COAL MINE COMPENSATION RATING BUREAU
OF PENNSYLVANIA

COMMERCE BUILDING – SUITE 501
300 NORTH SECOND STREET

HARRISBURG, PENNSYLVANIA 17101

CHARLES A. ROMBERGER
EXECUTIVE DIRECTOR

TELEPHONE
717-238-5020

November 21, 2022

The Honorable Michael Humphreys
Acting Insurance Commissioner
Pennsylvania Insurance Department
1311 Strawberry Square
Harrisburg, PA 17120

Attention: Michael McKenney, Actuarial Supervisor, Property & Casualty Bureau

RE: Proposal CM-1-2022
Revised Loss Costs for Traumatic, State Occupational Disease
And Federal Occupational Disease
To Be Effective: April 1, 2023

Dear Acting Commissioner Humphreys:

Enclosed for your review and approval is the annual filing of Loss Costs by the Coal Mine Compensation Rating Bureau of Pennsylvania ("Bureau"). This filing is made in accordance with Article VII of the Pennsylvania Workers' Compensation Act.

Exhibit I-A-M displays the proposed changes by classification and by coverage. Overall, the proposed change in Manual Loss Costs is 1.9%. By coverage, the proposal requests a change of -0.8% for Traumatic, a change of 7.2% for State Occupational Disease ("SOD") and a change of 16.7% for Federal Occupational Disease ("FOD").

The Proposed Traumatic Loss Costs are decreasing overall by $0.04 from $5.29 to $5.25. The overall experience is being driven by the following considerations:

- Indemnity Loss Development Factors changed modestly
  - The first to ultimate factor (i.e., for Accident Year 2021) changed by -1.8% and
  - The other factors changed between -1.5% and 0.4%.
- Indemnity Loss Trend Annual Factor decreased from 0.2% to 0.0%.
- The HB 1840 Adjustment Factors that vary by Accident Year decreased modestly. These adjustments are included with the Indemnity Loss Trend Factors. On a combined basis, the changes to the Indemnity Loss Trend Factors range from -1.6% to -0.5% for older to newer Accident Years respectively.
- Medical Loss Development Factors changed from -1.7% to -1.0% from older to newer Accident Years respectively.
- Medical Loss Trend Annual Factor changed from 1.9% to 2.4%. The HB 1846 Adjustment Factors are all now unity. On a combined basis, the Medical Loss Trend Factors changed from 1.4% to 3.4% from newer to older Accident Years respectively.

- The replacement of Accident Year 2016 experience with Accident Year 2021 experience in the five (5) year Traumatic Loss Cost analysis.
    - For the April 1, 2022 filing, the Accident Year 2016 Loss Cost was estimated to be $5.72.
    - For the April 1, 2023 filing, the Accident Year 2021 Loss Cost is estimated to be $4.84 with Indemnity decreasing modestly and Medical increasing.

The Proposed SOD Loss Costs are increasing overall by $0.05 from $0.69 to $0.74. The overall experience is being driven by the following considerations:

- For all classes combined, claim frequency changed by 3.0%.
- For all classes combined, claim severity changed by 6.3%.

The Proposed FOD Loss Costs are increasing overall by $0.12 from $0.72 to $0.84. The overall experience is being driven by the following considerations:

- For all classes combined, Basic claim frequency changed by 14.6%.
- For all classes combined, Excess claim frequency changed by 2.0%.
- For all classes combined, Basic claim severity changed by 2.1%.
- For all classes combined, Excess claim severity changed by 1.1%.

This Proposal consists of this cover letter, the enclosed Actuarial Report with Appendices A and B and Filing Exhibits. The Filing Exhibits were prepared for the Bureau by Mr. Peter A. Bennett who has extensive experience in this regard. This cover letter and Actuarial Report follow the organization that was used in last year's filing. The Filing Exhibits are unchanged from last year's filing, except where noted in the Summary of Significant Changes section of the Actuarial Report.

We ask for your approval of this filing on or before February 1, 2023. An approval in this timeframe facilitates the required notices and advanced issuance of revised employer rate cards, noting the applicable loss costs and rating plan values.

The Bureau and its consultant will be pleased to discuss any issues raised by the Department. Please feel free to contact me if additional information or discussion is necessary.

Sincerely,

Charles A. Romberger
Executive Director

Actuarial Report
Regarding the CMCRB's April 1, 2023 Loss Cost Filing

Introduction

I, Charles A. ("Chuck") Romberger, am the Executive Director of the Coal Mine Compensation Rating Bureau of Pennsylvania ("CMCRB"). I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. I offer this report in support of the CMCRB's proposed April 1, 2023 Loss Cost Filing. In this filing, the CMCRB proposes revisions to Loss Costs for Traumatic, State Occupational Disease ("SOD") and Federal Occupational Disease ("FOD") classifications under the CMCRB's jurisdiction to be effective April 1, 2023.

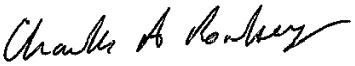
This report and the associated filing exhibits present information that demonstrate the fairness and reasonability of the proposed loss costs and show the CMCRB's continued use of accepted actuarial procedures and application of sound actuarial judgment.

I note that Mr. Peter A. Bennett participated in the preparation of this report and the associated Filing Exhibits. Mr. Bennett has extensive experience in this regard.

The remainder of this report consists of the following sections:

- The Executive Summary provides a discussion about the overall changes in Loss Costs and the sources of those changes contained in this filing by coverage (i.e., Traumatic, SOD and FOD). It also identifies "Other Items" that are typically of interest (e.g., the Employer Assessment Factor).
- The Summary of Significant Changes identifies and briefly discusses the significant changes in methods and assumptions from the CMCRB's prior loss cost filing.
- The Discussion of Filing Exhibits addresses the content of all of the Filing Exhibits and is arranged in Filing Exhibit order.
- The Disclosures section identifies and briefly discusses topics that broadly apply to all areas of this report and presents considerations or limitations related to the use of these findings.
- Appendix A provides a discussion about House Bill 1846 of 2014 (HB 1846).
- Appendix B provides a discussion and exhibits in support of the CMCRB's adjustments concerning House Bill 1840 (HB 1840 or Act 111 of 2018), the legislative response to the Pennsylvania Supreme Court's decision in Protz v. WCAB.

Sincerely,



Charles A. Romberger, ACAS, MAAA, CPCU, ARM
Executive Director, CMCRB

Executive Summary

This report and the associated filing exhibits provide the CMCRB's proposal for loss costs to be effective on April 1, 2023, which is twelve (12) months from the last approved loss costs. The proposed loss costs are based on the annual review of data by coverage (i.e., Traumatic, SOD, and FOD – Basic and Excess) and by classification for the ten (10) coal mine classifications under the CMCRB's jurisdiction.

For all classifications combined, this filing proposes the following changes in loss costs by coverage and in Total (i.e., all coverages combined). This information can also be found on Exhibit I-A-M, Page 2 (Grand Total section).

	Current Loss Cost	Proposed Loss Cost	Change in Loss Costs
Traumatic	$ 5.29	$ 5.25	-0.8%
SOD	0.69	0.74	7.2%
FOD (Basic & Excess)	0.72	0.84	16.7%
Total	$6.70	$6.83	1.9%

The remainder of this Executive Summary provides a discussion section for each type of coverage and a discussion section for "Other Items".

Traumatic Loss Costs

The Current Traumatic Loss Cost for all classes combined is $5.29 based on 2021 payroll distribution. The Proposed level is $5.25 or a change of -0.8%.

The key drivers of the change to Traumatic Loss Costs can be identified by comparing Exhibit V-B Page 1 for the April 1, 2023 filing to the April 1, 2022 filing. These drivers include:

- Indemnity Loss Development Factors changed modestly
  - The first to ultimate factor (i.e., for Accident Year 2021) changed by -1.8% and
  - The other factors changed between -1.5% and 0.4%.
- Indemnity Loss Trend Annual Factor decreased from 0.2% to 0.0%.
- The HB 1840 Adjustment Factors that vary by Accident Year decreased modestly. These adjustments are included with the Indemnity Loss Trend Factors. On a combined basis, the changes to the Indemnity Loss Trend Factors range from -1.6% to -0.5% for older to newer Accident Years respectively.
- Medical Loss Development Factors changed from -1.7% to -1.0% from older to newer Accident Years respectively.
- Medical Loss Trend Annual Factor changed from 1.9% to 2.4%. The HB 1846 Adjustment Factors are all now unity. On a combined basis, the Medical Loss Trend Factors changed from 1.4% to 3.4% from newer to older Accident Years respectively.
- The replacement of Accident Year 2016 experience with Accident Year 2021 experience in the five (5) year Traumatic Loss Cost analysis.
  - For the April 1, 2022 filing, the Accident Year 2016 Loss Cost was estimated to be $5.72.

- For the April 1, 2023 filing, the Accident Year 2021 Loss Cost is estimated to be $4.84 with Indemnity decreasing modestly and Medical increasing.

These drivers generally decrease the Indemnity indication and increase the Medical indication. The Indemnity indication changed by -4.2%, from $3.36 to $3.22; while the Medical indication changed by 2.7%, from $1.85 to $1.90. Prior to the application of credibility and capping changes at +/- 25% by class, the Total Traumatic indication changed by -1.7%, from $5.21 to $5.12. The Total indication may not equal the sum of the parts due to rounding.

Credibility and capping procedures are applied on Exhibit V-A Page 1 to the Indicated Unloaded Loss Costs to produce the Proposed Unloaded Loss Costs which are also displayed on Exhibit II. Exhibit II shows the Proposed Unloaded Loss Costs Percent Change (after Credibility and Capping) for all classes combined is -1.6%. Also, the totals on Exhibit II are the result of using payroll for the most recent accident year as weights while the totals on Exhibit V-B Page 1 are the result of using payroll for the most recent five (5) accident years as weights. Capping at -25% was utilized for the Anthracite Prep Plant class given the indicated change.

State Occupational Disease (SOD) Loss Costs

The Current State Occupational Disease Loss Cost for all classes combined is $0.69 based on 2021 payroll distribution. The Proposed level is $0.74 or a change of 7.2%.

The key drivers of this change can be identified by comparing Exhibit III for the April 1, 2023 filing to the April 1, 2022 filing. These drivers include:

- For all classes combined, claim frequency changed by 3.0%. By class, frequency changes varied from -13.0% to 15.2%.
- For all classes combined, claim severity changed by 6.3%. By class, severity changes varied from 4.5% to 8.1%.
- The Proposed Loss Cost for Bituminous Surface is capped at +25%. Also, the net change in Proposed Loss Costs does not equal the product of the claim frequency change and claim severity change because of the capping at +/- 25% in current or prior filings.

Federal Occupational Disease (FOD) – Basic/Excess – Loss Costs

The Current Federal Occupational Disease Basic/Excess Loss Cost for all classes combined is $0.72 based on 2021 payroll distribution. The Proposed level is $0.84 or a change of 16.7%.

The Federal component of the filing consists of two parts, the Federal Basic and the Federal Excess as follows:

	Current Loss Cost	Proposed Loss Cost	Change in Loss Costs
Basic	$ 0.58	$ 0.69	19.0%
Excess	0.14	0.15	+7.1%
Total	$0.72	$0.84	+16.7%

The Proposed Loss Costs are shown in Column (5) of Exhibit IV-A separately for Basic and Excess and in Total. The Currently Approved Unloaded Loss Costs are shown in Total (i.e., Basic and Excess combined) in Column (2) of Exhibit IV-A. The Total Current Loss Cost is split between Basic and Excess components using the Basic and Excess Loss Costs from Column (5) of Exhibit IV-A from the prior filing as weights.

The key drivers of this change can be identified by comparing Exhibit IV-A for the April 1, 2023 filing to the April 1, 2022 filing. These drivers include:

- For all classes combined, Basic claim frequency changed by 14.6%.
- For all classes combined, Excess claim frequency changed by 2.0%.
- For all classes combined, Basic claim severity changed by 2.1%.
- For all classes combined, Excess claim severity changed by 1.1%.
- The net change in Proposed Loss Costs does not equal the product of the claim frequency change and claim severity change because these three values do not all carry the same number of significant digits and because of the capping at +/- 25% in current or prior filings.

Other Items

- The Small Business Advocate Assessment Ratio changed from 0.0001 to 0.0002. (See Exhibit XI.) This amount is loaded into the CMCRB's Manual Loss Costs.
- The Employer Assessment Factor changed from 2.68% (or 0.0268) to 2.89% (or 0.0289). (See Exhibit XI-B.) This amount is not loaded into the CMCRB's Manual Loss Costs, but is treated as a separate calculation in the determination of policy premium. This amount is the estimated provision for Pennsylvania's Administrative Fund, Subsequent Injury Fund, Supersedeas Fund and Uninsured Employer Guaranty Fund.
- The overall Catastrophe Loss Cost provision changed from $0.13 (based on 2021 Payroll weights) to $0.17. (See Exhibit XII-A.) By class, the following amounts are loaded into the CMCRB's Manual Loss Costs:
    - The provision for Surface Classes changed from $0.04 to $0.05,
    - The provision for Auger changed from $0.10 to $0.12 and
    - The provision for Underground Classes changed from 0.22 to 0.27.
- The Experience Rating Plan parameters require a change to the Off-Balance Factor from 0.9844707 to 1.0081. This factor is not included in the CMCRB's Manual Loss Costs, but is incorporated into the Experience Rating Plan's Rating Formula.
- The Merit Rating Plan Off-Balance Factor changed from 1.0001 to 1.0002. (See Exhibit XIV-A, Page 1.) This amount is loaded into the CMCRB's Manual Loss Costs.
- The Safety Committee Credit Off-Balance Factor changes from 1.0209 to 1.0228. (See Exhibit XIV-B.) This amount is loaded into the CMCRB's Manual Loss Costs.

Summary of Significant Changes from Last Year's Filing

Many Exhibits show that the payroll for the Coke Class for Accident Year 2021 decreased to $0. Best documented in the Exhibit X series, the CMCRB notes that the payroll for the Coke Class decreased significantly from 2019 to 2020 from $4,466,971 to $313,587, and then subsequently decreased to $0 for 2021. The CMCRB understands that this is related to the closing of the last commercially insured Coke operation in Pennsylvania during early 2020.

Concerning Exhibit V-J, the April 1, 2023 Filing is like the April 1, 2022 Filing in that there aren't any claims that exceed the catastrophe limit. This result or situation is in contrast to the April 1, 2021 Filing when one claim for Accident Year 2019 exceeded the catastrophe limit and was listed on Exhibit V-J.

Concerning various pages in the Exhibit VI series, the CMCRB notes that between the April 1, 2022 Filing and April 1, 2023 Filing (current filing), one of the CMCRB's member company groups submitted revised statistical reports for losses that were (or should have been) included in prior filings. This company group is a moderately-sized member of the CMCRB. The revised reported loss amounts cause a general restatement of data across various years and report levels for Accident Years 2015 through 2020 for both Indemnity and Medical Incurred and Paid Losses as well as claim counts. The CMCRB notes that a different member company was involved in a similar restatement that was reported by the CMCRB with the April 1, 2022 Filing. The CMCRB notes that modest changes to previously reported losses can and do occur from time to time, but that the changes related to both of these events are unusual in the number of claims involved and in the spread of revisions across years and report levels as noted above. However, the CMCRB notes that the revised reporting did not occur exclusively or even mostly along the most recent diagonal but instead resulted in a general restatement of data across various years and report levels. Consequently, the CMCRB believes that these restatements do not require special treatment or adjustment per se because these restatements have simply reported statistical data the way that it should have been reported over several report cycles. These changes can be easily identified by a comparison of the Exhibit VI series in the current filing with the same exhibits from the April 1, 2022 Filing.

Most Filing Exhibits were updated from the CMCRB's prior loss cost filing either by adding the data for the newest available Accident Year and deleting the data for the oldest Accident Year or by just adding the data for the newest available Accident Year.

Discussion of Filing Exhibits

Many of the Filing Exhibits provide various totals and subtotals that are derived using current estimates of Developed Payrolls and/or Miner Years as weights. These totals and subtotals may differ from totals and subtotals shown in prior filings as the weights can and do change.

Exhibit I – Current and Proposed Loss Costs

The I-A-M pages provide comparisons of the currently Approved Manual Loss Costs and the Proposed Manual Loss Costs by classification.

The I-A-UL pages provide comparisons of the currently Approved Unloaded Loss Costs and the Proposed Unloaded Loss Costs in the same format as the I-A-M pages. However, I-A-UL also includes a third page that presents the loss cost limitations by classification and by coverage.

The I-B pages present the Proposed Unloaded Loss Costs after limitations (see the I-A-UL discussion above), the loading of the Catastrophe Loss Costs, the application of the various Off-Balance factors and the Proposed Loaded Loss Costs (or Proposed Manual Loss Costs).

In addition to providing Loss Costs by classification and by coverage, the pages in Exhibit I also provide various totals and subtotals that are derived using the Developed Payrolls for the most recent Accident Year as weights.

Exhibit II – Traumatic Loss Cost Indications

This page presents the currently Approved Unloaded Loss Costs, the Indicated Unloaded Loss Costs and the Proposed Unloaded Loss Costs by classification. Changes from the currently Approved Unloaded Loss Costs to the Indicated Unloaded Loss Costs are capped or limited to +/- 25% to derive the Proposed Unloaded Loss Costs by classification.

This page also displays various totals and subtotals that are derived using the Developed Payrolls for the most recent Accident Year as weights.

Exhibit III – State Occupational Disease Loss Cost Indications

This page presents the currently Approved Unloaded Loss Costs, the Indicated Loss Costs (the Indicated Loss Costs are the products of the Indicated Average Frequencies and the Indicated Average Severities) and the Proposed Loss Costs by classification. The Proposed Loss Costs equal the Indicated Loss Costs except where changes are limited to +/-25%.

This page also displays various totals and subtotals that are derived using the Developed Payrolls for the most recent Accident Year as weights.

Exhibit IV – Federal Occupational Disease Loss Cost Indications

A. This page presents the currently Approved Unloaded Loss Costs, the Indicated Loss Costs (the Indicated Loss Costs are the sums of the products of the Indicated Average Frequencies and the Indicated Average Severities for FOD Basic and FOD Excess) and the Proposed Loss Costs (i.e., Loss Costs w/ Limitation 25%) by classification. The Proposed Loss Costs equal the Indicated Loss Costs except where changes are limited to +/-25%.

   This page also displays various totals and subtotals that are derived using the Developed Payrolls for the most recent Accident Year as weights.

B. Page 1 displays the derivation of the FOD Basic Claim Frequencies. This process begins with the Indicated Claim Frequencies on a Miner Year basis developed in Exhibit IV-B Page 3. The Indicated Claim Frequencies are credibility weighted with the currently Approved FOD Basic Claim Frequencies trended (although the trend is 0%) to the current valuation level developed in Exhibit IV-B Page 4. After the application of credibility, the Credibility Weighted Indicated FOD Basic Claim Frequencies are converted to a Developed Payroll basis because the CMCRB publishes Loss Costs on a Payroll basis.

   The Total of the Expected Awarded Claims for All Classes is assigned as the full credibility standard. The credibility factor for each classification is obtained as the ratio of the Expected Awarded Claims of a given class to the full credibility standard raised to the ½ power.

   Page 2 displays the derivation of the FOD Excess Claim Frequencies. The Indicated Claim Frequencies are developed in Exhibit IV-B Page 5. The currently Approved FOD Excess Claim Frequencies are developed in Exhibit IV-B Page 6. Otherwise, this page works like Page 1.

   Page 3 displays the derivation of the FOD Basic Claim Frequencies on a Miner Year Basis. This process involves weighting the Modeled Indications from Exhibit VIII-F with the Experience Indications from Exhibit VIII-B-2. The weights are 25% for the Modeled Indications and 75% for the Experience Indications.

   Page 4 displays the conversions of the Approved FOD Basic Claim Frequencies from the prior filing that are on a Payroll basis to a Miner Year basis.

   Page 5 displays the derivation of the FOD Excess Claim Frequencies on a Miner Year Basis. This process involves weighting the Modeled Indications from Exhibit VII-L with the Experience Indications from Exhibit VII-B-2. The weights are 25% for the Modeled Indications and 75% for the Experience Indications.

   Page 6 displays the conversions of the Approved FOD Excess Claim Frequencies from the prior filing that are on a Payroll basis to a Miner Year basis.

   These pages provide various totals and subtotals that are derived using Developed

Payrolls and/or Estimated Miner Years as weights as indicated.

Exhibit V – Traumatic Loss Information

This section of the filing produces the Proposed Traumatic Unloaded Loss Costs by classification.

A. Page 1 displays the derivation of the Proposed Traumatic Unloaded Loss Costs by classification. This process begins with the Indicated Traumatic Loss Costs developed in Exhibit V-B. The Indicated Traumatic Unloaded Loss Costs are credibility weighted with the currently Approved Traumatic Unloaded Loss Costs trended to the current valuation level. After the application of credibility, the Indicated Traumatic Unloaded Loss Costs are further limited to changes of +/-25% to produce the Proposed Traumatic Unloaded Loss Costs.

   In addition to providing Traumatic Loss Costs by classification, this page also provides various totals and subtotals that are derived using the Developed Payroll shown in the column with these totals and subtotals as weights.

   The credibility procedure assigns full credibility (i.e., 100% credibility or 1.00) to three (3) of the Four Major Classifications (i.e., Underground Bituminous, Surface Anthracite and Surface Bituminous). For the six (6) minor classifications, the credibility factor for each classification is obtained as the ratio of the Five Year Expected Losses of a given class to Five Year Expected Losses for Surface Bituminous raised to the ½ power. For the April 1, 2023 Filing, Anthracite Co-Gen and Bituminous Prep Plant also received full credibility given the level of Five Year Expected Losses for these classes meeting or exceeding the Five Year Expected Losses for Surface Bituminous.

   The complement of the credibility is assigned to the currently Approved Traumatic Unloaded Loss Cost adjusted or trended to the current valuation level. The adjustment or on-level factor is the weighted average of the Indemnity and Medical Trends contained in this filing, weighted by the five (5) year Indemnity and Medical Ultimate Losses from Exhibit V-B, Page 1.

   Page 2 shows the derivation of the Indicated Traumatic Unloaded Loss Cost for the Underground Anthracite classification. This value is derived by a different process since this classification has minimal experience for the five (5) most recent Accident Years. This is the same procedure that was used in last year's filing.

B. These pages show the derivation of the Indicated Traumatic Unloaded Loss Costs by Classification. This process begins with the Reported Losses separately shown for Indemnity and Medical for the five (5) most recent Accident Years. It applies Loss Development and Trend Factors to adjust Reported Losses to Ultimate Losses. Finally, it compares Ultimate Losses to Developed Payroll to produce indicated Loss Costs by Accident Year and in Total. Page 1 shows the Total for All Classifications Combined. Pages 2, 6, and 14 show subtotals for the noted classification groupings.

Usually, the inclusion of claims in excess of $1,250,000 is limited on these pages. For this filing, there weren't any claims that exceeded this threshold.

C. These pages show the derivation of the Selected Age-to-Age Loss Development Factors separately for Traumatic Indemnity and Medical Incurred Losses. The Selected Factors are based on the Derived Development Factors which are developed on Pages V-D-2 and V-E-2 for Indemnity and Medical respectively. The Selected Age-to-Age Factors are Accumulated in Column 8 to produce Selected Age-to-Ultimate Loss Development Factors. The Age-to-Ultimate Factors include a "tail" provision for loss development beyond 20th report level.

For Indemnity Incurred Losses, the Age-to-Ultimate Factors changed as follows for:

- 1:2 (1st report to ultimate) -1.8%,
- 2:3 (2nd report to ultimate) -1.5%,
- 3:4 (3rd report to ultimate) -0.8%,
- 4:5 (4th report to ultimate) 0.4%,
- 5:6 (5th report to ultimate) -0.2% and
- 6th report to ultimate and beyond in the range of -0.2% to -0.1%.

For Medical Incurred Losses, the Age-to-Ultimate Factors changed as follows for:

- 1:2 (1st report to ultimate) -1.0%,
- 2:3 (2nd report to ultimate) -1.3%,
- 3:4 (3rd report to ultimate) -1.9%,
- 4:5 (4th report to ultimate) -1.8%,
- 5:6 (5th report to ultimate) -1.7% and
- 6th report to ultimate and beyond in the range of -1.5% to -0.2%.

D. These pages show the development of the Derived Traumatic Indemnity Loss Development Age-to-Age factors and include the development of the Tail Factor.

Page 1 is the same as VI-A-4. The Age-to-Age factors from this page are used on V-D-2. For additional information, please refer to the discussion for VI-A-4.

Page 2 shows the (Actual) Age-to-Age Factors and the Derived (or Modeled) Age-to-Age Factors for Traumatic Indemnity Incurred Losses. Examination of the Age-to-Age factors suggested that the factors from the first four (4) periods should be accepted without adjustment and that the factors for the remaining periods should be replaced with modeled or derived factors. The same determination was made for last year's filing.

The CMCRB decided that a linear model was reasonable and found to produce acceptable results. Similar to the model fitting approach in last year's filing, several assumptions were used to produce the model.

- The model needed to have a slight downward slope and to accept that loss development beyond some point in time was going to be zero (i.e., that loss development factors beyond some point would be 1.0000).
- The model needed to produce factors such that the upward accumulation of the derived factors would equal the upward accumulation of the actual factors from the experience period (i.e., period 5 through 19). The accumulation of these fifteen (15) factors is 15.02790, producing an average of 1.00186.
- The model would be linear and have the form y (t) = x – at.
- The model needed to have a value equal to the average of the experience data at the midpoint of the period that produced the data. Expressed algebraically,
  the midpoint of the period is 12 and
  the average of the experience period is 1.00186, so
  y (12) = 1.00186.
- Development beyond 10 years after the end of the experience period would not be expected. Again, expressed algebraically,
  the period associated with this assumption is 29 and
  the value of the function is 1.0001, so
  y (29) = 1.0001. (Beyond period 29, all factors are assumed to be 1.0000.)
- These conditions result in the following system of equations:
  y (12) = 1.00186 = x - (a) (12) and
  y (29) = 1.0001 = x - (a) (29).
- The solution for this system of equations was found to be:
  a = 0.0001040 and
  x = 1.0025800.
- Given these values, y (5) is determined to be 1.0026 = 1.00310 – (0.0001040)(5). (Note that rounding can have a slight impact on the calculations.) This value is entered on Line 5 of Column (5). The following numbers in this column are generated by subtracting 0.0001040.
- The Modeled Factors from periods 20 through 29 in Column (10) are accumulated upward in Column (11) to produce the CMCRB tail factor. The CMCRB tail factor is then averaged with the PCRB tail factor to produce the Selected tail factor.

Page 3 provides the Age-to-Age Indemnity Incurred Loss Development Factors from the most recent PCRB filing. The Tail Factor (or "20 to Ult" Factor) from this page is used on V-D-2. The PCRB Age-to-Age Factors are compared to the CMCRB Age-to-Age Factors on V-C-1.

E. These pages show the development of the Derived Traumatic Medical Loss Development Age-to-Age factors and include the development of the Tail Factor.

Page 1 is the same as VI-B-4. The Age-to-Age factors from this page are used on V-E-2. For additional information, please refer to the discussion for VI-B-4.

Page 2 shows the (Actual) Age-to-Age Factors and the Derived (or Modeled) Age-to-Age Factors for Traumatic Medical Incurred Losses. Examination of the Age-to-Age factors

suggested that the factors from the first two (2) periods should be accepted without adjustment and that the factors for the remaining periods should be replaced with modeled or derived factors. The same determination was made for last year's filing.

To begin, the CMCRB's Age-to-Age Factors were averaged with the PCRB's Age-to-Age Factors for the periods 10 to 19 to produce Adjusted Age-to-Age Factors. The CMCRB's Age-to-Age Factors were used for periods 3 through 9.

Next, the CMCRB decided that a model of the form y (t) = (x) (a^{t-3}) was reasonable and found to produce acceptable results. Similar to the model fitting approach in last year's filing, several assumptions were made to derive the fitted model.

- The geometric mean of the product of the Adjusted Age-to-Age Factors from periods 3 through 19 was calculated and found to be 1.0009915. (There are 17 factors from t=3 to t=19 so the geometric mean is (0.9781 x 1.0166 x …. x 1.0002) ^ (1/17)).
- The length of the development period beyond the end of the experience period was chosen to be 19 years. Development is not expected at the 39th report level and beyond. Development factors beyond 38th report are assumed to be 1.0000. The development factor for period 38 is assumed to be 1.0001.
- The model needed to produce factors such that the upward accumulation of the derived factors would equal the upward accumulation of the actual factors from period 3 through 19. This accumulation is 1.0170.
- The model needed to have a value equal to the geometric average of the experience data at the midpoint of the period that produced the data. Since the data that is being used runs from t=3 to t=19 the midpoint is at t=11. Thus, y (11) = 1.0009915.
- These conditions result in the following system of equations:

  $$y(11) = 1.0009915 = (x)(a^{8}) \text{ and}$$
  $$y(38) = 1.0001 = (x)(a^{35}).$$
- The solution for this system of equations was found to be:

  a = 0.999967 and
  x = 1.0012558.
- At this point, the value 1.0012558 (displayed as 1.0013) is entered on Line 3 (for Period 3) of Column 6. The Factor for Period 4 is obtained as (1.0012558) times (0.999967). The factor 'a' is applied to each of the succeeding Factors until Period 38 is reached. The system is very sensitive to the precision of the parameters. If the initial choices are abbreviated, the goals may not be met (e.g., the accumulated value may not be 1.0170 and/or the last point may not be 1.0001).
- The Modeled Factors from periods 20 through 38 in Column (9) are accumulated upward in Column (10) to produce the CMCRB (derived) tail factor. The CMCRB tail factor is then averaged with the PCRB tail factor to produce the Selected tail factor.

Page 3 provides the Age-to-Age Medical Incurred Loss Development Factors from the most recent PCRB filing. The Tail Factor (or "20 to Ult" Factor) from this page is used on V-E-2. The PCRB Age-to-Age Factors are compared to the CMCRB Age-to-Age Factors on V-C-2.

F. This page shows the selected Traumatic Annual Trend Factors separately for Indemnity and Medical losses that are derived from Exhibit V-K. Since the Annual Trend Factors are applied separately to the five (5) most recent Accident Years, the page also shows the Trend Period for each of those five (5) years and the Trend Factor for each Accident Year.

   In addition to traditional trend factors and calculations, this page also allows for adjustments related to other changes. For this filing, other changes include HB 1846 of 2014 and HB 1840 (or Act 111 of 2018).

   Concerning HB 1846, the CMCRB applied a uniform savings of 1.32% or a factor of 0.9868 to all Accident Years with the December 16, 2015 revision to the April 1, 2016 Filing. For the April 1, 2017 through April 1, 2022 Filings, the CMCRB proposed adjustment factors that varied by Accident Year and maintains that approach for the April 1, 2023 Filing. However, since each of the five Accident Years (i.e., 2017 – 2021) used in the Traumatic indication are expected to be fully reported on a post-HB 1846 basis, each of these Adjustment Factors is unity (1.0000.) These factors are discussed in Appendix A to this report.

   Concerning HB 1840, the CMCRB applied a uniform additional charge of 1.59% or a factor of 1.0159 for all Accident Years for the April 1, 2019 Filing. For the April 1, 2020 through April 1, 2022 Filings, the CMCRB proposed adjustment factors that vary by Accident Year and maintains that approach for the April 1, 2023 Filing. These factors and their derivation are provided in Appendix B to this report.

G. Omitted – Reserved for Future Use.

H. Page 1 provides a summary of the Traumatic Indemnity Losses. Page 2 provides a summary of the Traumatic Medical Losses. The data on these pages support calculations on the Exhibit V-I pages.

I. Exhibit V-I is comprised of six (6) pages. Each page presents a summary for or estimates of one of the trend parameters that are under consideration as follows:
   - Page 1 – Traumatic Indemnity Loss Severity Trend
   - Page 2 – Traumatic Medical and Medical Only Loss Severity Trend
   - Page 3 – Traumatic Medical Only Loss Severity Trend
   - Page 4 – Traumatic Indemnity Claim Frequency Trend
   - Page 5 – Traumatic Indemnity Claim Frequency Trend Net of Wage Trend
   - Page 6 – Traumatic Medical excluding Medical Only Loss Severity Trend

   Each of these six (6) pages is provided for three (3) different scenarios as follows:
   - Summary – these pages show the data under consideration for each parameter, the result for each parameter from Exhibit V-K which averages the 12 estimates that are considered, a graph of the data indicated and an algebraic expression of the line of best fit.

- Estimates 01-06 – these pages show the data under consideration for each parameter and the following six (6) estimates:
  - Estimates 01 & 02 are based on the ten (10) most recent Accident Years.
  - Estimates 03 & 04 are based on the nine (9) most recent Accident Years.
  - Estimates 05 & 06 are based on the eight (8) most recent Accident Years.
- Estimates 07-12 – these pages show the data under consideration for each parameter and the following six (6) estimates:
  - Estimates 07 & 08 are based on the nine (9) most recent Accident Years before the most recent Accident Year.
  - Estimates 09 & 10 are based on the eight (8) most recent Accident Years before the most recent Accident Year.
  - Estimates 11 & 12 are based on the seven (7) most recent Accident Years before the most recent Accident Year.

The twelve (12) estimates utilize a geometric average, a regression analysis, a 3-year moving average and the various experience periods listed above. These estimates also utilize data with certain extreme values limited only when noted on each page.

J. Customarily, on these pages, individual Traumatic claims that exceed $1,250,000 after loss development are proportioned based on reported medical and indemnity. The CMCRB believes that limiting these claims helps to stabilize the trend indications.

However, for the April 1, 2023 Filing, there weren't any claims that exceeded the noted threshold, so the application of these pages is reserved for future use.

K. Exhibit V-K summarizes the twelve (12) estimates of each trend parameter under consideration from the various pages of Exhibit V-I. This exhibit also displays the selected Claim Frequency, Indemnity Severity and Medical Severity Trend Factors. Additionally, on this exhibit, changes to the Composite Trend Factors are capped at +/- 3.0 percentage points from the factors used in the prior filing, when applicable.

In prior filings, the CMCRB generally selected trend estimates using averages of some or all of the Estimates 1-12, citing the estimates that were included and the rationale associated with these decisions. For example, for the April 1, 2018 Filing, the CMCRB selected trend estimates using the Average of Estimates 1-4 and 7-10, noting that the estimates that began with Accident Year 2009 involved exceptional variability (especially for Indemnity Severity).

For the April 1, 2019 through April 1, 2022 Filings, the CMCRB departed from this approach, noting that the prior approach did not provide reasonable results. For the April 1, 2023 Filing, the CMCRB continues this current approach and offers the following expanded discussion concerning the Traumatic trend factor selections displayed on Exhibit V-K.

The CMCRB notes that our database is very small and inherently volatile especially with respect to Traumatic loss trend estimation techniques. Oftentimes, the selection of the

years that are used to begin or end a loss trend estimation technique significantly changes the trend estimate that is produced. While this is not a new observation per se, the data in the subject filing continue to seem very sensitive to these considerations.

In calculating and selecting trend assumptions, the CMCRB considers several basic assumptions or observations that include, but are not limited to, the following:

- Claim Frequency Trend – The CMCRB notes that a modest negative claim frequency trend has existed in Pennsylvania for over 20 years and that this is evident in the CMCRB's data and in the PCRB's data. The CMCRB also understands that this phenomenon exists in W.C. data outside of Pennsylvania, but that this phenomenon might not be as consistent outside of Pennsylvania.
- Indemnity Severity Trend – The CMCRB believes that Indemnity Severity Trend is most influenced by wage inflation. However, other conditions or circumstances also influence Indemnity Claim Severity that are more difficult to quantify (e.g., mix of injury severities under consideration).
- Medical Severity Trend – The CMCRB believes that Medical Severity Trend is most influenced by medical cost and utilization inflation. However, like Indemnity Claim Severity, Medical Claim Severity is also influenced by other conditions or circumstances that are more difficult to quantify (e.g., mix of injury severities under consideration).
- Indemnity and Medical Severity Trend relationship – The CMCRB generally expects medical cost and utilization inflation to exceed wage inflation and that Indemnity Severity Trends will usually be slightly lower than Medical Severity Trends.
- Although the CMCRB believes that the reasoning of the assumptions listed above is sound and generally well accepted, the CMCRB also believes that actual data should relied upon to the extent that it is reliable and reasonable.

The CMCRB prepares a variety of trend estimates based on a review of metrics from actual data for the ten most recent Accident Years. The selected trend assumptions are then applied to the most recent five Accident Years. The new Accident Year is least affected by the selected trend assumptions, while the oldest Accident Year is most affected. See Exhibit V-F for the calculations that support this statement.

Essentially, each of the five most recent Accident Years produces an estimate of the Loss Costs (or the Claim Frequencies or Claim Severities) that are under consideration. Consequently, the CMCRB expects the results for the five most recent Accident Years to be randomly scattered around a horizontal straight line. Of course, with a limited database, actual results can and do vary from this expectation.

Traumatic Trend Factor Selections

- The CMCRB selected a Claim Frequency Trend of -1.50%. This selection results in 5-year and 9-year weighted average trended Claim Frequencies of 9.9 and 9.8 respectively which are just lower than the 3-year weighted average trended Claim Frequency of 10.1. This selection produces a good fit of the Claim Frequency data over the last ten years.

- The CMCRB selected an Indemnity Claim Severity Trend of 1.50%. This selection results in 5-year and 9-year averages that are modestly higher than the 3-year average. This selection produces a reasonably good fit of the Indemnity Claim Severity data over the last ten years especially when noting the variability in the estimates based on the starting and stopping years.

- The CMCRB selected a Medical Claim Severity Trend of 4.0%. This selection results in 9-year averages that are consistent though modestly higher than the 3-year averages. This selection produces a reasonably good fit of the Medical Claim Severity data over the last ten years. Like Indemnity Severity, there is significant variability in the estimates based on the starting and stopping years.

Observations about Loss Ratio Trends (or Composite Trends)

- Although the CMCRB prefers to separately review Claim Frequency and Claim Severity Trend estimates, the CMCRB notes that the Claim Frequency Trend times the Claim Severity Trend is equivalent to the Loss Ratio Trend.
- Therefore, the CMCRB's implied Indemnity Loss Ratio Trend is the product of 0.9850 (i.e., the selected -1.50% Claim Frequency Trend) and 1.0150 (i.e., the selected 1.50% Indemnity Severity Trend) which equals 1.000 (or 0.0%).
- Similarly, the CMCRB's implied Medical Loss Ratio Trend is the product of 0.9850 (i.e., the selected -1.50% Claim Frequency Trend) and 1.040 (i.e., the selected 4.0% Medical Severity Trend) which equals 1.024 (or 2.4%).

Exhibit VI – Traumatic Loss Development

The CMCRB notes that Act 44 of 1993 and Act 57 of 1996 significantly affected Traumatic Indemnity and Medical benefit levels and claim settlement practices (and consequently Traumatic Loss Development data reported to the CMCRB). The CMCRB's prior filings included calculations and adjustments to address these effects to its reported loss development data in the various pages of Exhibit VI. While the places for these calculations and adjustments are retained in this filing, the CMCRB notes that all of the years under consideration in these exhibits (i.e., 1997 through 2021) are expected to be fully reported on post-Act 44 and post-Act 57 levels and that the current filing does not adjust the reported losses for these law changes (i.e., all factors or adjustments are unity or zero accordingly).

A. Page 1 displays Reported Traumatic Indemnity Incurred Losses by Accident Year and by Report Level, Act 57 Indemnity Law Adjustment Factors and Reported Traumatic Indemnity Incurred Losses adjusted to Act 57 Law Level.

   Page 2 displays Reported Traumatic Indemnity Incurred Losses adjusted to Act 57 Law Level, Claim Settlement Level Additives and Reported Traumatic Indemnity Incurred Losses adjusted to Act 57 Law Level and Claim Settlement Level.

   Page 3 displays Reported Traumatic Indemnity Incurred Losses by Accident Year and by Report Level, the Sum of Act 57 Indemnity Law Adjustment Factors and Claim

Settlement Level Additives and Reported Traumatic Indemnity Incurred Losses adjusted to Act 57 Law Level and Claim Settlement Level.

Beginning with this filing, the Act 57 Law Adjustment Factors are all unity. All of the years at the report levels included in this filing are reported on a post-Act 57 Law level and no longer require adjustment.

Page 4 displays Reported Traumatic Indemnity Incurred Losses adjusted to Act 57 Law Level and Claim Settlement Level by Accident Year and by Report Level. It also shows the report-to-report Development factors, as well as the averaging and selection of report-to-report factors (i.e., the Average of Middle Four).

Pages 5a, 5b and 5c display the summary and derivation of the Traumatic Indemnity Claim Settlement Adjustment Factors.

When calculating loss development factors, the primary premise is that the loss development factors must be in direct relationship with the losses being developed. The CMCRB uses data for the five (5) most recent Accident Years when calculating indicated Traumatic Loss Costs by classification (see Exhibit V-B) and notes that this data (or these five (5) years) is all on a post-Act 57 Law and Claim Settlement level. For this filing, the historical Loss Development data is now also all consistently on this same level, so the adjustments identified above are no longer needed to restate the historical Loss Development data to a post-Act 57 Law and Claim Settlement level. (The CMCRB anticipates eliminating these pages in future filings.)

The CMCRB notes that Act 57 reduced Indemnity benefits in various ways. The more significant provisions of Act 57 involved changes to the AMA Guidelines, Social Security Offsets, Pension Offsets and Wage Level Offsets. The changes to Indemnity benefits are addressed by the Act 57 Indemnity Law Adjustment factors. The CMCRB also notes that Act 57 permitted and recommended the settlement of Traumatic claims. The changes in claim settlement practices are addressed by the Claim Settlement Level Additives (or adjustments).

The CMCRB notes that both sets of adjustments seem to be well known and accepted. Furthermore, these adjustments are no longer necessary since this data is reported directly on a post-Act 57 basis.

During 2017, the Pennsylvania Supreme Court made a decision in Protz v. WCAB that invalidated a portion of the Act 57 revisions. Subsequently, the Pennsylvania Legislature passed legislation that Governor Wolf signed on October 24, 2018, (Act 111 of 2018) to generally reinstate the provisions invalidated by this decision. The previously mentioned law and claim settlement adjustments used in the Exhibit VI series do not address the effect of this decision or this legislation. Refer to Exhibit V-F, the discussion concerning Exhibit V-F and Appendix B to this report for additional information concerning the treatment of the Protz Decision and Act 111 of 2018.

B. Page 1 displays Reported Traumatic Medical Incurred Losses by Accident Year and by Report Level, Act 44 Medical Law Adjustment Factors and Reported Traumatic Medical Incurred Losses adjusted to Act 44 Law Level.

Page 2 displays Act 44 Medical Law Adjustment Factors, Claim Settlement Adjustment Additions and the Sum of these adjustments.

Page 3 displays Reported Traumatic Medical Incurred Losses by Accident Year and by Report Level, the Sum of Act 44 Medical Law Adjustment Factors and Claim Settlement Adjustment Additions and Reported Traumatic Medical Incurred Losses adjusted to Act 44 Law and Claim Settlement Levels.

Beginning with the April 1, 2021 Filing, the Act 44 Medical Law Adjustment Factors are all unity. All of the years at the report levels included in this filing are also reported on a post-Act 44 Law level and no longer require adjustment.

Page 4 displays Reported Traumatic Medical Incurred Losses adjusted to Act 44 Law and Claim Settlement Levels by Accident Year and by Report Level. It also shows the report-to-report Development factors, as well as the averaging and selection of report-to-report factors (i.e., the Average of Middle Four).

Page 5 provides the derivation of the Medical Claim Settlement Adjustment Factors which are used on Page 2.

When calculating loss development factors, the primary premise is that the loss development factors must be in direct relationship with the losses being developed. The CMCRB uses data for the five (5) most recent Accident Years when calculating indicated Traumatic Loss Costs by classification (see Exhibit V-B) and notes that this data (or these five (5) years) is all on a post-Act 44 Law and Claim Settlement level. For this filing, the historical Loss Development data is now also all consistently on this same level, so the adjustments identified above are no longer needed to restate the historical Loss Development data to a post-Act 44 Law and Claim Settlement level. (The CMCRB anticipates eliminating these pages in future filings.)

Similar to a comment under the Indemnity section above, the CMCRB observes that both sets of adjustments seem to be well known and accepted. Furthermore, these adjustments are no longer necessary since this data is reported directly on a post-Act 44 basis.

During 2014, the Pennsylvania legislature passed House Bill 1846. The previously mentioned law and claim settlement adjustments used in the Exhibit VI series do not address the effect of this legislation. Refer to Exhibit V-F, the discussion concerning Exhibit V-F and Appendix A to this report for additional information concerning the treatment of HB 1846 of 2014.

C. Page 1 displays Reported Traumatic Indemnity Incurred Claims by Accident Year and by Report Level. It also shows the report-to-report Claim Count Development factors, the

averaging and selection of report-to-report factors, the Cumulative Claim Count Development factors and the estimated Ultimate Claim Counts for each Accident Year.

Page 2 displays Reported Traumatic Medical Only Incurred Claims by Accident Year and by Report Level. Otherwise, the format follows the format of Page 1.

Page 3 displays Reported Traumatic Medical Only Incurred Losses by Accident Year and by Report Level. The format is similar to Pages 1 and 2, except that only ten (10) report levels are displayed.

D. Page 1 presents the Summary of Adjustments to Traumatic Medical Loss Development Factors related to Act 44. As noted previously in this Report, all of the factors for all of the years and report levels in this filing are now unity since the data used in this filing is considered to be reported on a post-Act 44 levels. Pages 2 through 15 are reserved for future use.

E. This page presents the Traumatic Indemnity and Medical Paid Loss information by Accident Year and Report Level arranged in traditional loss development format.

Exhibit VII – SOD and FOD Excess Severity and Frequency

A. These five (5) pages show the Average SOD and FOD Excess Severities prior to adjustments for Act 57, adjustments for Act 57 and after adjustments for Act 57. One page is provided for each of the Four Major Classes and for the Other Classes combined.

These pages display severity values (i.e., Average Amounts and/or Totals) that are summaries of the details found in Exhibit VII-E, Exhibit IX-A and Exhibit VII-G. These pages average the Base Scenario with the All Permanent Partial Scenario using weights of 100% and 0% respectively, since no claims have been reported as Permanent Partial.

Sections “a” (After AMA Guidelines), “b” (Social Security Offset/Onset) and “c” (Pension Offset/Onset) are addressed in the discussion for Exhibit IX-A. See Exhibit IX-A for a discussion about these amounts.

Section “d” (Combined Social Security and Pension Offsets/Onsets) recognizes the condition that the full amount of the pension is available as an Offset to the SOD benefit with the constraint that the SOD benefit minus the Social Security and Private Pension Offsets must not be less than zero.

Section “e” (Wage Level Decrease/Increase) is no longer used.

Section “f” (Combined Social Security, Pension and Wage Level) presents percentages that are equivalent to the percentages in Section “d” since Section “e” is no longer used.

Section “g” (Combined Dollar Effect) summarizes the effect in dollars of the various Offsets and Onsets calculated on these pages.

B-1. Exhibit VII-B-1-A displays the derivation of the SOD Claim Frequencies by Classification on a Developed Payroll basis. This process begins with the Indicated Claim Frequencies on a Miner Year basis developed in Exhibit VII-B-2. The Indicated Claim Frequencies are credibility weighted with the currently Approved SOD Claim Frequencies trended (although the trend is 0%) to the current valuation level developed in Exhibit VII-B-1-B. After the application of credibility, the Credibility Weighted Indicated SOD Claim Frequencies are converted to a Developed Payroll basis because the CMCRB publishes Loss Costs on a Payroll basis.

The Total of the Expected Awarded Claims for All Classes is assigned as the full credibility standard. The credibility factor for each classification is obtained as the ratio of the Expected Awarded Claims of a given class to the full credibility standard raised to the ½ power.

Exhibit VII-B-1-B displays the conversions of the Approved SOD Claim Frequencies from the prior filing that are on a Payroll basis to a Miner Year basis.

Both of these pages provide various totals and subtotals that are derived using Developed Payrolls or Estimated Miner Years as weights as indicated in the Source notes. The totals and subtotals may differ from prior filings as the weights can and do change.

B-2. The objective of these pages is to compare estimates of the Expected Ultimate Awarded Claims to a suitable exposure base. These pages display data on the number of SOD Claims that have been Reported as Awarded, Denied or Pending by Classification and with Subtotals and a Grand Total. Additionally, the IBNR Claim estimates from Exhibit VII-C are also displayed. IBNR and Pending claims are multiplied by an Award Ratio, since all reported claims do not result in payment awards.

For the exposure base, Developed Payrolls are converted to Estimated Miner Years. Subsequently, Claim Frequencies are calculated on a Miner Year (per 100 Miner Years) basis which began with the filing for April 1, 2011.

Converting Developed Payrolls to Estimated Miner Years, the (Wage) Adjustment Factors are needed since our data shows that workers in certain Bituminous Classes (i.e., Underground and Prep Plant) were paid at a higher rate than workers in other classes. See Exhibit X-G for this analysis. The use of a single factor for all classes would overestimate the number of Miner Years in the cited classes and underestimate the number of Miner Years in other classes had a single factor been used to adjust the SAWW in the conversion process.

Given the limited number of Denied Claims in this data, each Class was given the Award Ratio based on the Grand Total data.

The totals and subtotals that are displayed are additions of the Classes listed and may slightly differ from the results derived using the formula in the Source notes.

Federal Excess Frequencies are also calculated on these pages as the products of the State Frequencies times a Federal Excess Award Ratio of 40%. This ratio has been used since the April 1, 2004 filing (and possibly earlier) and remains comparable to the ratio of FOD Excess Awarded and Pending Claims to SOD Awarded and Pending Claims.

C. Pages 1 through 4 (i.e., Exhibit VII-C-1 through VII-C-4) display SOD Reported Claims for the Four (4) Major Classifications. Page 5 (i.e., Exhibit VII-C-5) displays SOD Reported Claims for the six (6) Other Classifications combined. Page 6 (i.e., Exhibit VII-C-6) shows SOD Reported Claims for All Classifications combined.

   These pages show the procedure used to calculate Incurred But Not Reported (IBNR) Claims. Incremental Changes in Reported Claims are calculated and then converted to a percentage of Developed Payroll (in $Millions). The actual experience is averaged and then smoothed by ordering the actual data from largest to smallest.

   For the six (6) Other Classifications, the All Classifications estimates were used to arrive at the base IBNR. Pages 7 and 8 (i.e., Exhibit VII-C-7 and VII-C-8) show the IBNR calculations for the Other Classifications. Adjustment Factors were used for each of the Other Classifications to lower the expected probability of having a SOD claim since the Other Classifications have produced fewer SOD claims and lower SOD claim frequencies than the All Classifications experience with one exception. The Adjustment Factor for Anthracite Prep Plant was maintained at unity (i.e., no adjustment) because this Class has produced more claims and higher claim frequencies than the rest of the Other Classifications.

D. Omitted – Reserved for Future Use

E. This exhibit consists of six (6) subsections (i.e., a, b, c, d, e and f). Each subsection consists of five (5) pages (one page for each of the Four Major Classes and one page for the Other Classes combined). The subsections show the following severities or severity adjustments:
   a – SOD – Before Act 57
   b – SOD – Social Security Offset
   c – SOD – Private Pension Offset
   d – Federal Excess OD – Before Offsets
   e – Federal Excess OD – After Social Security Offset
   f – Federal Excess OD – After Social Security and Private Pension Offsets

   These pages display the individual claim detail from Exhibit IX-A by status (i.e., Awarded-Permanent, Awarded-Commuted/Compromised, and Pending). Since Pending claims could be resolved by Commutation or Compromise, the probability of Commutation/Compromise is assigned to the Pending claims based on the mix of Commuted/Compromised claims in the Awarded claims. The severity for the expected Commuted/ Compromised claims within the Pending claims is then adjusted by the difference between the Average Awarded Commuted/Compromised Severity and the

Average Awarded Permanent Severity. This adjustment results in a lower SOD cost and a higher FOD Excess cost.

F. Omitted – Reserved for Future Use

G. Page 1 displays the Smoothed Average Weekly Wages for the Four Major Classes from Exhibit VII-H and the process to convert these Wages to a post-Act 57 level, where needed. The post-Act 57 Wages are used in the Occupational Disease Severity Model.

The top of Page 2 shows the calculation of the Act 57 Wage Level Offset or the Wage Level decrease associated with Act 57. The Wage Level Changes included in Act 57 are expected to reduce State benefit levels and consequently increase Federal Excess benefit levels. The wage distribution is from the 120 State OD claims provided by CMCRB for the CM-1-1998 filing, with judgmental trending to estimate the distribution of wages among miners during the projected effective period of the loss costs. The average benefit levels before and after the changes were developed by PCRB.

The bottom of Page 2 shows the development of the 12.5% Pension Offset factor. This adjustment is made because not all miners are eligible for a private pension and not all private pension payments are subject to offset.

H. These pages show the development of the Projected Average SOD Wage Level for each of the Four Major Classes. For each class, an average ratio of the Reported (or Actual) SOD Average Wage to the Statewide Average Weekly Wage is calculated. The product of the ratio for each class and the projected Statewide Average Weekly Wage results in a Projected Average SOD Wage Level for each class. The Wage History for 1990 through 2021 (the most recent year that data is available) is then smoothed for use in the indexation process in Exhibit VII-G.

I. Omitted – Reserved for Future Use

J. Page 1 shows the historical Social Security Cost of Living Adjustments (COLA), the 3-year, 5-year, 10-year and All-year averages of these amounts and the Selected Annual Change. Page 2 shows the projection of the Monthly Wage Amounts Bend Points and the Annual Social Security Wage Base used to calculate the Primary Insurance Amount (PIA) or Social Security benefit. These amounts are projected to one (1) year past the proposed effective date, which is the average accident date of the proposed loss costs. Page 3 provides examples as to how the bend points and maximum are used.

K. Omitted – Reserved for Future Use.

L. These pages model changes to Claiming activity (i.e., Claim Awarding and Reopening) for FOD Excess Claims that are related to Federal Black Lung Regulation revisions that were issued on January 19, 2001. Generally, the reasoning for these calculations and assumptions follows the reasoning for Exhibit VIII-F, which is presented later in the

commentary for Exhibit VIII-F. The differences in the calculations and assumptions between Exhibit VII-L and Exhibit VIII-F are discussed as follows.

Exhibit VII-L uses data for the most recent twenty (20) years whereas Exhibit VIII-F only uses data for the most recent ten (10) years. Previously, the CMCRB asserted that different assumptions should be applied to the pre-2001 years and the post-2000 years. For the April 1, 2023 Filing, all of the years in this exhibit are post-2000, so the following assumptions apply to all of the years on this exhibit:

- Pending Awarded Ratios – an Award Ratio of 30% applies.
- Denied Reopened Ratios – a Reopened Ratio of 5% applies.
- Denied Awarded – an Award Ratio of 100% applies.
- IBNR Award Ratios – the IBNR Award Ratios that are shown on each page are the ratios of the Ultimate Awarded Claims (Col. 8) and the Reported Claims (Col. 1) from the Grand Total data on page 13.
- All of these assumptions have been maintained since the April 1, 2009 filing.

The IBNR amounts in Column 10 are 40% of the SOD IBNR Amounts from Exhibit VII-C. The reasoning for and history of this assumption was provided under Exhibit VII-B-2 above.

Exhibit VIII – FOD Basic Severity and Frequency

A. This page provides a summary of the individual claim details that are shown in Exhibit IX-B for the Federal Basic Severities separately for each of the Four Major Classes, the Four Major Classes Combined, the Other Classes Combined and All Classes Combined.

B-1. Omitted – Reserved for Future Use.

B-2. The objective of these pages is to compare estimates of the Expected Ultimate Awarded Claims to a suitable exposure base. These pages display data on the number of FOD Basic Claims that have been Reported as Awarded, Denied or Pending by Classification and with Subtotals and a Grand Total. Additionally, the IBNR Claim estimates from Exhibit VIII-C are also displayed. IBNR and Pending claims are multiplied by an Award Ratio, since all reported claims do not result in payment awards.

For the exposure base, Developed Payrolls are converted to Estimated Miner Years. Subsequently, Claim Frequencies are calculated on a Miner Year (per 100 Miner Years) basis which began with the filing for April 1, 2011.

Converting Developed Payrolls to Estimated Miner Years, the (Wage) Adjustment Factors are needed since our data shows that workers in certain Bituminous Classes (i.e., Underground and Prep Plant) were paid at a higher rate than workers in other classes. See Exhibit X-G for this analysis. The use of a single factor for all classes would overestimate the number of Miner Years in the cited classes and underestimate the number of Miner Years in other classes had a single factor been used to adjust the SAWW in the conversion process.

Each of the Four Major Classes is given its own Award Ratio. The Other Classes were given the Award Ratio based on the Grand Total data.

The totals and subtotals that are displayed are additions of the Classes listed and may slightly differ from the results derived using the formula in the Source notes.

C. Pages 1 through 4 (i.e., Exhibit VIII-C-1 through VIII-C-4) display FOD Basic Reported Claims for the Four (4) Major Classifications. Page 5 (i.e., Exhibit VIII-C-5) displays FOD Basic Reported Claims for the six (6) Other Classifications combined. Page 6 (i.e., Exhibit VIII-C-6) shows FOD Basic Reported Claims for All Classifications combined. (FOD Excess Reported Claims are addressed in Exhibits VII-B-2 and VII-L.)

   These pages show the procedure used to calculate Incurred But Not Reported (IBNR) Claims. Incremental Changes in Reported Claims are calculated and then converted to a percentage of Developed Payroll (in $Millions). The actual experience is averaged and then smoothed by ordering the actual data from largest to smallest.

   For the six (6) Other Classifications, the All Classifications estimates were used to arrive at the base IBNR. Pages 7 and 8 (i.e., Exhibit VIII-C-7 and VIII-C-8) show the IBNR calculations for the Other Classifications. Adjustment Factors were used for each of the Other Classifications to lower the expected probability of having a FOD Basic claim since the Other Classifications have produced fewer FOD Basic claims and lower FOD Basic claim frequencies than the All Classifications experience. The adjustment factors remain the same as those used in the April 1, 2022 Filing.

D. This page displays the Table of the Monthly Federal Black Lung Benefits from 1981 to the present. It also shows the changes in benefits from year to year and the selected change rates that were used to project FOD losses to the average accident date anticipated for the proposed filing.

E. Omitted – Reserved for Future Use.

F. These pages model changes to Claiming activity (i.e., Claim Awarding and Reopening) for Federal Basic OD Claims that are related to Federal Black Lung Regulation revisions that were issued on January 19, 2001. These revisions changed the procedures and criteria for obtaining Federal Black Lung Benefits resulting in the natural expectation that the frequency of Federal Black Lung claims would increase. Some of the regulatory changes involved limiting evidence and time to contest, broadening the definition of Black Lung disease, weakening the criteria for determining disability, offering new claim status (as opposed to subsequent and reopened status) to claims, and changing attorney and witness fees.

   These changes were expected to increase claim frequencies in the post-2000 years to a greater level than had been previously observed and to increase the claim frequencies in the pre-2001 years as well. Most parties agreed that frequencies, severities and costs

generally would increase under these revisions. Even the U.S. Department of Labor conceded that costs would rise between 15% and 60%.

For the post-2000 years, the CMCRB believes that Pending claims will be awarded at a higher rate than previously observed, so Pending claims are assumed to have an Award Ratio of 30%. Similarly, the CMCRB also believes that some Denied claims will be re-opened and awarded under the more liberal standards of proof, so 5% of Denied claims are assumed to be Reopened with a subsequent Award Ratio of 100%. These assumptions were first included in the April 1, 2009 filing. The derivation and history of these parameters has been discussed in prior filings, so a brief discussion is provided below.

For the years 1989 to 1999 as of August 2000, the following claim statuses were noted: 122 Awarded, 121 Pending, 447 Denied and 690 Reported.

The claim statuses for 121 Pending claims were updated as of August 2007. The following updated claim statuses were noted: 22 Awarded, 21 Pending, 76 Denied and 2 "Other".

This data implies an Award Ratio of 22.45% which is equal to (22) divided by (22+76). This ratio serves as an estimate of the percentage of Pending claims that will be ultimately Awarded.

The claim statuses for the 447 Denied claims were also updated as of August 2007. The following updated claim statuses were noted: 6 Awarded, 12 Pending and 429 Denied.

This data implies an Award Ratio for Denied Claims of about 2% which is equal to (8.7) divided by (447). The numerator of 8.7 is equal to (6) plus (12) x (22.45%). This ratio serves as an estimate of the percentage of Denied claims that will be ultimately Awarded.

The IBNR Award Ratio that is shown on each page is the ratio of the Total Ultimate Awarded Claims (Col. 8) and the Total Reported Claims (Col. 1) from the Grand Total data on page 13.

Exhibit IX – Individual Claim Detail for SOD and FOD Claim Severities

A. These pages display the Individual Claim Detail for State and FOD Excess claim severities separately for the Four Major Classes and for the Other Classes combined. The Individual Claim Details come from the CMCRB's Occupational Disease Severity Model ("Model"). Benefit amounts are accumulated over the lifetime of the miner (and spouse, if applicable) with mortality factors included in the calculation. For SOD and FOD Excess, this Model evaluates claims both on a Permanent Total basis and on a Permanent Partial basis.

To estimate the value of each claim, each claim is assumed to occur during the midpoint of the proposed filing period. This assumption requires that the historical wage amount recorded for each claim be adjusted to the midpoint of the proposed filing period. Details of these adjustments are presented in Exhibit VII-H.

These pages first display claim values (or projected benefits) for a "Base" scenario (i.e., before the impact of Act 57) for SOD (including Medical) and FOD Excess. These values are associated with the Awarded and Pending claims reported to the CMCRB for exposure years 1990 through 2021. For the Base Scenario, all claims are calculated with lifetime SOD Indemnity (Benefit) payments (i.e., Permanent Total basis) except for the Commuted or Compromised claims.

These pages also display claim values for an "All Permanent Partial" scenario. Values for the All Permanent Partial scenario are calculated because the implementation of American Medical Association (AMA) Guidelines to evaluate the percentage of disability was expected to reduce the portion of claims evaluated as Permanent Total. For this scenario, all claims other than Commuted, Compromised, or Widow Only were calculated with only 630 weeks of SOD Indemnity (Benefit) payments.

The 630-week duration was calculated as follows:

The AMA Guidelines do not apply prior to the expiration of an initial 104-week benefit period. With timely filing for review, timely occurrence of the hearing and timely issuance of a decision, a floor of 604 weeks exists (104 + 500). The actual period will be longer than this 604-week floor. It is estimated that the anticipated average benefit period for claims reviewed under the AMA Guidelines will exceed the floor by one-half of a year, or 26 weeks. Therefore, the All Permanent Partial Scenario was based upon 630 weeks (104 +26 +500).

These pages display Social Security Offsets/Onsets. These Offsets/Onsets are based on the Social Security Formulas – Historic Primary Insurance Amounts (PIA) and Projections in Exhibit VII-J. The decrease (or Offset) to SOD benefits is 50% of the miner's Social Security retirement benefit, limited to the amount of the SOD benefit. This adjustment results in a decrease to SOD Indemnity benefits and an increase to FOD Excess Indemnity benefits.

These pages also display Pension Offsets/Onsets. These Offsets/Onsets are based on the Pension Offset percentage calculated in Exhibit VII-G Page 2. The full amount of the pension is available as an Offset to the SOD benefit, with the constraint that the SOD benefit minus the Social Security and Private Pension Offsets must not be less than zero. This adjustment results in a decrease to SOD Indemnity benefits and an increase to FOD Excess Indemnity benefits.

Four (4) provisions in Act 57 of 1996 were expected to reduce SOD benefits (and Traumatic benefits). These provisions involved the:

1. AMA Guidelines

2. Social Security Offsets/Onsets
3. Pension Offsets/Onsets and
4. Wage Level Offsets/Onsets.

Consequently, the CMCRB has annually submitted estimates for SOD Loss Costs that reflect the anticipated savings from these provisions. Correspondingly, but not in the same proportions, the CMCRB has submitted estimates for FOD Excess Loss Costs that reflect the anticipated additional costs from these provisions that would be shifted to Federal secondary claims since the cross-over point for Federal benefits would occur quicker or earlier than under the old law.

This filing continues the process of phasing out some of the SOD Offsets and some of the FOD Excess Onsets.

- AMA Guidelines – While the CMCRB continues to calculate both a Permanent Total (or Base) scenario and an All Permanent Partial scenario, the Base scenario now receives 100% of the weight in the averaging of these two values. The weight given to the All Permanent Partial scenario has been reduced to zero since no such claims have emerged.

- Social Security and Pension Offsets/Onsets – The CMCRB continues to use the original assumptions for these provisions due to the absence of actual claim data in this regard.

- Wage Level Offsets/Onsets – The CMCRB annually updates the offset/onset amount in Exhibit VII-G Page 1. The SOD Offset percentage decreased from 1.1101% to 1.0754%.

B. These pages display the Individual Claim Detail for Federal Basic OD claim severities separately for the Four Major Classes and for the Other Classes. The Individual Claim Details come from the CMCRB's Occupational Disease Severity Model ("Model"). Benefit amounts are accumulated over the lifetime of the miner (and spouse, if applicable) with mortality factors included in the calculation.

These pages (Exhibit IX-A and IX-B) provide a source for the claim severity figures in Exhibits VII and VIII. No changes, except updates, were made in any of the formula used to run the Model. For example, the input parameters used to calculate the Medical Severities on these pages were updated to reflect inflation considerations.

Exhibit X – Payrolls – Developments and Adjustments

A. Developed and Adjusted Payrolls are displayed by year, by coverage and by classification. Payrolls occasionally differ by coverage for the reasons addressed in Exhibit X-C. Page 1 provides Traumatic Payrolls; Page 2 provides SOD Payrolls; and Page 3 provides FOD Payrolls.

B. Developed Traumatic Payrolls are extended at current loss cost level to calculate on-level Loss Cost Premium by year for eleven (11) years and by classification on Page 1. Rating values from the CMCRB's latest loss cost filing are shown on Pages 2 and 3.

C. Developed Traumatic Payrolls are first adjusted to obtain Developed SOD Payroll by showing the amount of Anthracite Underground payroll that is assigned to the Bituminous Underground classification related to the UAE decision on Pages 4 and 5. Otherwise, Developed Traumatic Payrolls are equal to Developed SOD Payrolls.

   Then, Developed SOD Payrolls are adjusted to obtain Developed FOD Payroll on Pages 1 through 3. The Federal Exempt Reported Payroll is the Traumatic Payroll for insureds that purchase State Act coverage (Traumatic and SOD), but that select to self-insure for FOD coverage. Also, Developed SOD Payrolls are further adjusted to obtain Developed FOD Payrolls for Executive Officers, Sole proprietors and Partners of Partnerships that elected not to purchase State Act coverage. These individuals can elect not to purchase State Act coverage, but cannot elect not to purchase FOD coverage.

D. Reported Payrolls by classification are projected to Developed Payrolls using the Development Factors calculated in Exhibit X-E. Developed Payrolls are the CMCRB's estimated ultimate or final payroll level for each Accident Year.

E. Payroll Development Factors are calculated first from report-to-report level and then from report-to-ultimate level.

F. SOD and FOD Claim Frequencies from the CMCRB's latest loss cost filing are shown.

G. Reported Average Weekly Wages for Coal Classes are indexed to the Statewide Average Weekly Wage (SAWW). These indexes are used in the calculation of SOD and FOD Claim Frequencies.

Exhibit XI – Special Assessments

In Section A, the fiscal year budget for the Office of Small Business Advocate is compared to the insurance carrier paid losses to produce the Small Business Advocate Assessment Factor or Ratio. This amount is loaded into the CMCRB's Manual Loss Costs.

In Section B, the fiscal year budgets for the listed Funds are compared to the Employer Assessment Premium Base to produce the Employer Assessment Factor. This amount is not loaded into the CMCRB's Manual Loss Costs, but is treated as a separate calculation in the determination of policy premium. This amount is the estimated provision for Pennsylvania's Administrative Fund, Subsequent Injury Fund, Supersedeas Fund and Uninsured Employer Guaranty Fund.

Exhibit XII – Catastrophe Provision

The CMCRB caps or limits losses for individual Traumatic claims at $1,250,000 in the Traumatic Loss Cost Indications by classification in Exhibit V-B which uses data for the five (5) most recent Accident Years. In this exhibit, the CMCRB calculates provisions for these large losses using data for the twenty (20) most recent Accident Years. The CMCRB expresses these considerations as loss costs which provide for potential future catastrophic loss events. These amounts, which vary by classification, are loaded into the CMCRB's Manual Loss Costs.

A. The overall catastrophe provision (or Loss Costs) is distributed among the ten (10) Traumatic classifications based on the Developed Payrolls for the most recent Accident Year and the noted Hazard Weights.

B. The Number of Excess Claims and Excess Loss Dollars in excess of $1,250,000 are summarized by Accident Year. The current Accident Year Developed Payroll is compared to the Average Catastrophe Excess Loss over the twenty (20) most recent Accident Years to develop the Catastrophe Loss Cost.

C. Information for the individual Traumatic losses that exceed the $1,250,000 threshold is shown including the trend factor used to bring losses to the current loss level. Beginning with the April 1, 2018 filing, all losses in the twenty (20) most recent Accident Years are reported on a post-Act 44 basis and do not require an Act 44 adjustment. The Statewide Average Weekly Wage Index is used as the Trend factor and is applied to both Indemnity and Medical Losses. The use of this index seems appropriate since Indemnity losses are a direct function of wages and Act 44 restricts changes in Medical costs to the change in the Statewide Average Weekly Wage.

D. Trend Factors (or factors that are used to bring historical Indemnity and Medical losses to current loss level) for Indemnity and Medical losses are calculated based on the Statewide Average Weekly Wage (SAWW) that is published for Pennsylvania. The CMCRB projects the SAWW to the average accident date associated with the requested effective date for this filing based on the review of the yearly changes that are shown.

E. The Number of Excess Claims and Excess Loss Dollars in excess of $1,250,000 are summarized by classification (or Class Code).

Exhibit XIII – Traumatic Experience Rating Plan

The CMCRB proposes to maintain the major features of the Traumatic Experience Rating Plan and to update the associated plan parameters. The major features are:

- The primary limiting value for basic ratable losses remains at $50,000 per occurrence.
- The secondary limiting value for excess ratable losses remains at $150,000 per occurrence.
- The eligibility requirement of at least $300,000 in modified Traumatic payroll during the three (3) year experience is maintained.
- The shape of the Credibility Table is also unchanged.

A. Page 1 shows the derivation of the Expected Loss Costs (or Values) based on the Unloaded Loss Costs and the Split of Total Losses by Layer. The proposed total limits loss costs were unloaded for loss-based assessments, the Small Business Advocate, Merit Rating Off-Balance, Safety Committee Off-Balance, Catastrophe Loading, loss development and trend to calculate the expected losses by layer. These unloaded, de-trended, undeveloped loss costs were then divided into layers based on the six-year average of actual losses by layer at the same maturity (report) level.

   Page 2 shows the calculations for the weighted loss development and loss trend factors. These factors are used on page 1.

   Page 3 shows the basic and ratable excess credibility amounts by size of risk (i.e., modified 3-year payroll) based on the proposed overall Unloaded Loss Cost. The primary layer table tracks the shape of the PCRB table converted from expected losses to Payroll using the proposed overall Unloaded Loss Cost underlying this filing. The table for the excess ratable layer was also updated based on the proposed overall Unloaded Loss Cost underlying this filing.

B. These pages provide comparisons of the current Experience Mods (as calculated and released by the CMCRB with last year's filing) to the proposed Experience Mods, by file number. In total, there are few new experience-rated accounts. Some accounts which were experience rated last year were not eligible this year. The Experience Rating Plan's Off-Balance factor was calculated to be 1.0081. Each indicated mod was adjusted by this off-balance factor so that the Plan is revenue neutral.

C. The CMCRB caps indicated Experience Mod increases and decreases at 0.35. This page shows files that are affected by this capping.

   Additionally, the CMCRB plans to continue the capping of Experience Mods for small accounts (which is part of the currently approved Experience Rating Plan) as follows:

Less than $499,999 in payroll	max mod 1.20
$500,000 to $749,999 in payroll	max mod 1.30
$750,000 to $999,999 in payroll	max mod 1.40

Exhibit XIV – Merit Rating and Safety Committee Credit Off-Balance Calculations

A. Page 1 shows the calculation of the Merit Rating Plan Off-Balance Factor, which is equal to the ratio of proposed Unloaded Loss Cost Premium to the proposed Unloaded Loss Cost Premium after Merit Rating Credits and Surcharges. Page 2 shows Developed Payroll for the most recent Accident Year in total and separately for Experience Rated, Merit Rated and Manual Rates risks. For Merit Rated risks, the Payroll is also shown separately for Merit Credit and Merit Surcharged risks.

B. This page shows the calculation of the Safety Committee Credit Off-Balance Factor. This factor is equal to the ratio of proposed Unloaded Loss Cost Premium to proposed Unloaded Loss Cost Premium after Safety Committee credits.

Disclosures

The CMCRB offers the following disclosures (i.e., potential constraints or limitations) concerning the conclusions in this report specifically related to potential risk and/or uncertainty. The Proposed Loss Costs do not include any provision for the risk and/or uncertainty that may be inherent in these reserve estimates or in these loss cost projections. While the CMCRB understands that the applicable Statements of Principles promulgated by the Casualty Actuarial Society advocate for a provision for uncertainty, the CMCRB believes that its approach is acceptable and reasonable, because individual carriers can decide whether or not to include a provision for uncertainty in the determination of their loss cost multipliers.

Although this report complies with applicable Actuarial Standards of Practice and Statements of Principles, users of this report should be aware that the projections in this report involve estimates that are inherently uncertain. This uncertainty stems from a dependence on the amount of future claims payments and on facts and circumstances that are unknown at this time. Some of these unknown facts and circumstances may involve, but may not necessarily be limited to, the following:

- Changes in claim reserving practices or settlement practices,
- Changes in the legal, regulatory, economic or social environments,
- Statistical variation from the projected expected values – especially given the fairly modest size of the CMCRB's database and
- Future emergence of new classes of losses or types of losses that are not sufficiently represented in the historical database.

The CMCRB believes that one potential source of instability in Traumatic Claim Frequencies (and possibly Severities) that deserves specific mention involves an actual or perceived change in the coal mining work force demographics. The CMCRB has heard reports from member companies that a shift in the Pennsylvania coal mining work force began during 2016 and continued into 2021 where older, more experienced miners were replaced by younger, less experienced miners. The CMCRB has also read reports (e.g., see MSHA's News Release posted June 6, 2017) about this same shift and the potential impact on losses related to it. While the CMCRB does not have access to data to corroborate this change or estimate its effect, the CMCRB understands that MSHA's opinion is that less experienced miners – both at a mine and at a specific occupation – suffer injuries at a higher rate than more experienced miners. The CMCRB has not directly or indirectly taken this reported demographic shift or its effect into consideration in the subject filing. However, the CMCRB believes that this phenomenon potentially adds to the uncertainty associated with the subject filing, especially concerning the lack of information that is available to predict when the demographic shift will stop or achieve a new demographic equilibrium.

The CMCRB believes that another potential source of instability involves the influx of new and large entities into the CMCRB's database. On Exhibit X-A, the influx of these new entities is associated with the significant changes in payroll as follows:

- Traumatic and SOD payroll increased by about $123 million or 41% from 2013 to 2014. However, FOD payroll increased by about $28 million or 10% from 2013 to 2014.

- Traumatic and SOD payroll decreased by about $74 million or 17% from 2014 to 2015. FOD payroll decreased by about $60 million or 19% from 2014 to 2015.
- Traumatic and SOD payroll decreased by about $96 million or 27% from 2015 to 2016. FOD payroll decreased by about $44 million or 17% from 2015 to 2016.
- The entities that produced the large Traumatic and SOD increases from 2013 to 2014 remained self-insured for FOD exposures through the first half of 2016, but began insuring their FOD exposures at that time.
- For 2017, Traumatic and SOD payroll increased by about $35 million or 14%. FOD payroll increased by about $68 million or 31%. However, for 2017, Traumatic and SOD payroll is once again almost the same as FOD payroll.
- For 2018 and 2019, payroll increased more modestly by 2-6% with Traumatic and SOD payrolls almost the same as FOD payrolls.

The CMCRB wants to acknowledge that the data for this filing spans into a period of time generally understood to include the presence of the coronavirus (SARS Cov-2 and/or COVID-19) in Pennsylvania. At this time, the CMCRB believes that some of the payroll change from 2019 to 2020 may be associated with work stoppages and/or slowdowns related to the coronavirus, but that change also may be attributed to lower demand for coal during 2020. The CMCRB is not aware of any specific impacts to the losses (i.e., specific claims) used in this filing related to the coronavirus. Furthermore, the CMCRB has not included any considerations and/or loads related to the coronavirus and/or potential similar future events in this filing.

The CMCRB believes that there is also potential uncertainty related to some indirect COVID-19 phenomena. These phenomena may include, but not be limited to, actual or perceived increased unemployment rates and financial stress and decreased access to medical care and safety and loss control visits to name just a few. Again, the CMCRB has not included any considerations and/or loads related to these potential concerns in this filing.

Additionally, the CMCRB believes that the conclusions in this report are consistent with the combined experience of all carriers in the CMCRB's database. However, the CMCRB acknowledges that the experience of the CMCRB's individual members companies may be different (or may be perceived to be different) from the aggregate experience of the CMCRB's total membership.

Please direct any questions concerning this report to:

Charles A. ("Chuck") Romberger, ACAS, MAAA, CPCU, ARM
Attn: Executive Director – Coal Mine Compensation Rating Bureau of Pennsylvania
300 North Second Street – Suite 501
Harrisburg, PA 17101
Phone: 717-238-5020
Email: cromberger.cmcrb@verizon.net

Actuarial Report – Appendix A
Consideration of House Bill 1846 of 2014 (HB 1846)
Regarding the CMCRB's April 1, 2023 Loss Cost Filing

The CMCRB notes that this version of this Appendix is different from prior versions and that prior versions of this Appendix continue to be available on the CMCRB's website for reference if needed. The CMCRB explains the reason for and nature of these changes below.

To begin, the CMCRB notes that HB 1846 became law in 2014. Subsequently, the CMCRB utilized this Appendix to explain and demonstrate the derivation of adjustment factors that were used to adjust reported losses to reflect the savings resulting from HB 1846 (or used to adjust reported losses to a post-HB 1846 level). The CMCRB utilized adjustment factors for this purpose beginning with the April 1, 2016 Loss Cost Filing through the April 1, 2021 Loss Cost Filing. Although the CMCRB continued to prepare this Appendix (and its associated exhibits) for the April 1, 2022 Loss Cost Filing, the adjustment factors for each of the five years (i.e., 2016 – 2020) used by the CMCRB in preparing its Traumatic Loss indication were unity, since each of the five years were expected to be fully reported on a post-HB 1846 level.

For the April 1, 2023 Loss Cost Filing, the CMCRB notes that each of the five years (i.e., 2017 – 2021) used in its Traumatic Loss indication are again expected to be fully reported on a post-HB 1846 level and that associated adjustment factors are not necessary. Consequently, the CMCRB decided to omit the five pages of calculations or exhibits that have been part of this Appendix for the last several years as well as the explanations that accompanied these exhibits.

Actuarial Report – Appendix B
Consideration of Protz v. WCAB (Derry Area School District) and
House Bill 1840 (HB 1840 or Act 111 of 2018)
Regarding the CMCRB's April 1, 2023 Loss Cost Filing

The CMCRB notes that this version of this Appendix is very similar to the versions of this Appendix that were included in the April 1, 2020 through April 1, 2022 Loss Cost Filings. The changes in this version generally involve the updating of data and assumptions by one year.

The Pennsylvania Supreme Court issued a decision in Protz v. WCAB (Derry Area School District) (the Protz Decision) dated June 20, 2017. In the Protz Decision, the Court ruled that Section 306(a.2) of the Pennsylvania Workers' Compensation Act (the Act) was an unconstitutional delegation of legislative authority. The CMCRB understands that this ruling meant that Section 306(a.2) had to be stricken and that Impairment Rating Evaluations were removed from the Act. The CMCRB notes that this ruling eliminated a cost containment provision that was enacted in the Pennsylvania Workers' Compensation system over 20 years ago.

The CMCRB included a provision (a load to Traumatic Indemnity Losses of 13.37% or 1.1337) in its April 1, 2018 Loss Cost Filing in response to the Protz Decision. Because of data limitations and constraints, this provision was based on PCRB Filing C-369, dated August 15, 2017.

Subsequent to the CMCRB proposing and implementing its April 1, 2018 Loss Cost Filing, the Pennsylvania Legislature passed HB 1840 that was signed by Governor Wolf on October 24, 2018. The CMCRB understands that this legislation re-established Impairment Rating Evaluations in the Act, amending the Impairment Rating Threshold from 50% to 35%, and that this legislation also increased the burial benefit in the Act from $3,000 to $7,000. More generally, the CMCRB understands that HB 1840 intends to stabilize the Pennsylvania Workers' Compensation system by fixing the portion of the Act that was struck down in the Protz Decision while making the other changes described above.

The CMCRB notes that the PCRB prepared estimations concerning the provisions of HB 1840 and that these estimations were included in the PCRB's Filing C-373 proposed to be effective January 1, 2019. As it did with the Protz Decision, the CMCRB adopts the PCRB's estimations concerning both of these provisions in HB 1840:

1) Re-establishment of Impairment Rating Evaluations and Revision to Impairment Rating Threshold from 50% to 35%: The PCRB estimated the impact on Indemnity Benefits (or Indemnity Losses) to be an increase of 1.56% or 1.0156 to move from the pre-Protz Level (i.e., Impairment Rating Threshold of 50%) to the post-HB 1840 Level (i.e., Impairment Rating Threshold of 35%).

2) Increase to Burial Benefit: The PCRB estimated the impact on Indemnity Benefits to be an increase of 0.032% or 1.00032 concerning this benefit increase.

Overall, the CMCRB adopts an HB 1840 adjustment factor of 1.59% or 1.0159 to reflect all of the estimable changes in HB 1840. This HB 1840 adjustment factor of 1.0159 is the product of the two component parts listed above or 1.0156 times 1.0003.

For the April 1, 2019 Loss Cost Filing, the CMCRB uniformly applied the HB 1840 adjustment factor of 1.0159 to Traumatic Indemnity Losses for each of the five accident years (i.e., 2013 through 2017) included in the Traumatic Loss Cost indications. The CMCRB did not find any claims that were included in the data with the April 1, 2019 Loss Cost Filing that appeared to be affected by the Protz Decision. In other words, the CMCRB believed that all of the Traumatic loss data included with the April 1, 2019 Loss Cost Filing continued to be reported on a pre-Protz Decision level.

For the April 1, 2020 through April 1, 2022 Loss Cost Filings, the CMCRB utilized an approach that derived unique adjustment factors for each of the five Accident Years used in those filings to prepare Traumatic Loss Cost indications. For the April 1, 2023 Loss Cost Filing, the CMCRB proposes a similar approach and provides this appendix to describe this process and the attached exhibits in support of these calculations.

Application to current data (i.e., to Traumatic Indemnity Losses)

The CMCRB believes that the PCRB's HB 1840 adjustment factor of 1.0159 continues to be the best available estimate of the anticipated increase in Traumatic Indemnity Losses from a pre-HB 1840 level to a post-HB 1840 level or more precisely a pre-Protz Decision level to a post-HB 1840 level.

Appendix B-1 shows the derivation of the HB 1840 adjustment factors for application to the reported or actual Indemnity Paid Losses for the 10 most recent Accident Years and Report Levels. For Calendar Years before 2018, the adjustment factor is 1.0159. For Calendar Year 2018, the adjustment factor is 1.0129, derived from the weights shown on this appendix. For Calendar Years after 2018, the adjustment factor is 1.0000 since the CMCRB assumed that Paid Losses would immediately reflect the new law level.

Appendix B-2 shows the derivation of the HB 1840 adjustment factor to Indemnity Outstanding Losses for Calendar Year 2021. The CMCRB assumed that 100% of Outstanding Losses for Calendar Year 2021 reflected the new law level since Calendar Year 2021 reports were to be valued as of April 30, 2022.

Appendix B-3 displays the derivation of the CMCRB's Indemnity Paid Loss Distribution. The CMCRB notes that the Selected Distribution is very close to the Actual Distribution through 9th report level. Beyond 9th report level, the CMCRB notes that it favored accelerating the distribution for simplicity in subsequent calculations. This distribution is necessary to prepare Accident Year Incremental Paid and Outstanding Losses.

Appendix B-4 distributes the Selected Paid Loss Distribution into an Accident Year loss development triangle. The Outstanding Loss Distribution is also displayed.

- Row 1 represents the portion of ultimate losses that are expected to be paid for each Accident Year based on current report levels.
- Row 2 shows the portion of ultimate losses that are expected to be outstanding for each Accident Year based on current report levels.
- Row 3 shows the sum of Rows 1 and 2 which sums to unity or 100% for each Accident Year.

Appendix B-5 shows the derivation of the Accident Year specific adjustment factors for HB 1840. The triangle on this page is the cell-by-cell product of the HB 1840 Adjustment Factors (B-1) and the Estimated Incremental Paid Losses (B-4). In other words, this triangle represents the Incremental Paid Losses on a post-HB 1840 basis.

- Row 1 represents the portion of ultimate losses that are expected to be paid for each Accident Year based on current report levels after Paid Losses are adjusted to reflect HB 1840 costs.
- Row 2 shows the portion of ultimate losses that are expected to be outstanding for each Accident Year based on current report levels.
- Row 3 shows the HB 1840 costs factor to be applied to outstanding losses.
- Row 4 reflects outstanding losses adjusted to reflect HB 1840 costs.
- Row 5 displays the factor to adjust Ultimate Accident Year losses to reflect HB 1840 costs. This row is also re-displayed in the column to the right.

Application by Type of Coverage

The CMCRB files Loss Costs for three "types" of coverages:

1. Traumatic – Pennsylvania Workers' Compensation Act coverage,
2. State Occupational Disease (SOD) – Pennsylvania Occupational Disease Act coverage and
3. Federal Occupational Disease (FOD) – Federal Mine Safety and Health Act coverage.

The CMCRB generally understands that the settlement of SOD claims has not relied upon the Impairment Rating Evaluation process and that adjustments for the Protz Decision or HB 1840 for SOD coverage are not necessary. Similarly, the CMCRB knows that the settlement of FOD claims does not rely upon provisions in the Pennsylvania Workers' Compensation Act and that adjustments for the Protz Decision or HB 1840 for FOD coverage are not necessary.

The CMCRB also understands that the settlement of Traumatic claims has relied upon the Impairment Rating Evaluation process and that adjustments for the Protz Decision and subsequently HB 1840 for Traumatic coverage are necessary. Consequently, the CMCRB's proposal includes the application of the adjustment factors from Appendix B-5 for Traumatic Indemnity coverage only.

While HB 1840 is expected to directly impact Indemnity Benefits and Losses, this legislation is not expected to directly impact Medical Benefits and Losses. However, as with any significant law change, the CMCRB notes the potential for changes in claiming activity and behavior. These changes have the potential to increase Medical Benefits and Losses going forward, but the CMCRB is not aware of a reliable means to estimate this potential increase at this time.

Consequently, the CMCRB adopts a HB 1840 adjustment factor of 1.0000 or 0.0% to be applied to all Traumatic Medical Losses. The CMCRB notes that this is consistent with the treatment of Medical Losses in the most recent PCRB Filing, Proposal C-380, April 1, 2022 Loss Cost Filing.

Retrospective

The CMCRB notes that the above mentioned estimates were prepared exclusively on a prospective basis. The CMCRB analysis and estimates do not include any provisions for the potential for retroactive changes in cost for claims that are currently open or for claims that were previously closed to reopen.

Uncertainty

The CMCRB notes that actuarial estimates in general involve some degree of uncertainty. The CMCRB believes that this is especially true of the estimates and adjustments mentioned above, since these estimations needed to be prepared before a reliable amount of actual experience under HB 1840 was available and while additional cases continue to be adjudicated concerning specific nuances related to these changes.

Attachments

1) Appendix B-1 through Appendix B-5

Impact of House Bill 1840 on Indemnity Paid Losses

Report Level	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1st	1.0159	1.0159	1.0159	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000
2nd	1.0159	1.0159	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000	
3rd	1.0159	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000		
4th	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000			
5th	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000				
6th	1.0159	1.0129	1.0000	1.0000	1.0000					
7th	1.0129	1.0000	1.0000	1.0000						
8th	1.0000	1.0000	1.0000							
9th	1.0000	1.0000								
10th	1.0000									

The CMCRB assumes that Paid Losses will immediately reflect the new law level. The weights below were judgmentally selected with consideration given to the date that House Bill 1840 of 2018 was signed by Governor Wolf of October 24, 2018.

HB 1840 Indemnity Paid Loss Adjustment Factors:	Combined	Adjustment	Weight	Adjustment	Weight
HB 1840 Adjustment Factor for Calendar Years prior to 2018	1.0159	1.0159	100.0%	1.0000	0.0%
HB 1840 Adjustment Factor for Calendar Year 2018	1.0129	1.0159	81.4%	1.0000	18.6%
HB 1840 Adjustment Factor for Calendar Years after 2018	1.0000	1.0159	0.0%	1.0000	100.0%

Impact of House Bill 1840 on Indemnity Outstanding Losses

Report Level	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1st										1.0000
2nd									1.0000	
3rd								1.0000		
4th							1.0000			
5th						1.0000				
6th					1.0000					
7th				1.0000						
8th			1.0000							
9th		1.0000								
10th	1.0000									

The CMCRB assumes that 50% of Outstanding Case Reserve Losses fully reflected the new law level at first report.

HB 1840 Indemnity Outstanding Loss Adjustment Factors:	Combined	Adjustment	Weight	Adjustment	Weight
HB 1840 Adjustment Factor for Calendar Years prior to 2018	1.0159	1.0159	100.0%	1.0000	0.0%
HB 1840 Adjustment Factor for Calendar Year 2018	1.0080	1.0159	50.0%	1.0000	50.0%
HB 1840 Adjustment Factor for Calendar Years after 2018	1.0000	1.0000	0.0%	1.0000	100.0%

Derivation of Traumatic Indemnity Incremental Paid Loss Distribution

Traumatic Indemnity Reported Paid Losses as of 04-30-2022 from Exhibit VI-E:

Report	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	2,060,360	1,899,710	4,015,185	2,666,351	2,516,576	2,666,824	2,196,913	2,533,857	2,613,834	2,367,125
2	5,486,851	4,482,404	7,425,208	6,101,619	5,231,352	5,437,686	5,148,691	6,047,363	5,373,349	
3	7,473,314	6,081,014	10,827,506	7,651,201	6,950,711	7,418,658	6,860,470	6,799,224		
4	8,392,146	6,502,458	11,747,478	9,380,121	8,203,041	8,254,560	7,232,745			
5	9,139,912	6,652,885	12,208,353	10,671,950	8,356,903	9,169,543				
6	9,395,170	7,003,338	12,232,461	10,663,121	8,518,921					
7	9,588,035	7,421,020	12,388,158	10,912,322						
8	9,898,479	7,504,122	12,388,158							
9	10,137,263	7,582,900								
10	10,145,648									

Traumatic Indemnity Reported Incurred Losses as of 04-30-2022 from Exhibit VI-A-4:

	10,262,450	7,807,196	12,388,158	12,405,876	8,714,729	10,474,304	8,271,331	7,903,631	7,200,675	4,395,644

Traumatic Indemnity Incurred Loss Development Factors from Exhibit V-C-1:

	1.0204	1.0226	1.0249	1.0273	1.0298	1.0325	1.0642	1.0900	1.2288	1.8738

Ultimate Traumatic Indemnity Losses = Indemnity Incurred Losses times Indemnity Incurred Loss Development Factors:

	10,471,804	7,983,639	12,696,623	12,744,556	8,974,428	10,814,719	8,802,350	8,614,958	8,848,189	8,236,558

Percent Paid = Traumatic Indemnity Reported Paid Losses divided by Ultimate Traumatic Indemnity Losses:

Report	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average	Average Ex Hi/Lo	Selected Incremental	Selected Cumulative
1	19.68%	23.80%	31.62%	20.92%	28.04%	24.66%	24.96%	29.41%	29.54%	28.74%	26.14%	26.26%	26.00%	26.00%
2	52.40%	56.14%	58.48%	47.88%	58.29%	50.28%	58.49%	70.20%	60.73%		56.99%	56.40%	30.00%	56.00%
3	71.37%	76.17%	85.28%	60.04%	77.45%	68.60%	77.94%	78.92%			74.47%	75.08%	18.50%	74.50%
4	80.14%	81.45%	92.52%	73.60%	91.40%	76.33%	82.17%				82.52%	82.30%	8.00%	82.50%
5	87.28%	83.33%	96.15%	83.74%	93.12%	84.79%					88.07%	87.23%	5.00%	87.50%
6	89.72%	87.72%	96.34%	83.67%	94.92%						90.47%	90.79%	3.00%	90.50%
7	91.56%	92.95%	97.57%	85.62%							91.93%	92.26%	2.00%	92.50%
8	94.53%	93.99%	97.57%								95.36%	94.53%	2.00%	94.50%
9	96.81%	94.98%									95.90%	95.90%	1.50%	96.00%
10	96.89%										96.89%	96.89%	4.00%	100.00%

Notes: The selected distribution is a very close approximation to the actual distribution through 9th report level.
The importance of the selected distribution diminishes beyond 9th report and was accelerated for simplicity.

Incremental Paid and Outstanding Indemnity Losses per Report Level

Report Level	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Selected Incremental Paid Losses	Cumulative Paid Losses	Outstanding Losses
1st	0.2600	0.2600	0.2600	0.2600	0.2600	0.2600	0.2600	0.2600	0.2600	0.2600	26.00%	26.00%	74.00%
2nd	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000		30.00%	56.00%	44.00%
3rd	0.1850	0.1850	0.1850	0.1850	0.1850	0.1850	0.1850	0.1850			18.50%	74.50%	25.50%
4th	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800				8.00%	82.50%	17.50%
5th	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500					5.00%	87.50%	12.50%
6th	0.0300	0.0300	0.0300	0.0300	0.0300						3.00%	90.50%	9.50%
7th	0.0200	0.0200	0.0200	0.0200							2.00%	92.50%	7.50%
8th	0.0200	0.0200	0.0200								2.00%	94.50%	5.50%
9th	0.0150	0.0150									1.50%	96.00%	4.00%
10th	0.0400										4.00%	100.00%	0.00%
1)	1.0000	0.9600	0.9450	0.9250	0.9050	0.8750	0.8250	0.7450	0.5600	0.2600			
2)	0.0000	0.0400	0.0550	0.0750	0.0950	0.1250	0.1750	0.2550	0.4400	0.7400			
3)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			

Notes:

1) The anticipated Cumulative Paid Losses which equal the sums of the columns above.
2) The remaining anticipated Outstanding Losses for each Accident Year.
3) The sum of rows 1 and 2.

Combination - Incremental Paid Losses times Adjustment Factors

Report Level	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Selected Incremental Paid Losses	Cumulative Paid Losses	Outstanding Losses
1st	0.2641	0.2641	0.2641	0.2641	0.2641	0.2641	0.2634	0.2600	0.2600	0.2600	26.00%	26.00%	74.00%
2nd	0.3048	0.3048	0.3048	0.3048	0.3048	0.3039	0.3000	0.3000	0.3000		30.00%	56.00%	44.00%
3rd	0.1879	0.1879	0.1879	0.1879	0.1874	0.1850	0.1850	0.1850			18.50%	74.50%	25.50%
4th	0.0813	0.0813	0.0813	0.0810	0.0800	0.0800	0.0800				8.00%	82.50%	17.50%
5th	0.0508	0.0508	0.0506	0.0500	0.0500	0.0500					5.00%	87.50%	12.50%
6th	0.0305	0.0304	0.0300	0.0300	0.0300						3.00%	90.50%	9.50%
7th	0.0203	0.0200	0.0200	0.0200							2.00%	92.50%	7.50%
8th	0.0200	0.0200	0.0200								2.00%	94.50%	5.50%
9th	0.0150	0.0150									1.50%	96.00%	4.00%
10th	0.0400										4.00%	100.00%	0.00%

1)	1.0146	0.9743	0.9588	0.9379	0.9163	0.8830	0.8284	0.7450	0.5600	0.2600
2)	0.0000	0.0400	0.0550	0.0750	0.0950	0.1250	0.1750	0.2550	0.4400	0.7400
3)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4)	0.0000	0.0400	0.0550	0.0750	0.0950	0.1250	0.1750	0.2550	0.4400	0.7400
5)	1.0146	1.0143	1.0138	1.0129	1.0113	1.0080	1.0034	1.0000	1.0000	1.0000

Accident Year	Adjustment Factor
2012	1.0146
2013	1.0143
2014	1.0138
2015	1.0129
2016	1.0113
2017	1.0080
2018	1.0034
2019	1.0000
2020	1.0000
2021	1.0000

Notes:

1) The anticipated Cumulative Adjusted Paid Losses which equal the sums of the columns above.
2) The remaining anticipated Outstanding Losses for each Accident Year.
3) The selected Adjustment factor for Calendar Year 2021 Outstanding Losses.
4) The product of rows 2 and 3.
5) The sum of rows 1 and 4.

The triangle above is the cell-by-cell product of the following two triangles:

Impact of House Bill 1840 on Indemnity Paid Losses (Appendix B-1)

Incremental Paid and Outstanding Indemnity Losses per Report Level (Appendix B-4)

Coal Mine Compensation Rating Bureau
Current and Proposed Loss Costs
Manual Including Loadings

	2021 Developed Payroll	(1) Approved Loss Cost Manual	(2) Proposed Loss Cost Manual	(3) Percent Change
Underground Anthracite:				
Traumatic (1010)	$232,531	$18.18	$17.53	-3.6%
State O.D. (1011)	232,531	19.18	19.97	4.1%
*Federal Basic/Ex (0160)	232,531	11.35	14.19	25.0%
Total	xx	48.71	51.69	6.1%
Underground Bituminous:				
Traumatic (1001)	$131,501,704	$6.88	$7.16	4.1%
State O.D. (1002)	131,501,704	0.66	0.73	10.6%
*Federal Basic/Ex (0158)	131,501,704	0.75	0.93	24.0%
Total	xx	8.29	8.82	6.4%
Surface Anthracite:				
Traumatic (1012)	$24,267,567	$6.63	$6.33	-4.5%
State O.D. (1016)	24,267,567	1.01	0.94	-6.9%
*Federal Basic/Ex (0153)	20,904,834	1.40	1.63	16.4%
Total	xx	9.04	8.90	-1.5%
Surface Bituminous:				
Traumatic (1014)	$29,582,319	$1.60	$1.26	-21.3%
State O.D. (1013)	29,582,319	0.39	0.49	25.0%
*Federal Basic/Ex (0156)	30,223,927	0.81	0.83	2.5%
Total	xx	2.80	2.58	-7.9%
Four Standard Classifications:				
Traumatic	$185,584,121	$6.02	$6.12	1.7%
State O.D.	185,584,121	0.69	0.74	7.2%
*Federal Basic/Ex	182,862,996	0.85	1.01	18.8%
Total	xx	7.56	7.87	4.1%

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Loss Costs (Approved 4/1/2022) - Exhibit X-B-2
Column (2) Proposed - Exhibit I-B, pages 1 and 2
Column (3) Traumatic Column (2) / Column (1)
OD Exhibit III and IV-A

Coal Mine Compensation Rating Bureau
Current and Proposed Loss Costs
Manual Including Loadings

		2021 Developed Payroll	(1) Approved Loss Cost Manual	(2) Proposed Loss Cost Manual	(3) Percent Change
Coke:					
	Traumatic (1469)	-	$4.22	$4.60	9.0%
	State O.D. (1017)	-	0.08	0.09	12.5%
	*Federal Basic/Ex (0154)	-	0.09	0.09	0.0%
	Total	xx	4.39	4.78	8.9%
Auger:					
	Traumatic (1015)	$208,581	$6.17	$6.34	2.8%
	State O.D. (1019)	208,581	0.17	0.18	5.9%
	*Federal Basic/Ex (0157)	229,661	0.41	0.39	-4.9%
	Total	xx	6.75	6.91	2.4%
Co-Gen Anthracite:					
	Traumatic (1021)	$8,263,749	$8.00	$7.77	-2.9%
	State O.D. (1022)	8,263,749	0.35	0.42	20.0%
	*Federal Basic/Ex (0181)	7,678,278	0.34	0.37	8.8%
	Total	xx	8.69	8.56	-1.5%
Co-Gen Bituminous:					
	Traumatic (1023)	$12,244,359	$1.11	$1.30	17.1%
	State O.D. (1024)	12,244,359	0.19	0.19	0.0%
	*Federal Basic/Ex (0182)	12,244,359	0.25	0.24	-4.0%
	Total	xx	1.55	1.73	11.6%
Prep Plant Anthracite:					
	Traumatic (1025)	$12,790,962	$3.68	$2.78	-24.5%
	State O.D. (1026)	12,790,962	2.75	2.87	4.4%
	*Federal Basic/Ex (0183)	11,177,278	0.76	0.81	6.6%
	Total	xx	7.19	6.46	-10.2%
Prep Plant Bituminous:					
	Traumatic (1027)	$32,053,110	$2.62	$2.06	-21.4%
	State O.D. (1028)	32,053,110	0.17	0.19	11.8%
	*Federal Basic/Ex (0184)	32,053,110	0.25	0.25	0.0%
	Total	xx	3.04	2.50	-17.8%
Other Classifications:					
	Traumatic	$65,560,761	$3.23	$2.79	-13.6%
	State O.D.	65,560,761	0.70	0.74	5.7%
	*Federal Basic/Ex	63,382,686	0.35	0.36	2.9%
	Total	xx	4.28	3.89	-9.1%
Grand Total:					
	Traumatic	$251,144,882	$5.29	$5.25	-0.8%
	State O.D.	251,144,882	0.69	0.74	7.2%
	*Federal Basic/Ex	246,245,682	0.72	0.84	16.7%
	Total	xx	6.70	6.83	1.9%

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Loss Costs (Approved 4/1/2022) - Exhibit X-B-2
Column (2) Proposed - Exhibit I-B, pages 1 and 2
Column (3) Traumatic Column (2) / Column (1)
OD Exhibit III and IV-A

Coal Mine Compensation Rating Bureau
Current and Proposed Loss Costs
Unloaded Manual

	2021 Developed Payroll	(1) Approved Unloaded Manual	(2) Indicated Unloaded Manual	(3) Proposed Unloaded Manual	(4) Percent Change
Underground Anthracite:					
Traumatic (1010)	$232,531	$17.59	$16.87	$16.87	-4.1%
State O.D. (1011)	232,531	19.18	19.97	19.97	4.1%
*Federal Basic/Ex (0160)	232,531	11.35	15.97	14.19	25.0%
Total	xx	48.12	52.81	51.03	6.0%
Underground Bituminous:					
Traumatic (1001)	$131,501,704	$6.52	$6.73	$6.73	3.2%
State O.D. (1002)	131,501,704	0.66	0.73	0.73	10.6%
*Federal Basic/Ex (0158)	131,501,704	0.75	0.93	0.93	24.0%
Total	xx	7.93	8.39	8.39	5.8%
Surface Anthracite:					
Traumatic (1012)	$24,267,567	$6.45	$6.14	$6.14	-4.8%
State O.D. (1016)	24,267,567	1.01	0.94	0.94	-6.9%
*Federal Basic/Ex (0153)	20,904,834	1.40	1.63	1.63	16.4%
Total	xx	8.86	8.71	8.71	-1.7%
Surface Bituminous:					
Traumatic (1014)	$29,582,319	$1.53	$1.18	$1.18	-22.9%
State O.D. (1013)	29,582,319	0.39	0.56	0.49	25.0%
*Federal Basic/Ex (0156)	30,223,927	0.81	0.83	0.83	2.5%
Total	xx	2.73	2.57	2.50	-8.4%
Four Standard Classifications:					
Traumatic	$185,584,121	$5.73	$5.78	$5.78	0.9%
State O.D.	185,584,121	0.69	0.75	0.74	7.2%
*Federal Basic/Ex	182,862,996	0.85	1.01	1.01	18.8%
Total	xx	7.27	7.54	7.53	3.6%

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Exhibit X-B Page 2
Column (2) Indicated Loss Cost - Exh. II, col(3) (Traumatic); Exh. III, col(5) (State O.D.); Exh. IV-A, col(5) (Federal O.D. After Adm/Law)
Column (3) Proposed Loss Cost - Exh. II, col(4) (Traumatic); Exh. III, col(8) (State O.D.); Exh. IV-A, col(7) (Federal O.D. After Adm/Law)
Column (4) Exhibit II, III or IV-A

Coal Mine Compensation Rating Bureau
Current and Proposed Loss Costs
Unloaded Manual

	2021 Developed Payroll	(1) Approved Unloaded Manual	(2) Indicated Unloaded Manual	(3) Proposed Unloaded Manual	(4) Percent Change
Coke:					
Traumatic (1469)	-	$4.09	$4.45	$4.45	8.8%
State O.D. (1017)	-	0.08	0.09	0.09	12.5%
*Federal Basic/Ex (0154)	-	0.09	0.09	0.09	0.0%
Total	xx	4.26	4.63	4.63	8.7%
Auger:					
Traumatic (1015)	$208,581	$5.94	$6.08	$6.08	2.4%
State O.D. (1019)	208,581	0.17	0.18	0.18	5.9%
*Federal Basic/Ex (0157)	229,661	0.41	0.39	0.39	-4.9%
Total	xx	6.52	6.65	6.65	2.0%
Co-Gen Anthracite:					
Traumatic (1021)	$8,263,749	$7.80	$7.55	$7.55	-3.2%
State O.D. (1022)	8,263,749	0.35	0.42	0.42	20.0%
*Federal Basic/Ex (0181)	7,678,278	0.34	0.37	0.37	8.8%
Total	xx	8.49	8.34	8.34	-1.8%
Co-Gen Bituminous:					
Traumatic (1023)	$12,244,359	$1.05	$1.22	$1.22	16.2%
State O.D. (1024)	12,244,359	0.19	0.19	0.19	0.0%
*Federal Basic/Ex (0182)	12,244,359	0.25	0.24	0.24	-4.0%
Total	xx	1.49	1.65	1.65	10.7%
Prep Plant Anthracite:					
Traumatic (1025)	$12,790,962	$3.56	$2.57	$2.67	-25.0%
State O.D. (1026)	12,790,962	2.75	2.87	2.87	4.4%
*Federal Basic/Ex (0183)	11,177,278	0.76	0.81	0.81	6.6%
Total	xx	7.07	6.25	6.35	-10.2%
Prep Plant Bituminous:					
Traumatic (1027)	$32,053,110	$2.53	$1.96	$1.96	-22.5%
State O.D. (1028)	32,053,110	0.17	0.19	0.19	11.8%
*Federal Basic/Ex (0184)	32,053,110	0.25	0.25	0.25	0.0%
Total	xx	2.95	2.40	2.40	-18.6%
Other Classifications:					
Traumatic	$65,560,761	$3.13	$2.66	$2.68	-14.4%
State O.D.	65,560,761	0.70	0.74	0.74	5.7%
*Federal Basic/Ex	63,382,686	0.35	0.36	0.36	2.9%
Total	xx	4.18	3.76	3.78	-9.6%
Grand Total:					
Traumatic	$251,144,882	$5.05	$4.97	$4.97	-1.6%
State O.D.	251,144,882	0.69	0.75	0.74	7.2%
*Federal Basic/Ex	246,245,682	0.72	0.85	0.84	16.7%
Total	xx	6.46	6.57	6.55	1.4%

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Exhibit X-B Page 2
Column (2) Indicated Loss Cost - Exh. II, col(3) (Traumatic); Exh. III, col(5) (State O.D.); Exh. IV-A, col(5) (Federal O.D. After Adm/Law)
Column (3) Proposed Loss Cost - Exh. II, col(4) (Traumatic); Exh. III, col(8) (State O.D.); Exh. IV-A, col(7) (Federal O.D. After Adm/Law)
Column (4) Exhibit II, III or IV-A

Coal Mine Compensation Rating Bureau
Current and Proposed Loss Costs
Unloaded Manual

Calculation of Proposed Unloaded Loss Costs

Underground Anthracite

Traumatic (1010)		Indicated Loss Cost.
State O.D. (1011)		Indicated Loss Cost.
*Federal O.D. (0160)	Basic/Ex	Indicated unloaded loss cost limited to 25.0%(Exhibit IV-A).

Underground Bituminous

Traumatic (1001)		Indicated Loss Cost.
State O.D. (1002)		Indicated Loss Cost.
*Federal O.D. (0158)	Basic/Ex	Indicated Loss Cost.

Surface Anthracite

Traumatic (1012)		Indicated Loss Cost.
State O.D. (1016)		Indicated Loss Cost.
*Federal O.D. (0153)	Basic/Ex	Indicated Loss Cost.

Surface Bituminous

Traumatic (1014)		Indicated Loss Cost.
State O.D. (1013)		Indicated unloaded loss cost limited to 25.0%(Exhibit III).
*Federal O.D. (0156)	Basic/Ex	Indicated Loss Cost.

Coke

Traumatic (1469)		Indicated Loss Cost.
State O.D. (1017)		Indicated Loss Cost.
*Federal O.D. (0154)	Basic/Ex	Indicated Loss Cost.

Auger

Traumatic (1015)		Indicated Loss Cost.
State O.D. (1019)		Indicated Loss Cost.
*Federal O.D. (0157)	Basic/Ex	Indicated Loss Cost.

Co-Gen Anthracite

Traumatic (1021)		Indicated Loss Cost.
State O.D. (1022)		Indicated Loss Cost.
*Federal O.D. (0181)	Basic/Ex	Indicated Loss Cost.

Co-Gen Bituminous

Traumatic (1023)		Indicated Loss Cost.
State O.D. (1024)		Indicated Loss Cost.
*Federal O.D. (0182)	Basic/Ex	Indicated Loss Cost.

Prep Plant Anthracite

Traumatic (1025)		Indicated unloaded loss cost limited to -25.0%(Exhibit II).
State O.D. (1026)		Indicated Loss Cost.
*Federal O.D. (0183)	Basic/Ex	Indicated Loss Cost.

Prep Plant Bituminous

Traumatic (1027)		Indicated Loss Cost.
State O.D. (1028)		Indicated Loss Cost.
*Federal O.D. (0184)	Basic/Ex	Indicated Loss Cost.

*Federal Basic and Excess are after the Federal Administrative / Law Change

Coal Mine Compensation Rating Bureau
Manual Loss Cost Loaded (after Capping)
For Catastrophe, Off-Balances, and Assessment
Proposed to Become Effective 4-1-2023

	2021 Developed Payroll	(1) Proposed Loss Cost Before Loading	(2) Catastrophe Loss Cost	(3) Loss Cost Including Catastrophe	(4) Loss Cost Including Off-Balance[a]	(5) Loss Cost Inc. Off-Balance[a] & Assessment[b]
Underground Anthracite:						
Traumatic (1010)	$232,531	$16.87	$0.27	$17.14	$17.53	$17.53
State O.D. (1011)	232,531	19.97				19.97
*Federal Basic/Ex (0160)	232,531	14.19				14.19
Total	xx	51.03				51.69
Underground Bituminous:						
Traumatic (1001)	$131,501,704	$6.73	$0.27	$7.00	$7.16	$7.16
State O.D. (1002)	131,501,704	0.73				0.73
*Federal Basic/Ex (0158)	131,501,704	0.93				0.93
Total	xx	8.39				8.82
Surface Anthracite:						
Traumatic (1012)	$24,267,567	$6.14	$0.05	$6.19	$6.33	$6.33
State O.D. (1016)	24,267,567	0.94				0.94
*Federal Basic/Ex (0153)	20,904,834	1.63				1.63
Total	xx	8.71				8.90
Surface Bituminous:						
Traumatic (1014)	$29,582,319	$1.18	$0.05	$1.23	$1.26	$1.26
State O.D. (1013)	29,582,319	0.49				0.49
*Federal Basic/Ex (0156)	30,223,927	0.83				0.83
Total	xx	2.50				2.58
Four Standard Classifications:						
Traumatic	$185,584,121	$5.78	$0.21	$5.99	$6.12	$6.12
State O.D.	185,584,121	0.74				0.74
*Federal Basic/Ex	182,862,996	1.01				1.01
Total	xx	7.53				7.87

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Proposed Loss Cost Before Loading - Exhibit II for Traumatic, Exhibit III for State OD, and Exhibit IV for Federal OD.
Column (2) Catastrophe - Exhibit XII-A
Column (3) (1)+(2)
Columns (4)(a) & (5)(a) Off-balances applied to Traumatic only

	Experience Rating	1.0000
Exhibit XIV-A	Merit Rating	1.0002
Exhibit XIV-B	Safety Rating	1.0228
	Combined	1.0230

(5)(b) Loss-based Assessment factor in present rates
applied to Traumatic & State OD loss costs =1.0002

Coal Mine Compensation Rating Bureau
Manual Loss Cost Loaded (after Capping)
For Catastrophe, Off-Balances, and Assessment
Proposed to Become Effective 4-1-2023

	2021 Developed Payroll	(1) Proposed Loss Cost Before Loading	(2) Catastrophe Loss Cost	(3) Loss Cost Including Catastrophe	(4) Loss Cost Including Off-Balance[a]	(5) Loss Cost Inc. Off-Balance[a] & Assessment[b]
Coke:						
Traumatic (1469)	-	$4.45	$0.05	$4.50	$4.60	$4.60
State O.D. (1017)	-	0.09				0.09
*Federal Basic/Ex (0154)	-	0.09				0.09
Total	xx	4.63				4.78
Auger:						
Traumatic (1015)	$208,581	$6.08	$0.12	$6.20	$6.34	$6.34
State O.D. (1019)	208,581	0.18				0.18
*Federal Basic/Ex (0157)	229,661	0.39				0.39
Total	xx	6.65				6.91
Co-Gen Anthracite:						
Traumatic (1021)	$8,263,749	$7.55	$0.05	$7.60	$7.77	$7.77
State O.D. (1022)	8,263,749	0.42				0.42
*Federal Basic/Ex (0181)	7,678,278	0.37				0.37
Total	xx	8.34				8.56
Co-Gen Bituminous:						
Traumatic (1023)	$12,244,359	$1.22	$0.05	$1.27	$1.30	$1.30
State O.D. (1024)	12,244,359	0.19				0.19
*Federal Basic/Ex (0182)	12,244,359	0.24				0.24
Total	xx	1.65				1.73
Prep Plant Anthracite:						
Traumatic (1025)	$12,790,962	$2.67	$0.05	$2.72	$2.78	$2.78
State O.D. (1026)	12,790,962	2.87				2.87
*Federal Basic/Ex (0183)	11,177,278	0.81				0.81
Total	xx	6.35				6.46
Prep Plant Bituminous:						
Traumatic (1027)	$32,053,110	$1.96	$0.05	$2.01	$2.06	$2.06
State O.D. (1028)	32,053,110	0.19				0.19
*Federal Basic/Ex (0184)	32,053,110	0.25				0.25
Total	xx	2.40				2.50
Other Classifications:						
Traumatic	$65,560,761	$2.68	$0.05	$2.73	$2.79	$2.79
State O.D.	$65,560,761	0.74				0.74
*Federal Basic/Ex	63,382,686	0.36				0.36
Total	xx	3.78				3.89
Grand Total:						
Traumatic	$251,144,882	$4.97	$0.17	$5.14	$5.26	$5.25
State O.D.	251,144,882	0.74				0.74
*Federal Basic/Ex	246,245,682	0.84				0.84
Total	xx	6.55				6.83

*Federal Basic and Excess are after the Federal Administrative / Law Change

Sources: Payroll from Exhibit X-A
Column (1) Proposed Loss Cost Before Loading - Exhibit II for Traumatic, Exhibit III for State OD, and Exhibit IV for Federal OD.
Column (2) Catastrophe - Exhibit XII-A
Column (3) (1)+(2)
Columns (4)(a) & (5)(a) Off-balances applied to Traumatic only

	Experience Rating	1.0000
Exhibit XIV-A	Merit Rating	1.0002
Exhibit XIV-B	Safety Rating	1.0228
	Combined	1.0230

(5)(b) Loss-based Assessment factor in present rates
applied to Traumatic & State OD loss costs =1.0002

COAL MINE COMPENSATION RATING BUREAU
TRAUMATIC LOSS COST INDICATIONS
Proposed Unloaded Loss Costs

Exhibit II

Classification		Code	(1) 2021 Developed Payroll	(2) Approved Unloaded Loss Cost (Eff 4/01/2022)	(3) Indicated Unloaded Loss Cost	(4) Proposed Unloaded Loss Cost	(5) Percent Change
Underground:	Anthracite	1010	232,531	17.59	16.87	16.87	-4.1%
	Bituminous	1001	131,501,704	6.52	6.73	6.73	3.2%
Surface:	Anthracite	1012	24,267,567	6.45	6.14	6.14	-4.8%
	Bituminous	1014	29,582,319	1.53	1.18	1.18	-22.9%
Four Standard Classes			185,584,121	5.73	5.78	5.78	0.9%
Other Classes	Coke	1469	-	4.09	4.45	4.45	8.8%
	Auger	1015	208,581	5.94	6.08	6.08	2.4%
Co-Gen:	Anthracite	1021	8,263,749	7.80	7.55	7.55	-3.2%
	Bituminous	1023	12,244,359	1.05	1.22	1.22	16.2%
Prep Plants:	Anthracite	1025	12,790,962	3.56	2.57	2.67	-25.0%
	Bituminous	1027	32,053,110	2.53	1.96	1.96	-22.5%
Other Classes			65,560,761	3.13	2.66	2.68	-14.4%
All Classes Combined			251,144,882	5.05	4.97	4.97	-1.6%

Sources: Column (1) Exhibit X-A
Column (2) Exhibit X-B,Page 2
Column (3) Exhibit V-A-1
Column (4) Exhibit V-A-1
Column (5) Exhibit V-A-1

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE LOSS COST

Exhibit III

Classification	(1) 2021 Developed Payroll	(2) Approved Unloaded Loss Cost	(3) Average Freq. per $1 mill.	(4) Indicated Average Severity	(5) Indicated Loss Cost (Rate)	(6) Indicated Change	(7) Proposed Change	(8) Proposed Loss Cost
Underground								
1011 Anthracite	$232,531	$19.18	0.242481	$823,601	$19.97	4.1%	4.1%	$19.97
1002 Bituminous	$131,501,704	$0.66	0.023199	$315,856	0.73	10.6%	10.6%	0.73
Surface								
1016 Anthracite	$24,267,567	$1.01	0.016147	$583,910	0.94	-6.9%	-6.9%	0.94
1013 Bituminous	$29,582,319	0.39	0.014083	$400,709	0.56	43.6%	25.0%	0.49
Four Standard Classes	$185,584,121	$0.69			$0.75	8.7%	7.2%	$0.74
1017 Coke	$ -	0.08	0.002173	400,709	0.09	12.5%	12.5%	0.09
1019 Auger	$208,581	0.17	0.004397	400,709	0.18	5.9%	5.9%	0.18
Co-Gen								
1022 Anthracite	$8,263,749	0.35	0.007177	583,910	0.42	20.0%	20.0%	0.42
1024 Bituminous	$12,244,359	0.19	0.004743	400,709	0.19	0.0%	0.0%	0.19
Prep Plant								
1026 Anthracite	$12,790,962	2.75	0.049198	583,910	2.87	4.4%	4.4%	2.87
1028 Bituminous	$32,053,110	0.17	0.004669	400,709	0.19	11.8%	11.8%	0.19
Other Classes	$65,560,761	$0.70			$0.74	5.7%	5.7%	$0.74
All Classes Combined	$251,144,882	$0.69			$0.75	8.7%	7.2%	$0.74

Sources: Column (1): Exhibit X-A
Column (2): Exhibit X-B Page 2
Column (3): Exhibit VII-B-1, Column (10)
Column (4): Four Standard Classes - Exhibit VII-A, pages 1 through 4
Coke, Auger, Prep Plant Bituminous and Co-Gen Bituminous = Surface Bituminous
Prep Plant Anthracite, Co-Gen Anthracite = Surface Anthracite
Column (5): [Column (3) times Column (4)] divided by 10,000.
Column (6): [Column (5) divided by Column (2)] minus 1.0
Column (7): Column (6) limited to +/- 25%.
Column (8): Column (2) times [1.000+Column(7)] and rounded.

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE LOSS COST INDICATION

Classification		(1) 2021 Developed Payroll	(2) Approved Unloaded Loss Cost	(3) Indicated Average Freq. per $1 mill.	(4) Indicated Average Severity	(5) Loss Cost (Rate)	(6) Indicated Change	(7) Loss Cost w/ Limitation 25%	(8) % Change w/Limitation 25%
Underground									
Anthracite:	Basic			0.311723	473,805	14.77			
	Excess			0.087440	137,658	1.20			
	Total	$232,531	$11.35			15.97	40.7%	$ 14.19	25.0%
Bituminous:	Basic			0.017608	403,705	0.71			
	Excess			0.008431	255,843	0.22			
	Total	$131,501,704	$0.75			0.93	24.0%	$ 0.93	24.0%
Surface									
Anthracite:	Basic			0.038022	412,492	1.57			
	Excess			0.007637	78,597	0.06			
	Total	$20,904,834	$1.40			1.63	16.4%	$ 1.63	16.4%
Bituminous:	Basic			0.020742	351,451	0.73			
	Excess			0.004515	216,860	0.10			
	Total	$30,223,927	$0.81			0.83	2.5%	$ 0.83	2.5%
Four Standard Classes	Basic					0.83			
	Excess					0.18			
	Total	$182,862,996	$0.85			1.01	18.8%	$ 1.01	18.8%
Coke	Basic			0.002062	351,451	0.07			
	Excess			0.000843	216,860	0.02			
	Total	$ -	$0.09			0.09	0.0%	$ 0.09	0.0%
Auger	Basic			0.009868	351,451	0.35			
	Excess			0.001788	216,860	0.04			
	Total	$229,661	$0.41			0.39	-4.9%	$ 0.39	-4.9%
Co-Gen									
Anthracite:	Basic			0.008584	412,492	0.35			
	Excess			0.002412	78,597	0.02			
	Total	$7,678,278	$0.34			0.37	8.8%	$ 0.37	8.8%
Bituminous:	Basic			0.005648	351,451	0.20			
	Excess			0.001635	216,860	0.04			
	Total	$12,244,359	$0.25			0.24	-4.0%	$ 0.24	-4.0%
Prep Plants									
Anthracite:	Basic			0.015995	412,492	0.66			
	Excess			0.019645	78,597	0.15			
	Total	$11,177,278	$0.76			0.81	6.6%	$ 0.81	6.6%
Bituminous:	Basic			0.006346	351,451	0.22			
	Excess			0.001554	216,860	0.03			
	Total	$32,053,110	$0.25			0.25	0.0%	$ 0.25	0.0%
Other Classes	Basic					0.31			
	Excess					0.05			
	Total	$63,382,686	$0.35			0.36	2.9%	$ 0.36	2.9%
All Classes Combined	Basic					0.70			
	Excess					0.15			
	Total	$246,245,682	$0.72			0.85	18.1%	$ 0.84	16.7%

Sources: Column (1): Exhibit X-A
Column (2): X-B Page 2
Column (3): Exhibit IV-B page 1 col. (10) (Basic) and Exhibit IV-B page 2 col. (10) (Excess)
Column (4): Four Standard Classes - Exhibit VIII-A (Basic) and Exhibit VII-A, Pages 1 through 4 (Federal Excess).
Coke, Auger, Prep Plant Bituminous and Co-Gen Bituminous = Surface Bituminous
Prep Plant Anthracite, Co-Gen Anthracite = Surface Anthracite
Column (5): [Column (3) times Column (4)] divided by 10,000.
Column (6): [Column (5) divided by Column (2)] minus 1.0
Column (7): Column (2) x [1+Column (8)]
Column (8): Column (6) Limited to +-25%

COAL MINE COMPENSATION RATING BUREAU

Federal Basic Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2012-2021	(2) Claim Frequency Per 100 Miner Years: Approved (Eff 4/1/2022)	(3) Trended to 4/1/2023	(4) Indicated (Eff 4/1/2023)	(5) Credibility: Expected Awarded Claims	(6) Credibility: Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) Payroll 2012-2021	(10) Frequency Per $1M Payroll
Underground:	Anthracite	0160	59.7	1.149255	1.149255	5.368766	0.686	0.128	1.689352	47.0%	3,235,380	0.311723
	Bituminous	0158	18,985.9	0.110037	0.110037	0.156928	20.892	0.706	0.143142	30.1%	1,543,472,989	0.017608
Surface:	Anthracite	0153	3,658.0	0.199513	0.199513	0.230503	7.298	0.417	0.212436	6.5%	204,379,216	0.038022
	Bituminous	0156	7,907.2	0.107644	0.107644	0.121059	8.512	0.450	0.113681	5.6%	433,379,655	0.020742
Four Standard Classifications			30,610.8	0.122138	0.122138	0.166619	37.388		0.146828		2,184,467,240	0.020575
	Coke	0154	691.2	0.011137	0.011137	0.013408	0.077	0.043	0.011235	0.9%	37,654,162	0.002062
	Auger	0157	112.4	0.054272	0.054272	0.046659	0.061	0.038	0.053983	-0.5%	6,148,855	0.009868
Co-Gen:	Anthracite	0181	1,470.4	0.047218	0.047218	0.052513	0.694	0.129	0.047901	1.4%	82,048,031	0.008584
	Bituminous	0182	1,999.2	0.031948	0.031948	0.030404	0.639	0.123	0.031758	-0.6%	112,420,648	0.005648
Prep Plants:	Anthracite	0183	1,371.7	0.090683	0.090683	0.091198	1.244	0.172	0.090772	0.1%	77,844,338	0.015995
	Bituminous	0184	3,761.7	0.049034	0.049034	0.061827	1.845	0.210	0.051721	5.5%	306,576,988	0.006346
Other Classes			9,406.6	0.048470	0.048470	0.054237	4.560		0.049628		622,693,022	0.007497
Total			40,017.4	0.104821	0.104821	0.140202	41.948		0.123980		2,807,160,262	0.017674

Source: (1) Exhibit VIII-B-2
(2) Exhibit IV-B-4
(3) = (2) trended to 4/1/2023 @ 0.0%
(4) Exhibit IV-B-3
(5) = (1) x (3) / 100
(6) = [(5) / 41.948]^(0.5)
(7) = (4)*(6)+((3)*(1-(6))
(8) = (7)/(2)-1
(9) Exhibit X-A-3
(10) = (7) X (1) / [(9) * 10,000]

Columns (2),(3),(4) & (7) totals and subtotals are weighted with 10 year estimated miner years.

PAB

Effective Date - April 01, 2023

8,421,645,998.455420

COAL MINE COMPENSATION RATING BUREAU

Federal Excess Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2012-2021	(2) Claim Frequency Per 100 Miner Years Approved (Eff 4/1/2022)	(3) Trended to 4/1/2023	(4) Indicated (Eff 4/1/2023)	(5) Credibility Expected Awarded Claims	(6) Credibility Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) Payroll 2012-2021	(10) Frequency Per $1M Payroll
Underground:	Anthracite	0160	59.7	0.469835	0.469835	0.502403	0.280	0.124	0.473873	0.9%	3,235,380	0.087440
	Bituminous	0158	18,985.9	0.063822	0.063822	0.069615	12.117	0.815	0.068543	7.4%	1,543,472,989	0.008431
Surface:	Anthracite	0153	3,658.0	0.048021	0.048021	0.030766	1.757	0.310	0.042672	-11.1%	204,379,216	0.007637
	Bituminous	0156	7,907.2	0.021069	0.021069	0.033243	1.666	0.302	0.024746	17.5%	433,379,655	0.004515
Four Standard Classifications			30,610.8	0.051682	0.051682	0.056421	15.820		0.054929		2,184,467,240	0.007697
	Coke	0154	691.2	0.004706	0.004706	0.002013	0.033	0.043	0.004590	-2.5%	37,654,162	0.000843
	Auger	0157	112.4	0.009960	0.009960	0.002710	0.011	0.025	0.009779	-1.8%	6,148,855	0.001788
Co-Gen:	Anthracite	0181	1,470.4	0.012150	0.012150	0.025372	0.179	0.099	0.013459	10.8%	82,048,031	0.002412
	Bituminous	0182	1,999.2	0.009886	0.009886	0.003234	0.198	0.104	0.009194	-7.0%	112,420,648	0.001635
Prep Plants:	Anthracite	0183	1,371.7	0.111529	0.111529	0.111389	1.530	0.290	0.111488	0.0%	77,844,338	0.019645
	Bituminous	0184	3,761.7	0.012332	0.012332	0.014410	0.464	0.160	0.012664	2.7%	306,576,988	0.001554
Other Classes			9,406.6	0.025660	0.025660	0.026839	2.415		0.025834		622,693,022	0.003903
Total			40,017.4	0.045565	0.045565	0.049468	18.235		0.048089		2,807,160,262	0.006855

Source: (1) Exhibit VIII-B-2
(2) Exhibit IV-B-6
(3) = (2) trended to 4/1/2023 @ 0.0%
(4) Exhibit IV-B-5
(5) = (1) x (3) / 100
(6) = [(5) / 18.235]^(0.5)
(7) = (4)*(6)+((3)*(1-(6))
(8) = (7)/(2)-1
(9) Exhibit X-A-3
(10) = (7) X (1) / [(9) * 10,000]

Columns (2),(3),(4) & (7) totals and subtotals are weighted with 10 year estimated miner years.

PAB

File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-04-B.xlsx]IV-B-2

Effective Date - April 01, 2023

Run Date: 08/30/22 09:34

8,421,645,916.100530

Coal Mine Compensation Rating Bureau

Federal Basic Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2021	(2) Approved Frequency Equivalent Per 100 Miner Years 4/1/2022	(3) Modeled Indication	(4) Experience Indication	(5) Weighted Average of Cols. (3) & (4)	(6) Percent Change
Underground:	Anthracite	0160	3.6	1.149255	4.505878	5.656396	5.368766	367.15%
	Bituminous	0158	1,414.6	0.110037	0.263146	0.121522	0.156928	42.61%
Surface:	Anthracite	0153	326.7	0.199513	0.216087	0.235308	0.230503	15.53%
	Bituminous	0156	472.3	0.107644	0.143996	0.113413	0.121059	12.46%
Four Standard Classifications			2,217.2	0.124399	0.237720	0.145548	0.168591	35.52%
	Coke	0154	0.0	0.011137	0.017177	0.012152	0.013408	20.39%
	Auger	0157	3.6	0.054272	0.088749	0.032629	0.046659	-14.03%
Co-Gen:	Anthracite	0181	120.0	0.047218	0.079425	0.043542	0.052513	11.21%
	Bituminous	0182	191.3	0.031948	0.043066	0.026184	0.030404	-4.83%
Prep Plants:	Anthracite	0183	174.7	0.090683	0.139449	0.075115	0.091198	0.57%
	Bituminous	0184	344.8	0.049034	0.094297	0.051004	0.061827	26.09%
	Other Classes		834.4	0.053598	0.089842	0.049209	0.059367	10.76%
		Total	3,051.6	0.105040	0.197286	0.119206	0.138726	32.07%

Source: (1) Exhibit VIII-B-2
(2) Exhibit IV-B-4
(3) Exhibit VIII-F
(4) Exhibit VIII-B-2
(5) = (0.25)*Col.(3)+ (0.75)*Col.(4)
(6) = (5)/(2) -1

Totals and subtotals are weighted by Miner Years.

COAL MINE COMPENSATION RATING BUREAU

Federal Basic Occupational Disease Classification Frequency

Classification		Class Code	(1) Approved Claim Freq. 4/1/2022	(2) Payroll 2011-2020	(3) Estimated Awarded Claims 2011-2020 (1) x (2)	(4) Estimated Miner Years 2012-2021	(5) Estimated Miner Years 2021	(6) Adjustment Factor	(7) Average Weekly Wage 2011	(8) Payroll 2011	(9) Estimated Miner Years 2011-2020	(10) Approved Frequency Equivalent Per 100 Miner Years
Underground:	Anthracite	0160	0.221177	4,260,793	0.942389	59.7	3.6	1.089	858	1,257,944	82.0	1.149255
	Bituminous	0158	0.013874	1,560,456,994	21.649780	18,985.9	1,414.6	1.582	858	148,485,709	19,675.0	0.110037
Surface:	Anthracite	0153	0.036690	202,981,810	7.447403	3,658.0	326.7	1.089	858	19,507,428	3,732.8	0.199513
	Bituminous	0156	0.020263	490,886,234	9.946828	7,907.2	472.3	1.089	858	87,730,506	9,240.5	0.107644
Four Standard Classifications				2,258,585,831		30,610.8	2,217.2			256,981,587	32,730	
	Coke	0154	0.002066	41,253,248	0.085229	691.2	-	1.089	858	3,599,086	765.3	0.011137
	Auger	0157	0.010173	7,095,449	0.072182	112.4	3.6	1.089	858	1,176,255	133.0	0.054272
Co-Gen:	Anthracite	0181	0.008721	85,351,395	0.744350	1,470.4	120.0	1.089	858	10,981,642	1,576.4	0.047218
	Bituminous	0182	0.005833	109,278,700	0.637423	1,999.2	191.3	1.089	858	9,102,411	1,995.2	0.031948
Prep Plants:	Anthracite	0183	0.016482	72,790,319	1.199730	1,371.7	174.7	1.089	858	6,123,259	1,323.0	0.090683
	Bituminous	0184	0.006199	309,678,946	1.919700	3,761.7	344.8	1.582	858	35,155,068	3,915.0	0.049034
Other Classes				625,448,057		9,406.6	834.4			66,137,721	9,707.9	
Total				2,884,033,888		40,017.4	3,051.6			323,119,308	42,438.2	

Source:
(1) Exhibit X-F (Federal Basic Frequency)
(2) Exhibit X-A-3
(3) = (1)x(2) / 1,000,000
(4) Exhibit VIII-B-2
(5) Exhibit VIII-B-2
(6) Exhibit X-G
(7) Exhibit XII-D
(8) Exhibit X-A-3
(9) = (4)-(5)+(8)/((6)x(7)x52)
(10) = (3)/(9)x100

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2021	(2) Approved Frequency Equivalent Per 100 Miner Years 4/1/2022	(3) Modeled Indication	(4) Experience Indication	(5) Weighted Average of Cols. (3) & (4)	(6) Percent Change
Underground:	Anthracite	0160	3.6	0.469835	0.250747	0.586288	0.502403	6.93%
	Bituminous	0158	1,414.6	0.063822	0.049846	0.076205	0.069615	9.08%
Surface:	Anthracite	0153	326.7	0.048021	0.048802	0.024754	0.030766	-35.93%
	Bituminous	0156	472.3	0.021069	0.006610	0.042121	0.033243	57.78%
Four Standard Classifications			2,217.2	0.053046	0.040808	0.062192	0.056846	7.16%
	Coke	0154	0.0	0.004706	0.000160	0.002630	0.002013	-57.22%
	Auger	0157	3.6	0.009960	0.000239	0.003534	0.002710	-72.79%
Co-Gen:	Anthracite	0181	120.0	0.012150	0.003651	0.032612	0.025372	108.82%
	Bituminous	0182	191.3	0.009886	0.002113	0.003608	0.003234	-67.29%
Prep Plants:	Anthracite	0183	174.7	0.111529	0.108967	0.112196	0.111389	-0.13%
	Bituminous	0184	344.8	0.012332	0.001181	0.018819	0.014410	16.85%
	Other Classes		834.4	0.032504	0.024313	0.036800	0.033678	3.61%
		Total	3,051.6	0.047429	0.036298	0.055249	0.050511	6.50%

Source: (1) Exhibit VIII-B-2
(2) Exhibit IV-B-6
(3) Exhibit VII-L
(4) Exhibit VII-B-2 (Federal Excess Frequency)
(5) = (0.25)*Col.(3)+ (0.75)*Col.(4)
(6) = (5)/(2) -1

Totals and subtotals are weighted with Miner Years

COAL MINE COMPENSATION RATING BUREAU

Federal Excess Occupational Disease Classification Frequency

Classification		Class Code	(1) Approved Claim Freq. 4/1/2022	(2) Payroll 2011-2020	(3) Estimated Awarded Claims 2011-2020 (1) x (2)	(4) Estimated Miner Years 2012-2021	(5) Estimated Miner Years 2021	(6) Adjustment Factor	(7) Average Weekly Wage 2011	(8) Payroll 2011	(9) Estimated Miner Years 2011-2020	(10) Approved Frequency Equivalent Per 100 Miner Years
Underground:	Anthracite	0160	0.090421	4,260,793	0.385265	59.7	3.6	1.089	858	1,257,944	82.0	0.469835
	Bituminous	0158	0.008047	1,560,456,994	12.556997	18,985.9	1,414.6	1.582	858	148,485,709	19,675.0	0.063822
Surface:	Anthracite	0153	0.008831	202,981,810	1.792532	3,658.0	326.7	1.089	858	19,507,428	3,732.8	0.048021
	Bituminous	0156	0.003966	490,886,234	1.946855	7,907.2	472.3	1.089	858	87,730,506	9,240.5	0.021069
Four Standard Classifications				2,258,585,831		30,610.8	2,217.2			256,981,587	32,730	
	Coke	0154	0.000873	41,253,248	0.036014	691.2	-	1.089	858	3,599,086	765.3	0.004706
	Auger	0157	0.001867	7,095,449	0.013247	112.4	3.6	1.089	858	1,176,255	133.0	0.009960
Co-Gen:	Anthracite	0181	0.002244	85,351,395	0.191529	1,470.4	120.0	1.089	858	10,981,642	1,576.4	0.012150
	Bituminous	0182	0.001805	109,278,700	0.197248	1,999.2	191.3	1.089	858	9,102,411	1,995.2	0.009886
Prep Plants:	Anthracite	0183	0.020271	72,790,319	1.475533	1,371.7	174.7	1.089	858	6,123,259	1,323.0	0.111529
	Bituminous	0184	0.001559	309,678,946	0.482789	3,761.7	344.8	1.582	858	35,155,068	3,915.0	0.012332
Other Classes				625,448,057		9,406.6	834.4			66,137,721	9,707.9	
Total				2,884,033,888		40,017.4	3,051.6			323,119,308	42,438.2	

Source:
(1) Exhibit X-F (Federal Excess Frequency)
(2) Exhibit X-A-3
(3) = (1)x(2) / 1,000,000
(4) Exhibit VIII-B-2
(5) Exhibit VIII-B-2
(6) Exhibit X-G
(7) Exhibit XII-D
(8) Exhibit X-A-3
(9) = (4)-(5)+(8)/((6)x(7)x52)
(10) = (3)/(9)x100

COAL MINE COMPENSATION RATING BUREAU
Traumatic Loss and Classification Credibility

Classification	Code	(1) 5 Year Payroll	2021 Payroll	(2) Loss Cost/Unloaded Approved (Eff 4/01/2022)	(3) Loss Cost/Unloaded Approved on Level	(4) Loss Cost/Unloaded Indicated (Eff 04/01/2023)	(5) Credibility Five Year Expected Losses	(6) Credibility Credibility Factor	(7) Indicated w/ Credibility Indicated Loss Cost	(8) Indicated w/ Credibility Indicated Change	(9) Proposed Change after Limitation	(10) Proposed Loss Cost	(11) Proposed Change Excluding Trend
Underground: Bituminous	1001	$801,739,132	$131,501,704	6.52	6.58	6.73	52,273,391	1.00	6.73	3.2%	3.2%	6.73	2.3%
Surface: Anthracite	1012	$111,388,244	$24,267,567	6.45	6.51	6.14	7,184,542	1.00	6.14	-4.8%	-4.8%	6.14	-5.7%
Bituminous	1014	$160,602,125	$29,582,319	1.53	1.54	1.18	2,457,213	1.00	1.18	-22.9%	-22.9%	1.18	-23.6%
Three Major Classifications		$1,073,729,501	$185,351,590	5.77	5.82	5.84	61,915,146						
Coke	1469	$13,831,415	$0	4.09	4.13	4.79	565,705	0.48	4.45	8.8%	8.8%	4.45	7.8%
Co-Gen: Anthracite	1021	$44,536,078	$8,263,749	7.80	7.87	7.55	3,473,814	1.00	7.55	-3.2%	-3.2%	7.55	-4.1%
Bituminous	1023	$58,220,078	$12,244,359	1.05	1.06	1.38	611,311	0.50	1.22	16.2%	16.2%	1.22	15.2%
Prep Plants: Anthracite	1025	$54,893,123	$12,790,962	3.56	3.59	2.44	1,954,195	0.89	2.57	-27.8%	-25.0%	2.67	-25.7%
Bituminous	1027	$162,453,085	$32,053,110	2.53	2.55	1.96	4,110,063	1.00	1.96	-22.5%	-22.5%	1.96	-23.2%
Auger	1015	$2,182,213	$208,581	5.94	5.99	6.39	129,623	0.23	6.08	2.4%	2.4%	6.08	1.4%
Subtotal (6)		$336,115,992	$65,560,761	3.23	3.25	2.82	10,844,711						
Underground: Anthracite	1010	$1,147,339	$232,531	17.59	17.75	15.99	201,817	0.29	16.87	-4.1%	-4.1%	16.87	-4.9%
Subtotal (7)		$337,263,331	$65,793,292	3.28	3.30	2.87	11,046,528						
Total (Based on 5-year Payroll)		$1,410,992,832	$251,144,882	5.17	5.22	5.13	$72,961,674		5.12				
Total (Based on 2021 Payroll, see Exhibit II)			$251,144,882	5.05					4.97	-1.6%	-1.6%	4.97	

Source: (1) Exhibit V-B
(2) Unloaded Loss Cost Current (Eff 4/01/2022) Exhibit X-B page 2
(3) = (2) X Trend =(2) X(1.009)
1.009=Weighted average of 1.024 and 1.000
Weights derived from 5 year Medical (26,761,656) and Indemnity (45,433,218)
ultimate losses. Exhibit V-B, pg. 1
(4) Exhibit V-B except Underground Anthracite, see Ex V-A-2
(5) Expected Losses = Column (1) times Column (2) divided by 100
(6) Factor Z = [(5) divided by 2,457,213]^(1/2)
(7) [Column (4) times Column (6)] plus [Column (3) times (1.0 minus Column (6))], except Underground Anthracite is the average of Column(3) and Column(4).
(8) Column(7) / Column(2) -1.0
(9) Loss costs changes limited to +25% increase , -25% decrease
(10) When Column (8) equals Column (9), then Column (7).
Otherwise, Column (2) * [1 + (9)].
(11) Column(10)/1.009/Column(2)-1.000

Calculation of Anthracite Underground Loss Cost

	Indicated	Proposed
Multiplicative Method (Anthracite: Underground vs. Surface)		
Differential Factor from Study	2.66	2.66
Indicated Anthracite Surface Loss Cost	6.14 *	6.14 *
Indicated Anthracite Underground Loss Cost	16.33	16.33
Comparative Hazard Method #1 (Anthracite vs. Bituminous)		
Differential Factor from Study	2.41	2.41
Indicated Bituminous Underground Loss Cost:	6.73 *	6.73 *
Indicated Anthracite Underground Loss Cost	16.22	16.22
Comparative Hazard Method #2 (Surface vs. Underground)		
Differential Factor from Study	2.51	2.51
Indicated Anthracite Surface Loss Cost:	6.14 *	6.14 *
Indicated Anthracite Underground Loss Cost	15.41	15.41
Average	15.99	15.99

* Souce: Exhibit V-A-1

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
All Classifications Combined (10 Classes)

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	10,474,304	1.0325	1.0080	10,901,235	3.77
2018	8,271,331	1.0642	1.0034	8,832,278	2.89
2019	7,903,631	1.0900	1.0000	8,614,958	2.77
2020	7,200,675	1.2288	1.0000	8,848,189	3.48
2021	4,395,644	1.8738	1.0000	8,236,558	3.28
5 Years	$38,245,585			$45,433,218	3.22
Medical					
2017	6,122,505	1.0495	1.1736	7,541,049	2.61
2018	5,210,327	1.0508	1.1461	6,274,912	2.05
2019	3,791,810	1.0521	1.1192	4,464,897	1.44
2020	4,026,550	1.0391	1.0930	4,573,100	1.80
2021	3,461,236	1.0577	1.0674	3,907,698	1.56
5 Years	$22,612,428			$26,761,656	1.90

Indemnity & Medical	(6) Developed Payroll				
2017	289,088,505			18,442,284	6.38
2018	306,135,580			15,107,190	4.93
2019	310,590,243			13,079,855	4.21
2020	254,033,622			13,421,289	5.28
2021	251,144,882			12,144,256	4.84
5 Years	$1,410,992,832			$72,194,874	5.12

Source: (1) Sum of Exhibit V-B, pages 2 and 6 - column (1)
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Sum of Exhibit V-B, pages 2 and 6 - column (6)

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Three 100% Credibility Classifications (3 Classes)

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	9,845,830	1.0325	1.0080	10,247,145	4.51
2018	7,726,278	1.0642	1.0034	8,250,261	3.51
2019	6,896,225	1.0900	1.0000	7,516,885	3.17
2020	5,788,471	1.2288	1.0000	7,112,873	3.76
2021	4,182,396	1.8738	1.0000	7,836,974	4.23
5 Years	$34,439,200			$40,964,138	3.82
Medical					
2017	4,975,826	1.0495	1.1736	6,128,691	2.70
2018	3,883,564	1.0508	1.1461	4,677,062	1.99
2019	3,392,418	1.0521	1.1192	3,994,608	1.69
2020	2,996,832	1.0391	1.0930	3,403,611	1.80
2021	3,140,320	1.0577	1.0674	3,545,387	1.91
5 Years	$18,388,960			$21,749,359	2.03

Indemnity & Medical	(6) Developed Payroll				
2017	227,016,632			16,375,836	7.21
2018	235,372,004			12,927,323	5.49
2019	236,759,475			11,511,493	4.86
2020	189,229,800			10,516,484	5.56
2021	185,351,590			11,382,361	6.14
5 Years	$1,073,729,501			$62,713,497	5.84

Source: (1) Sum of Exhibit V-B, pages 3,4 and 5 - column (1)
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Sum of Exhibit V-B, pages 3,4 and 5 - column (6)

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Underground Bituminous 1001

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	8,156,162	1.0325	1.0080	8,488,607	4.91
2018	7,140,035	1.0642	1.0034	7,624,260	4.22
2019	6,086,712	1.0900	1.0000	6,634,516	3.73
2020	5,155,610	1.2288	1.0000	6,335,214	4.55
2021	3,446,044	1.8738	1.0000	6,457,197	4.91
5 Years	$29,984,563			$35,539,794	4.43
Medical					
2017	4,237,496	1.0495	1.1736	5,219,295	3.02
2018	3,480,413	1.0508	1.1461	4,191,538	2.32
2019	2,886,811	1.0521	1.1192	3,399,250	1.91
2020	2,504,201	1.0391	1.0930	2,844,112	2.04
2021	2,469,657	1.0577	1.0674	2,788,216	2.12
5 Years	$15,578,578			$18,442,411	2.30

Indemnity & Medical	(6) Developed Payroll				
2017	172,708,778			13,707,902	7.94
2018	180,553,142			11,815,798	6.54
2019	177,833,672			10,033,766	5.64
2020	139,141,836			9,179,326	6.60
2021	131,501,704			9,245,413	7.03
5 Years	$801,739,132			$53,982,205	6.73

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Surface Anthracite 1012

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	1,495,642	1.0325	1.0080	1,556,604	7.35
2018	522,388	1.0642	1.0034	557,815	2.85
2019	492,004	1.0900	1.0000	536,284	2.28
2020	287,545	1.2288	1.0000	353,335	1.55
2021	710,186	1.8738	1.0000	1,330,747	5.48
5 Years	$3,507,765			$4,334,785	3.89
Medical					
2017	551,712	1.0495	1.1736	679,540	3.21
2018	271,551	1.0508	1.1461	327,035	1.67
2019	326,706	1.0521	1.1192	384,700	1.63
2020	410,613	1.0391	1.0930	466,348	2.04
2021	571,118	1.0577	1.0674	644,786	2.66
5 Years	$2,131,700			$2,502,409	2.25

Indemnity & Medical	(6) Developed Payroll				
2017	21,167,074			2,236,144	10.56
2018	19,576,675			884,850	4.52
2019	23,563,089			920,984	3.91
2020	22,813,839			819,683	3.59
2021	24,267,567			1,975,533	8.14
5 Years	$111,388,244			$6,837,194	6.14

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Surface Bituminous 1014

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	194,026	1.0325	1.0080	201,934	0.61
2018	63,855	1.0642	1.0034	68,186	0.19
2019	317,509	1.0900	1.0000	346,085	0.98
2020	345,316	1.2288	1.0000	424,324	1.56
2021	26,166	1.8738	1.0000	49,030	0.17
5 Years	$946,872			$1,089,559	0.68
Medical					
2017	186,618	1.0495	1.1736	229,856	0.69
2018	131,600	1.0508	1.1461	158,489	0.45
2019	178,901	1.0521	1.1192	210,658	0.60
2020	82,018	1.0391	1.0930	93,151	0.34
2021	99,545	1.0577	1.0674	112,385	0.38
5 Years	$678,682			$804,539	0.50

Indemnity & Medical	(6) Developed Payroll				
2017	33,140,780			431,790	1.30
2018	35,242,187			226,675	0.64
2019	35,362,714			556,743	1.57
2020	27,274,125			517,475	1.90
2021	29,582,319			161,415	0.55
5 Years	$160,602,125			$1,894,098	1.18

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Seven Less Than 100% Credibility Classifications (7 Classes)

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	628,474	1.0325	1.0080	654,090	1.05
2018	545,053	1.0642	1.0034	582,017	0.82
2019	1,007,406	1.0900	1.0000	1,098,073	1.49
2020	1,412,204	1.2288	1.0000	1,735,316	2.68
2021	213,248	1.8738	1.0000	399,584	0.61
5 Years	$3,806,385			$4,469,080	1.33
Medical					
2017	1,146,679	1.0495	1.1736	1,412,358	2.28
2018	1,326,763	1.0508	1.1461	1,597,850	2.26
2019	399,392	1.0521	1.1192	470,289	0.64
2020	1,029,718	1.0391	1.0930	1,169,489	1.80
2021	320,916	1.0577	1.0674	362,311	0.55
5 Years	$4,223,468			$5,012,297	1.49

Indemnity & Medical	(6) Developed Payroll				
2017	62,071,873			2,066,448	3.33
2018	70,763,576			2,179,867	3.08
2019	73,830,768			1,568,362	2.12
2020	64,803,822			2,904,805	4.48
2021	65,793,292			761,895	1.16
5 Years	$337,263,331			$9,481,377	2.81

Source: (1) Sum of Exhibit V-B, pages 7-13 - column (1)
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Sum of Exhibit V-B, pages 7-13 - column (6)

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Coke 1469

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	42,083	1.0325	1.0080	43,798	0.96
2018	99,871	1.0642	1.0034	106,644	2.38
2019	129,350	1.0900	1.0000	140,992	3.16
2020	0	1.2288	1.0000	0	0.00
2021	0	1.8738	1.0000	0	0.00
5 Years	$271,304			$291,434	2.11
Medical					
2017	185,062	1.0495	1.1736	227,940	4.99
2018	110,693	1.0508	1.1461	133,310	2.97
2019	8,215	1.0521	1.1192	9,673	0.22
2020	0	1.0391	1.0930	0	0.00
2021	0	1.0577	1.0674	0	0.00
5 Years	$303,970			$370,923	2.68

Indemnity & Medical	(6) Developed Payroll				
2017	4,566,113			271,738	5.95
2018	4,484,744			239,954	5.35
2019	4,466,971			150,665	3.37
2020	313,587			0	0.00
2021	0			0	0.00
5 Years	$13,831,415			$662,357	4.79

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Auger 1015

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	0	1.0325	1.0080	0	0.00
2018	0	1.0642	1.0034	0	0.00
2019	0	1.0900	1.0000	0	0.00
2020	87,382	1.2288	1.0000	107,375	27.92
2021	0	1.8738	1.0000	0	0.00
5 Years	$87,382			$107,375	4.92
Medical					
2017	0	1.0495	1.1736	0	0.00
2018	0	1.0508	1.1461	0	0.00
2019	2,299	1.0521	1.1192	2,707	0.50
2020	25,817	1.0391	1.0930	29,321	7.62
2021	0	1.0577	1.0674	0	0.00
5 Years	$28,116			$32,028	1.47

Indemnity & Medical	(6) Developed Payroll			
2017	449,009		0	0.00
2018	600,138		0	0.00
2019	539,914		2,707	0.50
2020	384,571		136,696	35.55
2021	208,581		0	0.00
5 Years	$2,182,213		$139,403	6.39

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Co-Gen Anthracite 1021

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	237,097	1.0325	1.0080	246,761	2.80
2018	90,755	1.0642	1.0034	96,910	0.84
2019	24,221	1.0900	1.0000	26,401	0.32
2020	654,420	1.2288	1.0000	804,151	10.50
2021	298	1.8738	1.0000	558	0.01
5 Years	$1,006,791			$1,174,781	2.64
Medical					
2017	256,260	1.0495	1.1736	315,634	3.58
2018	847,740	1.0508	1.1461	1,020,952	8.80
2019	53,068	1.0521	1.1192	62,488	0.76
2020	649,992	1.0391	1.0930	738,220	9.64
2021	45,442	1.0577	1.0674	51,304	0.62
5 Years	$1,852,502			$2,188,598	4.91

Indemnity & Medical	(6) Developed Payroll				
2017	8,819,700			562,395	6.38
2018	11,600,891			1,117,862	9.64
2019	8,191,669			88,889	1.09
2020	7,660,069			1,542,371	20.14
2021	8,263,749			51,862	0.63
5 Years	$44,536,078			$3,363,379	7.55

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Co-Gen Bituminous 1023

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	50,986	1.0325	1.0080	53,064	0.46
2018	106,387	1.0642	1.0034	113,602	0.94
2019	4,267	1.0900	1.0000	4,651	0.04
2020	7,540	1.2288	1.0000	9,265	0.09
2021	142,091	1.8738	1.0000	266,250	2.17
5 Years	$311,271			$446,832	0.77
Medical					
2017	136,598	1.0495	1.1736	168,247	1.47
2018	57,361	1.0508	1.1461	69,081	0.57
2019	11,225	1.0521	1.1192	13,218	0.11
2020	21,008	1.0391	1.0930	23,860	0.22
2021	72,101	1.0577	1.0674	81,401	0.66
5 Years	$298,293			$355,807	0.61

Indemnity & Medical	(6) Developed Payroll				
2017	11,435,057			221,311	1.94
2018	12,043,297			182,683	1.52
2019	11,818,883			17,869	0.15
2020	10,678,482			33,125	0.31
2021	12,244,359			347,651	2.84
5 Years	$58,220,078			$802,639	1.38

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Prep Plants Anthracite 1025

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	6,566	1.0325	1.0080	6,834	0.09
2018	43,147	1.0642	1.0034	46,073	0.48
2019	178,341	1.0900	1.0000	194,392	1.55
2020	276,154	1.2288	1.0000	339,338	2.79
2021	17,688	1.8738	1.0000	33,144	0.26
5 Years	$521,896			$619,781	1.13
Medical					
2017	34,515	1.0495	1.1736	42,512	0.55
2018	196,615	1.0508	1.1461	236,788	2.45
2019	143,849	1.0521	1.1192	169,384	1.35
2020	176,818	1.0391	1.0930	200,819	1.65
2021	60,149	1.0577	1.0674	67,908	0.53
5 Years	$611,946			$717,411	1.31

Indemnity & Medical	(6) Developed Payroll				
2017	7,746,154			49,346	0.64
2018	9,651,288			282,861	2.93
2019	12,534,373			363,776	2.90
2020	12,170,346			540,157	4.44
2021	12,790,962			101,052	0.79
5 Years	$54,893,123			$1,337,192	2.44

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Prep Plants Bituminous 1027

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	291,742	1.0325	1.0080	303,633	1.05
2018	204,893	1.0642	1.0034	218,788	0.68
2019	671,227	1.0900	1.0000	731,637	2.03
2020	386,708	1.2288	1.0000	475,187	1.43
2021	53,171	1.8738	1.0000	99,632	0.31
5 Years	$1,607,741			$1,828,877	1.13
Medical					
2017	534,244	1.0495	1.1736	658,025	2.28
2018	114,354	1.0508	1.1461	137,719	0.43
2019	180,736	1.0521	1.1192	212,819	0.59
2020	156,083	1.0391	1.0930	177,269	0.53
2021	143,224	1.0577	1.0674	161,698	0.50
5 Years	$1,128,641			$1,347,530	0.83

Indemnity & Medical	(6) Developed Payroll				
2017	28,803,457			961,658	3.34
2018	32,199,872			356,507	1.11
2019	36,099,579			944,456	2.62
2020	33,297,067			652,456	1.96
2021	32,053,110			261,330	0.82
5 Years	$162,453,085			$3,176,407	1.96

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Underground Anthracite - 1010

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	0	1.0325	1.0080	0	0.00
2018	0	1.0642	1.0034	0	0.00
2019	0	1.0900	1.0000	0	0.00
2020	0	1.2288	1.0000	0	0.00
2021	0	1.8738	1.0000	0	0.00
5 Years	$0			$0	0.00
Medical					
2017	0	1.0495	1.1736	0	0.00
2018	0	1.0508	1.1461	0	0.00
2019	0	1.0521	1.1192	0	0.00
2020	0	1.0391	1.0930	0	0.00
2021	0	1.0577	1.0674	0	0.00
5 Years	$0			$0	0.00

Indemnity & Medical	(6) Developed Payroll			
2017	252,383		0	0.00
2018	183,346		0	0.00
2019	179,379		0	0.00
2020	299,700		0	0.00
2021	232,531		0	0.00
5 Years	$1,147,339		-	0.00

Source: (1) CMCRB Database as of 04-30-2022
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-D

Coal Mine Compensation Rating Bureau
Traumatic Loss Cost Indication
Five Other Classifications [Page 6 less Pages 8 & 13] - (5 Classes)

Accident Year	(1) Reported Losses	(2) Loss Development	(3) Trend Factor	(4) Ultimate Losses	(5) Loss Cost
Indemnity					
2017	628,474	1.0325	1.0080	654,090	1.07
2018	545,053	1.0642	1.0034	582,017	0.83
2019	1,007,406	1.0900	1.0000	1,098,073	1.50
2020	1,324,822	1.2288	1.0000	1,627,941	2.54
2021	213,248	1.8738	1.0000	399,584	0.61
5 Years	$3,719,003			$4,361,705	1.31
Medical					
2017	1,146,679	1.0495	1.1736	1,412,358	2.30
2018	1,326,763	1.0508	1.1461	1,597,850	2.28
2019	397,093	1.0521	1.1192	467,582	0.64
2020	1,003,901	1.0391	1.0930	1,140,168	1.78
2021	320,916	1.0577	1.0674	362,311	0.55
5 Years	$4,195,352			$4,980,269	1.49

Indemnity & Medical	(6) Developed Payroll				
2017	61,370,481			2,066,448	3.37
2018	69,980,092			2,179,867	3.11
2019	73,111,475			1,565,655	2.14
2020	64,119,551			2,768,109	4.32
2021	65,352,180			761,895	1.17
5 Years	$333,933,779			$9,341,974	2.80

Source: (1) Exhibit V-B, page 6 minus page 8,column (1) minus page 13,column (1)
(2) Exhibit V-C
(3) Exhibit V-F
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit V-B, page 6 minus page 13 - column (6)

Coal Mine Compensation Rating Bureau
Indemnity & Funeral Traumatic Loss Development
Selected Loss Development Factors

(1) Development Period	(2) Average of Middle Four	(3) PCRB Factor	(4) CMCRB vs. PCRB Comparison	(5) Derived Development Factor	(6) Selected Factor	(7) Differences Average vs Selected	(8) Accumulated Selected Factor
1:2	1.5249	1.3312	0.1937	1.5249	1.5249	0.0000	1.8738
2:3	1.1273	1.0768	0.0505	1.1273	1.1273	0.0000	1.2288
3:4	1.0242	1.0148	0.0094	1.0242	1.0242	0.0000	1.0900
4:5	1.0307	1.0021	0.0286	1.0307	1.0307	0.0000	1.0642
5:6	0.9927	0.9995	-0.0068	1.0026	1.0026	-0.0099	1.0325
6:7	1.0148	1.0026	0.0122	1.0025	1.0025	0.0123	1.0298
7:8	1.0024	1.0025	-0.0001	1.0024	1.0024	0.0000	1.0273
8:9	1.0082	1.0011	0.0071	1.0023	1.0023	0.0059	1.0249
9:10	0.9980	1.0013	-0.0033	1.0022	1.0022	-0.0042	1.0226
10:11	1.0061	0.9996	0.0065	1.0021	1.0021	0.0040	1.0204
11:12	0.9985	1.0002	-0.0017	1.0020	1.0020	-0.0035	1.0183
12:13	1.0035	1.0013	0.0022	1.0019	1.0019	0.0016	1.0163
13:14	0.9987	1.0000	-0.0013	1.0017	1.0017	-0.0030	1.0144
14:15	0.9987	1.0002	-0.0015	1.0016	1.0016	-0.0029	1.0126
15:16	1.0008	0.9983	0.0025	1.0015	1.0015	-0.0007	1.0109
16:17	1.0022	0.9990	0.0032	1.0014	1.0014	0.0008	1.0093
17:18	1.0015	0.9999	0.0016	1.0013	1.0013	0.0002	1.0079
18:19	1.0018	1.0001	0.0017	1.0012	1.0012	0.0006	1.0066
19:20	1.0000	0.9998	0.0002	1.0011	1.0011	-0.0011	1.0054
20:Ult	xx	1.0031	xx	1.0043	1.0043		1.0043

Sources:
- (1) Reports spanned by age-to-age factors
- (2) Exhibit V-D Page 1 and VI-A Page 4
- (3) Exhibit V-D-3
- (4) Col.(2) - Col.(3)
- (5) Exhibit V-D-2 Col.(5)
- (6) = Selected equal to Col. (5)
- (7) Col.(2) - Col.(6)
- (8) Upward accumulation of Col.(6)

Coal Mine Compensation Rating Bureau
Medical Traumatic Loss Development
Selected Loss Development Factors

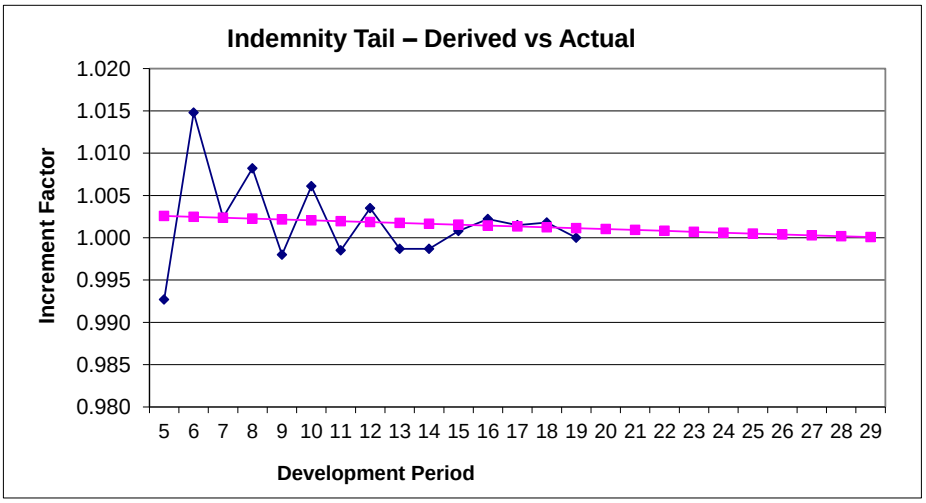
(1) Development Period	(2) Average of Middle Four	(3) PCRB Factor	(4) CMCRB vs. PCRB Comparison	(5) Derived Development Factor	(6) Selected Factor	(7) Differences Average vs Selected	(8) Accumulated Selected Factor
1:2	1.0179	1.0465	-0.0286	1.0179	1.0179	0.0000	1.0577
2:3	0.9876	1.0144	-0.0268	0.9876	0.9876	0.0000	1.0391
3:4	0.9781	1.0017	-0.0236	1.0013	1.0013	-0.0232	1.0521
4:5	1.0166	0.9932	0.0234	1.0012	1.0012	0.0154	1.0508
5:6	0.9938	0.9974	-0.0036	1.0012	1.0012	-0.0074	1.0495
6:7	1.0132	1.0075	0.0057	1.0012	1.0012	0.0120	1.0483
7:8	0.9970	1.0019	-0.0049	1.0011	1.0011	-0.0041	1.0471
8:9	1.0038	1.0045	-0.0007	1.0011	1.0011	0.0027	1.0459
9:10	1.0066	1.0012	0.0054	1.0011	1.0011	0.0055	1.0448
10:11	1.0036	1.0010	0.0026	1.0010	1.0010	0.0026	1.0437
11:12	1.0052	1.0017	0.0035	1.0010	1.0010	0.0042	1.0426
12:13	1.0035	1.0037	-0.0002	1.0010	1.0010	0.0025	1.0416
13:14	1.0041	1.0069	-0.0028	1.0009	1.0009	0.0032	1.0406
14:15	1.0033	1.0029	0.0004	1.0009	1.0009	0.0024	1.0396
15:16	0.9936	0.9987	-0.0051	1.0009	1.0009	-0.0073	1.0387
16:17	0.9819	1.0003	-0.0184	1.0008	1.0008	-0.0189	1.0378
17:18	1.0023	0.9995	0.0028	1.0008	1.0008	0.0015	1.0369
18:19	1.0001	1.0005	-0.0004	1.0008	1.0008	-0.0007	1.0361
19:20	1.0000	1.0039	-0.0039	1.0007	1.0007	-0.0007	1.0353
20:Ult	xx	1.0615	xx	1.0345	1.0345		1.0345

Sources:
- (1) Reports spanned by age-to-age factors
- (2) Exhibit V-E Page 1 and VI-B Page 4
- (3) Exhibit V-E-3
- (4) Col.(2) - Col.(3)
- (5) Exhibit V-E-2 Col.(6)
- (6) = Selected equal to Col. (5)
- (7) Col.(2) - Col.(6)
- (8) Upward accumulation of Col.(6)

Exhibit V-D-1 is the same as VI-A-4

Coal Mine Compensation Rating Bureau
Indemnity Tail – Derived vs Actual

(1) Development Period	(2) Age-to-Age Factor	(3) Derived Factor	(4) Accumulated Age-to-Age Fac.	(5) Model Factors	(6) Accumulated Model Factors	(7) Derived Factor	(8) Accumulated Derived Factor	(9) Tail Devel. Period	(10) Model Factors	(11) Accumulated Model Factors
1	1.5249	1.5249	1.8656	1.5249	xx	xx	xx			
2	1.1273	1.1273	1.2234	1.1273	xx	xx	xx			
3	1.0242	1.0242	1.0853	1.0242	xx	xx	xx			
4	1.0307	1.0307	1.0596	1.0307	xx	xx	xx			
5	0.9927	1.0026	1.0281	1.0026	1.0281	1.0026	1.0281			
6	1.0148	1.0025	1.0356	1.0025	1.0255	1.0025	1.0255			
7	1.0024	1.0024	1.0205	1.0024	1.0230	1.0024	1.0230			
8	1.0082	1.0023	1.0181	1.0023	1.0205	1.0023	1.0205			
9	0.9980	1.0022	1.0098	1.0022	1.0182	1.0022	1.0182			
10	1.0061	1.0021	1.0118	1.0021	1.0160	1.0021	1.0160			
11	0.9985	1.0020	1.0057	1.0020	1.0139	1.0020	1.0139			
12	1.0035	1.0019	1.0072	1.0019	1.0120	1.0019	1.0120			
13	0.9987	1.0017	1.0037	1.0017	1.0101	1.0017	1.0101			
14	0.9987	1.0016	1.0050	1.0016	1.0083	1.0016	1.0083			
15	1.0008	1.0015	1.0063	1.0015	1.0067	1.0015	1.0067			
16	1.0022	1.0014	1.0055	1.0014	1.0051	1.0014	1.0051			
17	1.0015	1.0013	1.0033	1.0013	1.0037	1.0013	1.0037			
18	1.0018	1.0012	1.0018	1.0012	1.0024	1.0012	1.0024			
19	1.0000	1.0011	1.0000	1.0011	1.0011	1.0011	1.0011			
20		1.0010						20	1.0010	1.0055
21		1.0009						21	1.0009	1.0045
22		1.0008						22	1.0008	1.0036
23		1.0007						23	1.0007	1.0028
24		1.0006						24	1.0006	1.0021
25		1.0005						25	1.0005	1.0015
26		1.0004						26	1.0004	1.0010
27		1.0003						27	1.0003	1.0006
28		1.0002						28	1.0002	1.0003
29		1.0001						29	1.0001	1.0001



CMCRB tail factor	1.0055
PCRB tail factor	1.0031
Selected Tail Factor	1.0043

Source:

(1) Development Period: e.g."1" = 12 months to 24 months
(2) Exhibit V-D-1 and VI-A-4
(3) 1 thru 4 Col.(2)
5 thru 19 Col. (7)
20 thru 29 Col. (10)
(4) = Accumulation of Col.(2)
(5) From Model: Refer to Written Report
(6) Accumulation of Col.(5)
(7) Col.(5) adjusted
(8) Accumulation of Col.(7)
(9) Tail Factor Development Periods
(10) Final Tail Calculation
(11) Accumulation of Col. (10)

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Indemnity & Funeral Loss Development Tail Factor
PCRB Development and Tail Factors

(1) Span of Maturities	(2) Age-to-Age Incurred Loss Factors	(3) Span of Maturities	(4) Cumulative Incurred Loss Factors
1 to 2	1.3312	1 to Ult	1.4701
2 to 3	1.0768	2 to Ult	1.1044
3 to 4	1.0148	3 to Ult	1.0256
4 to 5	1.0021	4 to Ult	1.0106
5 to 6	0.9995	5 to Ult	1.0085
6 to 7	1.0026	6 to Ult	1.0090
7 to 8	1.0025	7 to Ult	1.0064
8 to 9	1.0011	8 to Ult	1.0039
9 to 10	1.0013	9 to Ult	1.0028
10 to 11	0.9996	10 to Ult	1.0015
11 to 12	1.0002	11 to Ult	1.0019
12 to 13	1.0013	12 to Ult	1.0017
13 to 14	1.0000	13 to Ult	1.0004
14 to 15	1.0002	14 to Ult	1.0004
15 to 16	0.9983	15 to Ult	1.0002
16 to 17	0.9990	16 to Ult	1.0019
17 to 18	0.9999	17 to Ult	1.0029
18 to 19	1.0001	18 to Ult	1.0030
19 to 20	0.9998	19 to Ult	1.0029
20 to Ult	1.0031	20 to Ult	1.0031

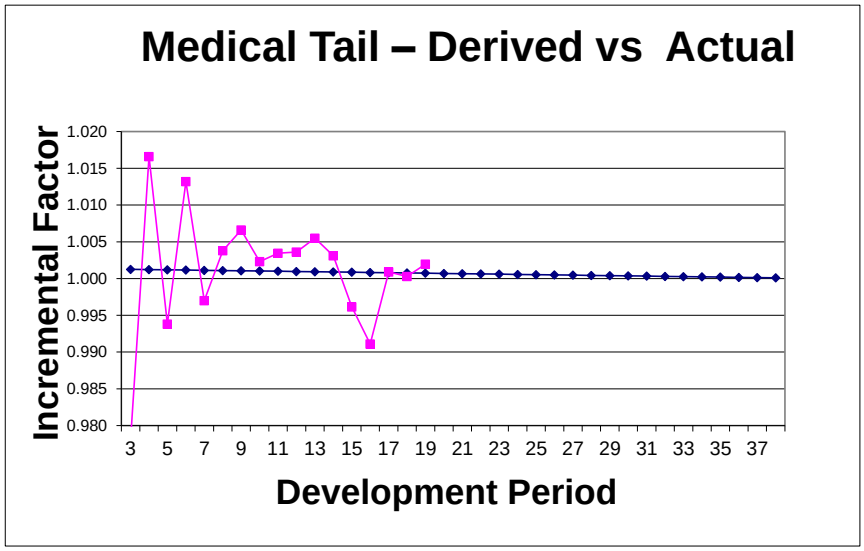
Source:PCRB Loss Cost Filing effective April 1, 2022 - Exhibit 5, page 5, Selected Incurred LDF

The 20:Ult Factor is the PCRB's "Beyond 19-20" factor

Exhibit V-E-1 is the same as VI-B-4

Coal Mine Compensation Rating Bureau
Medical Tail – Derived vs Actual

(1) Development Period	(2) Average Age-toAge Factor	(3) PCRB Factors	(4) Adjusted Age-to-Age Factor	(5) Accumulated Adjusted Age-to-Age Factor	(6) Derived Development Factor	(7) Accumulated Derived Factor	(8) Tail Development Period	(9) Derived Development Factor	(10) Accumulation of Derived Subsequent Factors
1	1.0179		1.0179	1.0224	1.0179	1.0224	20	1.0007	1.0076
2	0.9876		0.9876	1.0044	0.9876	1.0044	21	1.0007	1.0069
3	0.9781		0.9781	1.0170	1.0013	1.0170	22	1.0006	1.0062
4	1.0166		1.0166	1.0398	1.0012	1.0157	23	1.0006	1.0056
5	0.9938		0.9938	1.0228	1.0012	1.0145	24	1.0006	1.0050
6	1.0132		1.0132	1.0292	1.0012	1.0133	25	1.0005	1.0044
7	0.9970		0.9970	1.0158	1.0011	1.0121	26	1.0005	1.0039
8	1.0038		1.0038	1.0188	1.0011	1.0110	27	1.0005	1.0034
9	1.0066		1.0066	1.0150	1.0011	1.0099	28	1.0004	1.0029
10	1.0036	1.0010	1.0023	1.0083	1.0010	1.0088	29	1.0004	1.0025
11	1.0052	1.0017	1.0035	1.0060	1.0010	1.0078	30	1.0004	1.0021
12	1.0035	1.0037	1.0036	1.0025	1.0010	1.0068	31	1.0003	1.0017
13	1.0041	1.0069	1.0055	0.9989	1.0009	1.0058	32	1.0003	1.0014
14	1.0033	1.0029	1.0031	0.9935	1.0009	1.0049	33	1.0003	1.0011
15	0.9936	0.9987	0.9962	0.9904	1.0009	1.0040	34	1.0002	1.0008
16	0.9819	1.0003	0.9911	0.9942	1.0008	1.0031	35	1.0002	1.0006
17	1.0023	0.9995	1.0009	1.0032	1.0008	1.0023	36	1.0002	1.0004
18	1.0001	1.0005	1.0003	1.0023	1.0008	1.0015	37	1.0001	1.0002
19	1.0000	1.0039	1.0020	1.0020	1.0007	1.0007	38	1.0001	1.0001



CMCRB derived tail factor	1.0076
PCRB tail factor	1.0615
Selected	1.0345

Sources: (1) Development period:e.g. "1" =12 months to 24 months
(2) Exhibit VI-B-4
(3) PCRB Factors (Exhibit V-E-3)
(4) (1) thru (9): Col. (2)
(10) thru (19): average of Col. (2) and Col. (3)
(5) Accumulation of (4)
(6) See (4) above plus refer to written report.
(7) Accumulation of (6)
(8) Tail Factor Development Periods
(9) Final Tail Calculation
(10) Upward accumulation of Col. (9)

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Medical Loss Development Tail Factor
PCRB Development and Tail Factors

(1) Span of Maturities	(2) Age-to-Age Incurred Loss Factors	(3) Span of Maturities	(4) Cumulative Incurred Loss Factors
1 to 2	1.0465	1 to Ult.	1.1570
2 to 3	1.0144	2 to Ult.	1.1056
3 to 4	1.0017	3 to Ult.	1.0899
4 to 5	0.9932	4 to Ult.	1.0880
5 to 6	0.9974	5 to Ult.	1.0955
6 to 7	1.0075	6 to Ult.	1.0983
7 to 8	1.0019	7 to Ult.	1.0902
8 to 9	1.0045	8 to Ult.	1.0881
9 to 10	1.0012	9 to Ult.	1.0832
10 to 11	1.0010	10 to Ult.	1.0819
11 to 12	1.0017	11 to Ult.	1.0808
12 to 13	1.0037	12 to Ult.	1.0790
13 to 14	1.0069	13 to Ult.	1.0750
14 to 15	1.0029	14 to Ult.	1.0677
15 to 16	0.9987	15 to Ult.	1.0646
16 to 17	1.0003	16 to Ult.	1.0660
17 to 18	0.9995	17 to Ult.	1.0656
18 to 19	1.0005	18 to Ult.	1.0662
19 to 20	1.0039	19 to Ult.	1.0656
20 to Ult.	1.0615	20 to Ult.	1.0615

Source:PCRB Loss Cost Filing effective April 1, 2022 - Exhibit 5, page 19, Selected Incurred LDF

The 20:Ult Factor is the PCRB's "Beyond 19-20" factor.

Coal Mine Compensation Rating Bureau

Traumatic Loss Trend

Indemnity, Funeral and Medical for All Classes Combined

Trend Factors

Indemnity and Funeral

Annual Percentage Change: 0.0%

Accident Year	Trend Period - Years		Annual Percentage Change	Formula	Trend Factor	HB 1846 Adjustment Factor	HB 1840 Adjustment Factor	Adjusted Trend Factor
2017	7-1-17 to 4-1-2024	6.75	0.0%	(1 + 0.000) ^ 6.75	1.0000	1.0000	1.0080	1.0080
2018	7-1-18 to 4-1-2024	5.75	0.0%	(1 + 0.000) ^ 5.75	1.0000	1.0000	1.0034	1.0034
2019	7-1-19 to 4-1-2024	4.75	0.0%	(1 + 0.000) ^ 4.75	1.0000	1.0000	1.0000	1.0000
2020	7-1-20 to 4-1-2024	3.75	0.0%	(1 + 0.000) ^ 3.75	1.0000	1.0000	1.0000	1.0000
2021	7-1-21 to 4-1-2024	2.75	0.0%	(1 + 0.000) ^ 2.75	1.0000	1.0000	1.0000	1.0000

Medical and Medical Only

Annual Percentage Change: 2.4%

Accident Year	Trend Period - Years		Annual Percentage Change	Formula	Trend Factor	HB 1846 Adjustment Factor	HB 1840 Adjustment Factor	Adjusted Trend Factor
2017	7-1-17 to 4-1-2024	6.75	2.4%	(1 + 0.024) ^ 6.75	1.1736	1.0000	1.0000	1.1736
2018	7-1-18 to 4-1-2024	5.75	2.4%	(1 + 0.024) ^ 5.75	1.1461	1.0000	1.0000	1.1461
2019	7-1-19 to 4-1-2024	4.75	2.4%	(1 + 0.024) ^ 4.75	1.1192	1.0000	1.0000	1.1192
2020	7-1-20 to 4-1-2024	3.75	2.4%	(1 + 0.024) ^ 3.75	1.0930	1.0000	1.0000	1.0930
2021	7-1-21 to 4-1-2024	2.75	2.4%	(1 + 0.024) ^ 2.75	1.0674	1.0000	1.0000	1.0674

Source: Annual Percentage Change - Exhibit V-K

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Year	(1) Indemnity Case Incurred Losses	(2) Loss Development Factors	(3) Ultimate Losses	(4) Loss Cost Premium
2012	10,262,450	1.0204	10,471,804	16,060,980
2013	7,807,196	1.0226	7,983,639	15,068,240
2014	12,388,158	1.0249	12,696,623	23,465,866
2015	12,405,876	1.0273	12,744,556	19,545,291
2016	8,714,729	1.0298	8,974,428	14,034,825
2017	10,474,304	1.0325	10,814,719	15,954,484
2018	8,271,331	1.0642	8,802,350	16,804,038
2019	7,903,631	1.0900	8,614,958	16,811,021
2020	7,200,675	1.2288	8,848,189	13,664,937
2021	4,395,644	1.8738	8,236,558	13,292,227

Sources:
(1) Exhibit V-D,pg.1 or Exhibit VI-A,pg.4
(2) Exhibit V-C-1 Column (8)
(3) =(1)x(2)
(4) Exhibit X-B

Traumatic Loss Trend
Medical and Medical Only Losses for All Classes Combined

Year	(1) Medical Case Incurred Losses	(2) Loss Development Factors	(3) Ultimate Losses	(4) Loss Cost Premium
2012	5,696,979	1.0437	5,945,937	16,060,980
2013	4,211,388	1.0448	4,400,058	15,068,240
2014	5,884,600	1.0459	6,154,703	23,465,866
2015	3,895,122	1.0471	4,078,582	19,545,291
2016	3,747,184	1.0483	3,928,173	14,034,825
2017	6,122,505	1.0495	6,425,569	15,954,484
2018	5,210,327	1.0508	5,475,012	16,804,038
2019	3,791,810	1.0521	3,989,363	16,811,021
2020	4,026,550	1.0391	4,183,988	13,664,937
2021	3,461,236	1.0577	3,660,949	13,292,227

Sources:
(1) Exhibit V-E,pg.1 or Exhibit VI-B,pg.4
(2) Exhibit V-C-2 Column (8)
(3) =(1)x(2)
(4) Exhibit X-B

Traumatic Loss Trend

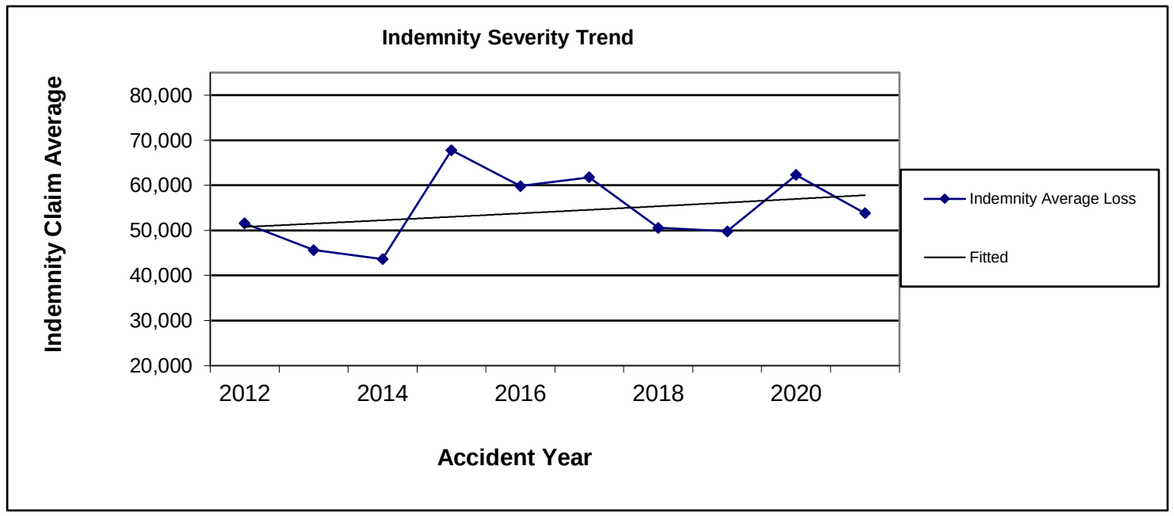
Indemnity and Funeral Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change
2012	10,471,804	203	51,585	
2013	7,983,639	175	45,621	-11.6%
2014	12,696,623	291	43,631	-4.4%
2015	12,744,556	188	67,790	55.4%
2016	8,974,428	150	59,830	-11.7%
2017	10,814,719	175	61,798	3.3%
2018	8,802,350	174	50,588	-18.1%
2019	8,614,958	173	49,797	-1.6%
2020	8,848,189	142	62,311	25.1%
2021	8,236,558	153	53,834	-13.6%

Indemnity Severity Trend Factor: 1.016
Source: Summary Exhibit (V-K)

Fitted=50033.7978 x e^(0.0144*(YEAR-2011))



Sources:
(1) Exhibit V-H page 1,Column (3)
(2) Exhibit VI-C-1
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend

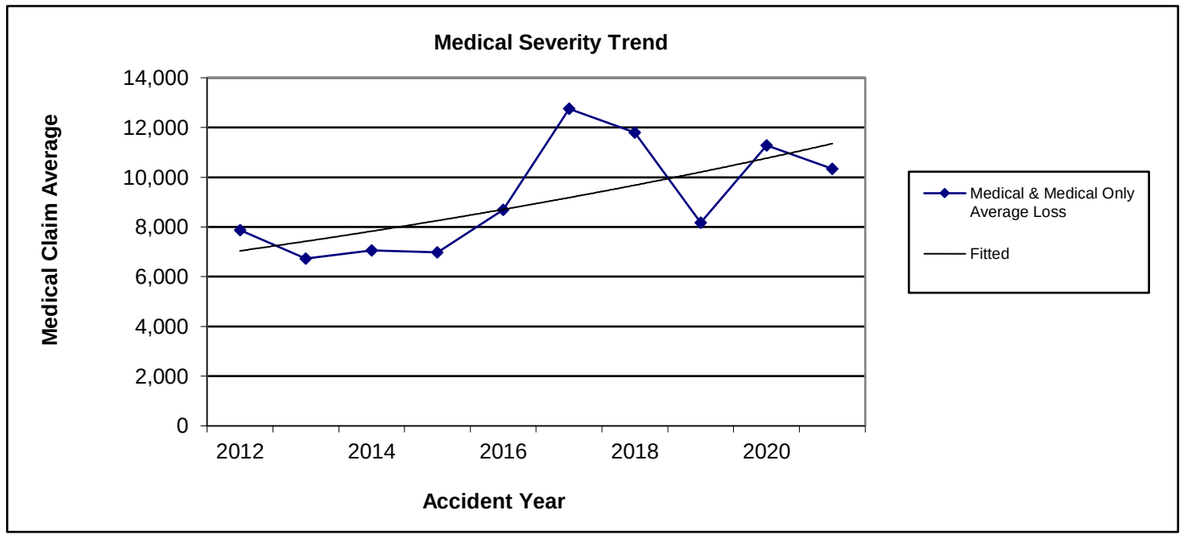
Medical and Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change
2012	5,945,937	755	7,875	
2013	4,400,058	654	6,728	-14.6%
2014	6,154,703	872	7,058	4.9%
2015	4,078,582	584	6,984	-1.0%
2016	3,928,173	452	8,691	24.4%
2017	6,425,569	504	12,749	46.7%
2018	5,475,012	464	11,800	-7.4%
2019	3,989,363	488	8,175	-30.7%
2020	4,183,988	371	11,278	38.0%
2021	3,660,949	354	10,342	-8.3%

Medical Severity Trend Factor: 1.064
Source: Summary Exhibit (V-K)

Fitted=6675.0549 x e^(0.0531*(YEAR-2011))



Sources:
(1) Exhibit V-H page 2,Column (3)
(2) Exhibit VI-C-1 + Exhibit VI-C-2

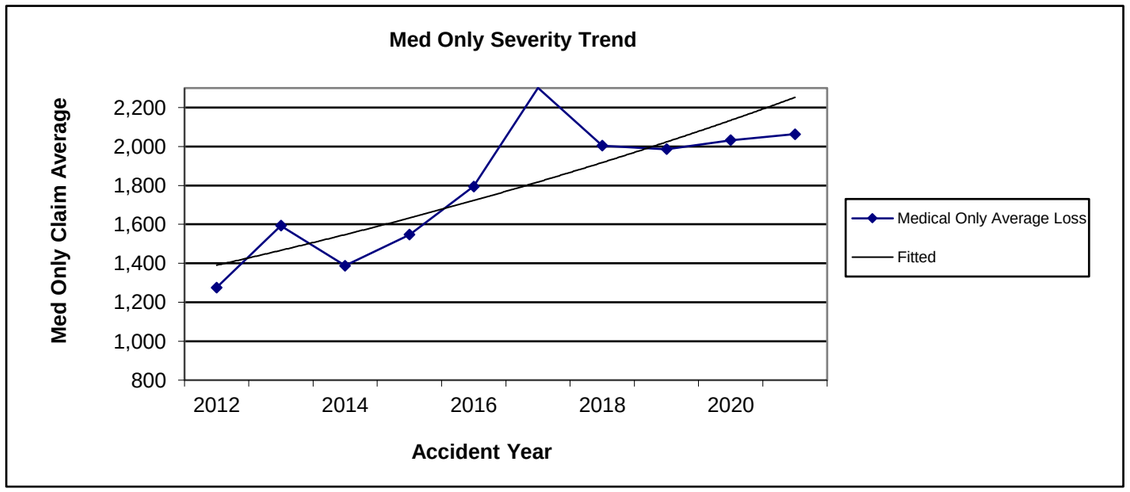
Traumatic Loss Trend
Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Claim Counts	(2) Ultimate Incurred Losses	(3) Average Loss	(4) Annual Average Loss Change
2012	552	704,535	1,276	
2013	479	763,168	1,593	24.8%
2014	581	806,301	1,388	-12.9%
2015	396	612,724	1,547	11.5%
2016	302	542,126	1,795	16.0%
2017	329	757,079	2,301	28.2%
2018	290	581,295	2,004	-12.9%
2019	315	625,437	1,986	-0.9%
2020	229	465,344	2,032	2.3%
2021	201	414,631	2,063	1.5%

Med. Only Severity Trend Factor: 1.055
Source: Summary Exhibit (V-K)

Fitted=1317.6362 x e^(0.0536*(YEAR-2011))



Sources:
(1) Exhibit VI-C-2
(2) Exhibit VI-C-3

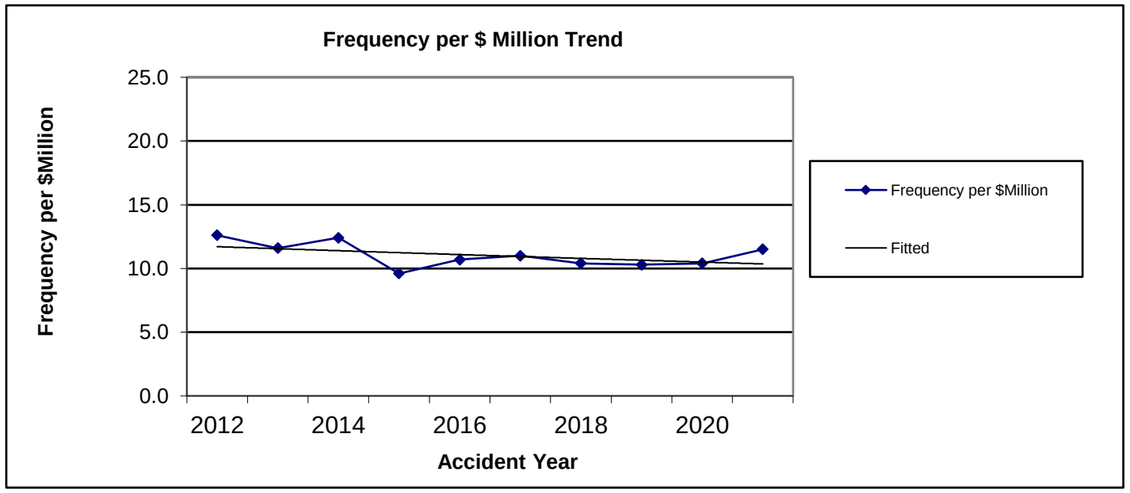
Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend

Year	(1) Ultimate Claim Counts	(2) Loss Cost Premium	(3) Frequency per($M)	(4) Annual Average Loss Change
2012	203	16,060,980	12.6	
2013	175	15,068,240	11.6	-7.9%
2014	291	23,465,866	12.4	6.9%
2015	188	19,545,291	9.6	-22.6%
2016	150	14,034,825	10.7	11.5%
2017	175	15,954,484	11.0	2.8%
2018	174	16,804,038	10.4	-5.5%
2019	173	16,811,021	10.3	-1.0%
2020	142	13,664,937	10.4	1.0%
2021	153	13,292,227	11.5	10.6%

Frequency per $Million Trend Factor: 0.986
Source: Summary Exhibit (V-K)

Fitted=11.8689 x e^(-0.0136*(YEAR-2011))



Sources:
(1) Exhibit V-I - Col. 2
(2) Exhibit X-B
(3) (1) / (2) x 1,000,000
(4) (Current Freq. / Prior Freq. -1.0) x 100'

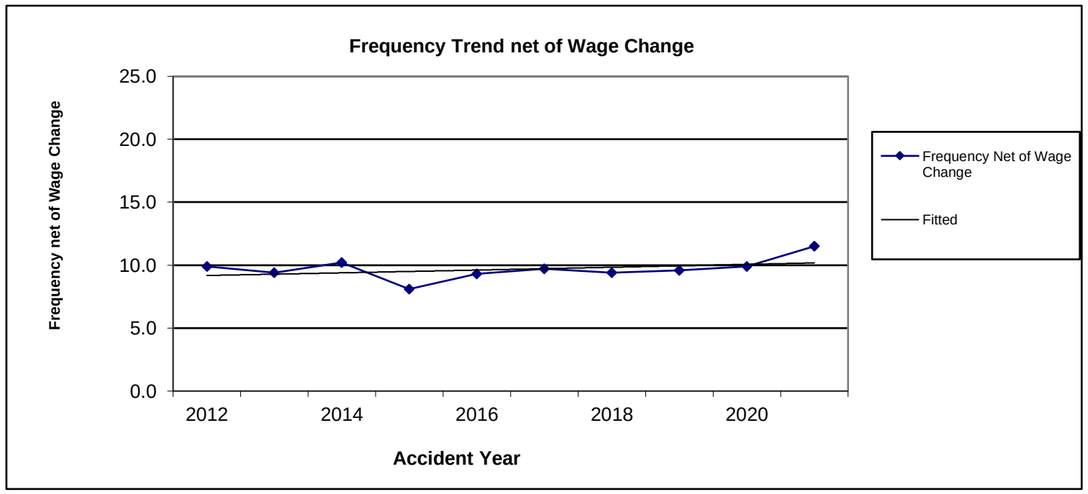
Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend Net of Wage Trend

Year	(1) Loss Cost Premium	(2) Statewide Average Weekly Wage	(3) On 2021 Level	(4) Loss Cost Premium on 2021 Level	(5) Claim Counts	(6) Adjusted Frequency per($M)	(7) Annual Frequency Change
2012	16,060,980	888	1.273	20,445,628	203	9.9	
2013	15,068,240	917	1.232	18,564,072	175	9.4	-5.1%
2014	23,465,866	932	1.212	28,440,630	291	10.2	8.5%
2015	19,545,291	951	1.188	23,219,806	188	8.1	-20.6%
2016	14,034,825	978	1.155	16,210,223	150	9.3	14.8%
2017	15,954,484	995	1.136	18,124,294	175	9.7	4.3%
2018	16,804,038	1025	1.102	18,518,050	174	9.4	-3.1%
2019	16,811,021	1049	1.077	18,105,470	173	9.6	2.1%
2020	13,664,937	1081	1.045	14,279,859	142	9.9	3.1%
2021	13,292,227	1130	1.000	13,292,227	153	11.5	16.2%

Frequency net of Wage Change Trend Factor: 1.011
Source: Summary Exhibit (V-K)

Fitted=9.0746 x e^(0.0115*(YEAR-2011))



Soures:
(1) Exhibit X-B
(2) Exhibit XII-D
(3) 2021 is 1.000. Values for other years divided into 2021 value to determine factor
(4) (1) x (3)
(5) Exhibit VI-C-1
(6) (5) / (4) * 1,000,000
(7) (Current Freq./Prior Freq.-1.0)x100

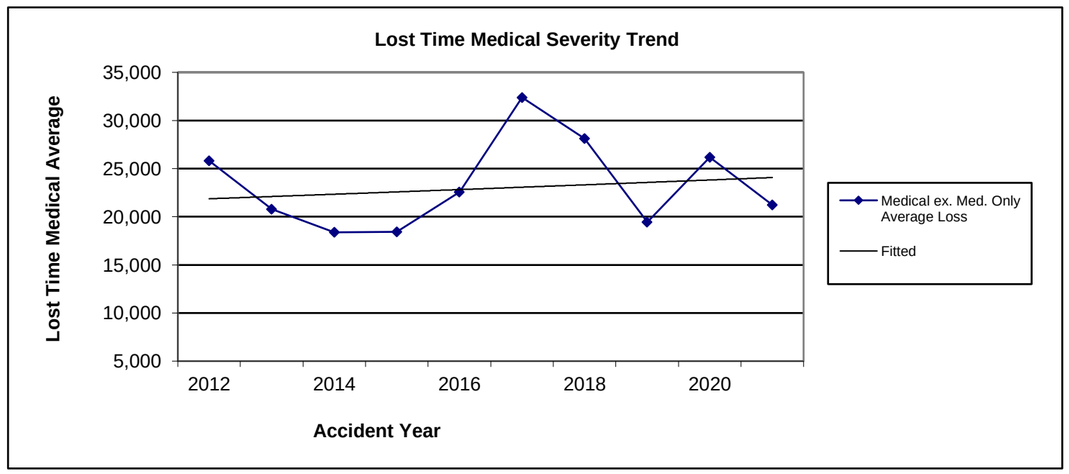
Traumatic Loss Trend
Medical (excl. Medical Only Losses) for All Classes Combined

Severity Trend

Year	(1) Ultimate Medical Losses Incurred	(2) Med. Only Ultimate Incurred Losses	(3) Ult. Med. On Lost Time Claims	(4) Claim Counts	(5) Average Loss	(6) Annual Average Loss Change
2012	5,945,937	704,535	5,241,402	203	25,820	
2013	4,400,058	763,168	3,636,890	175	20,782	-19.5%
2014	6,154,703	806,301	5,348,402	291	18,379	-11.6%
2015	4,078,582	612,724	3,465,858	188	18,435	0.3%
2016	3,928,173	542,126	3,386,047	150	22,574	22.5%
2017	6,425,569	757,079	5,668,490	175	32,391	43.5%
2018	5,475,012	581,295	4,893,717	174	28,125	-13.2%
2019	3,989,363	625,437	3,363,926	173	19,445	-30.9%
2020	4,183,988	465,344	3,718,644	142	26,188	34.7%
2021	3,660,949	414,631	3,246,319	153	21,218	-19.0%

Lost Time Medical Severity Trend Factor: 1.027
Source: Summary Exhibit (V-K)

Fitted=21633.5156 x e^(0.0107*(YEAR-2011))



Source:
(1) Exhibit V-H,Page 2
(2) Exhibit VI-C-3
(3) (1)-(2)
(4) Exhibit VI-C-1
(5) (3)/(4)
(6) (Current Avg. Loss /Prior Avg. Loss-1.0)x100

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Traumatic Loss Trend
Summary of Estimates

			Ests. 1&2	Ests. 3&4	Ests. 5&6	Ests. 7&8	Ests.9&10	Ests.11&12	Average	
V-I-1	Traditional	Indemnity	101.0%	101.9%	101.8%	102.3%	103.5%	103.6%	102.4%	Severity
	Moving Average	Indemnity	102.4%	100.9%	99.4%	102.4%	100.7%	98.7%	100.8%	Severity
									101.6%	Average
V-I-2	Traditional	Total Medical	104.3%	106.0%	105.8%	105.5%	107.8%	107.8%	106.2%	Severity
	Moving Average	Total Medical	104.6%	106.2%	105.5%	106.3%	108.5%	108.3%	106.6%	Severity
									106.4%	Average
V-I-3	Traditional	Medical Only	105.5%	104.1%	105.6%	106.2%	104.5%	106.6%	105.4%	Severity
	Moving Average	Medical Only	105.2%	105.0%	105.1%	105.9%	105.9%	106.2%	105.6%	Severity
									105.5%	Average
V-I-4	Traditional	Frequency	98.8%	99.6%	99.2%	97.7%	98.3%	97.8%	98.6%	Frequency
	Moving Average	Frequency	98.1%	99.2%	99.6%	97.4%	98.5%	98.8%	98.6%	Frequency
									98.6%	Average
V-I-5	Traditional	Frequency	101.5%	102.2%	102.0%	100.1%	100.7%	100.2%	101.1%	Frequency
	Moving Average	Frequency	100.7%	101.9%	102.3%	99.7%	100.9%	101.1%	101.1%	Frequency
									101.1%	Average
V-I-6	Traditional	Medical Ex. M.O.	99.4%	101.4%	102.4%	101.2%	103.8%	105.6%	102.3%	Severity
	Moving Average	Medical Ex. M.O.	100.4%	102.5%	102.4%	102.1%	105.1%	105.5%	103.0%	Severity
									102.7%	Average
			Average Frequency Indication							
	Traditional	Trad Freq	98.7%	99.4%	99.1%	97.4%	98.0%	97.5%	98.4%	
	Moving Average	MA Freq	97.9%	99.1%	99.5%	97.1%	98.2%	98.5%	98.4%	
									98.4%	

	Indemnity		Medical	
Selected Frequency Factor	98.50%	*	98.50%	*
Selected Severity Factor	101.50%	**	104.00%	***
Composite Trend Factor	100.00%		102.40%	
Approved 4-1-2022	100.2%		101.9%	
Selected 4-1-2023	100.0%	****	102.4%	****

* Selected Frequency Trend - see Actuarial Report

** Selected Indemity Severity Trend - see Actuarial Report

*** Selected Medical Severity Trend - see Actuarial Report

**** Limited to a maximum change of +-3.0 points, when necessary.

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	10,471,804	203	51,585			
2013	7,983,639	175	45,621	-11.6%		
2014	12,696,623	291	43,631	-4.4%	46,946	
2015	12,744,556	188	67,790	55.4%	52,347	11.5%
2016	8,974,428	150	59,830	-11.7%	57,084	9.0%
2017	10,814,719	175	61,798	3.3%	63,139	10.6%
2018	8,802,350	174	50,588	-18.1%	57,405	-9.1%
2019	8,614,958	173	49,797	-1.6%	54,061	-5.8%
2020	8,848,189	142	62,311	25.1%	54,232	0.3%
2021	8,236,558	153	53,834	-13.6%	55,314	2.0%

Analysis performed on data for 2012 through 2021.	Geometric Average:	0.5%	2.4%	Ests.
	Regression Indication:	1.5%		1 & 2
	Selected:	1.0%	2.4%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	2.1%	0.9%	Ests.
	Regression Indication:	1.6%		3 & 4
	Selected:	1.9%	0.9%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	3.1%	-0.6%	Ests.
	Regression Indication:	0.4%		5 & 6
	Selected:	1.8%	-0.6%	

Sources:
(1) Exhibit V-H page 1,Column (3)
(2) Exhibit VI-C-1
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Medical and Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	5,945,937	755	7,875			
2013	4,400,058	654	6,728	-14.6%		
2014	6,154,703	872	7,058	4.9%	7,220	
2015	4,078,582	584	6,984	-1.0%	6,923	-4.1%
2016	3,928,173	452	8,691	24.4%	7,578	9.5%
2017	6,425,569	504	12,749	46.7%	9,475	25.0%
2018	5,475,012	464	11,800	-7.4%	11,080	16.9%
2019	3,989,363	488	8,175	-30.7%	10,908	-1.6%
2020	4,183,988	371	11,278	38.0%	10,418	-4.5%
2021	3,660,949	354	10,342	-8.3%	9,932	-4.7%

Analysis performed on data for 2012 through 2021.	Geometric Average:	3.1%	4.6%	Ests.
	Regression Indication:	5.5%		1 & 2
	Selected:	4.3%	4.6%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	5.5%	6.2%	Ests.
	Regression Indication:	6.4%		3 & 4
	Selected:	6.0%	6.2%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	5.6%	5.5%	Ests.
	Regression Indication:	5.9%		5 & 6
	Selected:	5.8%	5.5%	

Sources:
(1) Exhibit V-H page 2,Column (3)
(2) Exhibit VI-C-1 + Exhibit VI-C-2
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Claim Counts	(2) Ultimate Incurred Losses	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	552	704,535	1,276			
2013	479	763,168	1,593	24.8%		
2014	581	806,301	1,388	-12.9%	1,419	
2015	396	612,724	1,547	11.5%	1,509	6.3%
2016	302	542,126	1,795	16.0%	1,577	4.5%
2017	329	757,079	2,301	28.2%	1,881	19.3%
2018	290	581,295	2,004	-12.9%	2,033	8.1%
2019	315	625,437	1,986	-0.9%	2,097	3.1%
2020	229	465,344	2,032	2.3%	2,007	-4.3%
2021	201	414,631	2,063	1.5%	2,027	1.0%

Analysis performed on data for 2012 through 2021.	Geometric Average:	5.5%	5.2%	Ests.
	Regression Indication:	5.5%		1 & 2
	Selected:	5.5%	5.2%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	3.3%	5.0%	Ests.
	Regression Indication:	4.8%		3 & 4
	Selected:	4.1%	5.0%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	5.8%	5.1%	Ests.
	Regression Indication:	5.3%		5 & 6
	Selected:	5.6%	5.1%	

Sources:
(1) Exhibit VI-C-2
(2) Exhibit VI-C-3
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend

Year	(1) Ultimate Claim Counts	(2) Loss Cost Premium	(3) Frequency per($M)	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	203	16,060,980	12.6			
2013	175	15,068,240	11.6	-7.9%		
2014	291	23,465,866	12.4	6.9%	12.2	
2015	188	19,545,291	9.6	-22.6%	11.2	-8.2%
2016	150	14,034,825	10.7	11.5%	10.9	-2.7%
2017	175	15,954,484	11.0	2.8%	10.4	-4.6%
2018	174	16,804,038	10.4	-5.5%	10.7	2.9%
2019	173	16,811,021	10.3	-1.0%	10.6	-0.9%
2020	142	13,664,937	10.4	1.0%	10.4	-1.9%
2021	153	13,292,227	11.5	10.6%	10.7	2.9%

Analysis performed on data for 2012 through 2021.	Geometric Average:	-1.0%	-1.9%	Ests.
	Regression Indication:	-1.4%		1 & 2
	Selected:	-1.2%	-1.9%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	-0.1%	-0.8%	Ests.
	Regression Indication:	-0.7%		3 & 4
	Selected:	-0.4%	-0.8%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	-1.1%	-0.4%	Ests.
	Regression Indication:	-0.4%		5 & 6
	Selected:	-0.8%	-0.4%	

Sources:
(1) Exhibit V-I-1 Col. 2
(2) Exhibit X-B
(3) (1) / (2) x 1,000,000
(4) (Current Freq. / Prior Freq. -1.0) x 100'

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend Net of Wage Trend

Year	(1) Loss Cost Premium	(2) Statewide Average Weekly Wage	(3) On 2021 Level	(4) Loss Cost Premium on 2021 Level	(5) Claim Counts	(6) Adjusted Frequency per($M)	(7) Annual Frequency Change	(8) 3-Year Moving Average	(9) Annual Mov. Avg. Change
2012	16,060,980	888	1.273	20,445,628	203	9.9			
2013	15,068,240	917	1.232	18,564,072	175	9.4	-5.1%		
2014	23,465,866	932	1.212	28,440,630	291	10.2	8.5%	9.8	
2015	19,545,291	951	1.188	23,219,806	188	8.1	-20.6%	9.2	-6.1%
2016	14,034,825	978	1.155	16,210,223	150	9.3	14.8%	9.2	0.0%
2017	15,954,484	995	1.136	18,124,294	175	9.7	4.3%	9.0	-2.2%
2018	16,804,038	1025	1.102	18,518,050	174	9.4	-3.1%	9.5	5.6%
2019	16,811,021	1049	1.077	18,105,470	173	9.6	2.1%	9.6	1.1%
2020	13,664,937	1081	1.045	14,279,859	142	9.9	3.1%	9.6	0.0%
2021	13,292,227	1130	1.000	13,292,227	153	11.5	16.2%	10.3	7.3%

Analysis performed on data for 2012 through 2021.	Geometric Average:	1.7%	0.7%	Ests.
	Regression Indication:	1.2%		1 & 2
	Selected:	1.5%	0.7%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	2.5%	1.9%	Ests.
	Regression Indication:	1.8%		3 & 4
	Selected:	2.2%	1.9%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	1.7%	2.3%	Ests.
	Regression Indication:	2.3%		5 & 6
	Selected:	2.0%	2.3%	

Sources:
(1) Exhibit X-B
(2) Exhibit XII-D
(3) 2021 is 1.000. Values for other years divided into 2021 value to determine factor
(4) (1)x(3)
(5) Exhibit VI-C-1
(6) (5) / (4) * 1,000,000
(7) (Current Freq./Prior Freq.-1.0)x100

Traumatic Loss Trend
Medical (excl. Medical Only Losses) for All Classes Combined

Severity Trend

Year	(1) Ultimate Medical Losses Incurred	(2) Med. Only Ultimate Incurred Losses	(3) Ult. Med. On Lost Time Claims	(4) Claim Counts	(5) Average Loss	(6) Annual Average Loss Change	(7) 3-Year Moving Average	(8) Annual Mov. Avg. Change
2012	5,945,937	704,535	5,241,402	203	25,820			
2013	4,400,058	763,168	3,636,890	175	20,782	-19.5%		
2014	6,154,703	806,301	5,348,402	291	18,379	-11.6%	21,660	
2015	4,078,582	612,724	3,465,858	188	18,435	0.3%	19,199	-11.4%
2016	3,928,173	542,126	3,386,047	150	22,574	22.5%	19,796	3.1%
2017	6,425,569	757,079	5,668,490	175	32,391	43.5%	24,467	23.6%
2018	5,475,012	581,295	4,893,717	174	28,125	-13.2%	27,697	13.2%
2019	3,989,363	625,437	3,363,926	173	19,445	-30.9%	26,654	-3.8%
2020	4,183,988	465,344	3,718,644	142	26,188	34.7%	24,586	-7.8%
2021	3,660,949	414,631	3,246,319	153	21,218	-19.0%	22,284	-9.4%

Analysis performed on data for 2012 through 2021.	Geometric Average:	-2.2%	0.4%	Ests.
	Regression Indication:	1.1%		1 & 2
	Selected:	-0.6%	0.4%	
Analysis performed on data for 2013 through 2021.	Geometric Average:	0.2%	2.5%	Ests.
	Regression Indication:	2.5%		3 & 4
	Selected:	1.4%	2.5%	
Analysis performed on data for 2014 through 2021.	Geometric Average:	2.1%	2.4%	Ests.
	Regression Indication:	2.6%		5 & 6
	Selected:	2.4%	2.4%	

Sources:
(1) Exhibit V-H,Page 2
(2) Exhibit VI-C-3
(3) (1)-(2)
(4) Exhibit VI-C-1
(5) (3)/(4)
(6) (Current Avg. Loss /Prior Avg. Loss-1.0)x100

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	10,471,804	203	51,585			
2013	7,983,639	175	45,621	-11.6%		
2014	12,696,623	291	43,631	-4.4%	46,946	
2015	12,744,556	188	67,790	55.4%	52,347	11.5%
2016	8,974,428	150	59,830	-11.7%	57,084	9.0%
2017	10,814,719	175	61,798	3.3%	63,139	10.6%
2018	8,802,350	174	50,588	-18.1%	57,405	-9.1%
2019	8,614,958	173	49,797	-1.6%	54,061	-5.8%
2020	8,848,189	142	62,311	25.1%	54,232	0.3%

Analysis performed on data for 2012 through 2020.	Geometric Average:	2.4%	2.4%	Ests.
	Regression Indication:	2.1%		7 & 8
	Selected:	2.3%	2.4%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	4.6%	0.7%	Ests.
	Regression Indication:	2.4%		9 & 10
	Selected:	3.5%	0.7%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	6.1%	-1.3%	Ests.
	Regression Indication:	1.0%		11 & 12
	Selected:	3.6%	-1.3%	

Sources:
(1) Exhibit V-H page 1,Column (3)
(2) Exhibit VI-C-1
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Medical and Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Losses	(2) Claim Counts	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	5,945,937	755	7,875			
2013	4,400,058	654	6,728	-14.6%		
2014	6,154,703	872	7,058	4.9%	7,220	
2015	4,078,582	584	6,984	-1.0%	6,923	-4.1%
2016	3,928,173	452	8,691	24.4%	7,578	9.5%
2017	6,425,569	504	12,749	46.7%	9,475	25.0%
2018	5,475,012	464	11,800	-7.4%	11,080	16.9%
2019	3,989,363	488	8,175	-30.7%	10,908	-1.6%
2020	4,183,988	371	11,278	38.0%	10,418	-4.5%

Analysis performed on data for 2012 through 2020.	Geometric Average:	4.6%	6.3%	Ests.
	Regression Indication:	6.3%		7 & 8
	Selected:	5.5%	6.3%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	7.7%	8.5%	Ests.
	Regression Indication:	7.8%		9 & 10
	Selected:	7.8%	8.5%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	8.1%	8.3%	Ests.
	Regression Indication:	7.5%		11 & 12
	Selected:	7.8%	8.3%	

Sources:
(1) Exhibit V-H page 2,Column (3)
(2) Exhibit VI-C-1 + Exhibit VI-C-2
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Medical Only Losses for All Classes Combined

Severity Trend

Year	(1) Ultimate Claim Counts	(2) Ultimate Incurred Losses	(3) Average Loss	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	552	704,535	1,276			
2013	479	763,168	1,593	24.8%		
2014	581	806,301	1,388	-12.9%	1,419	
2015	396	612,724	1,547	11.5%	1,509	6.3%
2016	302	542,126	1,795	16.0%	1,577	4.5%
2017	329	757,079	2,301	28.2%	1,881	19.3%
2018	290	581,295	2,004	-12.9%	2,033	8.1%
2019	315	625,437	1,986	-0.9%	2,097	3.1%
2020	229	465,344	2,032	2.3%	2,007	-4.3%

Analysis performed on data for 2012 through 2020.	Geometric Average:	6.0%	5.9%	Ests.
	Regression Indication:	6.3%		7 & 8
	Selected:	6.2%	5.9%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	3.5%	5.9%	Ests.
	Regression Indication:	5.5%		9 & 10
	Selected:	4.5%	5.9%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	6.6%	6.2%	Ests.
	Regression Indication:	6.5%		11 & 12
	Selected:	6.6%	6.2%	

Sources:
(1) Exhibit VI-C-2
(2) Exhibit VI-C-3
(4) (Current Avg. Loss / Prior Avg. Loss -1.0) x 100

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend

Year	(1) Ultimate Claim Counts	(2) Loss Cost Premium	(3) Frequency per($M)	(4) Annual Average Loss Change	(5) 3-Year Moving Average	(6) Annual Mov. Avg. Change
2012	203	16,060,980	12.6			
2013	175	15,068,240	11.6	-7.9%		
2014	291	23,465,866	12.4	6.9%	12.2	
2015	188	19,545,291	9.6	-22.6%	11.2	-8.2%
2016	150	14,034,825	10.7	11.5%	10.9	-2.7%
2017	175	15,954,484	11.0	2.8%	10.4	-4.6%
2018	174	16,804,038	10.4	-5.5%	10.7	2.9%
2019	173	16,811,021	10.3	-1.0%	10.6	-0.9%
2020	142	13,664,937	10.4	1.0%	10.4	-1.9%

Analysis performed on data for 2012 through 2020.	Geometric Average:	-2.4%	-2.6%	Ests.
	Regression Indication:	-2.2%		7 & 8
	Selected:	-2.3%	-2.6%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	-1.6%	-1.5%	Ests.
	Regression Indication:	-1.7%		9 & 10
	Selected:	-1.7%	-1.5%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	-2.9%	-1.2%	Ests.
	Regression Indication:	-1.5%		11 & 12
	Selected:	-2.2%	-1.2%	

Sources:
(1) Exhibit V-I-1 Col. 2
(2) Exhibit X-B-1
(3) (1) / (2) x 1,000,000
(4) (Current Freq. / Prior Freq. -1.0) x 100'

Traumatic Loss Trend
Indemnity and Funeral Losses for All Classes Combined

Frequency Trend net of Wage Trend

Year	(1) Loss Cost Premium	(2) Statewide Average Weekly Wage	(3) On 2021 Level	(4) Loss Cost Premium on 2021 Level	(5) Claim Counts	(6) Adjusted Frequency per($M)	(7) Annual Frequency Change	(8) 3-Year Moving Average	(9) Annual Mov. Avg. Change
2012	16,060,980	888	1.273	20,445,628	203	9.9			
2013	15,068,240	917	1.232	18,564,072	175	9.4	-5.1%		
2014	23,465,866	932	1.212	28,440,630	291	10.2	8.5%	9.8	
2015	19,545,291	951	1.188	23,219,806	188	8.1	-20.6%	9.2	-6.1%
2016	14,034,825	978	1.155	16,210,223	150	9.3	14.8%	9.2	0.0%
2017	15,954,484	995	1.136	18,124,294	175	9.7	4.3%	9.0	-2.2%
2018	16,804,038	1,025	1.102	18,518,050	174	9.4	-3.1%	9.5	5.6%
2019	16,811,021	1,049	1.077	18,105,470	173	9.6	2.1%	9.6	1.1%
2020	13,664,937	1,081	1.045	14,279,859	142	9.9	3.1%	9.6	0.0%

Analysis performed on data for 2012 through 2020.	Geometric Average:	0.0%	-0.3%	Ests.
	Regression Indication:	0.1%		7 & 8
	Selected:	0.1%	-0.3%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	0.7%	0.9%	Ests.
	Regression Indication:	0.7%		9 & 10
	Selected:	0.7%	0.9%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	-0.5%	1.1%	Ests.
	Regression Indication:	0.9%		11 & 12
	Selected:	0.2%	1.1%	

Source:
(1) Exhibit X-B
(2) Exhibit XII-D
(3) See Exhibit V-I-5 Estimates 01-06.
(4) (1)x(3)
(5) Exhibit VI-C-1
(6) (5) / (4) * 1,000,000
(7) (Current Freq./Prior Freq.-1.0)x100

Traumatic Loss Trend
Medical (excl. Medical Only Losses) for All Classes Combined

Severity Trend

Year	(1) Ultimate Medical Losses Incurred	(2) Med. Only Ultimate Incurred Losses	(3) Ult. Med. On Lost Time Claims	(4) Claim Counts	(5) Average Loss	(6) Annual Average Loss Change	(7) 3-Year Moving Average	(8) Annual Mov. Avg. Change
2012	5,945,937	704,535	5,241,402	203	25,820			
2013	4,400,058	763,168	3,636,890	175	20,782	-19.5%		
2014	6,154,703	806,301	5,348,402	291	18,379	-11.6%	21,660	
2015	4,078,582	612,724	3,465,858	188	18,435	0.3%	19,199	-11.4%
2016	3,928,173	542,126	3,386,047	150	22,574	22.5%	19,796	3.1%
2017	6,425,569	757,079	5,668,490	175	32,391	43.5%	24,467	23.6%
2018	5,475,012	581,295	4,893,717	174	28,125	-13.2%	27,697	13.2%
2019	3,989,363	625,437	3,363,926	173	19,445	-30.9%	26,654	-3.8%
2020	4,183,988	465,344	3,718,644	142	26,188	34.7%	24,586	-7.8%

Analysis performed on data for 2012 through 2020.	Geometric Average:	0.2%	2.1%	Ests.
	Regression Indication:	2.1%		7 & 8
	Selected:	1.2%	2.1%	
Analysis performed on data for 2013 through 2020.	Geometric Average:	3.3%	5.1%	Ests.
	Regression Indication:	4.3%		9 & 10
	Selected:	3.8%	5.1%	
Analysis performed on data for 2014 through 2020.	Geometric Average:	6.1%	5.5%	Ests.
	Regression Indication:	5.1%		11 & 12
	Selected:	5.6%	5.5%	

Source:
(1) Exhibit V-H,Page 2
(2) Exhibit VI-C-3
(3) (1)-(2)
(4) Exhibit VI-C-1
(5) (3)/(4)
(6) (Current Avg. Loss /Prior Avg. Loss-1.0)x100

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Indemnity and Funeral Losses for All Classes Combined

A. Indemnity Reported Incurred Losses as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

B. Act 57 Indemnity Law Adjusment Factors

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

	Act 57 Effective Date		Prior to
	(b) Accident Year 1996 (8-23-96)		1996
Act 57	Effect	Weight	Effect
Pre	17.53%	0.644	17.53%
Post	0.00%	0.356	
1996 Avg	11.29%	1.000	
Complement:	0.8871		0.8247

C. Indemnity Incurred Losses Adjusted to Act 57 Law Level as of 04/30/22

1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

Note: Reported Losses times Act 57 factors equals Indemnity Incurred Losses on Act 57 level.

Source: A. CMCRB Database as of 04/30/22 - Validated 08/02/22
B. Act 57 Indemnity Law Factor of 0.8247, 0.8871 (1996) and 1.000
C. A times B equals C

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Indemnity and Funeral Losses for All Classes Combined

A. Indemnity Incurred Losses Adjusted to Act 57 Law Level as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

B. Effect of Claim Settlement Levels Only = (Losses adjusted by Act 57 Law Adj. Factors and Claim Settlement Levels (Exhibit VI-A, page 3) divided by Losses adjusted by Act 57 Law Adj. Factors only (Exhibit VI-A, page 1))

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

Example: 1995 (2) 0.8447 (Page 3)
divided by 0.8247
equals 1.0243

Selected Years 0 to 10		
Claim Settlement Level Addititves		
9th Last	+2.0%	per year
8th Last	+2.0%	per year
7th Last	+2.0%	per year
6th Last	+2.0%	per year
5th Last	+1.5%	per year
4th Last	+1.0%	per year
3rd Last	+0.5%	per year
2nd Last	+0.5%	per year
1st Last	+0.5%	per year

Selected Years 11 to 20		
Claim Settlement Level Addititves		
14th Last	+1.2%	per year
13th Last	+1.2%	per year
12th Last	+1.2%	per year
11th Last	+1.2%	per year
10th Last	+0.9%	per year
9th Last	+0.6%	per year
8th Last	+0.3%	per year
7th Last	+0.2%	per year
6th Last	+0.2%	per year
5th Last	+0.2%	per year
4th Last	+0.1%	per year
3rd Last	+0.0%	per year
2nd Last	+0.0%	per year
1st Last	+0.0%	per year

C. Indemnity Incurred Losses Adjusted to Act 57 Law Level and Claim Settlement Levels as of 04/30/22

1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

Source: A. Exhibit VI-A, p. 1 (C)
B. Section C / Section A
C. Exhibit VI-A, p. 3 (C)

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Indemnity and Funeral Losses for All Classes Combined

A. Indemnity Reported Incurred Losses as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

B. Act 57 Indemnity Law Adjusment Factors and Claim Settlement Levels

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

Act 57 Effective Date			Prior to
(b) Accident Year 1996 (8-23-96)			1996
Act 57	Effect	Weight	Effect
Pre	17.53%	0.644	17.53%
Post	0.00%	0.356	
1996 Avg	11.29%	1.000	
Complement:			
1.0-0.1129=	0.8871		0.8247

Selected Years 0 to 10		
Claim Settlement Level Addititves		
9th Last	+2.0%	per year
8th Last	+2.0%	per year
7th Last	+2.0%	per year
6th Last	+2.0%	per year
5th Last	+1.5%	per year
4th Last	+1.0%	per year
3rd Last	+0.5%	per year
2nd Last	+0.5%	per year
1st Last	+0.5%	per year

Selected Years 11 to 20		
Claim Settlement Level Addititves		
14th Last	+1.2%	per year
13th Last	+1.2%	per year
12th Last	+1.2%	per year
11th Last	+1.2%	per year
10th Last	+0.9%	per year
9th Last	+0.6%	per year
8th Last	+0.3%	per year
7th Last	+0.2%	per year
6th Last	+0.2%	per year
5th Last	+0.2%	per year
4th Last	+0.1%	per year
3rd Last	+0.0%	per year
2nd Last	+0.0%	per year
1st Last	+0.0%	per year

C. Indemnity Incurred Losses Adjusted to Act 57 Law Level and Claim Settlement Levels as of 04/30/22

1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

Note: 1996 Adjustment Factors are capped at a maximum of 1.0000
The factors in section B were taken unchanged from the corresponding section of last year's (Approved) filing.

Source: A. Exhibit VI-A, p. 1 (A)
B. Act 57 and Claim Settlement Levels Combined
Exhibit VI-A-5a,VI-A-5b,VI-A-5c
C. A times B equals C

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Indemnity and Funeral Losses for All Classes Combined

A. Indemnity Reported Incurred Losses Adjusted to Act 57 Law Level and Claim Settlement Levels as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	5,169,557	4,616,566	3,404,097	3,705,402	4,478,660	5,436,836	4,367,449	4,077,968	6,150,319	3,325,544	3,275,884	5,594,328	2,447,080	3,188,490	3,669,341	3,774,273	3,455,344	7,192,624	6,961,079	4,870,955	5,818,161	5,591,090	4,986,171	4,737,813	4,395,644
2	7,204,997	6,425,692	5,685,213	6,056,207	7,551,263	8,904,201	6,352,445	6,450,455	9,269,896	5,595,218	5,094,625	6,615,460	4,426,812	4,704,074	6,714,362	6,976,588	6,561,596	11,743,499	9,306,469	7,982,656	8,489,313	7,792,902	7,339,107	7,200,675	
3	7,650,302	7,184,304	6,107,512	6,887,906	7,965,255	10,824,370	6,965,973	7,304,561	10,301,194	5,998,029	6,026,129	8,947,874	5,084,862	5,837,644	8,225,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631		
4	7,955,452	7,644,338	7,314,026	7,362,001	8,490,153	11,966,090	7,287,256	7,268,321	12,018,140	5,597,263	6,053,552	9,233,530	5,276,335	6,918,124	8,401,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,271,331			
5	8,698,833	8,242,894	7,591,552	7,291,553	8,760,507	12,323,050	8,286,573	7,374,171	12,453,149	5,496,933	6,217,757	9,406,949	5,433,501	7,301,176	8,647,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304				
6	8,527,476	8,275,893	7,679,135	7,454,081	8,994,827	13,133,004	8,109,584	7,418,021	11,984,386	5,215,101	6,349,621	9,432,764	5,295,524	7,158,740	8,666,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729					
7	8,464,405	8,429,042	7,685,857	7,462,274	8,879,879	12,772,686	8,140,325	7,469,216	12,178,272	5,237,407	6,471,573	9,542,759	5,295,524	7,274,640	8,549,657	10,086,465	7,895,047	12,388,158	12,405,876						
8	8,453,559	8,382,835	7,718,721	7,475,918	8,693,906	12,539,319	7,865,421	7,498,081	12,484,769	5,251,578	6,933,809	9,453,964	5,295,524	7,246,831	8,553,154	10,142,992	7,841,081	12,388,158							
9	8,385,552	8,467,821	7,754,976	7,486,544	8,481,353	12,455,797	7,459,231	7,539,604	12,600,820	5,372,852	6,720,431	9,672,629	5,295,524	7,433,505	8,553,117	10,249,907	7,807,196								
10	8,461,485	8,565,347	8,091,638	7,480,132	8,515,273	12,228,895	7,494,451	7,586,354	12,368,018	5,948,585	6,652,402	9,452,432	5,295,724	7,433,605	8,553,183	10,262,450									
11	8,504,790	8,647,604	8,094,480	7,481,252	8,549,118	12,023,866	7,400,303	7,633,071	12,470,444	6,000,946	6,693,877	9,539,005	5,425,367	7,433,720	8,609,023										
12	8,674,576	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,603,806	12,133,479	5,875,552	7,052,471	9,562,275	5,425,367	7,365,256											
13	8,712,300	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,631,230	12,176,584	5,890,328	7,174,716	9,582,515	5,425,367												
14	8,797,458	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,660,556	12,084,066	5,905,903	7,197,251	9,625,081													
15	8,824,907	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,687,823	11,732,109	5,921,413	7,220,222														
16	8,629,585	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,715,319	11,762,018	5,937,066															
17	8,640,604	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,808	7,741,100	11,800,415																
18	8,660,130	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,013	7,770,313																	
19	8,797,616	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,016																		
20	8,812,465	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844																			

B. Annual Loss Development Factors

1:2															1.8299	1.8485	1.8990	1.6327	1.3369	1.6388	1.4591	1.3938	1.4719	1.5198
2:3														1.2410	1.2251	1.2210	1.1197	1.0055	1.2370	1.0849	1.1898	1.0833	1.0769	
3:4													1.0377	1.1851	1.0214	1.1047	1.0156	1.0281	1.0255	1.0566	0.9725	0.9798		
4:5												1.0188	1.0298	1.0554	1.0293	1.0183	1.0314	1.0137	1.0377	1.0186	1.0663			
5:6											1.0212	1.0027	0.9746	0.9805	1.0022	1.0173	0.9944	0.9950	0.9980	0.9350				
6:7										1.0043	1.0192	1.0117	1.0000	1.0162	0.9865	1.0346	1.0317	1.0118	1.0147					
7:8									1.0252	1.0027	1.0714	0.9907	1.0000	0.9962	1.0004	1.0056	0.9932	1.0000						
8:9								1.0055	1.0093	1.0231	0.9692	1.0231	1.0000	1.0258	1.0000	1.0105	0.9957							
9:10							1.0047	1.0062	0.9815	1.1072	0.9899	0.9772	1.0000	1.0000	1.0000	1.0012								
10:11						0.9832	0.9874	1.0062	1.0083	1.0088	1.0062	1.0092	1.0245	1.0000	1.0065									
11:12					1.0039	1.0064	1.0034	0.9962	0.9730	0.9791	1.0536	1.0024	1.0000	0.9908										
12:13				1.0000	1.0035	0.9961	1.0033	1.0036	1.0036	1.0025	1.0173	1.0021	1.0000											
13:14			0.9995	1.0000	0.9775	0.9570	1.0033	1.0038	0.9924	1.0026	1.0031	1.0044												
14:15		1.0004	1.0000	1.0000	1.0017	1.0006	1.0032	1.0036	0.9709	1.0026	1.0032													
15:16	0.9779	1.0000	1.0000	1.0000	0.9997	0.9991	1.0032	1.0036	1.0025	1.0026														
16:17	1.0013	1.0001	1.0000	1.0000	1.0048	1.0010	1.0031	1.0033	1.0033															
17:18	1.0023	1.0003	1.0000	1.0000	1.0016	1.0010	1.0031	1.0038																
18:19	1.0159	1.0047	1.0000	1.0000	1.0016	0.9967	1.0030																	
19:20	1.0017	0.9959	1.0000	1.0000	1.0016	1.0000																		

C. Summary

	10 Year Straight Average	6 Year Straight Average	10 Year Weighted Average	10 Year Average Ex. Hi/Lo	6 Year Average Ex. Hi/Lo	6 Year Weighted Average	Average of Middle Four
1:2	1.6030	1.4701	1.5690	1.5993	1.4612	1.4594	1.5249
2:3	1.1484	1.1129	1.1384	1.1547	1.1087	1.1096	1.1273
3:4	1.0427	1.0130	1.0365	1.0337	1.0123	1.0135	1.0242
4:5	1.0319	1.0310	1.0312	1.0299	1.0265	1.0307	1.0307
5:6	0.9921	0.9903	0.9924	0.9956	0.9974	0.9908	0.9927
6:7	1.0131	1.0159	1.0138	1.0137	1.0186	1.0157	1.0148
7:8	1.0085	0.9992	1.0079	1.0029	0.9992	0.9996	1.0024
8:9	1.0062	1.0092	1.0067	1.0084	1.0084	1.0099	1.0082
9:10	1.0068	0.9947	1.0018	0.9979	0.9975	0.9943	0.9980
10:11	1.0040	1.0092	1.0026	1.0041	1.0077	1.0084	1.0061
11:12	1.0009	0.9998	0.9995	0.9978	0.9931	0.9969	0.9985
12:13	1.0032	1.0049	1.0028	1.0023	1.0030	1.0048	1.0035
13:14	0.9944	1.0016	0.9922	0.9978	1.0032	1.0008	0.9987
14:15	0.9986	0.9974	0.9972	1.0015	1.0024	0.9951	0.9987
15:16	0.9989	1.0018	0.9987	1.0009	1.0020	1.0016	1.0008
16:17	1.0019	1.0026	1.0019	1.0017	1.0027	1.0026	1.0022
17:18	1.0015	1.0016	1.0015	1.0014	1.0014	1.0015	1.0015
18:19	1.0031	1.0010	1.0029	1.0019	1.0012	1.0008	1.0018
19:20	0.9999	0.9999	0.9998	1.0004	1.0004	0.9998	1.0000

A. Loss Development Data: Exhibit VI-A, page 3
B. Annual Loss Development Factors
C. Summary of Straight Averages for 10 and 6 years,
Weighted Averages for 10 and 6 years,
Straight Averages for 10 and 6 years excluding highest and lowest,
Average of middle 4 of above 6 averages.

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Indemnity Claim Settlement Adjustment Factors
Summary of Data and Selections

Data as of	(1) 0 to 10 Development	(2) 0 to 10 Selection
4/30/2005	0.3%	0.5%
4/30/2004	0.8%	0.5%
4/30/2003	1.4%	0.5%
4/30/2002	1.0%	1.0%
4/30/2001	2.2%	1.5%
4/30/2000	3.1%	2.0%
4/30/1999	2.7%	2.0%
4/30/1998	2.8%	2.0%
4/30/1997	2.2%	2.0%
Total	16.5%	12.0%

Data as of	(3) 10 to 20 Development	(4) 10 to 20 Selection
4/30/2010	0.0%	0.0%
4/30/2009	0.1%	0.0%
4/30/2008	0.0%	0.0%
4/30/2007	0.1%	0.1%
4/30/2006	0.2%	0.2%
4/30/2005	0.4%	0.2%
4/30/2004	0.2%	0.2%
4/30/2003	0.9%	0.3%
4/30/2002	0.5%	0.6%
4/30/2001	1.4%	0.9%
4/30/2000	4.4%	1.2%
4/30/1999	0.1%	1.2%
4/30/1998	0.0%	1.2%
4/30/1997	0.0%	1.2%
Total	8.3%	7.3%

Sources:
(1) Exhibit VI-A Page 5b
(2) Exhibit VI-A Page 5b
(3) Exhibit VI-A Page 5c for 2001-2010, Filing effective 4/1/2009 for 1997-2000
(4) Exhibit VI-A Page 5c for 2001-2010, Filing effective 4/1/2009 for 1997-2000

Note: Personnel from the CMCRB have concluded that the impact of Act 57 has waned to the point that the Claim Settlement effect for this year and future years is zero(0.00). Thus this Exhibit will no longer be updated.

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Indemnity Claim Settlement Adjustment Factors - 1st to 10th Report

Accident Year	(1) 4/30/1997 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1987	18,806	759	4.0%	xx
1988	15,731	926	5.9%	xx
1989	19,920	856	4.3%	xx
1990	30,426	478	1.6%	xx
1991	19,515	319	1.6%	xx
1992	23,283	0	0.0%	xx
1993	17,896	445	2.5%	xx
1994	19,319	0	0.0%	xx
1995	10,133	0	0.0%	xx
Total	175,029	3,783	2.2%	2.0%

Accident Year	(1) 4/30/1998 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1988	16,032	0	0.0%	xx
1989	19,106	874	4.6%	xx
1990	30,400	1150	3.8%	xx
1991	19,984	544	2.7%	xx
1992	24,216	651	2.7%	xx
1993	19,117	919	4.8%	xx
1994	21,058	337	1.6%	xx
1995	10,822	349	3.2%	xx
1996	9,862	0	0.0%	xx
Total	170,597	4,824	2.8%	2.0%

Accident Year	(1) 4/30/1999 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1989	18,878	368	1.9%	xx
1990	29,654	1150	3.9%	xx
1991	19,430	596	3.1%	xx
1992	24,122	491	2.0%	xx
1993	19,482	440	2.3%	xx
1994	21,755	656	3.0%	xx
1995	11,322	127	1.1%	xx
1996	10,813	296	2.7%	xx
1997	xx	xx	xx	xx
Total	155,456	4,124	2.7%	2.0%

Accident Year	(1) 4/30/2000 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1990	29,328	800	2.7%	xx
1991	19,165	457	2.4%	xx
1992	23,117	988	4.3%	xx
1993	20,137	0	0.0%	xx
1994	20,495	1321	6.4%	xx
1995	12,031	0	0.0%	xx
1996	10,936	663	6.1%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
Total	135,209	4,229	3.1%	2.0%

Accident Year	(1) 4/30/2001 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1991	19,058	244	1.3%	xx
1992	22,030	813	3.7%	xx
1993	19,887	522	2.6%	xx
1994	20,719	434	2.1%	xx
1995	12,009	162	1.3%	xx
1996	11,474	156	1.4%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
Total	105,177	2,331	2.2%	1.5%

Accident Year	(1) 4/30/2002 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1992	22,275	0	0.0%	xx
1993	20,029	314	1.6%	xx
1994	21,125	214	1.0%	xx
1995	12,001	354	2.9%	xx
1996	12,046	0	0.0%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
Total	87,476	882	1.0%	1.0%

Accident Year	(1) 4/30/2003 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1993	19,361	236	1.2%	xx
1994	20,681	637	3.1%	xx
1995	11,831	0	0.0%	xx
1996	11,985	0	0.0%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
Total	63,858	873	1.4%	0.5%

Accident Year	(1) 4/30/2004 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1994	20,243	368	1.8%	xx
1995	11,907	0	0.0%	xx
1996	11,994	0	0.0%	xx
1997	xx	0	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
Total	44,144	368	0.8%	0.5%

Accident Year	(1) 4/30/2005 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1995	11,956	70	0.6%	xx
1996	12,182	0	0.0%	xx
1997	xx	0	xx	xx
1998	xx	0	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
Total	24,138	70	0.3%	0.5%

Note: Personnel from the CMCRB have concluded that the impact of Act 57 has waned to the point that the Claim Settlement effect for this year and future years is zero(0.00). Thus this Exhibit will no longer be updated.

(a) All amounts are in thousands of dollars

Sources: Column (1) Exhibit VI-A p. 1a
CMCRB Data Base

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Indemnity Claim Settlement Adjustment Factors - Beyond 10th Report

Accident Year	(1) 4/30/2001 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,728	283	1.4%	xx
1984	25,745	185	0.7%	xx
1985	16,662	219	1.3%	xx
1986	18,002	194	1.1%	xx
1987	17,785	0	0.0%	xx
1988	15,926	194	1.2%	xx
1989	18,586	0	0.0%	xx
1990	28,447	1222	4.3%	xx
1991	xx	xx	xx	xx
1992	xx	xx	xx	xx
Total	160,881	2,297	1.4%	0.9%

Accident Year	(1) 4/30/2002 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,581	0	0.0%	xx
1984	25,801	0	0.0%	xx
1985	16,776	0	0.0%	xx
1986	17,729	221	1.2%	xx
1987	17,924	0	0.0%	xx
1988	15,795	217	1.4%	xx
1989	18,938	0	0.0%	xx
1990	28,697	0	0.0%	xx
1991	18,465	442	2.4%	xx
1992	xx	xx	xx	xx
Total	179,706	880	0.5%	0.6%

Accident Year	(1) 4/30/2003 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,537	132	0.7%	xx
1984	25,724	0	0.0%	xx
1985	16,860	0	0.0%	xx
1986	17,764	0	0.0%	xx
1987	17,933	122	0.7%	xx
1988	15,878	0	0.0%	xx
1989	18,878	0	0.0%	xx
1990	28,678	294	1.0%	xx
1991	18,005	458	2.5%	xx
1992	21,860	835	3.8%	xx
Total	201,117	1,841	0.9%	0.3%

Accident Year	(1) 4/30/2004 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,617	0	0.0%	xx
1984	25,837	0	0.0%	xx
1985	16,954	0	0.0%	xx
1986	17,812	0	0.0%	xx
1987	18,072	0	0.0%	xx
1988	15,845	0	0.0%	xx
1989	18,876	0	0.0%	xx
1990	28,968	0	0.0%	xx
1991	18,078	16	0.1%	xx
1992	21,375	32	0.1%	xx
1993	19,300	358	1.9%	xx
Total	220,734	406	0.2%	0.2%

Accident Year	(1) 4/30/2005 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,558	0	0.0%	xx
1984	26,025	0	0.0%	xx
1985	17,068	0	0.0%	xx
1986	17,907	0	0.0%	xx
1987	18,208	0	0.0%	xx
1988	15,700	0	0.0%	xx
1989	18,503	380	2.1%	xx
1990	29,336	0	0.0%	xx
1991	18,154	0	0.0%	xx
1992	20,831	631	3.0%	xx
1993	19,597	0	0.0%	xx
1994	20,328	0	0.0%	xx
Total	241,215	1,011	0.4%	0.2%

Accident Year	(1) 4/30/2006 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,629	0	0.0%	xx
1984	25,971	0	0.0%	xx
1985	17,182	0	0.0%	xx
1986	17,896	94	0.5%	xx
1987	18,028	295	1.6%	xx
1988	15,763	0	0.0%	xx
1989	18,538	0	0.0%	xx
1990	29,409	176	0.6%	xx
1991	18,201	0	0.0%	xx
1992	20,921	0	0.0%	xx
1993	19,782	0	0.0%	xx
1994	20,479	8	0.0%	xx
1995	11,961	0	0.0%	xx
Total	253,760	573	0.2%	0.2%

Accident Year	(1) 4/30/07 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,485	0	0.0%	xx
1984	26,136	0	0.0%	xx
1985	17,144	0	0.0%	xx
1986	17,999	0	0.0%	xx
1987	18,007	0	0.0%	xx
1988	15,827	0	0.0%	xx
1989	18,579	0	0.0%	xx
1990	29,661	0	0.0%	xx
1991	18,272	0	0.0%	xx
1992	20,665	0	0.0%	xx
1993	19,781	167	0.8%	xx
1994	20,635	0	0.0%	xx
1995	11,960	9	0.1%	xx
1996	12,122	0	0.0%	xx
Total	266,273	176	0.1%	0.1%

Accident Year	(1) 4/30/2008 Rpt.Loss[a]	(2) 12 Month Fav_Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,478	0	0.0%	xx
1984	26,205	0	0.0%	xx
1985	16,838	0	0.0%	xx
1986	18,146	0	0.0%	xx
1987	18,110	0	0.0%	xx
1988	15,892	0	0.0%	xx
1989	18,621	0	0.0%	xx
1990	29,843	0	0.0%	xx
1991	18,318	0	0.0%	xx
1992	20,738	0	0.0%	xx
1993	19,744	0	0.0%	xx
1994	20,796	0	0.0%	xx
1995	11,969	0	0.0%	xx
1996	12,194	40	0.3%	xx
1997	8,505	0	0.0%	xx
Total	275,397	40	0.0%	0.0%

Accident Year	(1) 4/30/2009 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1983	19,527	0	0.0%	xx
1984	26,360	0	0.0%	xx
1985	16,906	0	0.0%	xx
1986	18,235	0	0.0%	xx
1987	18,212	0	0.0%	xx
1988	15,850	0	0.0%	xx
1989	18,662	0	0.0%	xx
1990	29,708	140	0.5%	xx
1991	18,252	104	0.6%	xx
1992	20,811	0	0.0%	xx
1993	19,892	0	0.0%	xx
1994	20,956	0	0.0%	xx
1995	11,976	0	0.0%	xx
1996	12,324	0	0.0%	xx
1997	8,675	0	0.0%	xx
1998	8,648	0	0.0%	xx
Total	284,994	244	0.1%	0.0%

Note: Personnel from the CMCRB have concluded that the impact of Act 57 has waned to the point that the Claim Settlement effect for this year and future years is zero(0.00). Thus this Exhibit will no longer be updated.

(a) All amounts are in thousands of dollars

Sources: Column (1) Exhibit VI-A p. 1a
CMCRB Database as of 04/30/22 - Validated 08/02/22 and prior

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Medical Losses for All Classes Combined

A. Medical Reported Incurred Losses as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	3,185,472	3,370,548	2,714,671	2,468,601	2,225,216	3,150,255	2,579,313	3,189,109	3,700,850	2,871,489	5,478,955	3,509,674	2,761,649	3,630,574	4,362,098	4,853,901	3,639,834	6,225,769	4,054,856	3,963,291	6,459,930	5,608,346	4,212,761	3,814,876	3,461,236
2	3,374,998	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,812,481	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,605	3,916,265	5,529,182	5,354,918	4,296,981	6,366,646	3,956,526	4,469,090	6,088,602	5,435,106	3,760,084	4,026,550	
3	3,598,928	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,794,988	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,891,686	4,168,949	5,659,785	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810		
4	3,571,097	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,756,587	4,166,709	4,249,331	3,418,585	5,632,912	3,804,580	2,991,503	4,414,665	5,635,548	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,210,327			
5	3,810,363	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,912,119	4,131,369	4,143,155	3,401,038	5,757,902	3,837,840	2,983,393	4,624,757	5,699,968	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505				
6	3,978,305	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,899,687	4,080,336	4,299,151	3,370,262	5,864,639	3,842,096	2,946,694	4,497,291	5,681,190	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184					
7	3,932,216	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,897,577	4,180,965	4,349,353	3,381,086	5,841,539	3,811,253	2,946,651	4,479,315	6,259,248	5,515,927	4,286,015	5,884,600	3,895,122						
8	3,951,475	3,791,456	3,171,882	2,921,384	2,789,664	4,339,920	2,890,067	4,187,418	4,411,495	3,382,185	5,950,133	3,599,483	2,986,651	4,359,000	6,259,576	5,504,253	4,267,766	5,884,600							
9	4,015,857	3,741,005	3,236,426	2,952,750	2,782,114	4,145,606	3,080,177	4,190,701	4,403,570	3,507,194	5,807,440	3,608,725	3,136,651	4,335,083	6,259,776	5,542,753	4,211,388								
10	4,393,793	3,777,626	3,357,242	2,950,698	2,879,623	4,160,518	3,110,017	4,206,298	4,356,915	3,729,031	5,819,126	3,619,059	3,137,264	4,336,078	6,260,088	5,696,979									
11	4,593,238	3,861,559	3,353,094	2,948,865	2,963,075	4,164,525	3,103,090	4,370,336	4,427,072	3,802,480	5,899,866	3,627,183	3,068,930	4,337,075	6,204,694										
12	4,586,566	3,843,219	3,409,251	3,021,208	3,005,905	4,194,244	3,209,975	4,350,145	4,413,282	3,748,522	5,991,937	3,633,896	3,137,660	4,337,118											
13	4,602,844	3,868,653	3,531,522	3,021,095	3,012,114	4,185,516	3,209,907	4,351,280	4,715,281	3,748,523	5,975,102	3,570,134	3,109,112												
14	4,627,844	3,851,694	3,532,688	3,020,836	3,143,372	4,205,064	3,209,709	4,376,929	4,715,272	3,748,522	5,975,102	3,628,112													
15	4,702,741	3,851,841	3,533,087	3,080,845	3,237,259	4,202,349	3,209,709	4,379,582	4,768,910	3,748,523	5,975,102														
16	4,694,564	3,852,213	3,539,649	3,080,810	3,220,132	3,961,842	3,151,961	4,384,435	4,868,910	3,748,523															
17	4,723,464	3,838,125	3,539,760	2,872,279	3,006,814	3,961,842	3,151,961	4,359,779	4,820,617																
18	5,023,336	3,835,125	3,534,812	2,872,279	3,017,086	3,961,842	3,151,961	4,359,779																	
19	5,023,336	3,834,626	3,535,783	2,872,279	3,018,743	3,961,842	3,151,961																		
20	5,023,209	3,834,646	3,536,162	2,872,279	3,019,006	3,961,842																			

B. Act 44 Medical Law Adjustment Factors

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

C. Medical Incurred Losses Adjusted to Act 44 Law Level as of 04/30/22

1	3,185,472	3,370,548	2,714,671	2,468,601	2,225,216	3,150,255	2,579,313	3,189,109	3,700,850	2,871,489	5,478,955	3,509,674	2,761,649	3,630,574	4,362,098	4,853,901	3,639,834	6,225,769	4,054,856	3,963,291	6,459,930	5,608,346	4,212,761	3,814,876	3,461,236
2	3,374,998	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,812,481	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,605	3,916,265	5,529,182	5,354,918	4,296,981	6,366,646	3,956,526	4,469,090	6,088,602	5,435,106	3,760,084	4,026,550	
3	3,598,928	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,794,988	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,891,686	4,168,949	5,659,785	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810		
4	3,571,097	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,756,587	4,166,709	4,249,331	3,418,585	5,632,912	3,804,580	2,991,503	4,414,665	5,635,548	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,210,327			
5	3,810,363	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,912,119	4,131,369	4,143,155	3,401,038	5,757,902	3,837,840	2,983,393	4,624,757	5,699,968	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505				
6	3,978,305	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,899,687	4,080,336	4,299,151	3,370,262	5,864,639	3,842,096	2,946,694	4,497,291	5,681,190	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184					
7	3,932,216	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,897,577	4,180,965	4,349,353	3,381,086	5,841,539	3,811,253	2,946,651	4,479,315	6,259,248	5,515,927	4,286,015	5,884,600	3,895,122						
8	3,951,475	3,791,456	3,171,882	2,921,384	2,789,664	4,339,920	2,890,067	4,187,418	4,411,495	3,382,185	5,950,133	3,599,483	2,986,651	4,359,000	6,259,576	5,504,253	4,267,766	5,884,600							
9	4,015,857	3,741,005	3,236,426	2,952,750	2,782,114	4,145,606	3,080,177	4,190,701	4,403,570	3,507,194	5,807,440	3,608,725	3,136,651	4,335,083	6,259,776	5,542,753	4,211,388								
10	4,393,793	3,777,626	3,357,242	2,950,698	2,879,623	4,160,518	3,110,017	4,206,298	4,356,915	3,729,031	5,819,126	3,619,059	3,137,264	4,336,078	6,260,088	5,696,979									
11	4,593,238	3,861,559	3,353,094	2,948,865	2,963,075	4,164,525	3,103,090	4,370,336	4,427,072	3,802,480	5,899,866	3,627,183	3,068,930	4,337,075	6,204,694										
12	4,586,566	3,843,219	3,409,251	3,021,208	3,005,905	4,194,244	3,209,975	4,350,145	4,413,282	3,748,522	5,991,937	3,633,896	3,137,660	4,337,118											
13	4,602,844	3,868,653	3,531,522	3,021,095	3,012,114	4,185,516	3,209,907	4,351,280	4,715,281	3,748,523	5,975,102	3,570,134	3,109,112												
14	4,627,844	3,851,694	3,532,688	3,020,836	3,143,372	4,205,064	3,209,709	4,376,929	4,715,272	3,748,522	5,975,102	3,628,112													
15	4,702,741	3,851,841	3,533,087	3,080,845	3,237,259	4,202,349	3,209,709	4,379,582	4,768,910	3,748,523	5,975,102														
16	4,694,564	3,852,213	3,539,649	3,080,810	3,220,132	3,961,842	3,151,961	4,384,435	4,868,910	3,748,523															
17	4,723,464	3,838,125	3,539,760	2,872,279	3,006,814	3,961,842	3,151,961	4,359,779	4,820,617																
18	5,023,336	3,835,125	3,534,812	2,872,279	3,017,086	3,961,842	3,151,961	4,359,779																	
19	5,023,336	3,834,626	3,535,783	2,872,279	3,018,743	3,961,842	3,151,961																		
20	5,023,209	3,834,646	3,536,162	2,872,279	3,019,006	3,961,842																			

Source: A. Loss Development Data: CMCRB Database as of 04/30/22 - Validated 08/02/22
B. Act 44 Law Level Adjustment Factors from Exhibit VI-D Page 1
C. Medical Incurred Losses Adjusted to Act 44 Law Level = A x B

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Medical Losses for All Classes Combined

A. Adjustment to Act 44 Law Level

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

B. Claim Settlement Adjustments Additions

1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							
9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000								
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000									
11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000										
12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000											
13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000												
14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000													
15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000														
16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000															
17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000																
18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000																	
19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000																		
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000																			

Selected Claim Settlement Level Additions		
17th Last	2.0%	per year
16th Last	2.0%	per year
15th Last	2.0%	per year
14th Last	2.0%	per year
13th Last	2.0%	per year
12th Last	1.5%	per year
11th Last	1.4%	per year
10th Last	1.3%	per year
9th Last	1.2%	per year
8th Last	1.1%	per year
7th Last	1.0%	per year
6th Last	0.8%	per year
5th Last	0.5%	per year
4th Last	0.0%	per year
3rd Last	0.0%	per year
2nd Last	0.0%	per year
1st Last	0.0%	per year

C. Sum of Adjustment to Act 44 Law Level and Claim Settlement Adjustments Additions

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

Source: A. Adjustment to Act 44 Law Level Exhibit VI-D Page 1
B. Claim Settlement Adjustments Additions Exhibits VI-B-5 (Refer to selected table above.)
C. A+B (with maximum of 1.000)

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Medical Losses for All Classes Combined

A. Medical Reported Incurred Losses as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	3,185,472	3,370,548	2,714,671	2,468,601	2,225,216	3,150,255	2,579,313	3,189,109	3,700,850	2,871,489	5,478,955	3,509,674	2,761,649	3,630,574	4,362,098	4,853,901	3,639,834	6,225,769	4,054,856	3,963,291	6,459,930	5,608,346	4,212,761	3,814,876	3,461,236
2	3,374,998	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,812,481	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,605	3,916,265	5,529,182	5,354,918	4,296,981	6,366,646	3,956,526	4,469,090	6,088,602	5,435,106	3,760,084	4,026,550	
3	3,598,928	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,794,988	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,891,686	4,168,949	5,659,785	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810		
4	3,571,097	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,756,587	4,166,709	4,249,331	3,418,585	5,632,912	3,804,580	2,991,503	4,414,665	5,635,548	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,210,327			
5	3,810,363	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,912,119	4,131,369	4,143,155	3,401,038	5,757,902	3,837,840	2,983,393	4,624,757	5,699,968	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505				
6	3,978,305	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,899,687	4,080,336	4,299,151	3,370,262	5,864,639	3,842,096	2,946,694	4,497,291	5,681,190	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184					
7	3,932,216	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,897,577	4,180,965	4,349,353	3,381,086	5,841,539	3,811,253	2,946,651	4,479,315	6,259,248	5,515,927	4,286,015	5,884,600	3,895,122						
8	3,951,475	3,791,456	3,171,882	2,921,384	2,789,664	4,339,920	2,890,067	4,187,418	4,411,495	3,382,185	5,950,133	3,599,483	2,986,651	4,359,000	6,259,576	5,504,253	4,267,766	5,884,600							
9	4,015,857	3,741,005	3,236,426	2,952,750	2,782,114	4,145,606	3,080,177	4,190,701	4,403,570	3,507,194	5,807,440	3,608,725	3,136,651	4,335,083	6,259,776	5,542,753	4,211,388								
10	4,393,793	3,777,626	3,357,242	2,950,698	2,879,623	4,160,518	3,110,017	4,206,298	4,356,915	3,729,031	5,819,126	3,619,059	3,137,264	4,336,078	6,260,088	5,696,979									
11	4,593,238	3,861,559	3,353,094	2,948,865	2,963,075	4,164,525	3,103,090	4,370,336	4,427,072	3,802,480	5,899,866	3,627,183	3,068,930	4,337,075	6,204,694										
12	4,586,566	3,843,219	3,409,251	3,021,208	3,005,905	4,194,244	3,209,975	4,350,145	4,413,282	3,748,522	5,991,937	3,633,896	3,137,660	4,337,118											
13	4,602,844	3,868,653	3,531,522	3,021,095	3,012,114	4,185,516	3,209,907	4,351,280	4,715,281	3,748,523	5,975,102	3,570,134	3,109,112												
14	4,627,844	3,851,694	3,532,688	3,020,836	3,143,372	4,205,064	3,209,709	4,376,929	4,715,272	3,748,522	5,975,102	3,628,112													
15	4,702,741	3,851,841	3,533,087	3,080,845	3,237,259	4,202,349	3,209,709	4,379,582	4,768,910	3,748,523	5,975,102														
16	4,694,564	3,852,213	3,539,649	3,080,810	3,220,132	3,961,842	3,151,961	4,384,435	4,868,910	3,748,523															
17	4,723,464	3,838,125	3,539,760	2,872,279	3,006,814	3,961,842	3,151,961	4,359,779	4,820,617																
18	5,023,336	3,835,125	3,534,812	2,872,279	3,017,086	3,961,842	3,151,961	4,359,779																	
19	5,023,336	3,834,626	3,535,783	2,872,279	3,018,743	3,961,842	3,151,961																		
20	5,023,209	3,834,646	3,536,162	2,872,279	3,019,006	3,961,842																			

B. Act 44 Medical Law Adjusment Factors and Claim Settlement Levels

1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

C. Medical Incurred Losses Adjusted to Act 44 Law Level and Claim Settlement Levels as of 04/30/22

1	3,185,472	3,370,548	2,714,671	2,468,601	2,225,216	3,150,255	2,579,313	3,189,109	3,700,850	2,871,489	5,478,955	3,509,674	2,761,649	3,630,574	4,362,098	4,853,901	3,639,834	6,225,769	4,054,856	3,963,291	6,459,930	5,608,346	4,212,761	3,814,876	3,461,236
2	3,374,998	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,812,481	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,605	3,916,265	5,529,182	5,354,918	4,296,981	6,366,646	3,956,526	4,469,090	6,088,602	5,435,106	3,760,084	4,026,550	
3	3,598,928	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,794,988	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,891,686	4,168,949	5,659,785	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810		
4	3,571,097	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,756,587	4,166,709	4,249,331	3,418,585	5,632,912	3,804,580	2,991,503	4,414,665	5,635,548	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,210,327			
5	3,810,363	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,912,119	4,131,369	4,143,155	3,401,038	5,757,902	3,837,840	2,983,393	4,624,757	5,699,968	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505				
6	3,978,305	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,899,687	4,080,336	4,299,151	3,370,262	5,864,639	3,842,096	2,946,694	4,497,291	5,681,190	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184					
7	3,932,216	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,897,577	4,180,965	4,349,353	3,381,086	5,841,539	3,811,253	2,946,651	4,479,315	6,259,248	5,515,927	4,286,015	5,884,600	3,895,122						
8	3,951,475	3,791,456	3,171,882	2,921,384	2,789,664	4,339,920	2,890,067	4,187,418	4,411,495	3,382,185	5,950,133	3,599,483	2,986,651	4,359,000	6,259,576	5,504,253	4,267,766	5,884,600							
9	4,015,857	3,741,005	3,236,426	2,952,750	2,782,114	4,145,606	3,080,177	4,190,701	4,403,570	3,507,194	5,807,440	3,608,725	3,136,651	4,335,083	6,259,776	5,542,753	4,211,388								
10	4,393,793	3,777,626	3,357,242	2,950,698	2,879,623	4,160,518	3,110,017	4,206,298	4,356,915	3,729,031	5,819,126	3,619,059	3,137,264	4,336,078	6,260,088	5,696,979									
11	4,593,238	3,861,559	3,353,094	2,948,865	2,963,075	4,164,525	3,103,090	4,370,336	4,427,072	3,802,480	5,899,866	3,627,183	3,068,930	4,337,075	6,204,694										
12	4,586,566	3,843,219	3,409,251	3,021,208	3,005,905	4,194,244	3,209,975	4,350,145	4,413,282	3,748,522	5,991,937	3,633,896	3,137,660	4,337,118											
13	4,602,844	3,868,653	3,531,522	3,021,095	3,012,114	4,185,516	3,209,907	4,351,280	4,715,281	3,748,523	5,975,102	3,570,134	3,109,112												
14	4,627,844	3,851,694	3,532,688	3,020,836	3,143,372	4,205,064	3,209,709	4,376,929	4,715,272	3,748,522	5,975,102	3,628,112													
15	4,702,741	3,851,841	3,533,087	3,080,845	3,237,259	4,202,349	3,209,709	4,379,582	4,768,910	3,748,523	5,975,102														
16	4,694,564	3,852,213	3,539,649	3,080,810	3,220,132	3,961,842	3,151,961	4,384,435	4,868,910	3,748,523															
17	4,723,464	3,838,125	3,539,760	2,872,279	3,006,814	3,961,842	3,151,961	4,359,779	4,820,617																
18	5,023,336	3,835,125	3,534,812	2,872,279	3,017,086	3,961,842	3,151,961	4,359,779																	
19	5,023,336	3,834,626	3,535,783	2,872,279	3,018,743	3,961,842	3,151,961																		
20	5,023,209	3,834,646	3,536,162	2,872,279	3,019,006	3,961,842																			

Source: A. Reported Medical Incurred Losses. Exhibit VI-B-1 (A)
B. Act 44 Medical Law Adjusment Factors and Claim Settlement Levels: Exhibit VI-B-2 (C)
C. Medical Incurred Losses Adjusted to Act 44 Law Level and Claim Settlement Levels= A x B

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Medical Losses for All Classes Combined

A. Medical Reported Incurred Losses Adjusted to Act 44 Law Level and Claim Settlement Levels as of 04/30/22

Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	3,185,472	3,370,548	2,714,671	2,468,601	2,225,216	3,150,255	2,579,313	3,189,109	3,700,850	2,871,489	5,478,955	3,509,674	2,761,649	3,630,574	4,362,098	4,853,901	3,639,834	6,225,769	4,054,856	3,963,291	6,459,930	5,608,346	4,212,761	3,814,876	3,461,236
2	3,374,998	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,812,481	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,605	3,916,265	5,529,182	5,354,918	4,296,981	6,366,646	3,956,526	4,469,090	6,088,602	5,435,106	3,760,084	4,026,550	
3	3,598,928	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,794,988	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,891,686	4,168,949	5,659,785	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810		
4	3,571,097	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,756,587	4,166,709	4,249,331	3,418,585	5,632,912	3,804,580	2,991,503	4,414,665	5,635,548	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,210,327			
5	3,810,363	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,912,119	4,131,369	4,143,155	3,401,038	5,757,902	3,837,840	2,983,393	4,624,757	5,699,968	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505				
6	3,978,305	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,899,687	4,080,336	4,299,151	3,370,262	5,864,639	3,842,096	2,946,694	4,497,291	5,681,190	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184					
7	3,932,216	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,897,577	4,180,965	4,349,353	3,381,086	5,841,539	3,811,253	2,946,651	4,479,315	6,259,248	5,515,927	4,286,015	5,884,600	3,895,122						
8	3,951,475	3,791,456	3,171,882	2,921,384	2,789,664	4,339,920	2,890,067	4,187,418	4,411,495	3,382,185	5,950,133	3,599,483	2,986,651	4,359,000	6,259,576	5,504,253	4,267,766	5,884,600							
9	4,015,857	3,741,005	3,236,426	2,952,750	2,782,114	4,145,606	3,080,177	4,190,701	4,403,570	3,507,194	5,807,440	3,608,725	3,136,651	4,335,083	6,259,776	5,542,753	4,211,388								
10	4,393,793	3,777,626	3,357,242	2,950,698	2,879,623	4,160,518	3,110,017	4,206,298	4,356,915	3,729,031	5,819,126	3,619,059	3,137,264	4,336,078	6,260,088	5,696,979									
11	4,593,238	3,861,559	3,353,094	2,948,865	2,963,075	4,164,525	3,103,090	4,370,336	4,427,072	3,802,480	5,899,866	3,627,183	3,068,930	4,337,075	6,204,694										
12	4,586,566	3,843,219	3,409,251	3,021,208	3,005,905	4,194,244	3,209,975	4,350,145	4,413,282	3,748,522	5,991,937	3,633,896	3,137,660	4,337,118											
13	4,602,844	3,868,653	3,531,522	3,021,095	3,012,114	4,185,516	3,209,907	4,351,280	4,715,281	3,748,523	5,975,102	3,570,134	3,109,112												
14	4,627,844	3,851,694	3,532,688	3,020,836	3,143,372	4,205,064	3,209,709	4,376,929	4,715,272	3,748,522	5,975,102	3,628,112													
15	4,702,741	3,851,841	3,533,087	3,080,845	3,237,259	4,202,349	3,209,709	4,379,582	4,768,910	3,748,523	5,975,102														
16	4,694,564	3,852,213	3,539,649	3,080,810	3,220,132	3,961,842	3,151,961	4,384,435	4,868,910	3,748,523															
17	4,723,464	3,838,125	3,539,760	2,872,279	3,006,814	3,961,842	3,151,961	4,359,779	4,820,617																
18	5,023,336	3,835,125	3,534,812	2,872,279	3,017,086	3,961,842	3,151,961	4,359,779																	
19	5,023,336	3,834,626	3,535,783	2,872,279	3,018,743	3,961,842	3,151,961																		
20	5,023,209	3,834,646	3,536,162	2,872,279	3,019,006	3,961,842																			

B. Annual Loss Development Ratios

1:2															1.2676	1.1032	1.1805	1.0226	0.9758	1.1276	0.9425	0.9691	0.8925	1.0555	
2:3														1.0645	1.0236	1.0240	0.9513	0.9508	0.9995	0.9384	1.0081	0.9769	1.0084		
3:4													1.0345	1.0589	0.9957	0.9963	0.9776	0.9722	0.9720	0.9326	0.9655	0.9813			
4:5												1.0087	0.9973	1.0476	1.0114	1.0207	1.0343	1.0014	1.0220	0.9863	1.0331				
5:6											1.0185	1.0011	0.9877	0.9724	0.9967	0.9903	1.0060	0.9998	0.9925	0.9714					
6:7										1.0032	0.9961	0.9920	1.0000	0.9960	1.1017	0.9988	1.0307	0.9987	0.9990						
7:8									1.0143	1.0003	1.0186	0.9444	1.0136	0.9731	1.0001	0.9979	0.9957	1.0000							
8:9								1.0008	0.9982	1.0370	0.9760	1.0026	1.0502	0.9945	1.0000	1.0070	0.9868								
9:10							1.0097	1.0037	0.9894	1.0633	1.0020	1.0029	1.0002	1.0002	1.0000	1.0278									
10:11						1.0010	0.9978	1.0390	1.0161	1.0197	1.0139	1.0022	0.9782	1.0002	0.9912										
11:12					1.0145	1.0071	1.0344	0.9954	0.9969	0.9858	1.0156	1.0019	1.0224	1.0000											
12:13				1.0000	1.0021	0.9979	1.0000	1.0003	1.0684	1.0000	0.9972	0.9825	0.9909												
13:14			1.0003	0.9999	1.0436	1.0047	0.9999	1.0059	1.0000	1.0000	1.0000	1.0162													
14:15		1.0000	1.0001	1.0199	1.0299	0.9994	1.0000	1.0006	1.0114	1.0000	1.0000														
15:16	0.9983	1.0001	1.0019	1.0000	0.9947	0.9428	0.9820	1.0011	1.0210	1.0000															
16:17	1.0062	0.9963	1.0000	0.9323	0.9338	1.0000	1.0000	0.9944	0.9901																
17:18	1.0635	0.9992	0.9986	1.0000	1.0034	1.0000	1.0000	1.0000																	
18:19	1.0000	0.9999	1.0003	1.0000	1.0005	1.0000	1.0000																		
19:20	1.0000	1.0000	1.0001	1.0000	1.0001	1.0000																			

C. Summary

	10 Year Straight Average	6 Year Straight Average	10 Year Weighted Average	10 Year Average Ex. Hi/Lo	6 Year Average Ex. Hi/Lo	6 Year Weighted Average	Average of Middle Four
1:2	1.0537	0.9938	1.0442	1.0471	0.9857	0.9866	1.0179
2:3	0.9946	0.9804	0.9932	0.9928	0.9838	0.9789	0.9876
3:4	0.9887	0.9669	0.9862	0.9869	0.9718	0.9676	0.9781
4:5	1.0163	1.0163	1.0171	1.0161	1.0193	1.0168	1.0166
5:6	0.9936	0.9928	0.9948	0.9933	0.9948	0.9935	0.9938
6:7	1.0116	1.0208	1.0137	1.0028	1.0068	1.0226	1.0132
7:8	0.9958	0.9967	0.9968	0.9994	0.9984	0.9963	0.9970
8:9	1.0053	1.0069	1.0021	1.0034	1.0010	1.0044	1.0038
9:10	1.0099	1.0055	1.0091	1.0058	1.0013	1.0062	1.0066
10:11	1.0059	1.0009	1.0063	1.0053	1.0019	1.0015	1.0036
11:12	1.0074	1.0038	1.0065	1.0067	1.0036	1.0040	1.0052
12:13	1.0039	1.0066	1.0049	0.9986	0.9971	1.0077	1.0035
13:14	1.0071	1.0037	1.0060	1.0034	1.0015	1.0033	1.0041
14:15	1.0061	1.0019	1.0052	1.0040	1.0002	1.0020	1.0033
15:16	0.9942	0.9903	0.9945	0.9973	0.9945	0.9911	0.9936
16:17	0.9837	0.9751	0.9862	0.9878	0.9796	0.9782	0.9819
17:18	1.0081	1.0003	1.0103	1.0004	1.0000	1.0003	1.0023
18:19	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001
19:20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Source: A. Incurred Losses Adjusted to Act 44 Law Level and Claim Settlement Levels: Exhibit VI-B-3
B. Annual Loss Development Ratios
C, Summary of Straight Averages for 10 and 6 years,
Weighted Averages for 10 and 6 years,
Straight Averages for 10 and 6 years excluding highest and lowest,
Average of middle 4 of above 6 averages.

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Medical Claim Settlement Adjustment Factors

Accident Year	(1) 4/30/1994 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1984	7,380	243	3.3%	xx
1985	4,469	105	2.3%	xx
1986	5,192	222	4.3%	xx
1987	4,941	262	5.3%	xx
1988	5,722	396	6.9%	xx
1989	8,405	532	6.3%	xx
1990	7,754	298	3.8%	xx
1991	6,824	328	4.8%	xx
1992	5,389	437	8.1%	xx
Total	56,076	2,823	5.0%	2.0%

Accident Year	(1) 4/30/1995 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1985	4,303	199	4.6%	xx
1986	5,166	122	2.4%	xx
1987	4,805	122	2.5%	xx
1988	5,860	161	2.7%	xx
1989	8,842	299	3.4%	xx
1990	7,595	471	6.2%	xx
1991	7,208	83	1.2%	xx
1992	4,462	198	4.4%	xx
1993	5,786	164	2.8%	xx
Total	54,027	1,819	3.4%	2.0%

Accident Year	(1) 4/30/1996 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1986	5,126	84	1.6%	xx
1987	4,959	72	1.5%	xx
1988	5,470	451	8.2%	xx
1989	8,720	575	6.6%	xx
1990	7,730	220	2.8%	xx
1991	7,240	281	3.9%	xx
1992	4,458	269	6.0%	xx
1993	6,163	189	3.1%	xx
1994	4,930	231	4.7%	xx
Total	54,796	2,372	4.3%	2.0%

Accident Year	(1) 4/30/1997 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1987	4,895	93	1.9%	xx
1988	5,318	202	3.8%	xx
1989	8,177	793	9.7%	xx
1990	7,929	274	3.5%	xx
1991	7,315	141	1.9%	xx
1992	4,284	319	7.4%	xx
1993	6,061	216	3.6%	xx
1994	5,062	155	3.1%	xx
1995	4,444	211	4.7%	xx
Total	53,485	2,404	4.5%	2.0%

Accident Year	(1) 4/30/1998 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1988	5,228	70	1.3%	xx
1989	7,991	321	4.0%	xx
1990	7,725	436	5.6%	xx
1991	7,216	173	2.4%	xx
1992	4,439	85	1.9%	xx
1993	6,077	194	3.2%	xx
1994	5,217	77	1.5%	xx
1995	4,354	272	6.2%	xx
1996	4,316	87	2.0%	xx
Total	52,563	1,715	3.3%	2.0%

Accident Year	(1) 4/30/1999 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1989	8,525	96	1.1%	xx
1990	7,726	83	1.1%	xx
1991	7,140	208	2.9%	xx
1992	2,428	74	3.0%	xx
1993	5,804	322	5.5%	xx
1994	5,111	198	3.9%	xx
1995	4,294	164	3.8%	xx
1996	4,690	106	2.3%	xx
1997	xx	xx	xx	xx
Total	45,718	1,251	2.7%	1.5%

Accident Year	(1) 4/30/2000 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1990	7,808	52	0.7%	xx
1991	7,176	15	0.2%	xx
1992	2,327	125	5.4%	xx
1993	5,767	161	2.8%	xx
1994	5,029	130	2.6%	xx
1995	4,416	97	2.2%	xx
1996	4,808	119	2.5%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
Total	37,331	699	1.9%	1.4%

Accident Year	(1) 4/30/2001 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1991	7,348	85	1.2%	xx
1992	2,286	86	3.8%	xx
1993	5,730	77	1.3%	xx
1994	5,060	29	0.6%	xx
1995	4,484	150	3.3%	xx
1996	4,806	187	3.9%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
Total	29,714	614	2.1%	1.3%

Accident Year	(1) 4/30/2002 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1992	2,939	16	0.5%	xx
1993	5,812	57	1.0%	xx
1994	5,113	40	0.8%	xx
1995	4,667	101	2.2%	xx
1996	4,704	242	5.1%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
Total	23,235	456	2.0%	1.2%

Accident Year	(1) 4/30/2003 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1993	5,971	0	0.0%	xx
1994	5,125	0	0.0%	xx
1995	4,706	0	0.0%	xx
1996	4,578	145	3.2%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
Total	20,380	145	0.7%	1.1%

Accident Year	(1) 4/30/2004 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1994	5,179	59	1.1%	xx
1995	4,740	83	1.8%	xx
1996	4,702	32	0.7%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
Total	14,621	174	1.2%	1.0%

Accident Year	(1) 4/30/2005 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1995	4,669	0	0.0%	xx
1996	4,626	0	0.0%	xx
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
Total	9,295	0	0.0%	0.8%

Accident Year	(1) 4/30/2006 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1996	4,708	25	0.5%	xx
1997	xx	0	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
2004	xx	xx	xx	xx
Total	4,708	25	0.5%	0.5%

Accident Year	(1) 4/30/2007 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1997	xx	xx	xx	xx
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
2004	xx	xx	xx	xx
2005	xx	xx	xx	xx
Total	0	0	0.0%	0.0%

Accident Year	(1) 4/30/2008 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1998	xx	xx	xx	xx
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
2004	xx	xx	xx	xx
2005	xx	xx	xx	xx
2006	xx	xx	xx	xx
Total	0	0	0.0%	0.0%

Accident Year	(1) 4/30/2009 Rpt.Loss[a]	(2) 12 Month Fav Dev[a]	(3) (2) / (1)	(4) Selection
1999	xx	xx	xx	xx
2000	xx	xx	xx	xx
2001	xx	xx	xx	xx
2002	xx	xx	xx	xx
2003	xx	xx	xx	xx
2004	xx	xx	xx	xx
2005	xx	xx	xx	xx
2006	xx	xx	xx	xx
2007	xx	xx	xx	xx
2008	xx	xx	xx	xx
Total	0	0	0.0%	0.0%

(a) All amounts are in thousands of dollars
Incurred losses for 1992 exclude effects of large loss.

Note: Personnel from the CMCRB have concluded that the impact of Act 57 has waned to the point that the Claim Settlement effect for this year and future years is zero(0.00). Thus this Exhibit will no longer be updated.

Sources: Column (1) Exhibit VI-B p. 1a
CMCRB Data Base

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Incurred Indemnity and Funeral Claim Counts for All Classes Combined (excl. USLH)

A. Indemnity Reported Incurred Claims as of 04/30/22

Report	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	241	196	219	203	156	163	193	170	168	175	172	149	258	161	140	163	152	156	131	137
2	244	196	227	228	163	164	206	193	177	182	198	171	287	181	147	172	171	170	139	
3	246	197	230	229	165	164	203	195	177	188	201	174	290	186	149	175	175	172		
4	246	198	231	230	166	164	205	195	177	190	202	175	291	188	149	174	174			
5	246	199	231	230	166	164	204	195	177	190	202	175	292	188	150	175				
6	246	199	231	230	166	164	204	195	177	190	202	175	291	188	150					
7	246	199	231	230	166	164	204	195	177	190	203	175	291	188						
8	246	199	231	230	166	164	204	195	177	190	203	175	291							
9	246	199	231	230	166	164	204	195	177	190	203	175								
10	246	199	231	230	166	164	204	195	178	190	203									
11	246	199	231	230	166	164	204	195	178	190										
12	246	199	231	230	166	164	204	195	178											
13	246	199	231	230	166	164	204	195												
14	246	199	231	230	166	164	204													
15	246	199	231	230	166	164														
16	246	199	231	230	166															
17	246	199	231	230																
18	246	199	231																	
19	246	199																		
20	246																			

B. Annual Claim Count Development

1:2										1.0400	1.1512	1.1477	1.1124	1.1242	1.0500	1.0552	1.1250	1.0897	1.0611
2:3									1.0000	1.0330	1.0152	1.0175	1.0105	1.0276	1.0136	1.0174	1.0234	1.0118	
3:4								1.0000	1.0000	1.0106	1.0050	1.0057	1.0034	1.0108	1.0000	0.9943	0.9943		
4:5							0.9951	1.0000	1.0000	1.0000	1.0000	1.0000	1.0034	1.0000	1.0067	1.0057			
5:6						1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9966	1.0000	1.0000				
6:7					1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0050	1.0000	1.0000	1.0000					
7:8				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8:9			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9:10		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0056	1.0000	1.0000								
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15:16	1.0000	1.0000	1.0000	1.0000	1.0000														
16:17	1.0000	1.0000	1.0000	1.0000															
17:18	1.0000	1.0000	1.0000																
18:19	1.0000	1.0000																	
19:20	1.0000																		

C. Summary

	10 Year Straight Average	6 Year Straight Average	10 Year Weighted Average	10 Year Average ex. Hi&Lo	6 Year Average ex. Hi&Lo	6 Year Weighted Average	Average of Middle Four	Selected	Cumulative	Acc. Year	Ultimate
1:2	1.0957	1.0842	1.0972	1.0957	1.0826	1.0853	1.0902	1.0902	1.1135	2021	153
2:3	1.0170	1.0174	1.0167	1.0171	1.0166	1.0168	1.0169	1.0169	1.0214	2020	142
3:4	1.0024	1.0014	1.0026	1.0024	1.0009	1.0017	1.0020	1.0020	1.0044	2019	173
4:5	1.0011	1.0026	1.0010	1.0011	1.0023	1.0025	1.0018	1.0018	1.0024	2018	174
5:6	0.9997	0.9994	0.9995	1.0000	1.0000	0.9992	0.9996	1.0005	1.0006	2017	175
6:7	1.0005	1.0008	1.0005	1.0000	1.0000	1.0008	1.0005	1.0001	1.0001	2016	150
7:8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2015	188
8:9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2014	291
9:10	1.0006	1.0009	1.0005	1.0000	1.0000	1.0009	1.0005	1.0000	1.0000	2013	175
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2012	203
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2011	190
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2010	178
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2009	195
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2008	204
15:16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2007	164
16:17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2006	166
17:18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2005	230
18:19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2004	231
19:20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2003	199
										2002	246

Source: A. Loss Development Data: CMCRB Database as of 04/30/22 - Validated 08/02/22
B. Annual Loss Development Ratios
C, Summary of Straight Averages for 10 and 6 years,
Weighted Averages for 10 and 6 years,
Straight Averages for 10 and 6 years excluding highest and lowest,
Average of middle 4 of above 6 averages.

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Medical Only Claim Counts for All Classes Combined (excl. USLH)

A. Medical Only Reported Incurred Claims Valued as of 04/30/22

Report	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	487	453	516	476	456	488	523	479	559	628	562	472	592	402	295	324	298	320	231	201
2	499	462	524	479	453	494	527	469	560	632	553	477	582	399	304	330	293	316	229	
3	500	461	523	480	451	495	528	469	559	627	553	478	580	397	303	329	290	315		
4	500	461	522	479	450	495	527	469	559	626	553	478	579	396	304	330	290			
5	500	461	522	479	450	495	528	469	559	626	553	478	580	396	302	329				
6	500	461	522	479	450	495	528	469	559	626	553	479	581	396	302					
7	500	461	522	479	450	495	528	469	559	626	552	479	581	396						
8	500	461	522	479	450	495	528	469	559	626	552	479	581							
9	500	461	522	479	450	495	528	469	559	626	552	479								
10	500	461	522	479	450	495	528	469	558	626	552									
11	500	461	522	479	450	495	528	469	558	626										
12	500	461	522	479	450	495	528	469	558											
13	500	461	522	479	450	495	528	469												
14	500	461	522	479	450	495	528													
15	500	461	522	479	450	495														
16	500	461	522	479	450															
17	500	461	522	479																
18	500	461	522																	
19	500	461																		
20	500																			

B. Annual Claim Count Development

1:2										1.0064	0.9840	1.0106	0.9831	0.9925	1.0305	1.0185	0.9832	0.9875	0.9913
2:3									0.9982	0.9921	1.0000	1.0021	0.9966	0.9950	0.9967	0.9970	0.9898	0.9968	
3:4								1.0000	1.0000	0.9984	1.0000	1.0000	0.9983	0.9975	1.0033	1.0030	1.0000		
4:5							1.0019	1.0000	1.0000	1.0000	1.0000	1.0000	1.0017	1.0000	0.9934	0.9970			
5:6						1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0021	1.0017	1.0000	1.0000				
6:7					1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9982	1.0000	1.0000	1.0000					
7:8				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8:9			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9:10		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9982	1.0000	1.0000								
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15:16	1.0000	1.0000	1.0000	1.0000	1.0000														
16:17	1.0000	1.0000	1.0000	1.0000															
17:18	1.0000	1.0000	1.0000																
18:19	1.0000	1.0000																	
19:20	1.0000																		

C. Summary

	10 Year Straight Average	6 Year Straight Average	10 Year Weighted Average	10 Year Average ex. Hi&Lo	6 Year Average ex. Hi&Lo	6 Year Weighted Average	Average of Middle Four	Selected	Cumulative	Acc. Year	Ultimate
1:2	0.9988	1.0006	0.9978	0.9968	0.9975	1.0005	0.9987	1.0000	1.0000	2021	201
2:3	0.9964	0.9953	0.9966	0.9966	0.9963	0.9955	0.9962	1.0000	1.0000	2020	229
3:4	1.0001	1.0004	0.9998	1.0000	1.0003	1.0000	1.0001	1.0000	1.0000	2019	315
4:5	0.9994	0.9987	0.9998	0.9998	0.9993	0.9992	0.9994	1.0000	1.0000	2018	290
5:6	1.0004	1.0006	1.0004	1.0002	1.0004	1.0007	1.0005	1.0000	1.0000	2017	329
6:7	0.9998	0.9997	0.9998	1.0000	1.0000	0.9997	0.9998	1.0000	1.0000	2016	302
7:8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2015	396
8:9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2014	581
9:10	0.9998	0.9997	0.9998	1.0000	1.0000	0.9997	0.9998	1.0000	1.0000	2013	479
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2012	552
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2011	626
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2010	558
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2009	469
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2008	528
15:16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2007	495
16:17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2006	450
17:18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2005	479
18:19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2004	522
19:20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2003	461
										2002	500

Medical Only claims are defined as claims with Medical Incurred dollars greater than zero and Indemnity Incurred dollars equal to zero.

Source: A. Loss Development Data: CMCRB Database as of 04/30/22 - Validated 08/02/22
B. Annual Loss Development Ratios
C, Summary of Straight Averages for 10 and 6 years,
Weighted Averages for 10 and 6 years,
Straight Averages for 10 and 6 years excluding highest and lowest,
Average of middle 4 of above 6 averages.

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Medical Only Incurred for All Classes Combined (excl. USLH)

A. Medical Only Reported Incurred Losses Valued as of 04/30/22

Report	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	326,965	344,009	440,355	393,342	475,073	645,531	538,996	499,273	689,845	830,417	739,070	657,505	844,733	693,513	566,845	710,306	617,796	583,508	446,068	408,624
2	354,474	343,651	489,659	395,971	492,413	667,028	564,408	475,294	714,306	875,488	730,189	725,991	815,806	646,094	561,393	751,295	615,524	606,070	465,344	
3	351,193	342,029	499,930	570,553	464,396	651,680	574,474	487,309	733,721	857,971	733,490	761,471	817,528	618,570	543,998	750,831	584,188	625,437		
4	343,963	346,252	499,000	577,565	464,210	654,006	561,921	487,349	733,721	860,990	734,013	762,094	804,432	612,724	545,870	758,162	581,295			
5	345,393	346,252	499,175	577,565	464,210	657,948	569,251	487,454	733,721	862,257	734,091	762,711	805,516	612,724	542,126	757,079				
6	345,393	346,252	499,175	577,565	464,210	663,201	578,077	487,454	733,721	862,257	734,170	763,168	806,301	612,724	542,126					
7	345,393	346,252	499,175	577,565	464,210	663,201	584,120	487,454	733,721	862,257	704,535	763,168	806,301	612,724						
8	345,393	346,252	499,182	439,393	464,210	663,201	586,976	487,454	733,721	862,257	704,535	763,168	806,301							
9	345,393	346,318	499,182	439,393	464,210	663,201	593,200	487,454	733,728	862,257	704,535	763,168								
10	345,393	346,318	499,182	439,463	464,210	663,201	600,587	488,067	733,514	862,257	704,535									

B. Annual Loss Development

1:2										1.0543	0.9880	1.1042	0.9658	0.9316	0.9904	1.0577	0.9963	1.0387	1.0432	
2:3									1.0272	0.9800	1.0045	1.0489	1.0021	0.9574	0.9690	0.9994	0.9491	1.0320		
3:4								1.0001	1.0000	1.0035	1.0007	1.0008	0.9840	0.9905	1.0034	1.0098	0.9950			
4:5							1.0130	1.0002	1.0000	1.0015	1.0001	1.0008	1.0013	1.0000	0.9931	0.9986				
5:6						1.0080	1.0155	1.0000	1.0000	1.0000	1.0001	1.0006	1.0010	1.0000	1.0000					
6:7					1.0000	1.0000	1.0105	1.0000	1.0000	1.0000	0.9596	1.0000	1.0000	1.0000						
7:8				0.7608	1.0000	1.0000	1.0049	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
8:9			1.0000	1.0000	1.0000	1.0000	1.0106	1.0000	1.0000	1.0000	1.0000	1.0000								
9:10		1.0000	1.0000	1.0002	1.0000	1.0000	1.0125	1.0013	0.9997	1.0000	1.0000									

C. Summary

	10 Year Straight Average	6 Year Straight Average	10 Year Weighted Average	10 Year Average ex. Hi&Lo	6 Year Average ex. Hi&Lo	6 Year Weighted Average	Average of Middle Four	Selected	Cumulative	Acc. Year	Ultimate
1:2	1.0170	1.0097	1.0155	1.0168	1.0172	1.0077	1.0147	1.0147	1.0147	2021	414,631
2:3	0.9970	0.9848	0.9979	0.9965	0.9820	0.9861	0.9911	1.0000	1.0000	2020	465,344
3:4	0.9988	0.9973	0.9988	0.9993	0.9974	0.9971	0.9981	1.0000	1.0000	2019	625,437
4:5	1.0009	0.9990	1.0008	1.0003	0.9999	0.9993	1.0001	1.0000	1.0000	2018	581,295
5:6	1.0025	1.0003	1.0023	1.0012	1.0002	1.0003	1.0010	1.0000	1.0000	2017	757,079
6:7	0.9970	0.9933	0.9965	1.0000	1.0000	0.9934	0.9967	1.0000	1.0000	2016	542,126
7:8	0.9766	1.0000	0.9796	1.0000	1.0000	1.0000	0.9949	1.0000	1.0000	2015	612,724
8:9	1.0011	1.0018	1.0010	1.0000	1.0000	1.0015	1.0009	1.0000	1.0000	2014	806,301
9:10	1.0014	1.0023	1.0014	1.0002	1.0003	1.0019	1.0012	1.0000	1.0000	2013	763,168

Source: A. Loss Development Data: CMCRB Database as of 04/30/22 - Validated 08/02/22
B. Annual Loss Development Ratios
C, Summary of Straight Averages for 10 and 6 years,

Weighted Averages for 10 and 6 years,
Straight Averages for 10 and 6 years excluding highest and lowest,
Average of middle 4 of above 6 averages.

Coal Mine Compensation Rating Bureau
Traumatic - Medical Losses
Summary of Adjustments to Development Factors for Act 44#

	Accident Year																								
Report	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000					
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000									
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000										
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000											
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000												
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000													
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000														
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000															
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																	
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																		
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																			

Adjustments to development factors applicable to medical loss evaluated as of 04/30/2022
Act 44 became effective in 1993.

Source: Unity adjustments for Accident Years 1995 and subsequent

Coal Mine Compensation Rating Bureau
Traumatic Loss Development
Paid Losses for All Classes Combined

Indemnity and Funeral Reported Paid Losses as of 04/30/22

Report	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	1,745,062	1,453,835	2,265,522	1,499,127	1,585,758	2,123,723	1,424,937	1,477,485	1,883,649	1,490,981	1,524,765	1,786,240	2,060,360	1,899,710	4,015,185	2,666,351	2,516,576	2,666,824	2,196,913	2,533,857	2,613,834	2,367,125
2	3,311,393	3,447,824	4,498,717	2,589,720	3,607,906	4,763,116	3,031,492	2,973,005	3,608,322	2,864,778	3,435,863	3,977,654	5,486,851	4,482,404	7,425,208	6,101,619	5,231,352	5,437,686	5,148,691	6,047,363	5,373,349	
3	5,285,169	5,249,852	6,269,556	4,097,105	5,068,968	6,595,737	3,990,338	4,078,233	5,798,309	4,380,163	4,339,688	6,103,091	7,473,314	6,081,014	10,827,506	7,651,201	6,950,711	7,418,658	6,860,470	6,799,224		
4	5,944,494	6,234,883	7,427,776	5,182,592	5,951,422	7,770,869	4,714,994	5,032,592	6,658,499	4,536,641	6,078,298	7,583,308	8,392,146	6,502,458	11,747,478	9,380,121	8,203,041	8,254,560	7,232,745			
5	6,698,701	6,774,208	8,517,965	5,654,435	6,488,204	8,470,539	4,894,518	5,362,003	6,986,131	4,912,891	6,374,543	7,955,378	9,139,912	6,652,885	12,208,353	10,671,950	8,356,903	9,169,543				
6	7,237,063	6,969,310	9,582,098	6,009,319	6,696,634	8,926,585	4,966,788	5,648,220	7,214,898	5,041,132	6,690,310	8,294,033	9,395,170	7,003,338	12,232,461	10,663,121	8,518,921					
7	7,283,059	7,402,247	9,706,503	6,156,138	6,907,738	9,168,385	4,991,574	5,900,930	7,644,898	5,082,350	7,001,167	8,345,450	9,588,035	7,421,020	12,388,158	10,912,322						
8	7,329,084	7,611,242	10,138,868	6,524,987	6,965,528	9,422,725	5,014,153	5,986,526	7,907,461	5,123,568	7,146,676	8,382,687	9,898,479	7,504,122	12,388,158							
9	7,462,119	7,653,900	10,368,436	6,705,837	7,020,184	9,810,124	5,059,383	6,164,246	8,052,763	5,164,786	7,433,505	8,415,832	10,137,263	7,582,900								
10	7,468,382	7,721,764	10,619,368	6,755,866	7,139,264	9,993,283	5,160,329	6,244,573	8,342,088	5,206,003	7,433,605	8,450,282	10,145,648									
11	7,474,646	7,789,732	10,873,650	6,839,005	7,190,739	10,178,581	5,422,689	6,340,857	8,901,130	5,425,367	7,433,490	8,484,019										
12	7,480,909	7,855,086	11,009,570	6,873,904	7,236,947	10,392,475	5,671,285	6,488,602	8,944,239	5,425,367	7,365,256											
13	7,481,735	7,919,766	11,120,644	6,908,899	7,276,930	10,542,895	5,694,209	6,942,382	8,979,706	5,425,367												
14	7,481,735	8,081,870	11,269,601	6,946,798	7,319,605	10,679,371	5,717,956	6,975,971	9,015,173													
15	7,481,735	8,115,379	11,305,361	6,981,697	7,362,281	10,920,744	5,741,638	7,009,560														
16	7,481,735	8,142,053	11,400,129	7,016,692	7,346,334	10,975,651	5,765,321															
17	7,481,735	8,205,378	11,418,631	7,051,687	7,387,814	11,040,607																
18	7,481,735	8,226,812	11,437,132	7,086,586	7,429,293																	
19	7,481,735	8,248,304	11,517,844	7,121,485																		
20	7,481,735	8,270,080	11,517,844																			

Medical Reported Paid Losses as of 04/30/22

Report	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	1,676,127	1,421,461	2,013,689	1,481,566	2,435,389	2,520,705	1,948,500	3,239,013	2,201,565	1,934,714	2,751,976	3,211,934	3,620,004	2,405,299	3,932,999	2,543,986	2,330,259	3,551,261	3,823,082	2,513,440	2,363,275	2,053,250
2	2,184,303	2,027,699	2,673,510	2,121,377	3,067,832	3,289,523	2,697,293	4,228,737	3,040,747	2,474,907	3,390,240	4,440,785	4,582,813	3,578,603	5,151,408	3,296,965	3,384,463	4,638,090	4,793,745	3,324,766	3,255,399	
3	2,352,615	2,236,309	3,007,596	2,326,077	3,293,472	3,433,690	2,989,067	4,505,191	3,288,243	2,729,947	3,683,337	4,817,723	4,960,347	3,742,975	5,735,672	3,580,853	3,604,969	5,032,359	4,989,893	3,462,723		
4	2,491,759	2,326,207	3,216,844	2,429,794	3,868,121	3,535,900	3,075,764	4,755,842	3,434,618	2,838,307	4,051,859	5,007,341	5,092,937	3,809,188	5,817,859	3,713,959	3,669,953	5,185,111	5,082,644			
5	2,617,138	2,425,392	3,378,060	2,544,069	3,923,267	3,673,096	3,157,818	4,895,811	3,482,499	2,888,987	4,202,511	5,259,529	5,128,604	3,896,925	5,835,421	3,864,888	3,678,978	5,301,963				
6	2,673,929	2,495,415	3,495,984	2,582,303	3,963,617	3,920,165	3,202,045	5,005,959	3,502,704	2,911,117	4,278,113	5,362,138	5,199,172	3,971,294	5,882,026	3,861,601	3,696,787					
7	2,698,511	2,581,983	3,544,378	2,683,561	4,005,779	4,000,731	3,238,455	5,123,649	3,511,257	2,933,165	4,315,213	5,507,337	5,222,506	4,070,119	5,884,600	3,872,574						
8	2,715,033	2,622,094	3,699,439	2,709,624	4,053,658	4,067,412	3,238,035	5,214,054	3,521,293	2,960,275	4,328,399	5,574,652	5,246,341	4,082,391	5,884,600							
9	2,725,884	2,671,237	3,711,954	2,751,055	4,069,440	4,101,236	3,301,685	5,294,667	3,531,557	2,993,791	4,334,343	5,725,914	5,306,826	4,093,543								
10	2,764,209	2,715,237	3,727,842	2,775,526	4,099,493	4,121,749	3,378,839	5,339,901	3,544,208	3,030,936	4,335,338	5,779,145	5,344,906									
11	2,785,789	2,768,418	3,738,687	2,801,700	4,156,729	4,152,472	3,500,778	5,404,879	3,552,431	3,068,930	4,336,335	5,824,552										
12	2,791,316	2,821,879	3,760,085	2,830,668	4,186,218	4,188,666	3,554,600	5,505,708	3,559,244	3,108,409	4,337,118											
13	2,794,972	2,865,653	3,783,035	2,860,666	4,197,884	4,398,535	3,591,568	5,690,592	3,570,134	3,109,112												
14	2,799,305	2,899,480	3,795,599	2,889,252	4,212,622	4,408,224	3,600,198	5,743,859	3,586,284													
15	2,823,807	2,925,169	3,944,740	2,926,491	4,228,643	4,496,066	3,605,231	5,788,585														
16	2,831,581	2,939,820	3,961,842	2,943,126	4,241,385	4,568,034	3,616,268															
17	2,872,279	3,006,814	3,961,842	2,943,548	4,247,885	4,573,018																
18	2,872,279	3,017,086	3,961,842	2,944,038	4,253,471																	
19	2,872,279	3,018,743	3,961,842	2,945,092																		
20	2,872,279	3,019,006	3,961,842																			

Source: CMCRB Database as of 04/30/22 - Validated 08/02/22

	State O.D.			Federal Excess O.D.		
	Base	All PP	Weighted 100%-0%	Base	All PP	Weighted 100%-0%
(a) After AMA Guidelines				(a) After AMA Guidelines		
(1) Number of Claims	# 9			# 9		
(2) Average Amounts	$918,454	$526,265	$918,454	$124,495	$284,797	$124,495
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$132,450	$284,797	$132,450
(2) Difference- Social Security (Federal= b-1 minus a-2)	$77,550	$0	$77,550	7,955	0	7,955
(3) Index (to a(2))	8.4435%	0.0000%	8.4435%	6.3898%	0.0000%	6.3898%
(4) Complement	91.5565%	100.0000%	91.5565%	93.6102%	100.0000%	93.6102%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$174,116	$292,373	$174,116
(2) Difference (Federal= c-1 minus b-1)	$138,425	$63,268	$138,425	41,666	7,576	41,666
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	17,303	7,909	17,303	5,208	947	5,208
(5) Index (to a-2)	1.8839%	1.5028%	1.8839%	4.1835%	0.3325%	4.1835%
(6) Complement	98.1161%	98.4972%	98.1161%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$94,853	$7,909	$94,853	$13,163	$947	$13,163
(2) Index (to a-2)	10.3275%	1.5028%	10.3275%			10.5733%
(3) Complement	89.6725%	98.4972%	89.6725%	Factor		110.5733%
(4) Total Average	823,601	518,357	823,601			137,658
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0.0000%			
(2) Complement			100.0000%			
(3) Dollar Decrease			0	Dollar Increase		$0
(4) Factor						100.0000%
(f) Combined Social Security, Pension and Wage Level				(f) Combined Percentage		
(1) Percentage level Excl. AMA Guidelines (d-3 times e-2)			89.6725%	(d-3) times (e-4)		110.5733%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			89.6725%			110.5733%
(4) Percentage Decrease			10.3275%	Increase		10.5733%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3) Decrease			$94,853	Increase		$13,163
(2) Average after Act 57 (a-2 plus or minus g-1)			$823,601			$137,658

Weighted Level = 100% Base Scenario plus 0% 'All Permanent Partial' Scenario.

Source: Exhibit VII-E, Exhibit IX-A & Exhibit VII-G, Page 1 and Page 2.

	State O.D.			Federal Excess O.D.		
	Base	All PP	Weighted 100%-0%	Base	All PP	Weighted 100%-0%
(a) After AMA Guidelines				(a) After AMA Guidelines		
(1) Number of Claims	# 73			# 73		
(2) Average Amounts	$355,387	$267,347	$355,387	$243,792	$274,359	$243,792
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$251,603	$280,879	$251,603
(2) Difference- Social Security (Federal= b-1 minus a-2)	$29,302	$14,354	$29,302	7,811	6,520	7,811
(3) Index (to a(2))	8.2451%	5.3691%	8.2451%	3.2040%	2.3764%	3.2040%
(4) Complement	91.7549%	94.6309%	91.7549%	96.7960%	97.6236%	96.7960%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$285,522	$308,492	$285,522
(2) Difference (Federal= c-1 minus b-1)	$81,829	$65,507	$81,829	33,919	27,613	33,919
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	10,229	8,188	10,229	4,240	3,452	4,240
(5) Index (to a-2)	2.8782%	3.0628%	2.8782%	1.7391%	1.2581%	1.7391%
(6) Complement	97.1218%	96.9372%	97.1218%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$39,531	$22,542	$39,531	$12,051	$9,972	$12,051
(2) Index (to a-2)	11.1233%	8.4319%	11.1233%			4.9431%
(3) Complement	88.8767%	91.5681%	88.8767%	Factor		104.9431%
(4) Total Average	315,856	244,805	315,856			255,843
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0.0000%			
(2) Complement			100.0000%			
(3) Dollar Decrease			0	Dollar Increase		$0
(4) Factor						100.0000%
(f) Combined Social Security, Pension and Wage Level				(f) Combined Percentage		
(1) Percentage level Excl. AMA Guidelines (d-3 times e-2)			88.8767%			104.9431%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			88.8767%			104.9431%
(4) Percentage Decrease			11.1233%	Increase		4.9431%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$39,531	Increase		$12,051
(2) Average after Act 57 (a-2 plus or minus g-1)			$315,856			$255,843

Weighted Level = 100% Base Scenario plus 0% 'All Permanent Partial' Scenario.

Source: Exhibit VII-E, Exhibit IX-A & Exhibit VII-G, Page 1 and Page 2.

	State O.D.			Federal Excess O.D.		
	Base	All PP	Weighted 100%-0%	Base	All PP	Weighted 100%-0%
(a) After AMA Guidelines				(a) After AMA Guidelines		
(1) Number of Claims	# 38			# 38		
(2) Average Amounts	$615,635	$419,938	$615,635	$73,408	$151,521	$73,408
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$76,383	$151,564	$76,383
(2) Difference- Social Security (Federal= b-1 minus a-2)	$16,589	$4,745	$16,589	2,975	43	2,975
(3) Index (to a(2))	2.6946%	1.1299%	2.6946%	4.0527%	0.0284%	4.0527%
(4) Complement	97.3054%	98.8701%	97.3054%	95.9473%	99.9716%	95.9473%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$94,091	$164,958	$94,091
(2) Difference (Federal= c-1 minus b-1)	$121,087	$88,463	$121,087	17,708	13,394	17,708
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	15,136	11,058	15,136	2,214	1,674	2,214
(5) Index (to a-2)	2.4586%	2.6332%	2.4586%	3.0153%	1.1050%	3.0153%
(6) Complement	97.5414%	97.3668%	97.5414%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$31,725	$15,803	$31,725	$5,189	$1,717	$5,189
(2) Index (to a-2)	5.1532%	3.7631%	5.1532%			7.0680%
(3) Complement	94.8468%	96.2369%	94.8468%	Factor		107.0680%
(4) Total Average	583,910	404,135	583,910			78,597
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0.0000%			
(2) Complement			100.0000%			
(3) Dollar Decrease			0	Dollar Increase		$0
(4) Factor						100.0000%
(f) Combined Social Security, Pension and Wage Level				(f) Combined Percentage		
(1) Percentage level Excl. AMA Guidelines (d-3 times e-2)			94.8468%			107.0680%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			94.8468%			107.0680%
(4) Percentage Decrease			5.1532%	Increase		7.0680%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$31,725	Increase		$5,189
(2) Average after Act 57 (a-2 plus or minus g-1)			$583,910			$78,597

Weighted Level = 100% Base Scenario plus 0% 'All Permanent Partial' Scenario.

Source: Exhibit VII-E, Exhibit IX-A & Exhibit VII-G, Page 1 and Page 2.

	State O.D.			Federal Excess O.D.		
	Base	All PP	Weighted 100%-0%	Base	All PP	Weighted 100%-0%
(a) After AMA Guidelines				(a) After AMA Guidelines		
(1) Number of Claims	# 24			# 24		
(2) Average Amounts	$444,622	$314,493	$444,622	$205,103	$252,174	$205,103
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$211,888	$255,293	$211,888
(2) Difference- Social Security (Federal= b-1 minus a-2)	$33,413	$7,458	$33,413	6,785	3,119	6,785
(3) Index (to a(2))	7.5149%	2.3714%	7.5149%	3.3081%	1.2368%	3.3081%
(4) Complement	92.4851%	97.6286%	92.4851%	96.6919%	98.7632%	96.6919%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$251,666	$283,031	$251,666
(2) Difference (Federal= c-1 minus b-1)	$84,002	$57,236	$84,002	39,778	27,738	39,778
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	10,500	7,155	10,500	4,972	3,467	4,972
(5) Index (to a-2)	2.3616%	2.2749%	2.3616%	2.4243%	1.3749%	2.4243%
(6) Complement	97.6384%	97.7251%	97.6384%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$43,913	$14,613	$43,913	$11,757	$6,586	$11,757
(2) Index (to a-2)	9.8765%	4.6464%	9.8765%			5.7324%
(3) Complement	90.1235%	95.3536%	90.1235%	Factor		105.7324%
(4) Total Average	400,709	299,881	400,709			216,860
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0.0000%			
(2) Complement			100.0000%			
(3) Dollar Decrease			0	Dollar Increase		$0
(4) Factor						100.0000%
(f) Combined Social Security, Pension and Wage Level				(f) Combined Percentage		
(1) Percentage level Excl. AMA Guidelines (d-3 times e-2)			90.1235%			105.7324%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			90.1235%			105.7324%
(4) Percentage Decrease			9.8765%	Increase		5.7324%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$43,913	Increase		$11,757
(2) Average after Act 57 (a-2 plus or minus g-1)			$400,709			$216,860

Weighted Level = 100% Base Scenario plus 0% 'All Permanent Partial' Scenario.

Source: Exhibit VII-E, Exhibit IX-A & Exhibit VII-G, Page 1 and Page 2.

	State O.D.			Federal Excess O.D.		
	Base	All PP	Weighted 100%-0%	Base	All PP	Weighted 100%-0%
(a) After AMA Guidelines				(a) After AMA Guidelines		
(1) Number of Claims	# 16			# 16		
(2) Average Amounts	$332,672	$247,090	$332,672	$238,820	$267,189	$238,820
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$249,838	$275,032	$249,838
(2) Difference- Social Security (Federal= b-1 minus a-2)	$22,699	$11,231	$22,699	11,018	7,843	11,018
(3) Index (to a(2))	6.8232%	4.5453%	6.8232%	4.6135%	2.9354%	4.6135%
(4) Complement	93.1768%	95.4547%	93.1768%	95.3865%	97.0646%	95.3865%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$264,142	$284,081	$264,142
(2) Difference (Federal= c-1 minus b-1)	$58,318	$39,673	$58,318	14,304	9,049	14,304
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	7,290	4,959	7,290	1,788	1,131	1,788
(5) Index (to a-2)	2.1913%	2.0070%	2.1913%	0.7487%	0.4233%	0.7487%
(6) Complement	97.8087%	97.9930%	97.8087%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$29,989	$16,190	$29,989	$12,806	$8,974	$12,806
(2) Index (to a-2)	9.0145%	6.5523%	9.0145%			5.3622%
(3) Complement	90.9855%	93.4477%	90.9855%	Factor		105.3622%
(4) Total Average	302,683	230,900	302,683			251,626
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0.0000%			
(2) Complement			100.0000%			
(3) Dollar Decrease			0	Dollar Increase		$0
(4) Factor						100.0000%
(f) Combined Social Security, Pension and Wage Level				(f) Combined Percentage		
(1) Percentage level Excl. AMA Guidelines (d-3 times e-2)			90.9855%			105.3622%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			90.9855%			105.3622%
(4) Percentage Decrease			9.0145%	Increase		5.3622%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$29,989	Increase		$12,806
(2) Average after Act 57 (a-2 plus or minus g-1)			$302,683			$251,626

Weighted Level = 100% Base Scenario plus 0% 'All Permanent Partial' Scenario.

Source: Exhibit VII-E, Exhibit IX-A & Exhibit VII-G, Page 1 and Page 2.

COAL MINE COMPENSATION RATING BUREAU

State Occupational Disease Classification Credibility

Classification		Code	(1) Estimated Miner Years 2012-2021	(2) Claim Frequency per 100 Miner Years: Indicated (Eff 4/1/2022)	(3) Claim Frequency per 100 Miner Years: Trended to 4/1/2023	(4) Claim Frequency per 100 Miner Years: Indicated (Eff 4/1/2023)	(5) Credibility: Expected Awarded Claims	(6) Credibility: Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) 10 Year 2012-2021 Payroll	(10) Claim Frequency Per $100 of Payroll
Underground:	Anthracite	1011	59.7	1.293623	1.293623	1.465719	0.772	0.119	1.314102	1.6%	3,235,380	0.242481
	Bituminous	1002	21,530.3	0.173844	0.173844	0.190512	37.429	0.827	0.187628	7.9%	1,741,346,706	0.023199
Surface:	Anthracite	1016	4,031.2	0.101114	0.101114	0.061885	4.076	0.273	0.090404	-10.6%	225,692,440	0.016147
	Bituminous	1013	7,710.4	0.064944	0.064944	0.105303	5.007	0.303	0.077173	18.8%	422,516,549	0.014083
Four Standard Classifications			33,331.6	0.141862	0.141862	0.157529	47.285		0.152336	8.2%	2,392,791,075	0.021221
	Coke	1017	690.3	0.012052	0.012052	0.006574	0.083	0.039	0.011838	-1.8%	37,601,270	0.002173
	Auger	1019	105.6	0.024402	0.024402	0.008836	0.026	0.022	0.024060	-1.4%	5,777,911	0.004397
Co-Gen:	Anthracite	1022	1,642.0	0.035307	0.035307	0.081531	0.580	0.103	0.040068	13.5%	91,676,307	0.007177
	Bituminous	1024	1,999.2	0.028678	0.028678	0.009019	0.573	0.102	0.026673	-7.0%	112,420,648	0.004743
Prep Plants:	Anthracite	1026	1,669.0	0.278562	0.278562	0.280490	4.649	0.292	0.279125	0.2%	94,689,900	0.049198
	Bituminous	1028	4,084.8	0.036117	0.036117	0.047048	1.475	0.164	0.037910	5.0%	331,692,609	0.004669
Other Classes			10,190.9	0.072482		0.080238	7.387		0.073648	2.7%	673,858,645	0.011138
Total			43,522.5	0.125617		0.139431	54.672		0.133911	6.9%	3,066,649,720	0.019005

Source: (1) Estimated Miner Years from Exhibit VII-B-2
(2) Exhibit VII-B-1-B Col. 10
(3) Approved claim frequency trended to 4/1/2023 @ 0.0%
(4) Indicated Frequency - Exhibit VII-B-2; totals and subtotals are based on class frequencies weighted with 10 year estimated miner years.
(5) Expected Awarded Claims = (1) x (2) / 100
(6) Factor Z = ((5) / 54.672)^0.5
(7)=(4)*(6)+((3)*(1-(6))
(8)=(7)/(2)-1 Totals and subtotals are weighted with 10 year estimated miner years.
(9) From Exhibit X-A
(10)=(7) x (1) / ((9) x 100) / 1,000,000

COAL MINE COMPENSATION RATING BUREAU

State Occupational Disease Classification Credibility

Classification		Code	(1) Approved Claim Freq. 4/1/2022	(2) Payroll 2011-2020	(3) Expected Awarded Claims 2011-2020 (1) x (2)	(4) Estimated Miner Years 2012-2021	(5) Estimated Miner Years 2021	(6) Adjustment Factor	(7) Average Weekly Wage 2011	(8) Payroll 2011	(9) Estimated Miner Years 2011-2020	(10) Frequency Per 100 Miner Years
Underground:	Anthracite	1011	0.248961	4,260,793	1.060771	59.7	3.6	1.089	858	1,257,944	82.0	1.293623
	Bituminous	1002	0.021968	1,758,330,711	38.627009	21,530.3	1,414.6	1.582	858	148,485,709	22,219.4	0.173844
Surface:	Anthracite	1016	0.018567	222,459,473	4.130405	4,031.2	379.2	1.089	858	21,034,600	4,084.9	0.101114
	Bituminous	1013	0.012229	479,008,294	5.857792	7,710.4	462.3	1.089	858	86,074,064	9,019.7	0.064944
Four Standard Classifications				2,464,059,271	49.675977	33,331.6	2,259.7			256,852,317	35,406.0	
	Coke	1017	0.002236	41,200,356	0.092124	690.3	-	1.089	858	3,599,086	764.4	0.012052
	Auger	1019	0.004576	6,745,585	0.030868	105.6	3.3	1.089	858	1,176,255	126.5	0.024402
Co-Gen:	Anthracite	1022	0.006510	95,132,593	0.619313	1,642.0	129.1	1.089	858	11,720,035	1,754.1	0.035307
	Bituminous	1024	0.005236	109,278,700	0.572183	1,999.2	191.3	1.089	858	9,102,411	1,995.2	0.028678
Prep Plants:	Anthracite	1026	0.050565	89,135,521	4.507138	1,669.0	199.9	1.089	858	7,236,583	1,618.0	0.278562
	Bituminous	1028	0.004572	334,794,567	1.530681	4,084.8	344.8	1.582	858	35,155,068	4,238.1	0.036117
Other Classes				676,287,322		10,190.9	868.4			67,989,438	10,496.3	
Total				3,140,346,593		43,522.5	3,128.1			324,841,755	45,902.3	

Source: (1) Approved Claim Frequency (4/1/22): See Exhibit III from filing effective 4/1/2022 (See Exhibit X-F)
(2) 10 years Payroll(2011-2020): See Exhibit X-A-1
(3) Expected Awarded Claims = (1)x(2) / 1,000,000
(4) Estimated Miner Years 2012-2021: See Exhibit VII-B-2
(5) Estimated Miner Years 2021: See Exhibit VII-B-2
(6) Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
(7) Average Weekly Wage 2011: See Exhibit XII-D
(8) Payroll 2011: See Exhibit X-A-1
(9) Estimated Miner Years 2011-2020 =(4)-(5)+(8)/((6)x(7)x52)
(10) Frequency Per 100 Miner Years = (3)/((9)/100))

STATE OCCUPATIONAL DISEASE FREQUENCY
WITH FEDERAL EXCESS FREQUENCY

ANTHRACITE UNDERGROUND (1011)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.0000	0.0000	0.000000	1,029,260	0.000000	888	1.089	20.5	0.000000	
2013	1	1	0	0	0.0000	0.0000	0.000000	381,876	1.000000	917	1.089	7.4	13.513514	
2014	0	0	0	0	0.0000	0.0000	0.000000	258,809	0.000000	932	1.089	4.9	0.000000	
2015	0	0	0	0	0.0000	0.0000	0.000000	254,336	0.000000	951	1.089	4.7	0.000000	
2016	0	0	0	0	0.0000	0.0000	0.000000	163,760	0.000000	978	1.089	3.0	0.000000	
2017	0	0	0	0	0.0000	0.0000	0.000000	252,383	0.000000	995	1.089	4.5	0.000000	
2018	0	0	0	0	0.0000	0.0000	0.000000	183,346	0.000000	1,025	1.089	3.2	0.000000	
2019	0	0	0	0	0.0000	0.0000	0.000000	179,379	0.000000	1,049	1.089	3.0	0.000000	
2020	0	0	0	0	0.0000	0.0000	0.000000	299,700	0.000000	1,081	1.089	4.9	0.000000	
2021	0	0	0	0	0.0468	0.0468	0.041172	232,531	0.041172	1,130	1.089	3.6	1.143677	
TOTAL	1	1	0	0	0.0468	0.0468	0.041172	3,235,380	1.041172			59.7	14.657191	
Average: State Frequency													1.465719	
Federal Excess Frequency (times 40.0%)													0.586288	

BITUMINOUS UNDERGROUND (1002)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	4	3	0	1	0.0000	0.0000	0.000000	153,618,908	3.000000	888	1.582	2,102.9	0.142660
2013	7	6	0	1	0.0000	0.0000	0.000000	149,747,092	6.000000	917	1.582	1,985.1	0.302252
2014	9	9	0	0	0.0000	0.0000	0.000000	271,230,707	9.000000	932	1.582	3,537.6	0.254410
2015	9	7	0	2	0.0000	0.0000	0.000000	216,454,460	7.000000	951	1.582	2,766.8	0.253000
2016	4	4	0	0	0.2763	0.2763	0.242876	148,556,407	4.242876	978	1.582	1,846.5	0.229779
2017	0	0	0	0	0.6822	0.6822	0.599654	172,708,778	0.599654	995	1.582	2,110.0	0.028420
2018	4	3	0	1	1.2350	1.2350	1.085547	180,553,142	4.085547	1,025	1.582	2,141.3	0.190798
2019	1	1	0	0	1.7623	1.7623	1.549088	177,833,672	2.549088	1,049	1.582	2,060.8	0.123694
2020	0	0	0	0	1.8228	1.8228	1.602206	139,141,836	1.602206	1,081	1.582	1,564.7	0.102397
2021	2	1	1	0	2.3315	3.3315	2.928415	131,501,704	3.928415	1,130	1.582	1,414.6	0.277705
TOTAL	40	34	1	5	8.1101	9.1101	8.007787	1,741,346,706	42.007787			21,530.3	1.905115
Average: State Frequency													0.190512
Federal Excess Frequency (times 40.0%)													0.076205

ANTHRACITE SURFACE (1016)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.0000	0.0000	0.000000	26,295,907	0.000000	888	1.089	522.9	0.000000
2013	1	0	0	1	0.0000	0.0000	0.000000	22,449,824	0.000000	917	1.089	432.3	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	20,466,075	0.000000	932	1.089	387.8	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	24,218,779	0.000000	951	1.089	449.7	0.000000
2016	2	2	0	0	0.0000	0.0000	0.000000	20,873,611	2.000000	978	1.089	376.9	0.530645
2017	0	0	0	0	0.0000	0.0000	0.000000	21,167,074	0.000000	995	1.089	375.7	0.000000
2018	0	0	0	0	0.0000	0.0000	0.000000	19,576,675	0.000000	1,025	1.089	337.3	0.000000
2019	0	0	0	0	0.0000	0.0000	0.000000	23,563,089	0.000000	1,049	1.089	396.7	0.000000
2020	0	0	0	0	0.0783	0.0783	0.068782	22,813,839	0.068782	1,081	1.089	372.7	0.018455
2021	0	0	0	0	0.3009	0.3009	0.264509	24,267,567	0.264509	1,130	1.089	379.2	0.069754
TOTAL	3	2	0	1	0.3792	0.3792	0.333290	225,692,440	2.333290			4,031.2	0.618854
Average: State Frequency													0.061885
Federal Excess Frequency (times 40.0%)													0.024754

BITUMINOUS SURFACE (1013)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	2	2	0	0	0.0000	0.0000	0.000000	76,452,811	2.000000	888	1.089	1,520.4	0.131544
2013	0	0	0	0	0.0000	0.0000	0.000000	61,349,745	0.000000	917	1.089	1,181.4	0.000000
2014	2	2	0	0	0.0000	0.0000	0.000000	54,050,731	2.000000	932	1.089	1,024.1	0.195293
2015	4	4	0	0	0.0000	0.0000	0.000000	40,934,048	4.000000	951	1.089	760.1	0.526247
2016	0	0	0	0	0.0294	0.0294	0.025860	29,127,089	0.025860	978	1.089	525.9	0.004917
2017	0	0	0	0	0.0805	0.0805	0.070786	33,140,780	0.070786	995	1.089	588.2	0.012034
2018	0	0	0	0	0.1519	0.1519	0.133511	35,242,187	0.133511	1,025	1.089	607.2	0.021988
2019	0	0	0	0	0.2383	0.2383	0.209501	35,362,714	0.209501	1,049	1.089	595.3	0.035192
2020	0	0	0	0	0.2594	0.2594	0.227995	27,274,125	0.227995	1,081	1.089	445.5	0.051177
2021	0	0	0	0	0.3926	0.3926	0.345060	29,582,319	0.345060	1,130	1.089	462.3	0.074640
TOTAL	8	8	0	0	1.1521	1.1521	1.012713	422,516,549	9.012713			7,710.4	1.053032
Average: State Frequency													0.105303
Federal Excess Frequency (times 40.0%)													0.042121

FOUR STANDARD CLASSES

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	6	5	0	1	0.0000	0.0000	0.000000	257,396,886	5.000000	888		4,166.7	0.119999	
2013	9	7	0	2	0.0000	0.0000	0.000000	233,928,537	7.000000	917		3,606.2	0.194110	
2014	11	11	0	0	0.0000	0.0000	0.000000	346,006,322	11.000000	932		4,954.4	0.222025	
2015	13	11	0	2	0.0000	0.0000	0.000000	281,861,623	11.000000	951		3,981.3	0.276292	
2016	6	6	0	0	0.3057	0.3057	0.268737	198,720,867	6.268737	978		2,752.3	0.227764	
2017	0	0	0	0	0.7627	0.7627	0.670440	227,269,015	0.670440	995		3,078.4	0.021779	
2018	4	3	0	1	1.3869	1.3869	1.219059	235,555,350	4.219059	1,025		3,089.0	0.136583	
2019	1	1	0	0	2.0007	2.0007	1.758589	236,938,854	2.758589	1,049		3,055.8	0.090274	
2020	0	0	0	0	2.1604	2.1604	1.898983	189,529,500	1.898983	1,081		2,387.8	0.079529	
2021	2	1	1	0	3.0719	4.0719	3.579156	185,584,121	4.579156	1,130		2,259.7	0.202644	
TOTAL	52	45	1	6	9.6882	10.6882	9.394963	2,392,791,075	54.394963			33,331.6	1.570999	
Average: State Frequency													0.157100	0.157528
Federal Excess Frequency (times 40.0%)													0.062840	0.063011

Source: Claim counts - CMCRB OD Database as of 08/02/2022
IBNR: Exhibit VII-C
Payroll- Exhibit X-A
The Award Ratios for all classes were set equal to the Grand Total Award Ratio calculated on Exhibit VII-B-2 Page 3.
The Grand Total Award Ratio is equal to Awarded ÷ (Awarded plus Denied) = 51 / [51 + 07] = 0.879
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

STATE OCCUPATIONAL DISEASE FREQUENCY
WITH FEDERAL EXCESS FREQUENCY

COKE (1017)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.0000	0.0000	0.000000	5,738,105	0.000000	888	1.089	114.1	0.000000	
2013	0	0	0	0	0.0000	0.0000	0.000000	4,791,910	0.000000	917	1.089	92.3	0.000000	
2014	0	0	0	0	0.0000	0.0000	0.000000	4,464,398	0.000000	932	1.089	84.6	0.000000	
2015	0	0	0	0	0.0000	0.0000	0.000000	4,340,376	0.000000	951	1.089	80.6	0.000000	
2016	0	0	0	0	0.0027	0.0027	0.002373	4,435,066	0.002373	978	1.089	80.1	0.002963	
2017	0	0	0	0	0.0060	0.0060	0.005274	4,566,113	0.005274	995	1.089	81.0	0.006511	
2018	0	0	0	0	0.0094	0.0094	0.008263	4,484,744	0.008263	1,025	1.089	77.3	0.010689	
2019	0	0	0	0	0.0142	0.0142	0.012482	4,466,971	0.012482	1,049	1.089	75.2	0.016598	
2020	0	0	0	0	0.0013	0.0013	0.001143	313,587	0.001143	1,081	1.089	5.1	0.022406	
2021	0	0	0	0	0.0000	0.0000	0.000000	0	0.000000	1,130	1.089	0.0	N/A	
TOTAL	0	0	0	0	0.0336	0.0336	0.029534	37,601,270	0.029534			690.3	0.059167	
Average: State Frequency													0.006574	
Federal Excess Frequency (times 40.0%)													0.002630	

AUGER (1019)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.0000	0.0000	0.000000	808,208	0.000000	888	1.089	16.1	0.000000
2013	0	0	0	0	0.0000	0.0000	0.000000	1,025,399	0.000000	917	1.089	19.7	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	806,976	0.000000	932	1.089	15.3	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	582,619	0.000000	951	1.089	10.8	0.000000
2016	0	0	0	0	0.0002	0.0002	0.000176	372,496	0.000176	978	1.089	6.7	0.002624
2017	0	0	0	0	0.0006	0.0006	0.000527	449,009	0.000527	995	1.089	8.0	0.006593
2018	0	0	0	0	0.0013	0.0013	0.001143	600,138	0.001143	1,025	1.089	10.3	0.011094
2019	0	0	0	0	0.0017	0.0017	0.001494	539,914	0.001494	1,049	1.089	9.1	0.016421
2020	0	0	0	0	0.0016	0.0016	0.001406	384,571	0.001406	1,081	1.089	6.3	0.022324
2021	0	0	0	0	0.0011	0.0011	0.000967	208,581	0.000967	1,130	1.089	3.3	0.029300
TOTAL	0	0	0	0	0.0065	0.0065	0.005714	5,777,911	0.005714			105.6	0.088356
Average: State Frequency													0.008836
Federal Excess Frequency (times 40.0%)													0.003534

ANTHRACITE CO-GEN (1022)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.0000	0.0000	0.000000	10,273,004	0.000000	888	1.089	204.3	0.000000
2013	0	0	0	0	0.0000	0.0000	0.000000	8,342,651	0.000000	917	1.089	160.7	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	9,060,883	0.000000	932	1.089	171.7	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	10,469,089	0.000000	951	1.089	194.4	0.000000
2016	0	0	0	0	0.0054	0.0054	0.004747	8,994,602	0.004747	978	1.089	162.4	0.002923
2017	0	0	0	0	0.0116	0.0116	0.010196	8,819,700	0.010196	995	1.089	156.5	0.006515
2018	0	0	0	0	0.0244	0.0244	0.021448	11,600,891	0.021448	1,025	1.089	199.9	0.010729
2019	1	1	0	0	0.0260	0.0260	0.022854	8,191,669	1.022854	1,049	1.089	137.9	0.741736
2020	0	0	0	0	0.0326	0.0326	0.028655	7,660,069	0.028655	1,081	1.089	125.1	0.022906
2021	0	0	0	0	0.0448	0.0448	0.039379	8,263,749	0.039379	1,130	1.089	129.1	0.030503
TOTAL	1	1	0	0	0.1448	0.1448	0.127279	91,676,307	1.127279			1,642.0	0.815312
Average: State Frequency													0.081531
Federal Excess Frequency (times 40.0%)													0.032612

BITUMINOUS CO-GEN (1024)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.0000	0.0000	0.000000	9,047,745	0.000000	888	1.089	179.9	0.000000
2013	0	0	0	0	0.0000	0.0000	0.000000	10,355,884	0.000000	917	1.089	199.4	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	11,721,184	0.000000	932	1.089	222.1	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	11,748,205	0.000000	951	1.089	218.2	0.000000
2016	0	0	0	0	0.0068	0.0068	0.005977	11,327,552	0.005977	978	1.089	204.5	0.002923
2017	0	0	0	0	0.0151	0.0151	0.013273	11,435,057	0.013273	995	1.089	202.9	0.006542
2018	0	0	0	0	0.0253	0.0253	0.022239	12,043,297	0.022239	1,025	1.089	207.5	0.010717
2019	0	0	0	0	0.0375	0.0375	0.032963	11,818,883	0.032963	1,049	1.089	199.0	0.016564
2020	0	0	0	0	0.0455	0.0455	0.039995	10,678,482	0.039995	1,081	1.089	174.4	0.022933
2021	0	0	0	0	0.0664	0.0664	0.058366	12,244,359	0.058366	1,130	1.089	191.3	0.030510
TOTAL	0	0	0	0	0.1966	0.1966	0.172811	112,420,648	0.172811			1,999.2	0.090189
Average: State Frequency													0.009019
Federal Excess Frequency (times 40.0%)													0.003608

Source: Claim counts - CMCRB OD Database as of 08/02/2022
IBNR: Exhibit VII-C-6, p.4
Payroll- Exhibit X-A
The Award Ratios for all classes were set equal to the Grand Total Award Ratio calculated on Exhibit VII-B-2 Page 3.
The Grand Total Award Ratio is equal to Awarded ÷ (Awarded plus Denied) = 51 / [51 + 07] = 0.879
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

STATE OCCUPATIONAL DISEASE FREQUENCY
WITH FEDERAL EXCESS FREQUENCY

ANTHRACITE PREP PLANT (1026)

IBNR Factor adjusted by 1.0000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.0000	0.0000	0.000000	8,671,140	0.000000	888	1.089	172.4	0.000000	
2013	0	0	0	0	0.0000	0.0000	0.000000	8,265,665	0.000000	917	1.089	159.2	0.000000	
2014	1	1	0	0	0.0000	0.0000	0.000000	8,234,771	1.000000	932	1.089	156.0	0.641026	
2015	2	1	0	1	0.0000	0.0000	0.000000	7,606,274	1.000000	951	1.089	141.2	0.708215	
2016	0	0	0	0	0.0105	0.0105	0.009230	7,018,927	0.009230	978	1.089	126.7	0.007285	
2017	1	1	0	0	0.0256	0.0256	0.022502	7,746,154	1.022502	995	1.089	137.5	0.743638	
2018	0	0	0	0	0.0507	0.0507	0.044565	9,651,288	0.044565	1,025	1.089	166.3	0.026798	
2019	0	0	0	0	0.0994	0.0994	0.087373	12,534,373	0.087373	1,049	1.089	211.0	0.041409	
2020	1	1	0	0	0.1296	0.1296	0.113918	12,170,346	1.113918	1,081	1.089	198.8	0.560321	
2021	0	0	0	0	0.1733	0.1733	0.152331	12,790,962	0.152331	1,130	1.089	199.9	0.076203	
TOTAL	5	4	0	1	0.4891	0.4891	0.429919	94,689,900	4.429919			1,669.0	2.804895	
Average: State Frequency													0.280490	
Federal Excess Frequency (times 40.0%)													0.112196	

BITUMINOUS PREP PLANT (1028)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.0000	0.0000	0.000000	34,211,729	0.000000	888	1.582	468.3	0.000000
2013	0	0	0	0	0.0000	0.0000	0.000000	34,253,697	0.000000	917	1.582	454.1	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	43,520,040	0.000000	932	1.582	567.6	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	33,564,176	0.000000	951	1.582	429.0	0.000000
2016	1	1	0	0	0.0142	0.0142	0.012482	23,689,882	1.012482	978	1.582	294.5	0.343797
2017	0	0	0	0	0.0380	0.0380	0.033402	28,803,457	0.033402	995	1.582	351.9	0.009492
2018	0	0	0	0	0.0676	0.0676	0.059420	32,199,872	0.059420	1,025	1.582	381.9	0.015559
2019	0	0	0	0	0.1145	0.1145	0.100646	36,099,579	0.100646	1,049	1.582	418.3	0.024061
2020	0	0	0	0	0.1418	0.1418	0.124642	33,297,067	0.124642	1,081	1.582	374.4	0.033291
2021	0	0	0	0	0.1737	0.1737	0.152682	32,053,110	0.152682	1,130	1.582	344.8	0.044281
TOTAL	1	1	0	0	0.5498	0.5498	0.483274	331,692,609	1.483274			4,084.8	0.470481
Average: State Frequency													0.047048
Federal Excess Frequency (times 40.0%)													0.018819

TOTAL OTHER CLASSES

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2012	0	0	0	0	0.0000	0.0000	0.000000	68,749,931	0.000000	888		1,155.1	0.000000	
2013	0	0	0	0	0.0000	0.0000	0.000000	67,035,206	0.000000	917		1,085.4	0.000000	
2014	1	1	0	0	0.0000	0.0000	0.000000	77,808,252	1.000000	932		1,217.3	0.082149	
2015	2	1	0	1	0.0000	0.0000	0.000000	68,310,739	1.000000	951		1,074.2	0.093093	
2016	1	1	0	0	0.0398	0.0398	0.034984	55,838,525	1.034984	978		874.9	0.118297	
2017	1	1	0	0	0.0969	0.0969	0.085175	61,819,490	1.085175	995		937.8	0.115715	
2018	0	0	0	0	0.1787	0.1787	0.157077	70,580,230	0.157077	1,025		1,043.2	0.015057	
2019	1	1	0	0	0.2933	0.2933	0.257811	73,651,389	1.257811	1,049		1,050.5	0.119734	
2020	1	1	0	0	0.3524	0.3524	0.309760	64,504,122	1.309760	1,081		884.1	0.148146	
2021	0	0	0	0	0.4593	0.4593	0.403725	65,560,761	0.403725	1,130		868.4	0.046491	
TOTAL	7	6	0	1	1.4204	1.4204	1.248532	673,858,645	7.248532			10,190.9	0.738682	
Average: State Frequency													0.073868	0.080238
Federal Excess Frequency (times 40.0%)													0.029547	0.032095

GRAND TOTAL

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.879 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2012	6	5	0	1	0.0000	0.0000	0.000000	326,146,817	5.000000	888		5,321.8	0.093953	
2013	9	7	0	2	0.0000	0.0000	0.000000	300,963,743	7.000000	917		4,691.6	0.149203	
2014	12	12	0	0	0.0000	0.0000	0.000000	423,814,574	12.000000	932		6,171.7	0.194436	
2015	15	12	0	3	0.0000	0.0000	0.000000	350,172,362	12.000000	951		5,055.5	0.237365	
2016	7	7	0	0	0.3455	0.3455	0.303721	254,559,392	7.303721	978		3,627.2	0.201360	
2017	1	1	0	0	0.8596	0.8596	0.755615	289,088,505	1.755615	995		4,016.2	0.043713	
2018	4	3	0	1	1.5656	1.5656	1.376136	306,135,580	4.376136	1,025		4,132.2	0.105903	
2019	2	2	0	0	2.2940	2.2940	2.016400	310,590,243	4.016400	1,049		4,106.3	0.097811	
2020	1	1	0	0	2.5128	2.5128	2.208742	254,033,622	3.208742	1,081		3,271.9	0.098070	
2021	2	1	1	0	3.5312	4.5312	3.982881	251,144,882	4.982881	1,130		3,128.1	0.159294	
TOTAL	59	51	1	7	11.1086	12.1086	10.643495	3,066,649,720	61.643495			43,522.5	1.381108	
Average: State Frequency													0.138111	0.139431
Federal Excess Frequency (times 40.0%)													0.055244	0.055772

Source: Claim counts - CMCRB OD Database as of 08/02/2022
IBNR: Exhibit VII-C-6, p.4
Payroll- Exhibit X-A
The Award Ratios for all classes were set equal to the Grand Total Award Ratio calculated on Exhibit VII-B-2 Page 3.
The Grand Total Award Ratio is equal to Awarded ÷ (Awarded plus Denied) = 51 / [51 + 07] = 0.879
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ANTHRACITE UNDERGROUND (1011)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
36	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0		
48	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0			
60	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0				
72	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0					
84	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0						
96	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0							
108	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1								
120	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0									
132	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1										
144	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0											
156	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0												
168	0	0	0	0	1	1	1	0	0	0	0	0	0	0													
180	0	0	0	0	1	1	1	0	0	0	0	0	0														
192	0	0	0	0	1	1	1	0	0	0	0	0															
204	0	0	0	0	1	1	1	0	0	0	0																
216	0	0	0	0	1	1	1	0	0	0																	
228	0	0	0	0	1	1	1	0	0																		
240	0	0	0	0	1	1	1	0																			

Incremental Changes

12-24													0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24-36												0	0	0	0	0	0	0	1	0	0	0	0	0	0		
36-48											0	0	0	0	0	0	0	0	0	0	0	0	0	0			
48-60										0	0	0	0	0	0	0	0	0	0	0	0	0	0				
60-72									0	0	0	0	0	0	0	0	0	0	0	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	1.49352	1.61270	1.57161	1.76229	1.81416	1.37016	1.63652	1.38655	1.35427	1.34532	1.41757	1.44252	1.66254	2.13671	1.33587	1.29959	1.25794	1.02926	0.38188	0.25881	0.25434	0.16376	0.25238	0.18335	0.17938	0.29970	0.23253		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		0.00000	0.20143
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.20143	0.00000
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000				0.00000	0.00000
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000					0.00000	0.00000
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000						0.00000	0.00000
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000							0.00000	0.00000
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.20143	0.20143

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.20143
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04684

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
BITUMINOUS UNDERGROUND (1002)

Exhibit VII-C-2

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	0	0	1	0	0	0	2	1	1	1	1	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	2
24	1	0	2	0	0	0	2	1	2	1	3	0	0	0	0	0	1	3	3	1	1	2	0	2	0	0	
36	3	0	3	1	2	1	2	2	2	1	3	0	0	0	0	0	1	3	3	2	1	3	0	4	1		
48	3	0	3	1	2	1	2	2	2	2	3	0	0	1	0	0	2	3	3	4	3	4	0	4			
60	3	0	3	1	2	1	3	3	2	2	3	0	0	2	0	0	2	4	3	6	6	4	0				
72	3	2	3	1	2	1	3	3	2	2	4	0	0	2	0	0	2	4	6	8	6	4					
84	3	2	3	1	2	9	3	3	2	2	4	0	0	2	0	0	2	4	7	9	9						
96	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4	7	9							
108	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4	7								
120	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4									
132	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2										
144	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0											
156	3	2	3	1	2	9	4	3	2	2	4	0	0	2	0												
168	3	2	3	1	2	9	4	3	2	2	4	0	0	2													
180	3	2	3	1	2	9	4	3	2	2	4	0	0														
192	3	2	3	1	2	9	4	3	2	2	4	0															
204	3	2	3	1	2	9	4	3	2	2	4																
216	3	2	3	1	2	9	4	3	2	2																	
228	3	2	3	1	2	9	4	3	2																		
240	3	2	3	1	2	9	4	3																			

Incremental Changes

12-24													0	0	0	0	1	3	1	1	1	2	0	1	0	0	
24-36												0	0	0	0	0	0	0	0	1	0	1	0	2	1		
36-48											0	0	0	1	0	0	1	0	0	2	2	1	0	0			
48-60										0	0	0	0	1	0	0	0	1	0	2	3	0	0				
60-72									0	0	1	0	0	0	0	0	0	0	3	2	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	1	1	3						
84-96							1	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	65.27115	75.22304	70.39669	61.08733	58.68524	47.52056	48.52263	49.25035	54.21550	65.49767	70.87262	70.46594	79.90427	101.35398	101.34814	125.39358	148.48571	153.61891	149.74709	271.23071	216.45446	148.55641	172.70878	180.55314	177.83367	139.14184	131.50170		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00673	0.01953	0.00668	0.00369	0.00462	0.01346	0.00000	0.00554	0.00000	0.00000		0.00463	0.00463
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00369	0.00000	0.00673	0.00000	0.01108	0.00562			0.00209	0.00319
36-48												0.00000	0.00000	0.00987	0.00000	0.00000	0.00673	0.00000	0.00000	0.00737	0.00924	0.00673	0.00000	0.00000				0.00307	0.00307
48-60											0.00000	0.00000	0.00000	0.00987	0.00000	0.00000	0.00000	0.00651	0.00000	0.00737	0.01386	0.00000	0.00000					0.00289	0.00289
60-72										0.00000	0.01411	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02003	0.00737	0.00000	0.00000						0.00319	0.00209
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00668	0.00369	0.01386							0.00186	0.00186
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.01773	0.01773

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00186	0.00395	0.00684	0.00991	0.01310	0.01773
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.27631	0.68220	1.23498	1.76233	1.82276	2.33153

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ANTHRACITE SURFACE (1016)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Year																										
12	1	0	2	1	1	0	1	1	1	1	1	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0
24	4	1	3	1	1	3	1	1	2	1	1	0	2	1	0	0	1	0	0	0	0	1	0	0	0	0	
36	7	1	3	1	1	3	1	2	2	1	1	0	2	1	0	0	1	0	1	0	0	1	0	0	0		
48	7	1	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2	0	0			
60	7	2	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2	0				
72	7	2	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2					
84	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0						
96	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0							
108	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1								
120	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0									
132	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1										
144	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0											
156	7	3	3	1	1	3	1	2	2	1	1	0	3	1	0												
168	7	3	3	1	1	3	1	2	2	1	1	0	3	1													
180	7	3	3	1	1	3	1	2	2	1	1	0	3														
192	7	3	3	1	1	3	1	2	2	1	1	0															
204	7	3	3	1	1	3	1	2	2	1	1																
216	7	3	3	1	1	3	1	2	2	1																	
228	7	3	3	1	1	3	1	2	2																		
240	7	3	3	1	1	3	1	2																			

Incremental Changes

12-24													1	0	0	0	0	0	0	0	0	0	0	0	0	0	
24-36												0	0	0	0	0	0	0	1	0	0	0	0	0	0		
36-48											0	0	1	0	0	0	0	0	0	0	0	1	0	0			
48-60										0	0	0	0	0	0	0	0	0	0	0	0	0	0				
60-72									0	0	0	0	0	0	0	0	0	0	0	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	20.28889	16.19217	17.78314	17.37629	18.44114	16.80781	13.94080	12.25126	12.16621	12.35973	12.14091	11.94638	14.55558	16.95431	16.44546	14.29529	21.03460	26.29591	22.44982	20.46608	24.21878	20.87361	21.16707	19.57668	23.56309	22.81384	24.26757		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		0.00000	0.00897
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04454	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.00343	0.00343
36-48												0.00000	0.06870	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04791	0.00000	0.00000				0.00897	0.00000
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000					0.00000	0.00000
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000						0.00000	0.00000
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000							0.00000	0.00000
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.01240	0.01240

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00343	0.01240
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.07825	0.30092

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
BITUMINOUS SURFACE (1013)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	1	2	2	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
36	2	3	2	1	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0		
48	3	3	3	1	2	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	2	0	0	0			
60	3	3	3	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	1	2	0	0				
72	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	1	4	0					
84	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2	4						
96	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2							
108	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0								
120	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2									
132	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1										
144	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0											
156	3	3	4	1	2	0	0	0	0	0	1	0	0	0	0												
168	3	3	4	1	2	0	0	0	0	0	1	0	0	0													
180	3	3	4	1	2	0	0	0	0	0	1	0	0														
192	3	3	4	1	2	0	0	0	0	0	1	0															
204	3	3	4	1	2	0	0	0	0	0	1																
216	3	3	4	1	2	0	0	0	0	0																	
228	3	3	4	1	2	0	0	0	0																		
240	3	3	4	1	2	0	0	0																			

Incremental Changes

12-24													0	0	0	0	0	0	0	0	1	0	0	0	0	0	
24-36												0	0	0	0	0	1	0	0	0	1	0	0	0	0		
36-48											0	0	0	0	0	0	0	1	0	1	0	0	0	0			
48-60										0	0	0	0	0	0	0	0	1	0	0	0	0	0				
60-72									0	0	0	0	0	0	0	0	0	0	0	0	2	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	1	0						
84-96							0	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	78.75261	77.82841	67.90579	63.65156	54.16227	49.93562	58.15133	53.50209	47.87374	56.21730	64.87156	63.00898	63.29577	73.05448	61.78439	72.71156	86.07406	76.45281	61.34975	54.05073	40.93405	29.12709	33.14078	35.24219	35.36271	27.27413	29.58232		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02443	0.00000	0.00000	0.00000	0.00000	0.00000		0.00188	0.00376
24-36													0.00000	0.00000	0.00000	0.00000	0.01162	0.00000	0.00000	0.00000	0.02443	0.00000	0.00000	0.00000	0.00000			0.00277	0.00277
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.01308	0.00000	0.00000	0.01850	0.00000	0.00000	0.00000	0.00000				0.00243	0.00243
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01308	0.00000	0.00000	0.00000	0.00000	0.00000					0.00101	0.00188
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04886	0.00000						0.00376	0.00142
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01850	0.00000							0.00142	0.00101
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.01327	0.01327

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00101	0.00243	0.00431	0.00674	0.00951	0.01327
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02942	0.08053	0.15189	0.23834	0.25938	0.39256

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
OTHER CLASSIFICATIONS - STATE

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
													Year														
12	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0
24	0	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	1	0	1	1	
36	0	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	0	1	1	1	0	1		
48	0	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1	1	0			
60	0	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1	1				
72	0	0	1	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1					
84	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	2						
96	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1							
108	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0								
120	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0									
132	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0										
144	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1											
156	0	0	2	0	1	1	0	1	1	1	0	1	1	0	0												
168	0	0	2	0	1	1	0	1	1	1	0	1	1	0													
180	0	0	2	0	1	1	0	1	1	1	0	1	1														
192	0	0	2	0	1	1	0	1	1	1	0	1															
204	0	0	2	0	1	1	0	1	1	1	0																
216	0	0	2	0	1	1	0	1	1	1																	
228	0	0	2	0	1	1	0	1	1																		
240	0	0	2	0	1	1	0	1																			

Incremental Changes

12-24													1	0	0	0	0	0	0	0	0	0	0	0	0	0	
24-36												0	0	0	0	0	0	0	0	0	1	1	0	0	0		
36-48											0	0	0	0	0	0	0	0	0	1	0	0	0	0			
48-60										0	0	0	0	0	0	0	0	0	0	0	0	0	0				
60-72									0	0	0	0	0	0	0	0	0	0	0	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	0	1						
84-96							0	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	60.34187	62.83464	73.62183	31.35678	30.45185	29.53686	32.92543	36.81203	41.30010	49.30786	53.12798	53.54405	59.39238	56.31762	48.54853	55.53150	67.98944	68.74993	67.03521	77.80825	68.31074	55.83853	61.81949	70.58023	73.65139	64.50412	65.56076		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		0.00000	0.00250
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01464	0.01791	0.00000	0.00000	0.00000			0.00250	0.00113
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01285	0.00000	0.00000	0.00000	0.00000				0.00099	0.00099
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000					0.00000	0.00000
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000						0.00000	0.00000
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01464							0.00113	0.00000
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.00462	0.00462

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00099	0.00212	0.00462
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.07291	0.13675	0.30289

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

Exhibit VII-C-6

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Year																										
12	2	0	4	1	3	0	3	3	3	2	3	0	1	1	0	1	2	0	2	0	0	1	1	1	1	1	2
24	6	3	8	1	4	5	3	3	5	3	5	1	3	1	0	1	3	3	3	1	2	3	1	2	1	1	
36	12	4	9	3	6	6	3	5	5	3	5	1	3	1	0	1	4	3	5	2	4	5	1	4	2		
48	13	4	10	3	6	6	4	5	5	4	5	1	4	2	0	1	5	4	5	6	6	7	1	4			
60	13	5	10	3	6	6	5	6	5	4	5	1	4	3	0	1	5	6	5	8	9	7	1				
72	13	7	11	3	7	6	5	6	5	4	6	1	4	3	0	1	5	6	8	10	11	7					
84	13	8	12	3	7	14	5	6	5	4	6	1	4	3	0	1	5	6	9	12	15						
96	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6	9	12							
108	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6	9								
120	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6									
132	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5										
144	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1											
156	13	8	12	3	7	14	6	6	5	4	6	1	4	3	0												
168	13	8	12	3	7	14	6	6	5	4	6	1	4	3													
180	13	8	12	3	7	14	6	6	5	4	6	1	4														
192	13	8	12	3	7	14	6	6	5	4	6	1															
204	13	8	12	3	7	14	6	6	5	4	6																
216	13	8	12	3	7	14	6	6	5	4																	
228	13	8	12	3	7	14	6	6	5																		
240	13	8	12	3	7	14	6	6																			

Incremental Changes

12-24													2	0	0	0	1	3	1	1	2	2	0	1	0	0	
24-36												0	0	0	0	0	1	0	2	1	2	2	0	2	1		
36-48											0	0	1	1	0	0	1	1	0	4	2	2	0	0			
48-60										0	0	0	0	1	0	0	0	2	0	2	3	0	0				
60-72									0	0	1	0	0	0	0	0	0	0	3	2	2	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	1	2	4						
84-96							1	0	0	0	0	0	0	0	0	0	0	0	0	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	0	0	0	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
168-180	0	0	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	226.14804	233.69096	231.27906	175.23425	163.55466	145.17101	155.17671	153.20228	156.90982	184.72788	202.43064	200.40787	218.81054	249.81710	229.46239	269.23152	324.84175	326.14682	300.96375	423.81458	350.17237	254.55940	289.08850	306.13559	310.59024	254.03363	251.14488		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00308	0.00920	0.00332	0.00236	0.00571	0.00786	0.00000	0.00327	0.00000	0.00000		0.00268	0.00290
24-36													0.00000	0.00000	0.00000	0.00000	0.00308	0.00000	0.00665	0.00236	0.00571	0.00786	0.00000	0.00653	0.00322			0.00272	0.00272
36-48												0.00000	0.00457	0.00400	0.00000	0.00000	0.00308	0.00307	0.00000	0.00944	0.00571	0.00786	0.00000	0.00000				0.00290	0.00268
48-60											0.00000	0.00000	0.00000	0.00400	0.00000	0.00000	0.00000	0.00613	0.00000	0.00472	0.00857	0.00000	0.00000					0.00180	0.00195
60-72										0.00000	0.00494	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00997	0.00472	0.00571	0.00000						0.00195	0.00180
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00332	0.00472	0.01142							0.00150	0.00150
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000								0.00000	0.00000
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.00000
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.00000
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.00000
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00000	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00000	0.00000
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00000	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																												0.01355	0.01355

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00150	0.00330	0.00525	0.00793	0.01065	0.01355
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.38184	0.95399	1.60721	2.46298	2.70546	3.40301

Source: Counts and Payrolls: Sum of Exhibits VII-C-1 thru VII-C-5

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

IBNR By Class

	CLASSIFICATION					
A. IBNR Factor	Coke	Auger	Anthracite Co-Gen	Bituminous Co-Gen	Anthracite Prep Plant	Bituminous Prep Plant
Year	1017	1019	1022	1024	1026	1028
2012	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2013	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2014	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2015	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2016	0.00150	0.00150	0.00150	0.00150	0.00150	0.00150
2017	0.00330	0.00330	0.00330	0.00330	0.00330	0.00330
2018	0.00525	0.00525	0.00525	0.00525	0.00525	0.00525
2019	0.00793	0.00793	0.00793	0.00793	0.00793	0.00793
2020	0.01065	0.01065	0.01065	0.01065	0.01065	0.01065
2021	0.01355	0.01355	0.01355	0.01355	0.01355	0.01355
B. Adjustment Factor	0.40000	0.40000	0.40000	0.40000	1.00000	0.40000
C. Payroll Per $1M						
2012	5.73811	0.80821	10.27300	9.04775	8.67114	34.21173
2013	4.79191	1.02540	8.34265	10.35588	8.26567	34.25370
2014	4.46440	0.80698	9.06088	11.72118	8.23477	43.52004
2015	4.34038	0.58262	10.46909	11.74821	7.60627	33.56418
2016	4.43507	0.37250	8.99460	11.32755	7.01893	23.68988
2017	4.56611	0.44901	8.81970	11.43506	7.74615	28.80346
2018	4.48474	0.60014	11.60089	12.04330	9.65129	32.19987
2019	4.46697	0.53991	8.19167	11.81888	12.53437	36.09958
2020	0.31359	0.38457	7.66007	10.67848	12.17035	33.29707
2021	0.00000	0.20858	8.26375	12.24436	12.79096	32.05311
D. IBNR						
2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2016	0.0027	0.0002	0.0054	0.0068	0.0105	0.0142
2017	0.0060	0.0006	0.0116	0.0151	0.0256	0.0380
2018	0.0094	0.0013	0.0244	0.0253	0.0507	0.0676
2019	0.0142	0.0017	0.0260	0.0375	0.0994	0.1145
2020	0.0013	0.0016	0.0326	0.0455	0.1296	0.1418
2021	0.0000	0.0011	0.0448	0.0664	0.1733	0.1737

Source: IBNR Factor - Exhibit VII-C-6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A-2
IBNR = A times B times C

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

IBNR By Class

	CLASSIFICATION					
A. IBNR Factor	Coke	Auger	Anthracite Co-Gen	Bituminous Co-Gen	Anthracite Prep Plant	Bituminous Prep Plant
Year	1017	1019	1022	1024	1026	1028
2002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2003	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2004	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2005	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2006	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2007	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2008	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2009	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2011	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
B. Adjustment Factor	0.40000	0.40000	0.40000	0.40000	1.00000	0.40000
C. Payroll Per $1M						
2002	10.48501	1.15084	6.35854	2.38612	3.78169	12.64983
2003	11.53408	1.10222	7.13766	3.05252	3.72130	14.75232
2004	12.04913	1.05880	7.35151	6.37448	4.40665	18.06729
2005	12.86098	1.02654	7.85529	8.52475	5.17007	17.69036
2006	12.73739	1.06683	8.40539	9.39758	4.88588	17.05097
2007	13.66993	1.12116	9.16045	10.78921	5.75644	18.89519
2008	9.76115	2.48856	7.95834	8.46856	6.39077	21.25026
2009	5.17355	0.92616	8.00464	7.86641	6.74975	19.82801
2010	5.43566	0.80670	8.48123	8.73270	5.76209	26.31313
2011	3.59909	1.17626	11.72004	9.10241	7.23658	35.15507
D. IBNR						
2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: IBNR Factor - Exhibit VII-C-6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A-2
IBNR = A times B times C

Coal Mine Compensation Rating Bureau

State O.D. Severity- Before Act 57

Underground Antrhacite

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	754,549	-	-			-	-		
	1	995,321	-	-			-	-		
	1	2,063,574	-	-			-	-		
	1	583,974	-	-			-	-		
	1	707,027	-	-			-	-		
	1	1,695,242	-	-			-	-		
	-	-	1	211,244			-	-		
	-	-	1	709,164			-	-		
	-	-	1	545,993			-	-		
(i) Total	# 6	$6,799,688	# 3	$1,466,402	# 9	$8,266,090	# 0	$0	# 9	$8,266,090
(ii) Average		$1,133,281		$488,801		$918,454		$0		$918,454
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 6		# 3		# 9					
(ii) Percentage	66.6667%		33.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$1,133,281		$488,801						
(ii) Difference (Col. 2 minus Col. 1)						($644,481)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	66.6667%		33.3333%							
(ii) Total	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($644,481)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$6,799,688	$1,133,281	# 0.0000	$0	$0	# 6.0000	$6,799,688	$1,133,281
(ii) Comm./Comp.	# 3	$1,466,402	$488,801	# 0.0000	$0	$0	# 3.0000	$1,466,402	$488,801
(iii) Total	# 9	$8,266,090	$918,454	# 0.0000	$0	$0	# 9.0000	$8,266,090	$918,454
(iv) Average Severity before Adjustment									$918,454
(v) Impact									$0

Source: Exhibit IX-A

State O.D. Severity- Before Act 57

Underground Bituminous

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	1,048,084	-	-			-	-		
	-	-	1	173,197			-	-		
	-	-	1	252,510			-	-		
	-	-	1	536,378			-	-		
	-	-	1	108,387			-	-		
	-	-	1	223,751			-	-		
	-	-	1	422,630			-	-		
	-	-	1	179,720			-	-		
	1	1,079,815	-	-			-	-		
	1	1,364,204	-	-			-	-		
	1	1,917,947	-	-			-	-		
	-	-	1	593,851			-	-		
	-	-	1	165,210			-	-		
	1	1,450,858	-	-			-	-		
	-	-	1	237,531			-	-		
	-	-	1	56,401			-	-		
	1	1,832,311	-	-			-	-		
	-	-	1	121,481			-	-		
	-	-	1	208,681			-	-		
	-	-	1	60,516			-	-		
	-	-	1	204,568			-	-		
	-	-	1	777,729			-	-		
	-	-	1	308,950			-	-		
	-	-	1	169,169			-	-		
	-	-	1	237,361			-	-		
	-	-	1	144,516			-	-		
	-	-	1	157,511			-	-		
	-	-	1	159,701			-	-		
	-	-	1	153,744			-	-		
	-	-	1	172,856			-	-		
	-	-	1	164,448			-	-		
	-	-	1	193,000			-	-		
	-	-	1	165,698			-	-		
	-	-	1	315,463			-	-		
	-	-	1	184,941			-	-		
	-	-	1	270,345			-	-		
	-	-	1	680,790			-	-		
	-	-	1	315,773			-	-		
	-	-	1	155,481			-	-		
	-	-	1	171,199			-	-		
	-	-	1	133,924			-	-		
	-	-	1	126,955			-	-		
	-	-	1	300,186			-	-		
	-	-	1	53,385			-	-		
	-	-	1	106,813			-	-		
	-	-	1	196,689			-	-		
	-	-	1	368,667			-	-		
	-	-	1	227,308			-	-		
	-	-	1	295,420			-	-		
	-	-	1	102,179			-	-		
	-	-	1	164,010			-	-		
	-	-	1	102,574			-	-		
	-	-	1	109,767			-	-		
	-	-	1	48,353			-	-		
	-	-	1	109,933			-	-		
	-	-	1	106,726			-	-		
	-	-	1	99,975			-	-		
	-	-	1	112,731			-	-		
	-	-	1	113,007			-	-		
	-	-	1	109,118			-	-		
	-	-	1	58,530			-	-		
	-	-	1	273,379			-	-		
	-	-	1	47,770			-	-		
	1	2,129,247	-	-			-	-		
	1	1,669,453	-	-			-	-		
	-	-	1	114,831			-	-		
	-	-	1	264,420			-	-		
	-	-	1	53,404			-	-		
	-	-	1	54,442			-	-		
	-	-	1	266,544			-	-		
	-	-	1	193,707			-	-		
	-	-	-	-			1	1,857,934		
	-	-	1	45,343			-	-		
(i) Total	# 8	$12,491,919	# 64	$12,803,578	# 72	$25,295,497	# 1	$1,857,934	# 73	$27,153,431
(ii) Average		$1,561,490		$200,056		$351,326		$1,857,934		$371,965
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$1,561,490		$200,056						
(ii) Difference (Col. 2 minus Col. 1)						($1,361,434)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Total	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$1,857,934		$1,857,934						
(ii) C/C Difference		$0		($1,361,434)						
(iii) (e-i) + (e-ii)		$1,857,934		$496,500						
(iv) Total (d-ii) x (e-iii)		$206,437		$441,333						
(v) Total of (e-iv)								$647,771		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$12,491,919	$1,561,490	# 0.1111	$206,437	$1,857,934	# 8.1111	$12,698,356	$1,565,551
(ii) Comm./Comp.	# 64	$12,803,578	$200,056	# 0.8889	$441,333	$496,500	# 64.8889	$13,244,911	$204,117
(iii) Total	# 72	$25,295,497	$351,326	# 1.0000	$647,771	$647,771	# 73.0000	$25,943,267	$355,387
(iv) Average Severity before Adjustment									$371,965
(v) Impact									($16,578)

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O.D. Severity- Before Act 57

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	1,003,804	-	-			-	-		
	-	-	1	48,215			-	-		
	1	1,083,672	-	-			-	-		
	1	723,793	-	-			-	-		
	1	351,352	-	-			-	-		
	-	-	1	74,074			-	-		
	1	859,829	-	-			-	-		
	1	648,959	-	-			-	-		
	-	-	1	651,417			-	-		
	1	958,492	-	-			-	-		
	1	1,196,212	-	-			-	-		
	1	949,563	-	-			-	-		
	1	780,404	-	-			-	-		
	1	97,650	-	-			-	-		
	-	-	1	466,846			-	-		
	1	893,157	-	-			-	-		
	1	725,419	-	-			-	-		
	1	1,098,484	-	-			-	-		
	-	-	1	695,697			-	-		
	1	810,292	-	-			-	-		
	1	561,741	-	-			-	-		
	1	610,864	-	-			-	-		
	1	759,151	-	-			-	-		
	1	1,599,427	-	-			-	-		
	1	590,128	-	-			-	-		
	1	904,522	-	-			-	-		
	-	-	1	43,337			-	-		
	1	1,235,340	-	-			-	-		
	-	-	1	285,337			-	-		
	1	687,886	-	-			-	-		
	1	827,025	-	-			-	-		
	-	-	1	159,549			-	-		
	-	-	1	151,530			-	-		
	-	-	1	138,175			-	-		
	-	-	1	75,042			-	-		
	-	-	1	135,272			-	-		
	-	-	1	216,957			-	-		
	-	-	1	295,509			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
(i) Total	# 24	$19,957,163	# 14	$3,436,957	# 38	$23,394,120	# 0	$0	# 38	$23,394,120
(ii) Average		$831,548		$245,497		$615,635		$0		$615,635
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 24		# 14		# 38					
(ii) Percentage	63.1579%		36.8421%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$831,548		$245,497						
(ii) Difference (Col. 2 minus Col. 1)						($586,052)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	63.1579%		36.8421%							
(ii) Total	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($586,052)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$19,957,163	$831,548	# 0.0000	$0	$0	# 24.0000	$19,957,163	$831,548
(ii) Comm./Comp.	# 14	$3,436,957	$245,497	# 0.0000	$0	$0	# 14.0000	$3,436,957	$245,497
(iii) Total	# 38	$23,394,120	$615,635	# 0.0000	$0	$0	# 38.0000	$23,394,120	$615,635
(iv) Average Severity before Adjustment									$615,635
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O.D. Severity- Before Act 57

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	1,594,185	-	-			-	-		
	1	1,299,299	-	-			-	-		
	-	-	1	757,411			-	-		
	-	-	1	128,596			-	-		
	-	-	1	446,704			-	-		
	1	1,986,796	-	-			-	-		
	-	-	1	590,259			-	-		
	-	-	1	56,302			-	-		
	-	-	1	260,394			-	-		
	-	-	1	124,125			-	-		
	-	-	1	422,950			-	-		
	-	-	1	254,303			-	-		
	-	-	1	99,010			-	-		
	-	-	1	173,747			-	-		
	-	-	1	119,719			-	-		
	1	939,689	-	-			-	-		
	-	-	1	168,880			-	-		
	-	-	1	137,494			-	-		
	-	-	1	70,611			-	-		
	-	-	1	151,570			-	-		
	-	-	1	383,760			-	-		
	-	-	1	218,866			-	-		
	-	-	1	163,412			-	-		
	-	-	1	122,848			-	-		
(i) Total	# 4	$5,819,969	# 20	$4,850,960	# 24	$10,670,930	# 0	$0	# 24	$10,670,930
(ii) Average		$1,454,992		$242,548		$444,622		$0		$444,622
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$1,454,992		$242,548						
(ii) Difference (Col. 2 minus Col. 1)						($1,212,444)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Total	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($1,212,444)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$5,819,969	$1,454,992	# 0.0000	$0	$0	# 4.0000	$5,819,969	$1,454,992
(ii) Comm./Comp.	# 20	$4,850,960	$242,548	# 0.0000	$0	$0	# 20.0000	$4,850,960	$242,548
(iii) Total	# 24	$10,670,930	$444,622	# 0.0000	$0	$0	# 24.0000	$10,670,930	$444,622
(iv) Average Severity before Adjustment									$444,622
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O.D. Severity- Before Act 57

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	1,761,010	-	-			-	-		
	-	-	1	326,980			-	-		
	-	-	1	160,861			-	-		
	-	-	1	271,522			-	-		
	-	-	1	181,107			-	-		
	1	634,928	-	-			-	-		
	-	-	1	102,510			-	-		
	-	-	1	86,885			-	-		
	-	-	1	119,629			-	-		
	1	531,434	-	-			-	-		
	-	-	1	232,338			-	-		
	-	-	1	169,409			-	-		
	-	-	1	177,705			-	-		
	-	-	1	402,195			-	-		
	-	-	1	80,227			-	-		
	-	-	1	84,013			-	-		
(i) Total	# 3	$2,927,372	# 13	$2,395,381	# 16	$5,322,753	# 0	$0	# 16	$5,322,753
(ii) Average		$975,791		$184,260		$332,672		$0		$332,672
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$975,791		$184,260						
(ii) Difference (Col. 2 minus Col. 1)						($791,531)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Total	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($791,531)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$2,927,372	$975,791	# 0.0000	$0	$0	# 3.0000	$2,927,372	$975,791
(ii) Comm./Comp.	# 13	$2,395,381	$184,260	# 0.0000	$0	$0	# 13.0000	$2,395,381	$184,260
(iii) Total	# 16	$5,322,753	$332,672	# 0.0000	$0	$0	# 16.0000	$5,322,753	$332,672
(iv) Average Severity before Adjustment									$332,672
(v) Impact									$0

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	368,149	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	329,801	-	-			-	-		
	-	-	1	-			-	-		
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	-	-	1	-			-	-		
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	-	-	-	-			-	-		
(i) Total	# 6	$697,950	# 3	$0	# 9	$697,950	# 0	$0	# 9	$697,950
(ii) Average		$116,325		$0		$77,550		$0		$77,550

b. Percentage of Awarded and Commuted/Compromised within Total Awarded

	(1)	(2)	(3)
(i) Number	# 6	# 3	# 9
(ii) Percentage	66.6667%	33.3333%	100%

c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim

	(1)	(2)	(3)
(i) Average	$116,325	$0	
(ii) Difference (Col. 2 minus Col. 1)			($116,325)

d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix

	(1)	(2)	(4)
(i) Awarded Mix	66.6667%	33.3333%	
(ii) Number	# 0.0000	# 0.0000	# 0

e. Pending Average from Above; Commuted and Compromised less Awarded Difference

	(1)	(2)		
(i) Pending Ave.	$0	$0		
(ii) C/C Difference	$0	($116,325)		
(iii) (e-i) + (e-ii)	$0	$0	limited to zero: negative offset is impossible	
(iv) Total (d-ii) x (e-iii)	$0	$0		
(v) Total of (e-iv)				$0

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$697,950	$116,325	# 0.0000	$0	$0	# 6.0000	$697,950	$116,325
(ii) Comm./Comp.	# 3	$0	$0	# 0.0000	$0	$0	# 3.0000	$0	$0
(iii) Total	# 9	$697,950	$77,550	# 0.0000	$0	$0	# 9.0000	$697,950	$77,550
(iv) Average Severity before Adjustment									$77,550
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- Social Security Offset

Underground Bituminous

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	71,797			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	390,383	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
	-	-	1	17,131			-	-		
	-	-	1	-			-	-		
	1	365,384	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	105			-	-		
	-	-	1	55,000			-	-		
	-	-	1	96,200			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	66,597			-	-		
	-	-	1	-			-	-		
	-	-	1	38,596			-	-		
	-	-	1	29,048			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	2,770			-	-		
	-	-	1	-			-	-		
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	-	-	1	-			-	-		
	-	-	1	35,716			-	-		
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	-	-	1	-			-	-		
	-	-	1	55,213			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	59,588			-	-		
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	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	46,907			-	-		
	-	-	1	36,566			-	-		
	-	-	1	-			-	-		
	-	-	1	2,759			-	-		
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	-	-	1	-			-	-		
	-	-	1	29,534			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	94,079			-	-		
	-	-	1	-			-	-		
	1	343,489	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	23,610			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	-	-			1	390,115		
	-	-	1	-			-	-		
(i) Total	# 8	$1,099,257	# 64	$761,217	# 72	$1,860,474	# 1	$390,115	# 73	$2,250,589
(ii) Average		$137,407		$11,894		$25,840		$390,115		$30,830
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$137,407		$11,894						
(ii) Difference (Col. 2 minus Col. 1)						($125,513)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Number	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$390,115		$390,115						
(ii) C/C Difference		$0		($125,513)						
(iii) (e-i) + (e-ii)		$390,115		$264,602						
(iv) Total (d-ii) x (e-iii)		$43,346		$235,201						
(v) Total of (e-iv)								$278,548		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$1,099,257	$137,407	# 0.1111	$43,346	$390,115	# 8.1111	$1,142,603	$140,869
(ii) Comm./Comp.	# 64	$761,217	$11,894	# 0.8889	$235,201	$264,602	# 64.8889	$996,419	$15,356
(iii) Total	# 72	$1,860,474	$25,840	# 1.0000	$278,548	$278,548	# 73.0000	$2,139,022	$29,302
(iv) Average Severity before Adjustment									$30,830
(v) Impact									($1,528)

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
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	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	65,124			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	304,777	-	-			-	-		
	-	-	1	-			-	-		
	1	260,464	-	-			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
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(i) Total	# 24	$565,241	# 14	$65,124	# 38	$630,365	# 0	$0	# 38	$630,365
(ii) Average		$23,552		$4,652		$16,589		$0		$16,589
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 24		# 14		# 38					
(ii) Percentage	63.1579%		36.8421%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$23,552		$4,652						
(ii) Difference (Col. 2 minus Col. 1)						($18,900)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	63.1579%		36.8421%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($18,900)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$565,241	$23,552	# 0.0000	$0	$0	# 24.0000	$565,241	$23,552
(ii) Comm./Comp.	# 14	$65,124	$4,652	# 0.0000	$0	$0	# 14.0000	$65,124	$4,652
(iii) Total	# 38	$630,365	$16,589	# 0.0000	$0	$0	# 38.0000	$630,365	$16,589
(iv) Average Severity before Adjustment									$16,589
(v) Impact									$0

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	1	290,813	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	46,747			-	-		
	1	356,053	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	26,874			-	-		
	-	-	1	27,352			-	-		
	-	-	1	-			-	-		
	-	-	1	18,056			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	17,764			-	-		
	-	-	1	16,557			-	-		
	-	-	1	-			-	-		
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	-	-	1	1,704			-	-		
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(i) Total	# 4	$646,866	# 20	$155,053	# 24	$801,918	# 0	$0	# 24	$801,918
(ii) Average		$161,716		$7,753		$33,413		$0		$33,413
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$161,716		$7,753						
(ii) Difference (Col. 2 minus Col. 1)						($153,964)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($153,964)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$646,866	$161,716	# 0.0000	$0	$0	# 4.0000	$646,866	$161,716
(ii) Comm./Comp.	# 20	$155,053	$7,753	# 0.0000	$0	$0	# 20.0000	$155,053	$7,753
(iii) Total	# 24	$801,918	$33,413	# 0.0000	$0	$0	# 24.0000	$801,918	$33,413
(iv) Average Severity before Adjustment									$33,413
(v) Impact									$0

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	43,857			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	59,565			-	-		
	1	211,637	-	-			-	-		
	-	-	1	1,182			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	1	-	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	43,255			-	-		
	-	-	1	3,688			-	-		
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(i) Total	# 3	$211,637	# 13	$151,547	# 16	$363,183	# 0	$0	# 16	$363,183
(ii) Average		$70,546		$11,657		$22,699		$0		$22,699
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$70,546		$11,657						
(ii) Difference (Col. 2 minus Col. 1)						($58,888)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($58,888)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$211,637	$70,546	# 0.0000	$0	$0	# 3.0000	$211,637	$70,546
(ii) Comm./Comp.	# 13	$151,547	$11,657	# 0.0000	$0	$0	# 13.0000	$151,547	$11,657
(iii) Total	# 16	$363,183	$22,699	# 0.0000	$0	$0	# 16.0000	$363,183	$22,699
(iv) Average Severity before Adjustment									$22,699
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- Private Pension Offset

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	174,462	-	-			-	-		
	1	213,651	-	-			-	-		
	1	221,062	-	-			-	-		
	1	172,974	-	-			-	-		
	1	188,013	-	-			-	-		
	1	191,416	-	-			-	-		
	-	-	1	84,242			-	-		
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(i) Total	# 6	$1,161,579	# 3	$84,242	# 9	$1,245,821	# 0	$0	# 9	$1,245,821
(ii) Average		$193,596		$28,081		$138,425		$0		$138,425
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 6		# 3		# 9					
(ii) Percentage	66.6667%		33.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$193,596		$28,081						
(ii) Difference (Col. 2 minus Col. 1)						($165,516)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	66.6667%		33.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($165,516)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$1,161,579	$193,596	# 0.0000	$0	$0	# 6.0000	$1,161,579	$193,596
(ii) Comm./Comp.	# 3	$84,242	$28,081	# 0.0000	$0	$0	# 3.0000	$84,242	$28,081
(iii) Total	# 9	$1,245,821	$138,425	# 0.0000	$0	$0	# 9.0000	$1,245,821	$138,425
(iv) Average Severity before Adjustment									$138,425
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- Private Pension Offset

Underground Bituminous

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	438,208	-	-			-	-		
	-	-	1	116,632			-	-		
	-	-	1	173,095			-	-		
	-	-	1	153,429			-	-		
	-	-	1	58,893			-	-		
	-	-	1	56,893			-	-		
	-	-	1	26,706			-	-		
	-	-	1	115,013			-	-		
	1	283,155	-	-			-	-		
	1	432,199	-	-			-	-		
	1	385,598	-	-			-	-		
	-	-	1	179,577			-	-		
	-	-	1	33,011			-	-		
	1	355,145	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	17,003			-	-		
	1	307,474	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	97,591			-	-		
	-	-	1	-			-	-		
	-	-	1	118			-	-		
	-	-	1	115,737			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	35			-	-		
	-	-	1	84,686			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	66,660			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	87,085			-	-		
	-	-	1	-			-	-		
	-	-	1	163,918			-	-		
	-	-	1	-			-	-		
	-	-	1	160,038			-	-		
	-	-	1	-			-	-		
	-	-	1	186,027			-	-		
	-	-	1	70,614			-	-		
	-	-	1	-			-	-		
	-	-	1	79,826			-	-		
	-	-	1	62,218			-	-		
	-	-	1	6,570			-	-		
	-	-	1	-			-	-		
	-	-	1	51,763			-	-		
	-	-	1	103,731			-	-		
	-	-	1	133,423			-	-		
	-	-	1	-			-	-		
	-	-	1	6,841			-	-		
	-	-	1	53,543			-	-		
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	-	-	1	-			-	-		
	-	-	1	4,279			-	-		
	-	-	1	50,108			-	-		
	-	-	1	55,663			-	-		
	-	-	1	34,167			-	-		
	-	-	1	-			-	-		
	-	-	1	47,090			-	-		
	-	-	1	57,590			-	-		
	-	-	1	16,840			-	-		
	-	-	1	6,012			-	-		
	-	-	1	10,977			-	-		
	1	151,223	-	-			-	-		
	1	298,506	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	149,576			-	-		
	-	-	1	14,946			-	-		
	-	-	1	8,049			-	-		
	-	-	1	161,533			-	-		
	-	-	1	130,892			-	-		
	-	-	-	-			1	360,953		
	-	-	1	2,705			-	-		
(i) Total	# 8	$2,651,508	# 64	$3,211,102	# 72	$5,862,611	# 1	$360,953	# 73	$6,223,564
(ii) Average		$331,439		$50,173		$81,425		$360,953		$85,254
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$331,439		$50,173						
(ii) Difference (Col. 2 minus Col. 1)						($281,265)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Number	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$360,953		$360,953						
(ii) C/C Difference		$0		($281,265)						
(iii) (e-i) + (e-ii)		$360,953		$79,688						
(iv) Total (d-ii) x (e-iii)		$40,106		$70,834						
(v) Total of (e-iv)								$110,940		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$2,651,508	$331,439	# 0.1111	$40,106	$360,953	# 8.1111	$2,691,614	$331,843
(ii) Comm./Comp.	# 64	$3,211,102	$50,173	# 0.8889	$70,834	$79,688	# 64.8889	$3,281,936	$50,578
(iii) Total	# 72	$5,862,611	$81,425	# 1.0000	$110,940	$110,940	# 73.0000	$5,973,550	$81,829
(iv) Average Severity before Adjustment									$85,254
(v) Impact									($3,425)

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- Private Pension Offset

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	211,838	-	-			-	-		
	-	-	1	-			-	-		
	1	192,026	-	-			-	-		
	1	172,086	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	24,595			-	-		
	1	279,232	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	156,122			-	-		
	1	262,930	-	-			-	-		
	1	263,983	-	-			-	-		
	1	202,184	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	-			-	-		
	1	186,824	-	-			-	-		
	1	-	-	-			-	-		
	1	251,155	-	-			-	-		
	-	-	1	63,645			-	-		
	1	172,987	-	-			-	-		
	1	115,394	-	-			-	-		
	1	-	-	-			-	-		
	1	229,667	-	-			-	-		
	1	396,520	-	-			-	-		
	1	122,719	-	-			-	-		
	1	241,610	-	-			-	-		
	-	-	1	15,493			-	-		
	1	114,819	-	-			-	-		
	-	-	1	97,475			-	-		
	1	185,925	-	-			-	-		
	1	183,297	-	-			-	-		
	-	-	1	70,168			-	-		
	-	-	1	91,869			-	-		
	-	-	1	64,125			-	-		
	-	-	1	34,183			-	-		
	-	-	1	53,971			-	-		
	-	-	1	144,457			-	-		
	-	-	1	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
(i) Total	# 24	$3,785,195	# 14	$816,102	# 38	$4,601,297	# 0	$0	# 38	$4,601,297
(ii) Average		$157,716		$58,293		$121,087		$0		$121,087

b. Percentage of Awarded and Commuted/Compromised within Total Awarded			
(i) Number	# 24	# 14	# 38
(ii) Percentage	63.1579%	36.8421%	100%

c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim			
(i) Average	$157,716	$58,293	
(ii) Difference (Col. 2 minus Col. 1)			($99,423)

d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix			
(i) Awarded Mix	63.1579%	36.8421%	
(ii) Number	# 0.0000	# 0.0000	# 0

e. Pending Average from Above; Commuted and Compromised less Awarded Difference				
(i) Pending Ave.	$0	$0		
(ii) C/C Difference	$0	($99,423)		
(iii) (e-i) + (e-ii)	$0	$0	limited to zero: negative offset is impossible	
(iv) Total (d-ii) x (e-iii)	$0	$0		
(v) Total of (e-iv)				$0

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$3,785,195	$157,716	# 0.0000	$0	$0	# 24.0000	$3,785,195	$157,716
(ii) Comm./Comp.	# 14	$816,102	$58,293	# 0.0000	$0	$0	# 14.0000	$816,102	$58,293
(iii) Total	# 38	$4,601,297	$121,087	# 0.0000	$0	$0	# 38.0000	$4,601,297	$121,087
(iv) Average Severity before Adjustment									$121,087
(v) Impact									$0

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	457,420	-	-			-	-		
	1	185,519	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	73,280			-	-		
	-	-	1	44,204			-	-		
	1	184,865	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	7,774			-	-		
	-	-	1	131,110			-	-		
	-	-	1	-			-	-		
	-	-	1	24,019			-	-		
	-	-	1	150,620			-	-		
	-	-	1	-			-	-		
	-	-	1	95,510			-	-		
	-	-	1	-			-	-		
	1	305,758	-	-			-	-		
	-	-	1	105,729			-	-		
	-	-	1	-			-	-		
	-	-	1	20,230			-	-		
	-	-	1	-			-	-		
	-	-	1	14,234			-	-		
	-	-	1	127,611			-	-		
	-	-	1	88,157			-	-		
	-	-	1	-			-	-		
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	-	-	-	-			-	-		
(i) Total	# 4	$1,133,562	# 20	$882,479	# 24	$2,016,041	# 0	$0	# 24	$2,016,041
(ii) Average		$283,391		$44,124		$84,002		$0		$84,002
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$283,391		$44,124						
(ii) Difference (Col. 2 minus Col. 1)						($239,267)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($239,267)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$1,133,562	$283,391	# 0.0000	$0	$0	# 4.0000	$1,133,562	$283,391
(ii) Comm./Comp.	# 20	$882,479	$44,124	# 0.0000	$0	$0	# 20.0000	$882,479	$44,124
(iii) Total	# 24	$2,016,041	$84,002	# 0.0000	$0	$0	# 24.0000	$2,016,041	$84,002
(iv) Average Severity before Adjustment									$84,002
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- Private Pension Offset

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	492,071	-	-			-	-		
	-	-	1	5,176			-	-		
	-	-	1	-			-	-		
	-	-	1	111,192			-	-		
	-	-	1	-			-	-		
	1	110,468	-	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	-	-	1	-			-	-		
	1	105,403	-	-			-	-		
	-	-	1	65,950			-	-		
	-	-	1	-			-	-		
	-	-	1	2,431			-	-		
	-	-	1	3,035			-	-		
	-	-	1	-			-	-		
	-	-	1	37,367			-	-		
(i) Total	# 3	$707,943	# 13	$225,152	# 16	$933,095	# 0	$0	# 16	$933,095
(ii) Average		$235,981		$17,319		$58,318		$0		$58,318
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$235,981		$17,319						
(ii) Difference (Col. 2 minus Col. 1)						($218,662)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		($218,662)						
(iii) (e-i) + (e-ii)		$0		$0	limited to zero: negative offset is impossible					
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$707,943	$235,981	# 0.0000	$0	$0	# 3.0000	$707,943	$235,981
(ii) Comm./Comp.	# 13	$225,152	$17,319	# 0.0000	$0	$0	# 13.0000	$225,152	$17,319
(iii) Total	# 16	$933,095	$58,318	# 0.0000	$0	$0	# 16.0000	$933,095	$58,318
(iv) Average Severity before Adjustment									$58,318
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess Before Offsets

Underground Antrhacite

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	3	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	1	-	-			-	-		
	-	-	1	225,932			-	-		
	-	-	1	476,492			-	-		
	-	-	1	418,024			-	-		
(i) Total	# 6	$5	# 3	$1,120,449	# 9	$1,120,454	# 0	$0	# 9	$1,120,454
(ii) Average		$1		$373,483		$124,495		$0		$124,495
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 6		# 3		# 9					
(ii) Percentage	66.6667%		33.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$1		$373,483						
(ii) Difference (Col. 2 minus Col. 1)						$373,482				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	66.6667%		33.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$373,482						
(iii) (e-i) + (e-ii)		$0		$373,482						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$5	$1	# 0.0000	$0	$0	# 6.0000	$5	$1
(ii) Comm./Comp.	# 3	$1,120,449	$373,483	# 0.0000	$0	$0	# 3.0000	$1,120,449	$373,483
(iii) Total	# 9	$1,120,454	$124,495	# 0.0000	$0	$0	# 9.0000	$1,120,454	$124,495
(iv) Average Severity before Adjustment									$124,495
(v) Impact									$0

Source: Exhibit IX-A

Federal Excess Before Offsets

Underground Bituminous

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	212,349			-	-		
	-	-	1	220,727			-	-		
	-	-	1	274,047			-	-		
	-	-	1	230,944			-	-		
	-	-	1	235,764			-	-		
	-	-	1	286,459			-	-		
	-	-	1	210,237			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	249,592			-	-		
	-	-	1	106,179			-	-		
	1	-	-	-			-	-		
	-	-	1	304,982			-	-		
	-	-	1	251,080			-	-		
	1	-	-	-			-	-		
	-	-	1	464,371			-	-		
	-	-	1	278,479			-	-		
	-	-	1	498,840			-	-		
	-	-	1	293,577			-	-		
	-	-	1	282,296			-	-		
	-	-	1	561,372			-	-		
	-	-	1	431,877			-	-		
	-	-	1	272,492			-	-		
	-	-	1	185,228			-	-		
	-	-	1	289,265			-	-		
	-	-	1	315,712			-	-		
	-	-	1	246,865			-	-		
	-	-	1	724,171			-	-		
	-	-	1	371,637			-	-		
	-	-	1	106,436			-	-		
	-	-	1	559,973			-	-		
	-	-	1	219,939			-	-		
	-	-	1	373,316			-	-		
	-	-	1	275,038			-	-		
	-	-	1	503,968			-	-		
	-	-	1	180,397			-	-		
	-	-	1	255,675			-	-		
	-	-	1	123,303			-	-		
	-	-	1	220,957			-	-		
	-	-	1	271,461			-	-		
	-	-	1	306,752			-	-		
	-	-	1	139,848			-	-		
	-	-	1	106,930			-	-		
	-	-	1	98,202			-	-		
	-	-	1	258,076			-	-		
	-	-	1	138,432			-	-		
	-	-	1	304,268			-	-		
	-	-	1	286,396			-	-		
	-	-	1	372,020			-	-		
	-	-	1	42,125			-	-		
	-	-	1	101,130			-	-		
	-	-	1	348,184			-	-		
	-	-	1	305,080			-	-		
	-	-	1	280,862			-	-		
	-	-	1	329,195			-	-		
	-	-	1	348,502			-	-		
	-	-	1	269,636			-	-		
	-	-	1	269,819			-	-		
	-	-	1	296,193			-	-		
	-	-	1	283,461			-	-		
	-	-	1	324,752			-	-		
	1	692	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	155,467			-	-		
	-	-	1	208,054			-	-		
	-	-	1	318,407			-	-		
	-	-	1	352,106			-	-		
	-	-	1	159,787			-	-		
	-	-	1	83,051			-	-		
	-	-	-	-			1	-		
	-	-	1	176,715			-	-		
(i) Total	# 8	$692	# 64	$17,552,453	# 72	$17,553,144	# 1	$0	# 73	$17,553,144
(ii) Average		$86		$274,257		$243,794		$0		$240,454
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$86		$274,257						
(ii) Difference (Col. 2 minus Col. 1)						$274,171				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Number	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$274,171						
(iii) (e-i) + (e-ii)		$0		$274,171						
(iv) Total (d-ii) x (e-iii)		$0		$243,707						
(v) Total of (e-iv)								$243,707		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$692	$86	# 0.1111	$0	$0	# 8.1111	$692	$85
(ii) Comm./Comp.	# 64	$17,552,453	$274,257	# 0.8889	$243,707	$274,171	# 64.8889	$17,796,160	$274,256
(iii) Total	# 72	$17,553,144	$243,794	# 1.0000	$243,707	$243,707	# 73.0000	$17,796,852	$243,792
(iv) Average Severity before Adjustment									$240,454
(v) Impact									$3,338

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	82,396			-	-		
	1	7,074	-	-			-	-		
	1	2	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	317,146			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	150,312			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	40,914	-	-			-	-		
	-	-	1	283,090			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	129,689			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	243,635			-	-		
	1	395	-	-			-	-		
	-	-	1	286,023			-	-		
	1	-	-	-			-	-		
	1	4	-	-			-	-		
	-	-	1	107,572			-	-		
	-	-	1	176,015			-	-		
	-	-	1	103,567			-	-		
	-	-	1	161,981			-	-		
	-	-	1	103,348			-	-		
	-	-	1	240,847			-	-		
	-	-	1	355,480			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
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	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
(i) Total	# 24	$48,390	# 14	$2,741,101	# 38	$2,789,490	# 0	$0	# 38	$2,789,490
(ii) Average		$2,016		$195,793		$73,408		$0		$73,408
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 24		# 14		# 38					
(ii) Percentage	63.1579%		36.8421%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$2,016		$195,793						
(ii) Difference (Col. 2 minus Col. 1)						$193,777				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	63.1579%		36.8421%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$193,777						
(iii) (e-i) + (e-ii)		$0		$193,777						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$48,390	$2,016	# 0.0000	$0	$0	# 24.0000	$48,390	$2,016
(ii) Comm./Comp.	# 14	$2,741,101	$195,793	# 0.0000	$0	$0	# 14.0000	$2,741,101	$195,793
(iii) Total	# 38	$2,789,490	$73,408	# 0.0000	$0	$0	# 38.0000	$2,789,490	$73,408
(iv) Average Severity before Adjustment									$73,408
(v) Impact									$0

Source: Exhibit IX-A

Federal Excess Before Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	1	1	-	-			-	-		
	-	-	1	546,099			-	-		
	-	-	1	95,678			-	-		
	-	-	1	317,187			-	-		
	1	0	-	-			-	-		
	-	-	1	273,393			-	-		
	-	-	1	320,488			-	-		
	-	-	1	236,863			-	-		
	-	-	1	358,020			-	-		
	-	-	1	358,397			-	-		
	-	-	1	99,479			-	-		
	-	-	1	331,568			-	-		
	-	-	1	98,786			-	-		
	-	-	1	303,444			-	-		
	1	-	-	-			-	-		
	-	-	1	188,984			-	-		
	-	-	1	42,772			-	-		
	-	-	1	325,918			-	-		
	-	-	1	151,085			-	-		
	-	-	1	354,167			-	-		
	-	-	1	228,020			-	-		
	-	-	1	99,262			-	-		
	-	-	1	192,863			-	-		
(i) Total	# 4	$1	# 20	$4,922,470	# 24	$4,922,471	# 0	$0	# 24	$4,922,471
(ii) Average		$0		$246,124		$205,103		$0		$205,103
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$0		$246,124						
(ii) Difference (Col. 2 minus Col. 1)						$246,123				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$246,123						
(iii) (e-i) + (e-ii)		$0		$246,123						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$1	$0	# 0.0000	$0	$0	# 4.0000	$1	$0
(ii) Comm./Comp.	# 20	$4,922,470	$246,124	# 0.0000	$0	$0	# 20.0000	$4,922,470	$246,124
(iii) Total	# 24	$4,922,471	$205,103	# 0.0000	$0	$0	# 24.0000	$4,922,471	$205,103
(iv) Average Severity before Adjustment									$205,103
(v) Impact									$0

Source: Exhibit IX-A

Federal Excess Before Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	335,421			-	-		
	-	-	1	384,955			-	-		
	-	-	1	216,316			-	-		
	-	-	1	335,419			-	-		
	1	5	-	-			-	-		
	-	-	1	211,185			-	-		
	-	-	1	154,168			-	-		
	-	-	1	766,519			-	-		
	1	-	-	-			-	-		
	-	-	1	58,979			-	-		
	-	-	1	279,369			-	-		
	-	-	1	322,842			-	-		
	-	-	1	410,349			-	-		
	-	-	1	213,418			-	-		
	-	-	1	132,182			-	-		
(i) Total	# 3	$5	# 13	$3,821,122	# 16	$3,821,127	# 0	$0	# 16	$3,821,127
(ii) Average		$2		$293,932		$238,820		$0		$238,820
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$2		$293,932						
(ii) Difference (Col. 2 minus Col. 1)						$293,931				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$293,931						
(iii) (e-i) + (e-ii)		$0		$293,931						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$5	$2	# 0.0000	$0	$0	# 3.0000	$5	$2
(ii) Comm./Comp.	# 13	$3,821,122	$293,932	# 0.0000	$0	$0	# 13.0000	$3,821,122	$293,932
(iii) Total	# 16	$3,821,127	$238,820	# 0.0000	$0	$0	# 16.0000	$3,821,127	$238,820
(iv) Average Severity before Adjustment									$238,820
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security Offset

Underground Antrhacite

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	3	-	-			-	-		
	1	-	-	-			-	-		
	1	27,633	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	43,960	-	-			-	-		
	-	-	1	225,932			-	-		
	-	-	1	476,492			-	-		
	-	-	1	418,024			-	-		
(i) Total	# 6	$71,597	# 3	$1,120,449	# 9	$1,192,046	# 0	$0	# 9	$1,192,046
(ii) Average		$11,933		$373,483		$132,450		$0		$132,450
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 6		# 3		# 9					
(ii) Percentage	66.6667%		33.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$11,933		$373,483						
(ii) Difference (Col. 2 minus Col. 1)						$361,550				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	66.6667%		33.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$361,550						
(iii) (e-i) + (e-ii)		$0		$361,550						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$71,597	$11,933	# 0.0000	$0	$0	# 6.0000	$71,597	$11,933
(ii) Comm./Comp.	# 3	$1,120,449	$373,483	# 0.0000	$0	$0	# 3.0000	$1,120,449	$373,483
(iii) Total	# 9	$1,192,046	$132,450	# 0.0000	$0	$0	# 9.0000	$1,192,046	$132,450
(iv) Average Severity before Adjustment									$132,450
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security Offset

Underground Bituminous

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	212,349			-	-		
	-	-	1	220,727			-	-		
	-	-	1	274,047			-	-		
	-	-	1	230,944			-	-		
	-	-	1	235,764			-	-		
	-	-	1	301,921			-	-		
	-	-	1	210,237			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	2,894	-	-			-	-		
	-	-	1	249,592			-	-		
	-	-	1	106,179			-	-		
	1	-	-	-			-	-		
	-	-	1	319,057			-	-		
	-	-	1	251,080			-	-		
	1	2,814	-	-			-	-		
	-	-	1	464,371			-	-		
	-	-	1	278,479			-	-		
	-	-	1	498,945			-	-		
	-	-	1	344,076			-	-		
	-	-	1	282,296			-	-		
	-	-	1	561,372			-	-		
	-	-	1	431,877			-	-		
	-	-	1	322,905			-	-		
	-	-	1	185,228			-	-		
	-	-	1	327,549			-	-		
	-	-	1	344,562			-	-		
	-	-	1	246,865			-	-		
	-	-	1	724,171			-	-		
	-	-	1	374,407			-	-		
	-	-	1	106,436			-	-		
	-	-	1	559,973			-	-		
	-	-	1	219,939			-	-		
	-	-	1	408,657			-	-		
	-	-	1	275,038			-	-		
	-	-	1	503,968			-	-		
	-	-	1	180,397			-	-		
	-	-	1	255,675			-	-		
	-	-	1	165,881			-	-		
	-	-	1	220,957			-	-		
	-	-	1	271,461			-	-		
	-	-	1	339,141			-	-		
	-	-	1	139,848			-	-		
	-	-	1	106,930			-	-		
	-	-	1	98,202			-	-		
	-	-	1	258,076			-	-		
	-	-	1	164,688			-	-		
	-	-	1	324,236			-	-		
	-	-	1	286,396			-	-		
	-	-	1	374,779			-	-		
	-	-	1	42,125			-	-		
	-	-	1	101,130			-	-		
	-	-	1	348,184			-	-		
	-	-	1	305,080			-	-		
	-	-	1	280,862			-	-		
	-	-	1	329,195			-	-		
	-	-	1	378,036			-	-		
	-	-	1	269,636			-	-		
	-	-	1	269,819			-	-		
	-	-	1	296,193			-	-		
	-	-	1	340,057			-	-		
	-	-	1	324,752			-	-		
	1	96,725	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	179,078			-	-		
	-	-	1	208,054			-	-		
	-	-	1	318,407			-	-		
	-	-	1	352,106			-	-		
	-	-	1	159,787			-	-		
	-	-	1	83,051			-	-		
	-	-	-	-			1	3,693		
	-	-	1	176,715			-	-		
(i) Total	# 8	$102,433	# 64	$18,021,942	# 72	$18,124,376	# 1	$3,693	# 73	$18,128,069
(ii) Average		$12,804		$281,593		$251,727		$3,693		$248,330
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$12,804		$281,593						
(ii) Difference (Col. 2 minus Col. 1)						$268,789				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Number	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$3,693		$3,693						
(ii) C/C Difference		$0		$268,789						
(iii) (e-i) + (e-ii)		$3,693		$272,482						
(iv) Total (d-ii) x (e-iii)		$410		$242,206						
(v) Total of (e-iv)								$242,617		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$102,433	$12,804	# 0.1111	$410	$3,693	# 8.1111	$102,844	$12,679
(ii) Comm./Comp.	# 64	$18,021,942	$281,593	# 0.8889	$242,206	$272,482	# 64.8889	$18,264,149	$281,468
(iii) Total	# 72	$18,124,376	$251,727	# 1.0000	$242,617	$242,617	# 73.0000	$18,366,992	$251,603
(iv) Average Severity before Adjustment									$248,330
(v) Impact									$3,273

Source: Exhibit IX-A

Federal Excess After Social Security Offset

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	82,396			-	-		
	1	7,074	-	-			-	-		
	1	2	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	317,146			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	150,312			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	40,914	-	-			-	-		
	-	-	1	283,090			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	129,689			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	3,245	-	-			-	-		
	-	-	1	243,635			-	-		
	1	110,227	-	-			-	-		
	-	-	1	286,023			-	-		
	1	-	-	-			-	-		
	1	4	-	-			-	-		
	-	-	1	107,572			-	-		
	-	-	1	176,015			-	-		
	-	-	1	103,567			-	-		
	-	-	1	161,981			-	-		
	-	-	1	103,348			-	-		
	-	-	1	240,847			-	-		
	-	-	1	355,480			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
(i) Total	# 24	$161,466	# 14	$2,741,101	# 38	$2,902,567	# 0	$0	# 38	$2,902,567
(ii) Average		$6,728		$195,793		$76,383		$0		$76,383
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 24		# 14		# 38					
(ii) Percentage	63.1579%		36.8421%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$6,728		$195,793						
(ii) Difference (Col. 2 minus Col. 1)						$189,065				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	63.1579%		36.8421%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$189,065						
(iii) (e-i) + (e-ii)		$0		$189,065						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$161,466	$6,728	# 0.0000	$0	$0	# 24.0000	$161,466	$6,728
(ii) Comm./Comp.	# 14	$2,741,101	$195,793	# 0.0000	$0	$0	# 14.0000	$2,741,101	$195,793
(iii) Total	# 38	$2,902,567	$76,383	# 0.0000	$0	$0	# 38.0000	$2,902,567	$76,383
(iv) Average Severity before Adjustment									$76,383
(v) Impact									$0

Source: Exhibit IX-A

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	1	35,556	-	-			-	-		
	-	-	1	546,099			-	-		
	-	-	1	95,678			-	-		
	-	-	1	319,063			-	-		
	1	54,139	-	-			-	-		
	-	-	1	273,393			-	-		
	-	-	1	320,488			-	-		
	-	-	1	236,863			-	-		
	-	-	1	384,893			-	-		
	-	-	1	360,309			-	-		
	-	-	1	99,479			-	-		
	-	-	1	349,624			-	-		
	-	-	1	98,786			-	-		
	-	-	1	303,444			-	-		
	1	-	-	-			-	-		
	-	-	1	188,984			-	-		
	-	-	1	42,772			-	-		
	-	-	1	325,918			-	-		
	-	-	1	168,820			-	-		
	-	-	1	359,169			-	-		
	-	-	1	228,020			-	-		
	-	-	1	99,262			-	-		
	-	-	1	194,566			-	-		
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(i) Total	# 4	$89,695	# 20	$4,995,628	# 24	$5,085,322	# 0	$0	# 24	$5,085,322
(ii) Average		$22,424		$249,781		$211,888		$0		$211,888
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$22,424		$249,781						
(ii) Difference (Col. 2 minus Col. 1)						$227,358				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$227,358						
(iii) (e-i) + (e-ii)		$0		$227,358						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$89,695	$22,424	# 0.0000	$0	$0	# 4.0000	$89,695	$22,424
(ii) Comm./Comp.	# 20	$4,995,628	$249,781	# 0.0000	$0	$0	# 20.0000	$4,995,628	$249,781
(iii) Total	# 24	$5,085,322	$211,888	# 0.0000	$0	$0	# 24.0000	$5,085,322	$211,888
(iv) