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To: The Honorable Jessica K. Altman, Insurance Commissioner

From: Kenneth Creighton, ACAS, MAAA, Chief Actuary

Date: November 13, 2018

Subject: PCRB Filing C-372 – Workers Compensation Loss Cost Filing
Proposed Effective Date: January 1, 2019

This actuarial memorandum provides a discussion of the analysis performed by the PCRB reflected in the proposed changes to loss costs and other rating values in Pennsylvania contained in this filing. The loss costs in this filing are meant to apply to policies written from January 1, 2019 through March, 31, 2019. A separate loss cost filing, which will apply to policies written from April 1, 2019 through March 31, 2020, will be filed in December.

Indicated and Proposed Change	**-10.02%**

A second filing, PCRB Filing C-373, is also being filed concurrently. That filing reflects the impact on loss costs and other rating values of Pennsylvania House Bill 1840 of 2017, which became law on October 24, 2018. The legislation was in response to the Pennsylvania Supreme Court decision in *Protz v. WCAB (Derry Area School District)* and reinstated the use of impairment rating evaluations in determining the classification of Permanent injuries. The proposed change in Filing C-373 represents the proposed change from the loss costs proposed in this filing, Filing C-372.

The actuarial methods in this filing are consistent with those used in the prior annual loss cost filing, Filing C-370, which became effective April 1, 2018.

The premium and loss experience underlying this filing is the same as that used in Filing C-370 with one notable exception. The PCRB determined that the financial data valued as of December 31, 2016, reported by a PCRB member and used in the development of Filing C-370, was incorrect. This member's reported losses were materially overstated. In this filing, that data has been removed.

The discussion in this memorandum is organized by the following topics:

- Summary of Key Elements
- Recognition of Effects of Changes in Law
- Adherence to Actuarial Principles and Standards of Practice
- Methods
    - Loss Development
    - Trend
- Indicated Change in Loss Costs
- Employer Assessment Factor and Loss Cost Loadings
- Experience Rating Plan Parameters
- Retrospective Loss Development Factors
- Classification Loss Cost Relativities
- Excess Loss (Pure Premium) Factors, Loss Elimination Ratios and State and Hazard Group Relativities

- Closing Comments and Qualifications
- Index of Exhibits

SUMMARY OF KEY ELEMENTS

In this filing, the PCRB has employed procedures and analyses consistent with those supporting previous annual rating value filings. The following table summarizes the major components of the proposed change.

PCRB Loss Cost Filing Effective January 1, 2019		
(1)	Change in indemnity loss experience from provisions in the approved April 1, 2018 loss costs	-5.21%
(2)	Change in medical loss experience from provisions in the approved April 1, 2018 loss costs	-4.50%
(3)	Change in the indemnity trend rate and trend period from provisions in the approved April 1, 2018 loss costs	-3.64%
(4)	Change in the medical trend rate and trend period from provisions in the approved April 1, 2018 loss costs	-2.52%
(5)	Impact of HB1846 pure savings in the January 1, 2019 filing	-0.49%
(6)	Impact of the Protz Adjustment in the January 1, 2019 filing	+6.33%
(7)	Overall Change: [(1+(1)] x [1+(2)] x (1+(3)] x [1+(4)] x [(1+(5)] x [1+(6)]	-10.03%

Each of the components identified in this chart are briefly discussed below. More thorough discussion can be found in subsequent sections of this memorandum.

<u>Changes in Indemnity Loss Experience</u>

The PCRB's analysis of the experience data for indemnity benefits produces estimates of loss costs that would be lower than the costs underlying the schedule of PCRB loss costs in Filing C-370. The PCRB has adjusted available historical indemnity data to be consistent with provisions of Act 57 of 1996 (Act 57) and applied benefit on-level factors to adjust historical indemnity data to a post-Act 44 of 1993 (Act 44) basis before proceeding with our loss development and trend analyses. The indemnity loss experience in the current filing, after adjustment to ultimate value but before adjustment for trend, implies a change in indicated loss costs of -5.21%.

