim frequency. The PCRB has previously attributed this difference in the rates of change in claim frequency in these respective databases to the exposure bases available for use in these different sources. The exposure base used for comparison to the Department of Labor and Industry counts, payrolls, is not sensitive to shifts between type of employment having inherently different hazards and potentials for injuries and claims. The expected losses used to compute claim frequencies in the PCRB's internal data do respond to changes in the mix of

employments being insured and for which claims are being reported. As there has been a tendency for the Pennsylvania economy to become more service-oriented and less focused on manufacturing and contracting, this shift has itself contributed to lower claim counts over time.

In light of the most recent information provided by the Department of Labor and Industry, it is possible that some part of the historical divergence between claim frequencies, as measured by the PCRB and injury, and illness frequencies, produced by using the Department's injury and illness counts in conjunction with non-Federal employment payrolls, may have been owing to some unintended changes in reporting practices for some sources of the Department's data over time.

Given the uncertainty associated with the recent Department of Labor and Industry data for this filing, the PCRB has relied on its own internal data for purposes of measuring and projecting claim frequencies in this filing. The PCRB's internal data shows that claim frequency declined by 7.5 percent in Policy year 1997, 5.1 percent in Policy Year 1998 and 4.8 percent in Policy Year 1999 (the latest available year under the approved Statistical Plan). Recognizing this recent experience and potential adverse implications of deterioration in economic conditions in Pennsylvania, the PCRB has selected rates of decline in claim frequency after January 1, 2000 of 4.3 percent for 2000, 3.0 percent for 2001 and 1.0 percent for 2002 and the First Quarter of 2003 for use in this filing.

The PCRB would point out that loss cost indications are relatively sensitive to changes in trend, regardless of the respective component(s) which may be producing any given trend. With particular regard to claim frequency, even a relatively nominal additional flattening or upturn in trend from the provisions incorporated in this filing, which might be attendant with further changes in economic or other conditions in Pennsylvania, could render the indemnity trend provision used for this filing significantly understated.

**Medical:** The PCRB proceeded in a manner similar to that described above for indemnity trend in preparing this filing, as respects medical trends but with parametric modifications as suggested by the differences in observed policy year loss ratios.

An exponential trend model based on the eight policy years from 1992 through 1999 inclusive was selected for use in this filing as a measure of historical severity ratio trends. This model gives significant credence to policy year loss ratios seen in recent years in Pennsylvania. It is also consistent with the recommendations of the Insurance Department's most recent examination of the PCRB that exponential trend models are more appropriately applied to longer periods of time, such as eight years. For this filing, this trend model produces an effective trend model in which on-level severity ratios are increasing at a rate of approximately +8.0 percent per year.

The PCRB has applied the observed historical severity medical trend through the effective period of proposed loss costs. Actual changes in claim frequency through January 1, 2000 have been incorporated in this filing for trending purposes. For the trend periods after January 1, 2000 the same claim frequency trend selections as were used for indemnity benefits

were applied to medical losses. The comments offered above with respect to indemnity losses regarding the sensitivity of loss cost indications and the potential effects of even a relatively benign additional flattening or upturn in claim frequency on loss cost indications are equally applicable to medical losses.

### **INDICATED CHANGE IN LOSS COSTS**

Exhibit 12 enclosed in support of this filing presents the derivation of indicated changes in collectible loss costs effective April 1, 2002. The indicated change in collectible loss costs is derived based on estimates of prior policy year loss ratios, including the effects of Act 44 on medical benefits and Act 57 of 1996 on indemnity benefits. These estimated policy year loss ratios are then trended forward to the mid-point of the proposed loss costs (April 1, 2003) considering the anticipated claim frequency trend discussed above, and those loss ratios are then adjusted for the estimated effects of Act 44 on indemnity benefits. The loss ratio thus estimated is 1.0212. Since in the PCRB's loss cost filings the target loss ratio is 1.0000, this result supports the proposed 2.12 percent increase in current loss costs for the policy period beginning April 1, 2002.

