# Delaware Compensation Rating Bureau, Inc.



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August 31, 2004

# VIA OVERNIGHT DELIVERY

The Honorable Donna Lee Williams Insurance Commissioner Department of Insurance State of Delaware 841 Silver Lake Boulevard Dover, DE 19901

Attention: Darryl Reese

RE: Bureau Filing No. 0404 Workers Compensation Residual Market Rate and Voluntary Market Loss Cost Filing **Proposed Effective December 1, 2004** 

Dear Commissioner Williams:

On behalf of the members of the Delaware Compensation Rating Bureau, Inc. (DCRB), I am filing herewith proposed revisions to:

- Delaware's Residual Market Plan for workers compensation insurance
- Loss costs and related rating values for use in the voluntary workers compensation insurance market in Delaware
- Amendments to selected Manual rules in Delaware

This filing is made in compliance with provisions of H.B. 241, workers compensation insurance legislation enacted in 1993. These revisions are proposed to be **effective** on a new and renewal basis for workers compensation insurance policies with normal anniversary rating dates on or after 12:01 a.m., **December 1, 2004**.

The following narrative will provide you with a summary discussion of the content, background and supporting information for this filing. Attachments to this letter comprise the balance of the filing and provide pertinent detail information regarding the proposed residual market rates, voluntary market loss costs, rating values, supplementary rate information and classification procedures and supporting information for this filing.

## I: CONTENT OF THE FILING

## A: RESIDUAL MARKET RATES

Delaware law requires that a "residual market plan" be filed with the Insurance Commissioner by the advisory organization. Residual market coverage is provided under the auspices of the Delaware Workers Compensation Insurance Plan (hereafter, the "Plan"). Employers unable to obtain workers compensation insurance in the voluntary market may apply to the Plan, whereupon an insurance carrier is assigned to administer coverage for that employer, either as a servicing carrier on behalf of the Plan or on a direct assignment basis.

Historically, rates for the Plan have been promulgated based on statewide experience. Since August 1, 1997, employers insured in the Plan which are eligible for experience rating and which produce an experience modification greater than 1.000 in accordance with the approved Experience Rating Plan have been subject to a surcharge program. This surcharge program is intended to provide incentives for employers to improve their workers compensation loss experience and/or to secure workers compensation coverage from the voluntary market. In the DCRB's residual market rate and voluntary market loss cost filings since the inception of the surcharge program, the expected amounts of such Plan surcharges were accounted for in the form of nominal off-sets to proposed voluntary market loss costs. This filing proposes to continue the practice of using statewide experience for purposes of deriving the indicated overall residual market rate change. The filing also proposes to maintain a Plan surcharge program sensitive to individual risk experience and to reduce voluntary market loss costs to the extent necessary to offset the expected amount of Plan surcharges thus generated. The average change in collectible rate level for the residual market prior to the effect of Plan surcharges proposed in this filing is an increase of 13.53 percent.

The components of the proposed overall change in residual market rates are set forth following:

#### Component Analysis of Indicated December 1, 2004 Change in Residual Market Rates

(1) Indicated change in rates from indemnity loss experience	1.0115338
(2) Indicated change in rates from medical loss experience	1.0794537
(3) Indicated change in rates from indemnity loss ratio trend	1.0218176
(4) Indicated change in rates from medical loss ratio trend	1.0445932
(5) Indicated change in rates from loss-adjustment expense	0.9989042
(6) Indicated change in rates from loss-based assessments	0.9984636

(7) Indicated change in rates from other expenses	0.9718562
(8) Indicated change in rates from July 1, 2005 benefit change	1.0050000
Indicated overall change in rates (1) x (2) x (3) x (4) x (5) x (6) x (7) x (8) rounded to 4 decimal places	1.1353

In preparing the above decomposition of the proposed overall change in residual market rates into discrete components, it was necessary to serially measure the impact of the change in each component of interest while keeping all other variables constant. In this exercise, nominal differences in the attributed impact of most specific variables occur when the sequence of calculating the effects is changed. Thus, the above values are reasonable representations of the observed impacts of each variable, but some differences in results could be obtained through alternative analytical approaches. Such differences would be offsetting, however, and would not affect the overall rate level change itself.

While there are several factors for which the Bureau has accounted as contributing to the proposed rate level change, medical loss experience and medical loss ratio trend in combination are the predominant causes for the overall rate change indication. Medical loss experience in and of itself would produce an increase in rate level of approximately 7.9 percent, and medical loss ratio trend alone would result in an increase in rate level of almost 4.5 percent. Together these factors account for more than 12.75 points of the overall 13.53 percent residual market rate level increase indication. Within the remaining factors, increases attributable to indemnity loss experience, indemnity trend and the July 1, 2005 benefit change are largely offset by indicated reductions produced by other expense, loss-based assessments and loss adjustment expense factors.