<u>Changes in Medical Loss Experience</u>

Consistent with the approach adopted in previous filings, the PCRB has stated medical loss experience on a post-Act 44, and a pre-HB1846 (Act 184 of 2014)[1] basis, before proceeding with our loss development and trend analyses. The evaluation of medical loss experience in this filing, after adjustment to ultimate value but before adjustment for trend, shows a reduction from the loss experience underlying the current loss costs. The overall effect of the medical loss experience is an implied incremental change in indicated loss costs of -4.50%.

[1] For consistency with prior filings, the term HB1846 is generally used in this memorandum, rather than Act 184.

Changes in Trend

Similar to the April 1, 2018 loss cost filing, the PCRB's trend provisions are based upon separate analyses of claim frequency and claim severity experience for the Pennsylvania workers compensation system. The PCRB has applied an exponential trend model fitted through the most recent available seven policy years as the basis for estimating claim frequency trend.

Claim severity is analyzed in a similar manner to prior filings. For both indemnity and medical, ultimate loss ratios at current loss cost levels are adjusted to remove frequency. The remaining severity ratios have been reviewed using commonly accepted trend methods.

The following table provides a summary of trend results and a comparison to the results in the prior loss cost filing (C-370).

PCRB Trend Comparison C-372 v. C-370				
	Indemnity	**Medical through 1/1/2015**	**Medical after 1/1/2015**	**Average Medical Trend**
Current Analysis (C-372)				
Frequency Trend	-5.57%	-5.57%	-5.57%	-5.57%
Severity Trend	+2.52%	+3.59%	+3.40%	+3.40%
Combined (Loss Ratio) Trend	-3.20%	-2.18%	-2.36%	-2.36%
Prior Analysis (C-370)				
Frequency Trend	-5.56%	-5.56%	-5.56%	-5.56%
Severity Trend	+4.09%	+4.55%	+4.36%	+4.36%
Combined (Loss Ratio) Trend	-1.70%	-1.26%	-1.44%	-1.44%
Impact to Current Indicated Change				
	-3.64%	-2.52%		

The current analysis results in a 1.5 percentage point decrease to indemnity severity trend and a one percentage point decrease to medical severity trend.

There is essentially no change in frequency trend as compared to Filing C-370. The source of the data used to calculate frequency trend was unaffected by data issue described earlier. Indemnity loss ratio trend, the combination of frequency and severity trend, has increased from -1.70% to -3.20%. This change implies an incremental change in indicated loss costs of -3.64%.

For medical severity trend, the impact of HB1846 is reflected with an adjustment for trend deflection. In Filing C-370, medical severity trend for the period prior to 1/1/2015 was estimated to be +4.55%. Due to HB1846, trend deflection reduced medical severity trend by 0.19 percentage point to +4.36%, on and after 1/1/2015. With this filing, medical severity trend is estimated to be +3.59%, with HB1846 trend deflection reducing it to +3.40%. Consistent with past practice, three policy years, 2013, 2014 and 2015, are used to determine the final indicated change. The midpoint of this policy period experience is 1/1/2015. As a result, the trend adjustment to the midpoint of the policy period beginning 1/1/2019 uses the HB1846-deflected trend for five years. As the medical severity trend has decreased with no change in frequency trend, the loss ratio trend is likewise reduced from -1.44% in Filing C-370 to -2.36% in this filing. This implies an incremental change in indicated loss costs of -2.52%.

HB1846 Savings

In addition to the trend deflection mentioned above, HB1846 also provides a savings in medical benefits. This is discussed further below. The result is an incremental change in the indicated loss costs of -0.49%.

Protz Decision

Filing C-369 and Exhibit 35 in this filing provide the PCRB's analysis of the impact to indemnity benefits due to the Protz decision. The analysis results in a factor of 1.1337 to increase indemnity losses. Changes in the distribution of trended ultimate loss ratios between indemnity and medical benefits in this filing result in a change of +6.33% for the impact of the Protz decision.