Because average experience modifications are expected to be slightly higher during the period for which the proposed loss costs will apply than was the case for currently approved loss costs, average proposed increases in manual loss costs are slightly smaller at 1.35 percent than the indicated increase in collectible loss costs of 2.12 percent. By industry group the proposed average changes in manual loss costs effective April 1, 2002 are:

Manufacturing	+0.56%
Contracting	+1.07%
All Other	+1.88%

These indicated changes to manual loss costs were derived by industry group on Page 1 of Exhibit 12 using information regarding the historical operation of the Experience Rating Plan (see Exhibits 18 and 19 of the enclosures to this filing). Anticipated collectible premium ratios are compared to provisions in current rates, with the ratios used to adjust the proposed change in collectible loss costs to appropriate manual levels on the bottom of Page 1 of the Exhibit 12.

### **EMPLOYER ASSESSMENT FACTOR AND LOSS COST LOADINGS**

In preparing this filing the PCRB has reviewed experience pertinent to the employer assessment factor to be applied to Pennsylvania workers compensation business in accordance with Act 57 of 1997. Exhibit 13 enclosed presents a summary of the PCRB's determination of the appropriate employer assessment factor. Coincidentally, the net effect of reported changes in budgetary amounts, bases for allocation among payer groups, and premium volume result in a proposed provision of 0.0337, identical to the currently approved provision.

The provision for assessments supporting the Office of the Small Business Advocate, which continues to be part of proposed PCRB loss costs, is proposed to remain at .0001.

PCRB loss costs continue to include adjustments for the effects of the Merit Rating Plan and the Certified Safety Committee Program. These provisions are proposed to change from 0.0032 and 0.0045 to 0.0034 and 0.0034, respectively, as shown in Exhibit 13 and separately derived in Exhibits 15 and 16.

This filing also proposes to update classification loss costs to reflect indicated loadings for the Pennsylvania Construction Classification Premium Adjustment Program (PCCPAP).

Since 1991 the PCCPAP program has been in effect for designated construction classifications. This program offers tabular premium credits to employers subject to those specified classifications that demonstrate the payment of wages above certain threshold levels. When such credits are provided, any experience modification applicable to the employer is also adjusted under the terms of the program by reducing the expected losses used in the rating in proportion to the PCCPAP credit given. Manual loss costs for each construction classification then incorporate "offsets" intended to recover the premium credits given to higher-wage employers from all employers insured in each construction classification. Thus, the PCCPAP program is intended to be "revenue-neutral" and should reallocate premium obligations between low- and high-wage employers without either increasing or reducing the overall amount of premium collected in these classifications.

For this filing the PCRB has been able to analyze participation in this program and the level of credits generally obtained by participating employers in each classification using the most recent available experience. Results of that analysis and proposed PCCPAP loads on loss costs by classification are included as Exhibit 14 of the enclosures to this filing.

Available experience, as summarized on Exhibit 14, produces a revised indicated PCCPAP offset of 3.41 percent of loss costs, down somewhat from the current average of 3.67 percent.

While the proportion of eligible employers seeking and/or qualifying for credit under the plan has increased slightly, those risks that do qualify for PCCPAP credits produce a nominally lower average credit.

In addition, Exhibit 14 reveals that there continue to be material differences between construction classifications in terms of the portion of employers receiving PCCPAP credits and/or the level of credits provided to such employers. Indicated offsets range from 0.00 percent in Code 662, Household Appliance Service, to 8.21 percent in Code 649, Ceiling Installation.

## **EXPERIENCE RATING PLAN PARAMETERS**

The Experience Rating Plan provides a prospective means of recognizing differences in loss potential between employers. This recognition is accomplished by means of a comparison of each qualifying employer's loss and exposure experience over a specified period of time (experience period) to the average experience of all other employers engaged in similar businesses.

As part of each loss cost filing, the PCRB reviews the results of its Experience Rating Plan and proposes certain updates or revisions to the Plan as are deemed necessary or appropriate to maintain the effective operation of the plan.

Exhibit 18 of the enclosures to this filing presents a detailed analysis of results of the Experience Rating Plan within each industry group over the most recent available five years. These analyses are set forth in tabular form by premium size group and experience modification range by year and are also depicted in graphic form for additional reference. Exhibit 19 of this filing presents summaries of collectible premium ratios and detail of the derivation of expected loss cost factors supporting the Experience Rating Plan parameters proposed in this filing. In addition, a separate page is included within Exhibit 19 that sets forth the PCRB's selected basis for full credibility in the proposed Experience Rating Plan.