## **B: VOLUNTARY MARKET LOSS COSTS**

Since the enactment of H.B. 241 in 1993, Delaware law has applied a "loss cost" approach to pricing of workers compensation insurance written in the voluntary market. Under this system the advisory organization (i.e., the Bureau) filings are limited to prospective loss costs, policy forms, uniform classification and experience rating plans and rules, and supporting information relating thereto. Advisory organization filings specifically <u>exclude</u> provisions for profit or for expenses other than loss-adjustment expenses and loss-based assessments. Provisions for profit and expenses other than loss-adjustment expenses and loss-based assessments are incorporated into voluntary market workers compensation rates by virtue of competitive filings made by each insurer. Insurer expense filings may adopt by reference, with or without deviation, either loss costs filed by the advisory organization or the rates and supplementary information filed by another insurer.

Consistent with past practice, in this filing the Bureau has derived indicated changes in voluntary market loss costs directly from the proposed residual market rate change discussed above. This derivation is accomplished by removing from those rate proposals the combined effects of all provision for profit and expenses other than loss-adjustment expenses and loss-based assessments. As a result, like the proposed changes in Plan rates, these proposed revisions in overall voluntary market loss costs are based on statewide experience.

The proposed premium structure for residual market rates in this filing is shown below, with comparative values from the approved current rates for ease of reference.

ltem	Current Provision As a Percent of Premium	Proposed Provision As a Percent of Premium
Loss	61.21	64.54
Loss-Adjustment Expense	9.54	8.37
Commission	6.94	7.13
Other Acquisition	2.03	2.29
General Expenses	3.83	3.12
Premium Discount	10.42	10.58
State Premium Tax	2.00	2.00
Other State Taxes	0.38	0.32
Uncollectible Premium	N/A	1.00
Administrative Assessment*	2.72	2.61
Workers Compensation Fund	4.50	4.00
Underwriting Profit	(3.57)	(5.96)

\* Denotes loss-based assessment

Under Delaware law, loss-adjustment expenses and loss-based assessments are included in the loss costs filed by the Bureau. Thus, in combination the provisions for loss, loss-adjustment expense and loss-based assessments account for 75.52 percent of the Bureau's proposed Plan rates (64.54 + 8.37 + 2.61 = 75.52). The Bureau's proposed voluntary market loss costs in this filing are thus based on rating values computed by multiplying the proposed Plan rates (before application of some applicable surcharges) by a factor of .7552. This approach produces an average indicated increase in voluntary market loss costs of 16.70 percent that can be computed as follows:

1.1353 x .7552 / .7347 = 1.1670

In the above equation 0.7552 is the portion of <u>proposed</u> residual market rates attributable to loss costs, loss-adjustment expense and loss-based assessments, and 0.7347 is the portion of <u>current</u> residual market rates attributable to loss costs, loss-adjustment expense and loss-based assessments (i.e., 61.21 + 9.54 + 2.72 = 73.47).

The proposed increase in voluntary market loss costs is attributable to the same factors previously identified in the discussion of residual market rates, except that the effects of expense provisions other than loss-adjustment expense and loss-based assessments do not apply to loss costs.

It is important to note that the net effect of the proposed loss costs on ultimate prices for employers that will be insured in the voluntary market (the majority of all insured risks) may differ significantly from employer-to-employer and from insurer-to-insurer. Workers compensation insurance prices for these employers will be a function of individual carrier decisions as respects profit and expense provisions. Further, each carrier may elect to use the

Bureau's loss costs by reference, to deviate from those loss costs, to file independent loss costs or to use loss costs filed by another insurer by reference. In addition, employers may obtain their future workers compensation insurance from a different insurance carrier than the carrier providing their current policy, further expanding the range of possible price changes that individual risks may experience. This complexity is a natural consequence of the competitive pricing system implemented under H.B. 241 in Delaware and is analogous to circumstances in many other states also having adopted competitive pricing systems for workers compensation insurance.

## C: RESIDUAL MARKET SURCHARGE

Experience of employers insured under the Plan in Delaware has historically presented an aggregate loss ratio substantially higher than that of employers insured in the voluntary market. In fact, the loss ratio of Plan accounts was higher than that of voluntary business by approximately 29 percent in the period 1997–2001.

In addition, during the late 1980s and early 1990s, Delaware had seen persistent increases in the portion of the market insured in the Plan. In previous response to these concerns the Bureau filed and the Insurance Commissioner approved a Plan surcharge program in 1997 that incorporated the following features:

- Surcharges are limited to risks eligible for experience rating and only apply to risks with debit experience modifications (i.e., those employers with demonstrably worse than average experience).
- To avoid redundant or inequitable penalties, surcharges are applied only to the extent that
  each employer is not fully credible in the Experience Rating Plan. This procedure assesses
  larger proportional surcharges to small employers who are largely protected from the effects
  of their own experience in the Experience Rating Plan but reduces surcharges applicable to
  larger employers whose premiums significantly respond to their own loss records.
- Surcharges are limited to the debit portion of each risk's experience modification. This limitation provides a smooth transition from non-rated to experience-rated risks and/or from small experience rating credits to small experience rating debits.