RECOGNITION OF THE EFFECTS OF CHANGES IN LAW

The PCRB has made two types of adjustments to reflect changes in law. In the first case, law change is reflected through adjustment to the historical data. In the second case, law change is reflected through factors explicitly applied in the final calculations of the overall indicated change or in the determination of trend.

Adjustment to Historical Data for Act 44, Act 57 and HB1846

The predominant law changes which required adjustment to historical data in preparing this filing are Act 44, Act 57 and HB1846.

Beginning with its April 1, 1999 Loss Cost Filing, the PCRB adopted an approach of stating medical experience incurred prior to the implementation of Act 44 on an effective "post-Act 44" basis. Prior to adopting this approach, the PCRB had performed extensive testing of this approach and compared its results to alternative methods incorporated in previous loss cost filings. In its April 1, 2006 Loss Cost Filing, the PCRB made a similar adjustment to historical data for the effects of Act 44 on indemnity experience. This filing continues the procedures first implemented with the April 1, 1999 filing.

In its February 1, 1997 Loss Cost Filing, the PCRB estimated the effects of Act 57 on prospective loss costs. In subsequent loss cost filings, various technical updates and/or revisions to the original estimates of effects of this legislation have been incorporated as appropriate.

Similar to the 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 in the April 1, 2000 Loss Cost Filing with respect to Act 57. These approaches have been consistently used since the filings in which they were first implemented, including this filing.

In this filing, an adjustment is made to reflect HB1846 by stating medical experience on a pre-HB1846 basis. There are several reasons for treating this legislation on a pre-law basis while adjusting for Acts 44 and 57 on a post-law basis. First, HB1846 only impacts medical costs starting January 1, 2015.[2] Acts 44 and 57 became effective more than two decades ago, so a large portion of the loss data is already reported on a post-law basis. Second, the pre-law basis for HB1846 removes the distortion in loss development and trend that can appear in the most recent data points and allows for explicit adjustments to trend and projected loss ratios that are consistent with the PCRB's analysis of the legislation, as shown in Exhibit 34.

Table I, prepared from reported financial data in support of this filing, adjusted to a post-Act 44, post-Act 57 and pre-HB1846 basis, is shown in Exhibit 5. Details of the adjustments are provided in Exhibit 5.

<u>Savings Attributable to HB1846</u>

The PCRB has estimated that HB1846 will reduce medical costs for workers compensation insurance policies effective from January 1, 2019 through March 31, 2019 in the Commonwealth by approximately 1.51%. This total impact is comprised of a savings factor of 0.9908 (-0.92%) applicable to the trended ultimate losses from prior policy years, as shown in Exhibit 1, page 1, and a reduction in severity trend of -0.19%, annually. This trend reduction (trend deflection) spans the 4.625 years from January 1, 2015 to August 15, 2019, the midpoint of the prospective policy period. As noted above, we are using January 1, 2015 as the starting date, rather than the actual effective date four days earlier, as a simplifying assumption with negligible impact on the calculations. The trend deflection produces a factor of 0.9924 (-0.76%). The combined effect is 0.9908 x 0.9924, which equals 0.9849 (-1.51%).

Discussion and supporting exhibits for the PCRB's evaluation of HB1846 are provided in the accompanying Exhibit 34.

<u>Impact of the Protz Decision</u>

The impact of the Protz decision was analyzed in Filing C-369, and is discussed in Exhibit 35. The PCRB continues to use this analysis and the resulting change to indemnity costs. The analysis results in a factor of 1.1337 to adjust to indemnity costs to a post-Protz level. Due to the change in the distribution of indemnity and medical ultimate loss ratios, the overall impact to loss costs in this filing is higher than in Filing C-369 (1.0633 v. 1.0606).