The changes in collectible premium ratios presented on Exhibit 19 must be accounted for in establishing manual levels of loss costs, as shown on the bottom portion of Page 1 of Exhibit 12.

Final Experience Rating Plan parameters proposed in this filing are shown in Exhibits 27 and Exhibit 28.

Since the April 1, 2001 Loss Cost Filing, the PCRB has performed additional analysis of its Experience Rating Plan directed at the matters of eligibility, credibility assignments and loss limitations applied in the Plan. In excess of 100 different variations of experience rating plans have been tested and reviewed in this effort to date, and substantial progress toward development of improved parameters and procedures for use in experience rating Pennsylvania workers compensation risks has been made as of the date of this filing.

Materials provided to the Bureau's Actuarial and Classification and Rating Committees for the joint meeting of those bodies held on November 7, 2001 reflected results obtained to date through a series of tests of the Experience Rating Plan using 1997 data. The PCRB expects to submit those materials on an informational basis to the Pennsylvania Insurance Department separately from but approximately concurrent with this filing. The Insurance Department and the PCRB's Actuarial Committee will be invited to participate in and comment on this work and appropriate additional review, toward the objective of accomplishing as complete and meaningful a review of this important element of the overall pricing system in Pennsylvania as possible.

#### **EXCESS LOSS (PURE PREMIUM) FACTORS, STATE AND HAZARD GROUP RELATIVITIES AND LOSS ELIMINATION RATIOS**

Excess loss pure premium factors (ELFs) recognize employers' elections to limit the amount of individual accidents on retrospective rating plan options negotiated with their insurers. Since losses in excess of the selected limit are omitted from the determination of final retrospective premiums, insurers must collect an insurance charge for the expected value of those loss limitations in order to maintain the actuarial balance of the retrospective rating options. ELFs are multiplied times standard premium to determine the applicable excess loss charge and will vary by loss limitation and hazard group of the employer's governing classification.

State and hazard group relativities are parameters used to refine the application of a common table of insurance charges and savings to multiple jurisdictions under retrospective rating plans. These factors are computed based on loss severities in each state and are applied to expected losses prior to determining the expected loss size range used in obtaining insurance charges and savings from the countrywide Table M.

Loss elimination ratios (LERs) are required under Act 44 for specified selections of deductible coverage that must be offered subject to insurer underwriting standards. These small deductible plans operate on a per claim basis, as distinguished from the per accident or occurrence basis underlying excess loss factors; otherwise the LERs would be complementary values to the ELF's (i.e.,  $1.0 - \text{ELF}$ ) at common loss limitations.

The ELF's, state and hazard group relativities and LERs all depend in primary part on an analysis of loss distributions for the applicable state(s). The PCR's analysis of appropriate ELF's, state and hazard group relativities and LERs is reflected on Exhibits 21 – 25 inclusive that are included as supporting information for this filing.

#### **OPTIONAL RETROSPECTIVE LOSS DEVELOPMENT FACTORS**

Because loss valuations tend to change (and generally to increase) over time, some retrospective rating plans provide for application of development factors to preliminary loss reports in computing retrospective premiums. The PCR's has historically presented appropriate voluntary loss development factors based on aggregate PCR's experience as part of its filings for use by carriers and insureds in negotiating and agreeing upon their retrospective rating plans.

Exhibit 26 of the enclosures to this filing shows the PCR's proposed optional retrospective loss development factors on an unlimited basis. In addition, the PCR's includes in its Manual reference to the formula for adjusting unlimited loss development factors to limited bases by reference to the ELF's described above. That formula is also shown in Exhibit 26 for reference.

#### **CLASSIFICATION LOSS COST RELATIVITIES**

Workers compensation insurance is written under a classification system that provides varying rating values for different types of businesses based on the risk of loss inherent in those businesses subject to each distinct classification. As a result, any overall loss cost indication must ultimately be apportioned to each individual classification with due recognition given to the comparative experience of employers subject to each classification.