The surcharge expressed as a factor to be applied to standard premium is computed using the following formula:

0.50 x (1.000 - risk credibility in the Experience Rating Plan)

As noted above, Plan loss ratios continue to be much higher than those of the voluntary market. While the portion of the Delaware workers compensation market insured under the Plan declined after 1994, this measure of the residual market turned around and began to increase in 2000. For this filing, the Plan market share is estimated at 16.21 percent. This estimate is based on the most recent available policy year, 2003.

This filing retains the above-described Plan surcharge program as a disincentive for employers to have their Delaware workers compensation insurance coverage placed in the Plan.

The Bureau estimates that the above-described surcharge program will produce an average surcharge for subject risks of approximately 19.0 percent of premium. Recognizing that some employers insured in the Plan do not qualify for experience rating and that other employers insured in the Plan qualify for experience rating but produce credit modifications, the surcharges produced by the proposed procedure would represent approximately 11.2 percent of total Plan premium.

The full amount of this surcharge premium is recognized in the promulgation of proposed voluntary market loss costs for this filing. This approach allows a reduction of manual loss costs by approximately 2.17 percent and essentially produces three different benchmark loss cost levels underlying workers compensation insurance rates in Delaware. These different underlying loss cost levels are as defined below:

- 1. Plan risks subject to surcharges (highest level depending on individual risk experience)
- 2. Plan risks not subject to surcharges (based on statewide average experience)
- 3. Voluntary market risks (based on statewide average experience reduced by offset for surcharges applied to first group above)

The Bureau believes that this Plan surcharge proposal remains an equitable and reasonable step toward reducing Plan subsidies and providing meaningful disincentives for placement of employers in the Plan. The Bureau also continues to believe that the Bureau and the Department of Insurance should again consider additional measures, such as the publication of Plan depopulation reports, as means of addressing the size of the Plan in Delaware. The Bureau has been and remains aware that pricing plans, including rate surcharges, mandatory retrospective rating plans, elimination of premium discounts and increased premium deposit requirements, have been invoked in residual markets in other jurisdictions. The Bureau is also mindful that the Delaware Department of Insurance has historically not been inclined to consider broad, generic differentials between residual market and voluntary market price levels. Given this regulatory preference, it is imperative that Delaware's Plan be maintained at as small a portion of the overall workers compensation market as possible.

### D: MANUAL LANGUAGE, ENDORSEMENTS, FORMS AND AUDITABLE PAYROLLS

This filing includes several proposals to update prevailing Manual language and forms in Delaware. A series of Bureau staff memorandums speaking to these proposed changes is provided with this filing letter in support of each of these proposed revisions. A brief synopsis of each proposal is also set forth following for ease of reference.

#### Executive Officer Exclusion Agreement

This proposal will establish an approved form to evidence the election by an executive officer or officers not to be subject to Delaware workers compensation law. The absence of such a form may lead to ambiguity regarding the coverage status of specific individuals. The proposed form articulates the intended practices to be applied for coverage obtained through the Delaware Insurance Plan and would also be available on an optional basis for use in the voluntary market.

# Corporate Officer Weekly Minimum and Maximum Payrolls to be Audited in Delaware and Premium Determination for Sole Proprietors or Partners

Corporate officer remuneration is subject to specified minimum and maximum amounts, which are updated routinely in accordance with reported changes in the Statewide Average Weekly Wage. This proposal will accomplish such an update to the maximum auditable payroll for corporate officers.

Determination of exposure for premium computation purposes for sole proprietors and partners presently may proceed under either of two provisions set forth in the Manual. Staff proposes to eliminate one of those alternatives and thereby conform the treatment of sole proprietors and partners with that of corporate officers.

#### Farm Labor, Domestic and Casual Labor Payrolls

In response to amendment of Section 2307 of the Delaware Workers Compensation Act, the filing proposes to revise the threshold earnings published in the Delaware Manual as being required to bring these kinds of employment within the mandatory provisions of the law.

# Notification Endorsement of Pending Law Changes to Terrorism Risk Insurance Act – WC 00 01 12

NCCI Item Filing P-1392 proposes a new optional endorsement that carriers may use to provide notification to policyholders that premium charges for foreign terrorism may continue or be changed from current amounts depending on the expiration, extension and/or revision to federal backstop provisions currently in effect but scheduled to sunset effective December 31, 2005. This proposal would give carriers an appropriate vehicle for communications to policyholders and maintain consistency between Delaware and other jurisdictions countrywide.

#### New Manual Language - Subclassifications

H.B. 430 authorizes carrier development of subclassifications. This proposal will provide recognition of this authority and set forth appropriate procedures pertaining to the development and use of subclassifications.

#### Employers Liability Coverage Endorsement – WC 00 03 03 B Federal Employers Liability Act Coverage Endorsement – WC 01 01 04

NCCI Item Filing P-1389 proposes revision to the Employers Liability Coverage Endorsement – WC 00 03 03 B to remove the existing exclusion of "bodily injury to any member of the flying crew of any aircraft." This same item filing proposes revision to the Federal Employers Liability Act Coverage Endorsement – WC 01 01 04 to make clear that use of the endorsement voids the otherwise applicable exclusion of FELA under Part Two, Section C of the Standard Workers Compensation and Employers Liability Insurance Policy.