ADHERENCE TO ACTUARIAL PRINCIPLES AND STANDARDS OF PRACTICE

This filing has been developed using actuarial methods that are consistent with all applicable actuarial principles and standards of practice. Loss costs, as developed, filed and distributed by the PCRB represent estimates of future costs. These estimates rely on projections of loss experience (claim costs) to the prospective time period during which they will be in effect. That is, they are estimates of the costs of claims that are made under workers compensation insurance policies to be in effect from January 1, 2019 to March 31, 2019. The ultimate, true value of these claims will not be known until they have all closed, several decades from now. As a result, estimates of the future costs must be used. Adherence to actuarial principles and

[2] HB1846 was effective on December 27, 2014. Throughout this analysis, the PCRB used January 1, 2015 to simplify calculations. This has de minimus impact.

standards of practice ensures the reasonableness of the estimates, along with their compliance with regulatory requirements.

Four principles are provided in the Casualty Actuarial Society's Statement of Principles Regarding Property and Casualty Insurance Ratemaking. The fourth principle states:

> "A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer."

There are many Actuarial Standards of Practice (ASOPs) applicable to this filing. These documents set forth the standards, including appropriate considerations, that guide an actuary in developing and presenting the methods and calculations contained in this filing. These include ASOPs regarding data quality, credibility, trend, risk classification, and communications.

In addition, core principles for estimating future payments on claims are found in the Casualty Actuarial Society's Statement of Principles Regarding Property and Casualty Unpaid Claims Estimates. The first principle states:

> "An unpaid claims estimate for a defined group of claims is reasonable if it is derived from reasonable assumptions and appropriate methods or models and the reasonableness of the estimate has been validated by appropriate indicators or tests, all evaluated consistent with the review date and valuation date in the context of the intended measure."

Unpaid claim estimates are discussed in this filing in the Loss Development section. In November 2014, the Casualty Actuarial Society revised the Statement of Principles Regarding Unpaid Claims Estimates, removing reference to several considerations that now appear in ASOP 43. While this ASOP specifies that it does not apply to "estimates developed solely for ratemaking purposes," the PCRB has nevertheless adhered to the spirit of this standard. As such, an additional document is attached that addresses a request from the Pennsylvania Insurance Department to provide a discussion of any limitations that may have had a substantive impact on the unpaid claims estimates included in the filing.

METHODS

The ratemaking approach in this filing has three overarching steps:

- Gather premium and claim data from prior periods and project it to its ultimate value. This is commonly known as premium and loss development.
- Project the resulting estimated ultimate loss ratios for both frequency and severity trend to the midpoint of the future policy period.
- Make any other adjustments necessary to reflect known trends or changes impacting premium or claims.

LOSS DEVELOPMENT

This filing uses premium and loss experience from recent policy years to estimate the costs of the upcoming policy period, which starts January 1, 2019. Using experience from prior years is perhaps the most common approach to developing estimates of future costs in property and casualty insurance ratemaking, and relies on the basic assumption that past experience is a key source of information and insight regarding future costs.

In this filing, the PCRB has applied both the case incurred loss development and the paid loss development methods in its analysis of loss experience from prior policy periods. The PCRB has selected the average of these two methods in its estimate of future costs. The average provides a balance between the different results of the case incurred and the paid loss development methods. Results of these loss development methods are set forth in detail in Exhibits 6, 7 and 10. The data used to calculate the two most recent sets of development factors (link ratios) is shown in Exhibit 5.

Data in Exhibit 5 is organized so that policy year losses for a given stage of development, used to calculate development factors, are from a common population of companies. In order to make the best use of available data, the population of companies used for one stage of development is allowed to differ from the population for other stages of development. Exhibit 5 provides the data for two stages of development: policy years valued as of 12/31/14 developing to values as of 12/31/15; policy years valued as of 12/31/15 developing to values as of 12/31/16. These are the two stages of development used to select loss development factors in this filing. The development factors calculated in this fashion are shown in columns labeled, “Ratio to Prior Year.”

Exhibit 6 shows the development factors calculated in Exhibit 5, along with several sets of factors from prior years for comparison. The selected factors for indemnity and medical, both paid and incurred, are the average of the factors for the latest two stages of development (from Exhibit 5).

