DCRB
DELAWARE
Compensation Rating Bureau, Inc.

TO: The Honorable Trinidad Navarro
Delaware Insurance Commissioner

FROM: Brent Otto, FCAS, MAAA
Vice President of Actuarial Services and Chief Actuary

DATE: August 21, 2024

RE: DCRB Filing No. 2405
Workers Compensation F-Classification and USL&HW Rating Value Filing
Proposed Effective December 1, 2024

This actuarial memorandum provides a discussion of the analysis performed by the DCRB that results in proposed rating values for employment classifications subject to the United States Longshore and Harbor Workers (USL&HW) Compensation Act (the Act or the USL&HW Act). The overall impact of the proposed change to collectible premium level is -4.97%, while the associated impact to the collectible loss cost level is -0.48%. These changes are proposed to be effective on December 1, 2024.

The overall indications are driven by changes in expenses, since there is limited credibility placed on the actual experience due to its small volume. The decrease in the profit & contingency (P&C) load, due to higher yield rates, are the two primary expense items driving the overall indicated change. The P&C load only impacts the rates, and is therefore, the primary driver for the difference between the proposed rates and loss costs. This expense change is similar to the decreases seen in the annual rate and loss cost filing.

DEFINITION OF COVERAGES SUBJECT TO THIS FILING

The employment classifications that are the subject of this filing, known as “F-Classifications” or “F-Classes,” provide insurance coverage for compensation liability for maritime or federal employment subject to the USL&HW Act. The F-Classes are used for employees that are “employed in maritime employment, in whole or in part, upon the navigable waters of the United States…”[1] Examples of employment generally subject to this Act are longshoremen, harbor workers, ship repairmen, shipbuilders, ship breakers and other employees engaged in loading, unloading, repairing, or building vessels.

On occasion, employer operations not subject to assignment to an F-Class may involve some employees whose duties are subject to the USL&HW Act. State Act classifications (those not designated by an F suffix) do not contemplate liability under the USL&HW Act. Accordingly, a United States Longshore and Harbor Workers Compensation Coverage Percentage is provided in the DCRB Manual to adjust rating values otherwise applicable to State Act classifications for the different (and higher) benefits payable under the USL&HW Act.

[1] 33 USC Ch.18.

The volume of USL&HW business is relatively small in comparison to the total Delaware workers compensation market.

SUMMARY OF THE PROPOSAL IN THIS FILING

The following summarizes the annualized overall impact of the proposed changes. The impacts by class code can be found in Exhibit 10. In addition, the USL&HW Compensation Coverage Percentage and associated factor, applied to the approved carrier rate(s) in the State Act classifications, is provided. This produces appropriate rates for employees whose duties are subject to USL&HW Act benefits. The Expense Constant and Tax Multiplier are also shown below.

	Indicated and Proposed Changes	
	Residual Market Rates	Voluntary Market Loss Costs
Overall Average Change (Collectible Basis)	-4.97%	-0.48%
Overall Average Change (Manual Basis)	-2.46%	+2.15%

Other Changes:

- Revise USL&HW Compensation Coverage Percentage (Rule XII) from 113.3% to 108.4%. This results in a USL&HW factor revision from 2.133 to 2.084.
- Revise Expense Constant from $345 to $375.
- Revise the Tax Multiplier from 1.1240 to 1.1312.

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. Rates and loss costs, as developed, filed, and distributed by the DCRB 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 starting December 1, 2024. The ultimate, true value of these claims is uncertain and will not be known until they have all closed. As a result, estimates of the future costs must be used. Adherence to actuarial principles and 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. Principle 4 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."

Actuarial Standards of Practice (ASOPs) apply to this filing. These documents set forth the standards, including appropriate considerations, that guide an actuary to develop and present the methods and calculations in this filing. These include ASOPs regarding data quality (ASOP 23), credibility (ASOP 25), trend (ASOP 13), risk classification (ASOP 12), communications (ASOP 41), and unpaid claim estimates (ASOP 43) which states:

> "The actuary should assess the reasonableness of the unpaid claim estimate, using appropriate indicators or tests that, in the actuary's professional judgment, provide a validation that the unpaid claim estimate is reasonable. The reasonableness of an unpaid claim estimate should be determined based on facts known to, and circumstances known to or reasonably foreseeable by, the actuary at the time of estimation."

This filing relies on data provided by our member companies; however, in accordance with ASOP No. 23 Data Quality, the data has been reviewed for reasonableness and consistency. Some examples of review include, but are not limited to, identifying, and investigating questionable data, comparing the current premium, loss data and loss development patterns to the data and patterns used in the prior analysis.

DEVIATION FROM STANDARD METHODS

This filing continues to use a methodology that includes a comparison of F-Class assigned risk rates for Delaware to F-Class assigned risk rates in other states. The comparison of values is shown in Exhibit 10.

Since benefits for USL&HW coverage are set at the National level, a basic a-priori assumption is that the rates should be similar to other states' assigned risk rates, with differences due to factors other than benefit levels.

Beginning with the December 1, 2020 F-Class filing, a selection was made to assign 80% weight to the manual rates by class based on the indications and 20% weight to an average rate determined using values from multiple states. This allows rates to rise and fall to some extent based on levels observed in other states. Without this approach, individual class rates would change very little given the very low class credibility levels. In general, the average rates by class are relatively stable and provide additional credibility to the dataset allowing class values to have some influence using a larger body of experience. An off-balance will be used to further adjust the F-Class rates to achieve the indicated manual rate level change. Additional details are provided in Exhibit 10.

The deviations from standard methods are consistent with the Principles and Considerations in the Casualty Actuarial Society's Statement of Principles Regarding Property and Casualty Insurance Ratemaking. The Considerations provide the following discussion:

> A number of ratemaking methodologies have been established by precedent or common usage within the actuarial profession. Since it is desirable to encourage experimentation and innovation in ratemaking, the actuary need not be completely bound by these precedents. Regardless of the ratemaking methodology utilized, the material assumptions should be documented and available for disclosure. While no ratemaking methodology is appropriate in all cases, a number of

> considerations commonly apply … Informed actuarial judgments can be used effectively in ratemaking. Such judgments may be applied throughout the ratemaking process and should be documented and available for disclosure.[2]

DISCUSSION OF THIS FILING'S METHODS, ANALYSIS AND FINDINGS

Data Used for Loss and Exposures

This filing uses loss and exposure data attributed to F-Class business as submitted on nit reports under the approved Statistical Plan in Delaware. Unit Statistical data has been used in lieu of financial data because the DCRB has found this information to be more consistent, accurate and reliable than the separate reporting for F-Class business in Financial Calls.

Unit Statistical data is limited to case incurred losses, separately reported for indemnity and medical benefits, for a series of ten successive annual evaluations beginning 18 months after the inception of each policy period (First Report through Tenth Report).

Supporting information for this filing includes standard earned premium and incurred losses from Unit Statistical data for Policy Years 2012 through 2021.

Unit Statistical data used for the analysis of the overall indicated rate level change in this filing is presented in Exhibit 5.

Analysis of Loss Experience

The DCRB performed incurred loss development analyses, separately for indemnity and medical benefits. All available development points at each maturity (i.e., development factors for policy years containing reported loss amounts) were computed and formed the basis for a selected series of loss development factors. Those selected factors were smoothed by fitting curves to the differences (or "residuals") between the selected loss development factors and unity (1.0).

A number of different curve-fitting alternatives for indemnity and medical loss development were considered in the preparation of this filing. For these curve fitting processes, development factors beyond 10th report were selected to be unity (1.0) to control the shape and behavior of the final fitted curves.

The fitted values for loss development factor residuals were adjusted by adding back the value of unity (1.0) that was removed prior to the application of the curve-fitting process. Development factors derived by cumulatively multiplying the age-to-age factors were used to estimate ultimate losses for indemnity and medical benefits by policy year.

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[2] CAS Statement of Principles Regarding Property and Casualty Insurance Ratemaking, lines 60 through 65, 124 through 126.

Exponential trend models were applied to the developed indemnity and medical loss ratios. A weighted average of the 10 most recent policy year loss ratios selected as the basis for the indicated change in F-Class rates.

The DCRB's loss development and trend analyses are shown in Exhibit 5.

The estimated effect of the anticipated October 1, 2025 benefit change for USL&HW benefits is derived in Exhibit 14.

Data Used for Expenses

Expense data is not reported to the DCRB separately for F-Class business. Accordingly, much of the expense data used in preparation of this filing is Delaware experience for stock agency companies or total Delaware workers compensation expense data, each related to their respective workers compensation premiums.

The DCRB's expense study performed in support of this filing is included in Exhibit 3. Provisions were separately measured based on Delaware experience for stock agency companies or total Delaware workers compensation experience for the following expense components: commission and brokerage, other acquisition, general expense, and loss adjustment expense.

Using Unit Statistical data, an indicated provision in proposed rates for premium discounts was obtained based on experience for risks written by carriers using the Schedule Y discount table. This derivation is also presented in Exhibit 3. A provision for uncollectible premium is included based on data collected by the NCCI for residual market business in the State of Delaware. The analysis appears on Page 3.7 of Exhibit 3.

Analysis of Expense Experience

Historical ratios of expense to premium were considered from the most recent available five years of experience. Provisions for the Federal Assessment and Premium Tax were based on currently available assessment levels. Miscellaneous taxes were estimated based on historical relationships between such taxes and premiums. Loss adjustment expenses were measured in relation to losses based on the most recent available five years' experience.

The proposed expense loadings consistent with this filing are shown in Exhibit 2.

Derivation of Permissible Loss and Loss Adjustment Expense Ratio

The DCRB retained an economic consultant to accomplish the following portions of the analysis supporting this filing:

- Determine an appropriate rate of return for the enterprise of writing workers compensation insurance in Delaware

- Prepare a model to account for all applicable cash flows attendant with the writing of workers compensation insurance business in Delaware

- Using this model, compute a permissible portion of premium to be attributed to loss, loss adjustment expense and loss-based assessments in combination and a separate provision for profit consistent with the anticipated cash flows and rate of return noted above

The Cost of Capital was determined by weighting both debt capital along with equity capital when determining the Profit and Contingency load. Details of the model applied in preparation of this filing with a summary of key inputs, outputs and assumptions is provided in Exhibit 4.

Analysis of USL&HW Compensation Coverage Percentage

The USL&HW Compensation Coverage Percentage is based on a comparison of benefit levels between State Act coverage and the USL&HW Act. This comparison is performed by type of claim and type of benefit to measure the respective potential obligations arising from injuries occurring under the jurisdiction of federal, as compared to state, law. Such a comparison then serves as the basis for the factor to adjust premiums in state classifications for the contingency of exposure to federal benefits.

The derivation of the proposed USL&HW Compensation Coverage Percentage is presented in Exhibit 6.

Proposed Classification Rates and Loss Costs

Further information is shown below under the heading entitled “F-Class Exhibits 9, 10, 11, 12 and 15 – Classification Analysis and Exhibits.”

Miscellaneous Rating Values

Tax Multiplier – A factor to account for assessments made on losses when policies are written using retrospective rating plans for F-Class business is derived as shown in Exhibit 8.

Experience Rating Plan Parameters – The recently approved updated Experience Rating Plan (Filing No. 2402) applies to F-Class business in Delaware. Expected loss rates are required for the F-Classes in order to incorporate experience under those classifications into the determination of employers’ experience modifications. The derivation of expected loss rate factors, which are multiplied by the proposed rates to produce the necessary expected loss rates by year in each F-Class, is shown in Exhibit 11.

DISCUSSION OF EXHIBITS

An index of all exhibits appears at the end of this memorandum. The following material provides discussion of the key elements.

F-Class Exhibit 1 – Indicated Change in Rate Level

Exhibit 1 shows the derivation of an indicated change of -4.97% in collectible rate level for Delaware F-Class business. On a manual basis, the indicated rate level change is -2.46%. Also,

Exhibit 1 shows indicated changes of -0.48% in collectible loss cost level and +2.15% in manual loss cost level.

The procedure for developing the indicated changes in Exhibit 1 is the same as that used in previous Delaware F-Class filings. Derivation of the trended loss ratios on Line (1) is described in Exhibit 5.

The assignment of 5% credibility to the trended loss ratio in Line (1), results in 95% credibility applicable to the loss ratio underlying current rates in Line (3).

The credibility-weighted trended loss ratio is adjusted to include loss adjustment expenses (Line (5)). The LAE ratio was the indicated LAE ratio in the pending Delaware state act filing (0.2696), which is also shown in Exhibit 3. The total on Line (6) is then compared to the permissible loss and loss adjustment ratio (Line (7)) and multiplied by the estimated effect of the October 1, 2025 benefit change (Line (9)) to produce the indicated change in overall rate level on Line (10). Consistent with past practice, the DCRB derived indicated changes in voluntary market loss costs (Line (11)) directly from the indicated change in overall rate level discussed above. This derivation is accomplished by removing the combined effects of all provisions for profit and expenses, other than loss adjustment expenses and loss-based assessments, from the rate level change. Derivation of Lines (5) and (7) are discussed below.

The indicated changes in collectible premium and loss costs are converted to indicated changes in manual rate level (Line (14)) and manual loss cost level (Line (15)) by adjusting for the change in the off-balance of the Experience Rating Plan (collectible premium ratio). The proposed collectible premium ratio is taken from the Delaware December 1, 2024 Rate and Loss Cost Filing (DCRB Filing No. 2403).

F-Class Exhibit 5 – Analysis of Experience

Exhibit 5 presents a review of F-Class experience as reported under the Unit Statistical Plan. Experience for the most recent available years through 2021 was extracted from the updated rate revision database. This recent data has been supplemented by prior experience included in previous F-Class filings. Page 1 of Exhibit 5 shows reported standard earned premiums (2006 to 2021), indemnity incurred losses (2006 to 2021) and the associated age-to-age loss development factors. The step-shaped lines separating successive evaluations for a given policy period indicate that the data was extracted from successive reviews. The data from prior rate revisions was not re-extracted and edited and may therefore have a degree of inconsistency with data subsequently extracted due to corrections of units, availability of previously missing units or the lack of units previously included. The cells denoted with asterisks (****) represent points where an inconsistency in data was observed between successive extracts for a given report year and maturity. Where the inconsistency was deemed negligible, loss development factors were calculated to increase the number of factors available. The bottom section of Page 1 shows seven-year and all-years weighted averages as well as selected loss development factors, on both an age-to-age and ultimate basis.

Page 2 shows similar details for F-Class medical experience.

The selected age-to-age factors for indemnity and medical are derived on Pages 3 and 4, respectively, and are the result of fitting a curve to the residuals (LDF-1) of the all-years weighted average age-to-age factors. Unity (1.0) is selected as the tail factor (10th-to-ultimate).

Ultimate on-level loss ratios are calculated on Page 5 for indemnity, medical and in total. 10-year weighted average loss ratios and zero percent annual trend were selected for both indemnity and medical losses. The resulting trended loss ratios of 33.81% for indemnity and 16.66% for medical were carried to Line (1) of Exhibit 1.

Given the very limited number of claims, frequency trend was selected at 0.0%. Page 7 shows indemnity severity trend is based on changes in the National Average Weekly Wage (NAWW) using a 10-point exponential fit given that the NAWW is the basis for F-Class indemnity benefits. Page 8 shows medical severity utilized the Medicare index using a 10-point exponential fit given that F-Class medical fee schedule changes are based on changes in Medicare costs.

Page 9 shows a graph of the resulting projected ultimate loss ratios.

F-Class Exhibit 2 – Expense Loading

Expense provisions are presented in Exhibit 2 and are broadly categorized as loss and loss adjustment and underwriting expenses.

The columns of Exhibit 2 show current and proposed expense provisions. Proposed provisions for the Federal Assessment (4.44%) and State Premium Tax (2.00%) are based on currently available assessment levels. Other State Tax is estimated to be 0.30%. Provisions for general expense, other acquisition, premium discount, commissions, and uncollectible premiums are derived in Exhibit 3 – Expense Study.

The provisions for profit (-2.66%) and the combined provision for loss and loss-related expenses (80.96%) were derived from an internal rate of return model, as described in Exhibit 4.

F-Class Exhibit 3 – Expense Study

Page 3.1 of Exhibit 3 derives provisions for commission, other acquisition, and general expense exclusive of expense constant dollars. Commissions are related to premium, including large deductible business on a net (as reported) basis. Other acquisition and general expense are related to premiums, including large deductible business on a gross (before deductible credits) basis. Average factors over five years, 2018 through 2022, were considered and a three-year average was selected. Experience for stock agency companies is included.

Loss adjustment expenses for Calendar Years 2018 through 2022 are related to incurred losses, including large deductible business on a gross (before reimbursement) basis. The selected five-year average factor of 26.96% is shown on Page 3.4. Experience for all companies is included.

An average premium discount figure of 8.15% is derived on pages 3.5 through 3.6 of Exhibit 3, based on the total Delaware premium for all policies from Schedule Y companies including those with F-Class exposure. The figure includes an adjustment to account for multi-state risks.

Based on data from the Delaware (Assigned Risk) Insurance Plan, an average uncollectible premium rate of 3.21% was selected.

F-Class Exhibit 4 – Internal Rate of Return Model

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

A profit loading is chosen so that the net cash flows, when discounted to present value, provide a return equal to the projected target rate of return, or cost of capital. The cost of capital is derived in 4 is based on a weighted average of both debt and equity capital and is equal to 11.79%.

This filing recognizes investment income on reserve and surplus funds as well as the cost of debt capital in determining the overall expected return for carriers from writing workers compensation business in Delaware.

As mentioned above, the inclusion of debt capital as part of the weighted average cost of capital. The primary reasons supporting this change were:

1. Debt capital is part of statutory surplus.
2. Insurance company debt/capital ratios have risen over the past 20 years.
3. Inclusion of debt capital brings the model into compliance with industry best practices

In the internal rate of return analysis, the profit provision is -2.66%. A loss ratio, including provision for loss, loss adjustment and the federal assessment, and consistent with the other expense values used in the model, was derived, and equals 80.96%. That loss ratio was split into the loss (60.26%), loss adjustment expense (16.25%) and the federal assessment (4.45%) components by maintaining a ratio of loss adjustment expense to loss of 26.96% and a ratio of federal assessment expense to loss of 7.38%.

F-Class Exhibits 9, 10, 11, 12 and 15 – Classification Analysis and Exhibits

Exhibit 9, Rate and Loss Cost Formulae, describes the steps used in the classification ratemaking process. Exhibit 10, Derivation of F-Class Rates and Loss Costs, contains the comparison of Delaware F-Class rates to other states' rates and the derivation of proposed values. It also shows current and proposed values by class and the respective percentage changes. Expected loss rate factors used to calculate expected losses for experience rating are derived in Exhibit 11, Calculation of Expected Loss Rate Factors. Proposed rating values are shown in Exhibit 12, Manual Rates, Loss Costs and Expected Loss Rates. Exhibit 15, Other Supporting Classification Exhibits & Class Book, are also included. The Class Book shows the reported and projected experience for each class. Other Supporting F-Classification Exhibits show various factors used in the class ratemaking process. The per-claim and per-accident loss limits and the credibility tables are the same as the ones used in the December 1, 2024 Delaware State Act Rate and Loss Cost Filing.

F-Class Exhibit 6 – U. S. Longshore & Harbor Workers Compensation Coverage Percentage

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

The DCRB proposes that the USL&HW factor changed from 2.1327 to 2.0843, representing a 108.4% load to State Act rating values.

Other F-Class Exhibits

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

Exhibit 8, Tax Multiplier, provides a tax multiplier factor applicable to F-Class exposures for use in retrospective rating. The DCRB proposes that the factor changed from 1.1240 to 1.1312.

CLOSING COMMENTS AND QUALIFICATIONS

DCRB Filing No. 2405 fully and fairly reflects the most recent available experience indications in Delaware. The DCRB respectfully requests a timely review of this filing, allowing implementation on a new and renewal basis **effective December 1, 2024**. A timely review will allow adequate advance notice of final residual market rates and voluntary market loss costs and related rating values to all participants in the Delaware marketplace. Toward that objective, the DCRB will be pleased to answer any questions or provide any available supplementary information which you, your staff and consultants reviewing this filing on your behalf may require.

This filing has been developed by and under the direction of Brent Otto, FCAS,. He meets the Qualification Standards of the American Academy of Actuaries to provide the actuarial opinion contained within this filing.

Please direct all questions to:

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