This filing proposes adoption of this item filing effective December 1, 2004 to maintain uniformity between Delaware and other jurisdictions countrywide.

### E: OTHER FILING PROVISIONS

In addition to proposed Plan rates, voluntary market loss costs, residual market surcharges and classification procedures, this filing addresses a number of rating values, programs, rules and procedures which are integral parts of the Delaware workers compensation insurance system. In general, the filing's proposals simply reflect parametric changes in various rating values consistent with the most recent available Delaware experience. Detailed information supporting each of these proposals is provided elsewhere in this filing. Brief synopses of each of these issues and their purposes are provided immediately following for reference purposes.

ITEM	PROPOSAL	PURPOSE
DCCPAP Program	Revise manual rating value offsets & wage table	Maintain revenue balance of program
Expense constant (residual market)	Change from \$235 to \$240	Update value for price inflation
Minimum premium (residual market)	Update minimum premium parameters	Update values for wage inflation
Excess loss factors	Update ELFs	Maintain accuracy of rating values per current data
Excess loss premium factors	Update ELPFs	Maintain accuracy of rating values per current data
Experience Rating Plan	Update rating values	Reflect current experience

ITEM	PROPOSAL	PURPOSE
Retrospective rating	Revise optional development factors, tax multiplier and expected loss size group ranges	Reflect current experience
Small Deductible Program	Review existing premium credit and loss elimination ratio schedules	Reflect current experience
State and hazard group relativities	Revise retrospective rating plan values	Reflect current experience
Workplace Safety Program	Revise manual rating value offsets	Maintain revenue balance in Program
Merit Rating Plan	Revise manual rating value offsets	Maintain revenue balance in Program
Minimum and maximum corporate officer payrolls	Revise current values	Update values for wage inflation

## II: SUPPORTING INFORMATION FOR THE FILING

Attached exhibits and materials provide technical support for each of the proposals advanced in this filing. For purposes of understanding and in order to highlight some of the more important aspects of the technical analysis that the Bureau has undertaken in the preparation of this filing, the following discussion will address each of the listed topics in turn:

- Effects of large losses on experience analysis
- Estimation of policy year ultimate loss and loss-adjustment expense ratios
- Trend provisions
- Determination of the proper permissible loss ratio for proposed residual market rates

These subject areas embrace the primary determinants of the proposed changes in residual market rates and voluntary market loss costs.

## A: EFFECTS OF LARGE LOSSES ON EXPERIENCE ANALYSIS

Workers compensation benefits include partial wage replacement during periods of inability to work, various forms of permanent disability awards, and payment of costs of medical and rehabilitative services necessary to gain maximum medical improvement from the effects of work-related injuries and illnesses. In concert, these benefits and, in particular, medical benefits can produce extremely large obligations in individual cases. Claims incurring benefits totaling millions of dollars can and do occur. The analysis performed by the Bureau in

reviewing prevailing residual market rates and voluntary market loss costs must include reasonable provisions for the potential for such occurrences but attempts to avoid being unduly impacted by the occurrence (or absence) of rare or unusual claims. Historically, the Bureau has considered the extent to which large claims have been present in Delaware experience and has employed various techniques designed to accomplish these stated objectives. Most notably the Bureau's prior filings have on occasion excluded a specific policy year from the determination of prospective trend factors when the policy year in question contained an unusually large loss, since such a policy year would tend to overstate future trends if it were to be included as a new trend point, and it would subsequently understate those trends if it were included as an old trend point.

In reviewing experience for the December 1, 2004 filing, the Bureau noted several relatively large claims attributable to Policy Year 2002 (the most recent complete policy year of data available for this filing). After careful consideration of available analytical alternatives, the Bureau elected not to simply exclude Policy Year 2002 from its analysis of loss development and/or trend. While the practice of excluding policy years with an unusually large claim(s) can effectively avoid undue impacts resulting from those claims, the Bureau believes that routinely ignoring experience that contains large claims will bias indications toward understating rating value needs.

For this filing the Bureau has applied a procedure that performs loss development and trend analyses on a "limited" basis and then accounts for the expectation that claims exceeding the selected limit will occur from time-to-time by adding an excess loss factor to the rate level analysis. Several approaches to this procedure were considered, and the method used as the basis for the proposals submitted herewith is outlined below:

- A loss limitation of \$1.5 million was selected for the prospective rating period. This limitation represents approximately one percent of on-level standard earned premium at residual market rates.
- It was determined that the selected loss limitation would be expected to remove some 7.57 percent of losses from Delaware experience.
- A series of loss limitations was selected for Policy Years 2002 through 1983, such that capping losses at the designated limits was expected to remove approximately 7.57 percent of losses from each policy year. This produced a series of loss limitations that declined at an annual rate of 6.37 percent. For policy years prior to 1983, a constant loss limitation of \$387,530 was applied.
- Reported paid and case-incurred losses were adjusted as needed to limit underlying loss data to the selected limitations by policy year.
- Loss development analysis was performed using the limited loss data produced above, and the selected loss limitations were imposed on developed losses such that the ultimate loss estimates derived remained consistent with those limitations.