Tail factors for beyond the 29th report are determined for incurred loss development in Exhibit 7, using a decrement method. The tail factors for paid loss development are based on two calculations in Exhibit 6. First, the ratio of incurred loss at the later valuation at 29th report is divided by the paid loss at the earlier valuation at 28th report. This ratio can be seen in the column labeled, “Pd-Inc. LDF.” Second, the tail factor for incurred loss beyond the 29th report is also used for paid development beyond the 29th report. That is, paid loss development factors are used through the 28th report, developed to the incurred level at the 29th report, and then developed to ultimate using the incurred tail factor for beyond the 29th report. The individual development factors for each report are accumulated into report-to-ultimate factors, shown in Exhibit 6 as “Cum LDF”. The product of the report-to-ultimate factors and the most recent valuation of paid loss or case incurred loss, as appropriate, produces estimates of ultimate loss for all policy years displayed.

This process produces estimates of ultimate loss for both indemnity and medical on both an incurred basis and a paid basis. The resulting projected ultimate losses can be seen on Exhibit 6, Page 5 for indemnity and Page 17 for medical. The resulting projected ultimate loss ratios appear on Exhibit 6, Page 6 for indemnity and Page 18 for medical.

In summary, the loss development methods used in this filing are consistent with previous PCRB filings. The paid loss development method and the incurred loss development method provide important insight into the costs of the upcoming policy period. The practice of using the average of the two methods, as is done in this and in prior filings, strikes a balance between the two and utilizes the strengths of both methods: the paid loss development method relies on actual payments and payment patterns, while the incurred loss development method uses actual payments plus the amounts that insurers have identified as the additional amounts to be paid on a case-by-case basis.

TREND

This filing incorporates adjustments for four types of trend, or the inflationary (deflationary) forces that affect costs and the methods of measuring and projecting costs: exposure trend, frequency trend, indemnity severity trend, and medical severity trend.

Exposure Trend

In this filing, as has been done in prior filings, standard earned premium is calculated at current loss cost levels. This removes the impact of loss cost level changes. The remaining trends in exposure are matched to trends in costs through loss ratios. By dividing losses for a policy year, either on a paid or case incurred basis, by premium at current levels, the loss-based costs of providing workers compensation coverage are directly paired with the premium for the coverage. When loss ratios rise, then costs are rising relative to premium, and when they decline, the costs are declining relative to premium, exclusive of filed loss cost changes. Thus, the loss ratio methods used in this filing implicitly reflect premium trends due to exposure changes. The loss ratios are shown in Exhibit 6, Page 6 for indemnity and Page 18 for medical.

Frequency Trend

Exhibit 8 provides the analysis of frequency trend. Indemnity claim counts are used as a consistent measure for frequency since these claims include those with indemnity and medical benefits. Medical only claims are not used here to reduce the volatility they bring. (The cost of medical only claims is incorporated later in the medical loss ratios.) Separate analyses are shown; the first excludes large deductible business while the second includes it. This exhibit also includes graphs of frequency using both approaches, along with non-deductible business broken down by industry group.

Consistent with prior filings, the PCRB has selected the seven-year exponential trend, as shown on Exhibit 8, Page 1 (see “PY09-PY15”.) The resulting frequency trend, -5.6%[3], is the same result as in Filing C-370. As can be seen in the graphs in Exhibit 8, the frequency point for 2013 showed a shallower drop than in previous years, but the points for 2014 and 2015 resumed the long-term downward trend seen in past filings. This can also be deduced from the several different exponential fits over shorter and longer periods of time.

Claim frequency (“#Claims per $1 million”) in Exhibit 8 is reproduced in Exhibit 6, Page 6. These are actual frequency measures, not fitted. The figures are normalized to show them relative to Policy Year 2004. The frequency component of indemnity and medical trend is removed by dividing the indemnity loss ratio and the medical loss ratio by normalized frequency. The resulting indemnity severity and medical severity ratios show the resulting severity over time. In other words, by holding exposure trend and frequency trend constant, the remaining severity trends may be observed and analyzed.