In preparing individual classification loss costs for this filing the PCR's has continued to apply classification pricing procedures established as a result of a 1994 study of the classification plan conducted in cooperation with the Insurance Department, Milliman & Robertson, Inc. and the Commonwealth Contractors' Coalition. These procedures have been used and approved in each of the four previous PCR's loss cost filings.

Exhibit 17 of the enclosures to this filing provides an overview of the classification loss cost formulae utilized in preparation of this filing. These procedures are consistent with previously submitted and approved methods. For this filing the PCR's proposes a second step toward a

revision begun last year in procedures used to apply “test correction factors” to interim results in the derivation of classification loss cost relativities. Last year’s filing moved one-third of the way from a previous procedure applying separate test correction factors by type of loss to an alternative that uses a flat factor across all types of loss. This year’s filing proposes moving two-thirds of the way along this transition, with the expectation that the next annual loss cost filing made by the PCRB will complete this transition. This change allows the distribution of losses by type of loss, and particularly between serious, non-serious and medical only losses, to change over time in response to persistent patterns in reported experience.

The PCRB has elected for purposes of this loss cost filing to apply “swing limits” or allowable fluctuations in classification loss costs of 25 points above and below the average loss cost change. In addition, the PCRB applies a testing procedure to identify potential significant reversals in classification loss cost changes relative to overall average indications year after year and intervenes where such indicated changes exceed selected amounts. These swing limits apply to “pure” loss costs, which include an adjustment for the operation of the Experience Rating Plan. The values so determined are subsequently adjusted to include appropriate provisions for the following items:

- Offsets for net Merit Rating Plan credits
- Offsets for Pennsylvania Construction Classification Premium Adjustment Program credits
- Offsets for Certified Safety Committee credits
- Assessment for the Office of the Small Business Advocate

The Index to Classification Exhibits and the accompanying Class Book in the enclosures to this filing present detail of the experience and loss cost indications derived for each classification in this filing. Within the Index to Classification Exhibits certain parametric components of the classification loss cost review process are presented, and the bases for establishing credibility tables applicable to both payroll and expected losses are provided. Summary unit statistical data pertinent to the classification experience analysis is also included as Exhibits 20A, 20B and 20C of the enclosures to this filing.

Item 9 within the Index to Classification Exhibits presents identification of several classifications in which some form of selection or other intervention in the statistical procedures generally applied to the determination of classification loss costs was deemed appropriate. For some of these classifications the bases for loss cost selection were references to prevailing national procedures or values (for example, the explosives classifications, for which the national procedure is specifically presented as Item 10, or the aircraft seat surcharge). In many of the remaining classifications the PCRB is continuing as an interim procedure to select loss cost indications based on specified non-temporary staffing classifications for application to designated temporary staffing codes which describe the same type(s) of businesses. It is anticipated that, when sufficient statistical data for the temporary staffing codes is available, the classification procedure used for these classifications will be reviewed.

Item 12 of the Index to Classification Exhibits presents "Class Book pages" detailing the derivation of loss costs for classifications treated in combination or subject to reassignments of data from/to another class(es). The Class Book presents detail of the experience and loss cost indications derived for each individual classification in this filing, performed without special consideration using the proposed procedures.

The loss costs developed in accordance with the procedures set forth on Exhibit 17 and presented in portions of the Index to Classification Exhibits and the Class Book exclude the following considerations previously discussed in this letter:

- PCCPAP offsets from Exhibit 14
- Merit Rating Plan credit offsets derived in Exhibit 15
- Offsets for Certified Safety Committee credits derived in Exhibit 16
- Assessment loading for the Office of the Small Business Advocate shown in Exhibit 13

The loss costs prior to application of these latter considerations may be thought of as "pure" loss costs and are the values to which the loss cost change limitations or "swing limits" have been applied.

For this filing consideration was given to past filings' changes by classification relative to average or overall indications in making final rating value selections. This procedure mitigated what otherwise would have been substantial fluctuations above and below average levels between successive filings for a limited number of classifications.