- Trend analysis was accomplished by dividing the observed limited loss ratios into separate components for claim frequency and claim severity, and prospective trends were selected for each component.
- Trended limited loss ratios were adjusted to an unlimited basis by application of an excess loss factor, from which point the rate level analysis could proceed in the usual fashion.

The Bureau's purpose in applying a loss limitation during the course of its analysis for this filing was to produce a more stable and accurate indication than might be obtained from other analytical approaches. For the benefit of readers interested in the quantitative effects of this selected procedure, the following comparisons are provided.

Had the loss development and trend procedures adopted for purposes of this filing been applied on an unlimited basis, the resulting residual market rate level change indication would have been +26.70 percent instead of +13.53 percent. The reason that the unlimited analysis would have produced a much higher indication is that including large losses in the specific policy years in which they occurred, and especially in Policy Year 2002, would have given substantially higher trend factors than those obtained from the limited loss approach.

The Bureau had initially applied a constant loss limit of \$1.5 million to every policy year. Discussion of the filing at a joint meeting of the Bureau's Actuarial and Classification & Rating Committees held on August 17, 2004 pointed out the fact that, over time, wage level changes, benefit increases, inflation in medical prices and general utilization of the workers compensation system would act in concert to increase loss values. The Committees suggested and the Bureau subsequently adopted an approach that would allow prior policy years to be adjusted using different loss limitations. The Bureau's selected approach has the effect of applying loss limitations that are expected to remove similar portions of overall losses from each policy year, rather than applying one loss limitation that would inevitably tend to remove smaller and smaller portions of loss from successively older policy years. The residual market rate level change indication that was derived using the constant \$1.5 million loss limitation was an increase of 22.80 percent. The lower indication proposed in this filing (13.53 percent) occurs because the loss experience (and, most importantly, the medical loss experience) component of the analysis was materially reduced when the sliding scale of loss limitations was applied. In retrospect, the Bureau believes that the Committees' suggestion for a revised analysis effectively removed a redundancy from the preliminary staff work that had removed successively smaller portions of losses from the historical data, while adding a full 7.57 percent of loss to the prospective rate level indication. The analysis offered in support of this filing is now balanced in the sense that limitations applied for prior years are expected to have removed the same level of loss from historical data as has been added as an excess loss provision further on in the rate level change calculations.

Limiting losses in the course of the filing analysis and accounting separately for expected losses in excess of the effect of the applied limit(s) is a viable means of tempering the potential effects of relatively rare, large claims on rating value change indications. Other methods could also be considered for this purpose, and, in at least some circumstances, no special treatment of this issue might be necessary or appropriate. While the Bureau believes that its application

of a limited loss technique to the current filing is appropriate, we also recognize that there is a broad variety of possible parameters and technically different approaches that could reasonably be considered in such an analysis. The Bureau expects and intends to explore possible alternatives to or modifications of the specific analysis presented herein on an ongoing basis and will propose different approaches in future filings, if and when we are confident that adoption of such approaches will improve the accuracy, stability and/or presentation of our rating value change proposals.

Discussion of the Bureau's estimation of policy year ultimate loss and loss adjustment expenses ratios and trend provisions following below are offered and should be read in the context of the loss limitation procedure outlined above.

# B: ESTIMATION OF POLICY YEAR ULTIMATE LOSS AND LOSS ADJUSTMENT EXPENSE RATIOS

Much of the analytical effort required in workers compensation insurance ratemaking is devoted to the evaluation of loss experience from prior periods of time. The following points are important in considering this aspect of workers compensation ratemaking:

- Results of past experience form a vitally important base of knowledge from which
  prospective estimates pertinent to ratemaking are generally made.
- Because workers compensation losses may be paid out over an extended period of time after the occurrence of an accident and the filing of a claim, results of recent periods of experience must themselves be estimated before ratemaking analysis based on those prior periods of time may proceed.

The Bureau has considered the matter of estimating ultimate policy year loss and lossadjustment expense ratios at length in the preparation of this filing. Various actuarial methods were tested prior to the final selection of estimates used in support of this filing. In evaluating results of these methods, information gleaned from the Bureau's Unit Statistical Plan data was also taken into account.

In estimating ultimate policy year loss ratios for indemnity benefits, the paid loss development and case-incurred loss development methods gave comparable results for many older policy years, with the most significant proportional differences between these approaches arising in the most recent three policy years. For those policy years (2000, 2001 and 2002), the caseincurred loss development method gave consistently higher estimates than did the paid-loss development method. This pattern represented a reversal from analysis done in preparation of previous Bureau filings, in which the paid loss development method had tended to give higher estimates than did the case-incurred loss development method.

Review of Unit Statistical Plan data revealed that claim closure rates had declined noticeably for the most recent three available policy years (1999, 2000 and 2001). Discussion at the joint meeting of the Actuarial and Classification & Rating Committees reviewing a draft filing raised the possibility that, with claims closures slowing down, the paid-loss development method might

be expected to understate ultimate loss estimates to a more substantial and persistent extent than might the case-incurred loss development method and noted that such a phenomenon would be consistent with the observed shift in relative estimates between these two approaches.

With the benefit of extensive staff review and discussion by both the Actuarial and Classification and Rating Committees, the Bureau has based estimates of ultimate indemnity losses in the filing on the average of separate applications of two different loss development approaches. The first of the methods included in the average estimates incorporated in this filing is the caseincurred loss development method. The second method applies paid-loss development over as long a development period as is available from the Bureau's data (varying up to as late as 20th report depending on policy year) and then converts to a case-incurred loss development method for the remaining development to an ultimate basis.

This filing's indemnity loss development methodology was specifically considered during the Department of Insurance's review of the Bureau's 2001 residual market rate and voluntary market loss cost filing and was used as the basis for the Bureau's 2002 and 2003 filings.

Estimated ultimate medical losses were somewhat more sensitive to the choice of loss development method than was the case for indemnity losses, with notable differences arising for each of the most recent seven policy years. As had been the case when differences in estimates of ultimate losses arose for indemnity benefits, the case-incurred loss development method tended to give higher answers for medical benefits than did the paid-loss development method. Unit Statistical Plan data and the conclusions based thereon regarding claim closure rates referenced above for indemnity losses are generally applicable to medical losses as well. While most workers compensation claims involve no indemnity losses and are thus "medical-only" cases, the majority of medical losses are attributable to compensable claims also involving indemnity benefits. Thus, although the Bureau's Unit Statistical Plan data does show both indemnity and medical-only claims separately and in combination, the Bureau's conclusions regarding claim closure rates are based primarily on the data for indemnity claims.

Based on similar considerations and discussions as those underlying selection of a methodology for indemnity loss, the Bureau has based estimates of ultimate medical losses in the filing on the same approach as was described above for indemnity losses.

In applying its loss development methods, the Bureau has applied the following procedures to smooth fluctuations arising due to the limited volume of data available for the analysis:

- ° Use of four-year average loss development factors
- Smoothing of loss development factors using various mathematical models and curves fitted through the observed multi-year averages
- Using trend procedures which rely on multi-year averages rather than individual year ultimate loss and loss-adjustment expense ratios

A comprehensive comparison of results of a variety of loss development methods tested in preparation of the filing may be seen on the enclosed Exhibit 2, Page 2.6 for indemnity loss and Page 2.19 of the same exhibit for medical loss.

## **C: TREND PROVISIONS**

Historical data available for ratemaking relates to prior periods of time ending some time before the preparation of a filing. Often the available historical data will exhibit a propensity to change in some general fashion over time. Each Bureau filing applies to a prospective period of time beginning well after the end of the available historical data. Thus, it is necessary to account for any anticipated continuation of (or deviation from) observed historical tendencies for loss ratios to change over time during the period between the end of the available data and the policy period to which the proposed rates will apply. This accounting is accomplished using various forms of "trend" analysis.

In support of its December 1, 2002 and December 1, 2003 filings, the Bureau adopted a trend approach that separated policy year loss ratio trends into "severity" and "trend" components. As this alternative approach appeared to provide greater detail about significant features of Delaware workers compensation experience and would allow more informed and specific judgments about probable future experience, the Bureau has also applied this approach to the preparation of this filing. The procedure used and results thus obtained are described further below.

Policy year loss ratios were adjusted to a series of "severity ratios" by removing the effects of actual observed changes year-to-year in the frequency of indemnity claims per unit of expected loss at a constant Bureau rate level. The series of severity ratios thus obtained are representative of the policy year loss ratios that would apply absent any change in underlying claim frequency and, thus, may be thought of as a series of indices of claim severity.

The Bureau applied linear and exponential trend models to the policy year severity ratios produced by the loss development methods referred to previously. Indemnity and medical ratios were treated separately, and for each method the linear and exponential models were applied to all possible numbers of policy years from four through ten.

A variety of techniques were employed to evaluate the reasonableness of results of each trend calculation. Statistical goodness-of-fit tests were applied, residual differences between predicted and actual data points were computed, and graphic depictions of selected series of severity ratios were prepared and reviewed.

For indemnity benefits, a review of alternative trend model indications, including graphic presentations of indemnity loss and severity ratios over the past several years for selected models, supports the selection of an exponential trend model applied to the most recent available seven policy year severity ratios. This selected model produces an indicated annual trend for indemnity severity ratios of +7.7 percent.

Since future loss ratios will be the combined result of changes in claim severity and claim frequency, the Bureau also considered the most appropriate method to trend claim frequency for this filing. Applying the same trend model and time period as was used to derive indemnity severity ratio trends produced an annual claim frequency trend of -7.7 percent.

Indemnity loss ratios for this filing were then trended to the midpoint of the prospective rating value period by applying the measured annual rate of change in claim severity to each of the most recent four policy year severity ratios, adjusting those separate estimates of trended severity ratios for observed actual changes in claim frequency through Policy Year 2002, and then applying a prospective claim frequency trend of -7.7 percent per year forward to the midpoint of the prospective rating value period. The filing is based on the average trended policy year indemnity loss and loss-adjustment expense ratio thus obtained, effectively the average trended indication for the most recent four policy years in combination.

For medical benefits, the same kind of analysis was applied. Policy year loss and lossadjustment expense ratios were adjusted by removing actual observed changes in claim frequency, producing a series of policy year severity ratio indices. Various trend models were applied to that time series over varying periods of time, and a trend model using an exponential model applied over the most recent available seven policy years was selected. This approach gave an indicated medical severity trend of +10.4 percent per year. Medical loss ratios for this filing were then trended to the midpoint of the prospective rating value period by applying the measured annual rate of change in claim severity to each of the most recent four policy year severity ratios, adjusting those separate estimates of trended severity ratios for observed actual changes in claim frequency through Policy Year 2002, and then applying a prospective claim frequency trend of -7.7 percent per year forward to the mid-point of the prospective rating value period. The filing is based on the average trended policy year medical loss and loss-adjustment expense ratio thus obtained, effectively the average trended indication for the most recent four policy years in combination.

## D: DETERMINATION OF PROPER PERMISSIBLE LOSS RATIO FOR PROPOSED PLAN RATES

The use of methodologies that explicitly recognize investment income in concert with anticipated cash flows, benefit costs and expense needs in preparing workers compensation rate filings is well established. The precise manner in which these methods may be applied in the preparation of such filings, however, differs from jurisdiction-to-jurisdiction. The Bureau's approach in previous filings has been to use such methods to directly compute a permissible loss and loss-adjustment expense ratio consistent with an independently established target rate-of-return. This approach has previously been approved by the Department of Insurance and has been retained for the development of this filing as well.

The prospective determination of an appropriate overall rate-of-return, which workers compensation insurers should be entitled to earn given the risk they assume in underwriting this line-of-business, is accomplished by a variety of economic analyses which are generally based on expected returns of businesses subject to risk levels comparable to that of underwriting workers compensation insurance. These methodologies next proceed by establishing a set of cash flows representing the various transactions related to the underwriting of workers compensation insurance. These cash flows include the expected patterns for the receipt of premiums, payment of losses and expenses, use of tax credits and/or payment of tax obligations, and maintenance of surplus funds in support of the business. Expense needs to which the expense cash flows will apply are determined based on historical experience.

Estimates of the probable investment results that an insurer underwriting workers compensation insurance may expect to achieve were made by reviewing existing insurer investment portfolios and prevailing investment returns on various forms of investments held therein. Applying these estimates to the cash flows previously established allows an explicit presentation of the effects of investment income throughout the life of a book of workers compensation policies and an estimated accounting of the value of that income to the insurer.

Based on the set of cash flows determined to apply to prospective policies and the estimated parameters of investment yields, federal tax laws, etc., these methods model all expected cash flows over the entire period during which payments attributable to a given policy period are expected to continue. For any given loss provision in rates, the present value of these cash flows can then be consolidated and compared to the target rate-of-return. The loss provision accomplishing a balance between the expected and target rates-of-return then becomes the basis for the permissible loss ratio. Within the concept of the Internal Rate of Return (IRR) Model used by the Bureau, the loss provision includes provision for amounts generally related to losses such as loss-adjustment expense and loss-based assessments.

The recognition of investment income in this analysis allows for a lower profit provision from underwriting than would otherwise be possible. This filing proposes an underwriting "profit" provision of -5.96 percent, i.e., an underwriting loss of almost six percent. This proposed underwriting loss is larger than the underwriting loss contemplated in current residual market rates (-3.57 percent).

For this filing, the Bureau has retained an independent economic consultant to perform the above-described analyses. Results of this work are presented in complete detail in attachments to this filing letter but are also summarized for ease of reference below:

#### INTERNAL RATE OF RETURN MODEL INPUTS & RESULTS December 1, 2004 Residual Market Rate Filing

<ul><li>(1) Target Rate of Return</li><li>(2) Indicated Expense Provisions</li></ul>	+8.95%
(a) Commissions	+7.13%
(b) Other Acquisition	+2.29%
(c) General	+3.12%
(d) Premium Discount	+10.58%
(e) State Premium Tax	+2.00%
(f) Uncollectible Premium	+1.00%
(g) Other State Taxes	+0.32%
(h) Workers Compensation Fund Assessment	+4.00%

(3) Investment Income	
(a) Pre-Tax Return on Assets Net of	
Investment Expenses	+5.28%
(b) Post-Tax Return on Assets Net of	
Investment Expenses	+4.09%
(4) Profit & Contingencies	-5.96%
(5) Permissible Loss Ratio	+75.52%*

\*75.52% includes loss (64.54%), loss-adjustment expense (8.37%) and loss-based assessment (2.61%)

The following materials accompany this filing letter and present supplementary rating information and supporting information pertinent to the proposals advanced in this filing.

- 1. Record of Meeting Actuarial and Classification & Rating Committees, August 17, 2004 Note that, per a recommendation of the most recent Department of Insurance examination of the Bureau, these minutes are in the process of being reviewed and approved by the two committees and accepted by the Governing Board. If there are any changes resulting from this process, a revised final copy will be promptly forwarded to the Department of Insurance.
- 2. Summary of material for modification of experience ("Brown Book")
- 3. Trends in Experience Questionnaire for Leading Carrier Groups
- 4. The following exhibits taken from the Actuarial and Classification & Rating Committees' August 17, 2004 meeting agenda package or prepared or modified in consideration of discussions at that meeting:

Exhibit Exhibit Exhibit		Limited Losses	Table I - Summary of Financial Call Data Excess Loss Ratios and Loss Limitations Table I Reported Losses in Excess of Loss Limitations
Exhibit	2	Limited Losses	Paid and Incurred Loss Development and Trend
Exhibit	2a	Limited Losses	Graphs of Selected Loss Development Projections
Exhibit	2b		Comparisons of 2003 and 2004 Filing Estimates of Ultimate Loss
Exhibit	3b		Measures of Goodness-of-Fit in Trend Calculations Using Severity Ratios
Exhibit	5		Graphs of Ultimate and Trended Experience Components
Exhibit	6b	Limited Losses	Retrospective Test of Trend Projections Using Severity Ratios
Exhibit	7		Closure Rates, Payout Ratios and Average Claim Costs
Exhibit	8		Expense Study
Exhibit	9		Internal Rate of Return Model
Exhibit	10		Effect of 7/1/05 Benefit Change
Exhibit	11		Expense Loading
Exhibit	12		Indicated Change in Residual Market Rates and Voluntary Market Loss Costs

Exhibit 13	3	Experience Rating Plan Performance
Exhibit 14	1	Delaware Construction Classification Premium Adjustment
		Program
Exhibit 15	5	Rate and Loss Cost Formulae
Exhibit 16	3	Small Deductible Program
Exhibit 17A	ł	Excess Loss Pure Premium Factors
Exhibit 17E	3	Excess Loss Pure Premium Factors with Adjustment for
		Serious ALAE
Exhibit 170	C	Excess Loss Premium Factors
Exhibit 17	2	Excess Loss Premium Factors with Adjustment for
		Serious ALAE
Exhibit 18	3	State & Hazard Group Relativities
Exhibit 19	)	Delaware Insurance Plan
Exhibit 20	)	Review of Experience Rating Plan Parameters
Exhibit 27		Table B
Exhibit 22A	٩	Table II - Unit Statistical Data
Exhibit 22		Table III - Unit Statistical Data
Exhibit 220	2	Table IV - Unit Statistical Data
Exhibit 23	3	Claim Frequencies
Exhibit 24	1	Retrospective Development Factors
Exhibit 25	5	Tax Multiplier
Exhibit 26	3	Summary of Indicated and Proposed Residual
		Market Rates
Exhibit 27	7	Manual Rates, Loss Costs and Expected Loss Rates
Exhibit 28	3	Index to Classification Exhibits
		Class Book
Exhibit 29	)	Delaware Workplace Safety Program &
		Merit Rating Program
Exhibit 30	)	Distribution of Residual Market Rate Changes
Exhibit 31/	4	Summary of Indicated and Proposed Residual
		Market Rates by Class Code
Exhibit 31	3	Summary of Indicated and Proposed Residual Market
		Rates by Percentage Change
Exhibit 32	2	NCCI Filing Memorandum R-1385
Exhibit 2	I Unlimited Losses	Table I – Summary of Financial Call Data
Exhibit 2	2 Unlimited Losses	Paid and Incurred Loss Development and Trend
Exhibit 2a	a Unlimited Losses	Graphs of Selected Loss Development Projections
Exhibit 3t	o Unlimited Losses	Measures of Goodness of Fit in Trend Calculations Using
		Severity Ratios
Exhibit 6b	o Unlimited Losses	Retrospective Test of Trend Projections for
		Severity Ratios
DCRB Sta	ff Memorandum of Ma	ay 24, 2004: Executive Officers Exclusion Agreement
DCRB Sta	ff Memorandum of Ju	ne 9, 2004: Corporate Officer Weekly Minimum and

Maximum Payrolls to be Audited in Delaware and Premium Determination for Sole Proprietors or Partners

DCRB Staff Memorandum of July 23, 2004: Manual Revisions to Section 1

> DCRB Staff Memorandum of August 4, 2004: Notification Endorsement of Pending Law Change to Terrorism Risk Insurance Act – WC 00 01 12
>  DCRB Staff Memorandum of August 5, 2004: Manual Revisions to Section 2 – Subclassification

DCRB Staff Memorandum of August 5, 2004: Employers Liability Coverage Endorsement – WC 00 03 03 B and Federal Employers Liability Act Coverage – WC 01 01 04

### III: SUMMARY

In preparing this filing, the Bureau has considered current Delaware experience at length and has applied a variety of actuarial and economic analytical techniques that collectively support the proposals advanced herein. The rating value changes proposed herein are necessary and appropriate in order to maintain the equity and adequacy of approved Bureau rating values in Delaware.

Bureau staff will be pleased to cooperate with and assist the Department of Insurance in its prompt consideration of these proposals.

Sincerely,

Timothy L. Wisecarver President

TLW/kg Enclosures