Indemnity Severity Trend

Using the severity ratios discussed above, the PCRB has applied an exponential trend model to the most recent seven available policy years to estimate indemnity claim severity trend. The

[3] Note that with this filing, while frequency trend is discussed using one or two decimal points, e.g., -5.6% or -5.57%, the actual figure used is not rounded and is the result of using the exponential trend functions in Excel. The result to four decimal places is -5.5702%.

indicated indemnity severity trend is +2.52%[4] per year. This is lower than the selected indemnity severity trend in the prior loss cost filing, which was +4.09%. Exhibit 6, Pages 6 through 13, provides details of the severity ratios and the variety of analyses applied. The use of the seven-point exponential trend in this filing is consistent with the method and selection in prior filings.

Medical Severity Trend

Using the severity ratios discussed above in the Frequency Trend section, the PCRB has applied an exponential trend model to the most recent seven available policy years to estimate medical claim severity trend. The indicated medical severity trend is +3.59%[5] per year. This is higher than the selected medical severity trend in the prior loss cost filing, which was +4.55%. The annual medical severity trend has been adjusted for the effects of HB1846 by subtracting 0.19 percentage point, resulting in annual medical severity trend of +3.40% from January 1, 2015 forward. This adjustment is discussed in Exhibit 34.

Exhibit 6, Pages 18 through 25, provides details of the medical severity ratios and the variety of analyses applied. The use of the seven-point exponential trend in this filing is consistent with the method and selection in prior filings. Note that the HB1846 trend deflection is not incorporated in this exhibit, but is applied in Exhibit 1.

INDICATED CHANGE IN LOSS COSTS

Exhibit 1 presents the derivation of indicated changes in collectible loss costs effective January 1, 2019. 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 both indemnity and medical benefits, of Act 57 on indemnity benefits and of HB1846 on medical benefits. The effects of HB1846 are explicitly reflected through an adjustment to medical severity trend of -0.19 percentage point and a cost savings factor of 0.9908. The estimated policy year loss ratios are trended forward to the midpoint of the prospective policy period (August 15, 2019), resulting in a loss ratio of 0.8504. The impact of the Protz decision to indemnity benefits, reflected through a factor of 1.1337, along with the House Bill 1846 savings factor, result in a loss ratio of 0.8998, which represents a change in collectible loss costs of -10.02%.

For this Interim Loss Cost Filing, the expected changes in experience modifications, during the period for which the proposed loss costs will apply, were assumed to be zero. Therefore, for all industry groups, the proposed average changes in manual loss costs effective January 1, 2019 were identical to the overall collectible loss cost change of -10.22%.

That is, the anticipated collectible premium ratios were assumed to be the same as the provisions in the current loss costs.

EMPLOYER ASSESSMENT FACTOR AND LOSS COST LOADINGS

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 presents a summary of the PCRB's determination of the appropriate Employer Assessment

[4] To four decimals, the result is +2.5175%.
[5] To four decimals, the result is +3.5882%.

Factor. The proposed employer assessment provision is 2.17%, no change from 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 0.01%.

PCRB loss costs continue to include adjustments for the effects of the Merit Rating Plan and the Certified Safety Committee Program. No changes are proposed to the Merit Rating Plan and Certified Safety Committee Program increment factors. Their respective factors are 0.0032 and 0.0106. These proposed values are shown in Exhibit 13 and are 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). The PCCPAP program is intended to be “revenue-neutral” and reallocates premium obligations between low- and high-wage employers without either increasing or reducing the overall amount of premium collected in the affected 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 in Exhibit 14.

Available experience, as summarized on Exhibit 14, produces a revised average indicated PCCPAP offset of 2.70% of loss costs, which represents no change from the April 1, 2018 filing.

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. Proposed offsets range from 0.19% in Code 652, Carpentry – Residential, to 7.03% in Code 661, Electrical Wiring – within Buildings.

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 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 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.

Exhibit 19 presents summaries of collectible premium ratios and details of the derivation of expected loss cost factors supporting the Experience Rating Plan parameters proposed in this filing.

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

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 PCRB has historically presented appropriate voluntary loss development factors based on aggregate PCRB experience as part of its filings for use by carriers and insureds in negotiating and agreeing upon their retrospective rating plans.

Exhibit 26 presents the PCRB's proposed optional retrospective loss development factors on an unlimited basis. In addition, the PCRB includes in its Manual reference to the formula for adjusting unlimited loss development factors to a limited bases. 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.

Exhibit 17 provides an overview of the classification loss cost formulae used in preparation of this filing. These procedures are consistent with previously-submitted and approved methods.

The PCRB applies "swing limits," which limit fluctuations in classification loss costs to no more than 25 points above and below the average loss cost change within each industry group. In addition, the PCRB applies a testing procedure to identify significant changes 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 present detail of the experience and loss cost indications derived for each classification in this filing. Within the Index to Classification Exhibits, certain parameters 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 is also included in Exhibits 20a, 20b and 20c.

Item 8 within the Index to Classification Exhibits identifies several classifications for which some form of selection or other intervention in the standard procedures was deemed appropriate. The bases for loss cost selection include special pricing procedures (for example, the explosives, aircraft, attendant care and temporary staffing classifications[6]), allocation of loss costs between ratable and non-ratable components, recognition of statutory provisions for occupational disease benefits, combinations of separately-defined codes for purposes of determining loss costs and/or responses to data reassignments occurring during the latter stages of classification pricing analysis.

Item 13 of the Index to Classification Exhibits presents “Supplemental Class Book Pages” detailing the derivation of loss costs for classifications treated in combination or subject to reassignments of data from/to another classification or classifications. The Class Book presents details 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 in 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.

Consistent with prior filings, consideration has been given to past filings’ changes by classification relative to average or overall indications in making final rating value selections. This “secondary capping” procedure is meant to mitigate substantial fluctuations above and below average levels between successive filings for a limited number of classifications. In last year’s filing, the PCRB added a step to prevent an increase beyond an increase resulting from secondary capping, or a decrease beyond a decrease resulting from the secondary capping. For this filing, one classification was affected by the secondary capping procedure.

Exhibit 28 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. Exhibit 30 depicts in graphic form the distribution of percentage changes in classification loss costs on both an indicated and proposed basis. Classifications subject to capping are also identified.

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

PCRB loss cost filings typically include rating values for various rating plans affected by the size of loss for individual claims or occurrences. Limitations applicable to the amount(s) of loss can be used in computing a retrospective premium. Other portions of this analysis facilitate the application of standard tables to Pennsylvania business.

[6] The temporary staffing classification methodology incorporated in this filing was filed with the Pennsylvania Insurance Department on April 28, 2016, in Filing No. 274, and approved on June 24, 2016.

This filing has updated some parameters associated with the set of seven hazard groups based on the most recent available experience, as discussed below. No changes to excess loss (pure premium) factors and loss elimination ratios are proposed in this filing. The approved excess loss (pure premium) factors in Filing C-368, effective April 1, 2017, and the approved loss elimination ratios in Filing C-370, effective April 1, 2018, continue to be appropriate.

Exhibit 24 presents the derivation of state and hazard group relativities for Hazard Groups A through G in the proposed filing.

CLOSING COMMENTS AND QUALIFICATIONS

PCRB Filing C-372 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 anticipated savings from the enactment of House Bill 1846, and the impact of the Protz decision. The PCRB respectfully requests a timely review of this filing, allowing implementation on a new and renewal basis **effective January 1, 2019**. A timely review will allow adequate advance notice of final loss costs and related rating values to all participants in the Pennsylvania marketplace. 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.

This filing has been developed by and under the direction of Kenneth Creighton, ACAS, MAAA and Peter Yoon, ACAS, MAAA. They both meet the Qualification Standards of the American Academy of Actuaries to provide the actuarial opinion contained within this filing.

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