Exhibit 28 in support of this filing presents a complete table of proposed loss costs and expected loss factors pertinent to the Experience Rating Plan. Exhibit 29 presents both summary results and classification detail of the PCRB's tests of proposed loss costs against intended levels. Finally, Exhibit 30 depicts in graphic form the distribution of percentage changes in classification loss costs, both before and after the application of swing limits or "caps."

## **MANUAL LANGUAGE REVISIONS**

Proposed Manual language to accomplish the changes described briefly below is included in this filing.

- ***Designated Auditable Payrolls***

The filing proposes updates to several of these values for the continuing effects of wage inflation, including specifically the following:

Executive Officers - the maximum auditable payroll proposed to change from \$1,550 to \$1,600 per week

Taxicab operators for leased cab - the annual auditable payroll absent available payroll records proposed to change from \$30,550 to \$32,200

Salaried police or firefighters - the minimum auditable payroll proposed to change from \$3,050 to \$3,200 per year

Specific Manual language proposed in support of these changes is provided under cover of a staff memorandum dated October 15, 2001 accompanying this filing.

This filing, Proposal C-343, fully and fairly reflects the most recent available experience indications in Pennsylvania, together with all initial and continuing effects of both Act 44 and Act 57. The PCRB respectfully requests a timely review of this filing toward the objective of its implementation, as proposed, on a new and renewal basis **effective April 1, 2002**. In requesting review of this filing the PCRB is especially hopeful that adequate and appropriate advance notice of final loss costs and related rating values may be given to all participants in the Pennsylvania marketplace. Such notice would, of course, be assisted by as prompt and expeditious a review of this matter as possible. Toward that objective, the PCRB will be pleased to answer any questions or provide any available supplementary information which you or your staff may require.

Sincerely,

Timothy L. Wisecarver  
President

TLW/kg

Enclosures: Brown Book  
Actuarial and Classification & Rating Committees Minutes  
Summary of Responses to Survey of 26 Large Carrier Groups  
Discussion of Casualty Actuarial Society's "Statement of Principles Regarding  
Property and Casualty Loss and Loss Adjustment Expense Reserves"  
Index to Classification Exhibits  
Class Book  
Exhibit 5 Table I - Summary of Financial Call Data  
Exhibit 6 Paid & Incurred Loss Development & Trend  
Exhibit 7 Tail Factors for Loss Development  
Exhibit 8 Claim Frequencies  
Exhibit 9A Measures of Goodness of Fit in Trend Calculations Using Loss  
Ratios  
Exhibit 9B Measures of Goodness of Fit in Trend Calculations Using Severity  
Ratios  
Exhibit 10 Graphs of Indemnity and Medical Loss Ratios  
Exhibit 11A Retrospective Test of Trend Projections for Loss Ratios  
Exhibit 11B Retrospective Test of Trend Projections for Severity Ratios  
Exhibit 12 Indicated Change in Loss Costs

Enclosures continued:

Exhibit 13	Loss-Based Assessments and Employer Assessment Factor
Exhibit 14	Pennsylvania Construction Classification Premium Adjustment Program ("PCCPAP")
Exhibit 15	Merit Rating Plan Off-Balance Indications
Exhibit 16	Certified Safety Committee Program Offset
Exhibit 17	Loss Cost Formulae
Exhibit 18	Review of Experience Rating Plan Results
Exhibit 19	Review of Experience Rating Plan Parameters
Exhibit 20A	Table II
Exhibit 20B	Table III
Exhibit 20C	Table IV
Exhibit 21	Excess Loss (Pure Premium) Factors – NCCI Methodology
Exhibit 22	Empirical Pennsylvania Loss Distribution
Exhibit 23	Proposed Excess Loss (Pure Premium) Factors
Exhibit 24	State and Hazard Group Relativities
Exhibit 25	Small Deductible – Loss Elimination Ratios
Exhibit 26	Retrospective Development Factors
Exhibit 27	Table B
Exhibit 28	Loss Costs and Expected Loss Factors
Exhibit 29	Tests of Indicated & Selected Loss Costs
Exhibit 30	Distribution of Loss Cost Percentage Changes
Exhibit 31	NCCI Filing Memorandum (Item R-1371)
	Staff Memorandum of October 15, 2001 - Proposed Revisions to Designated Auditable Payrolls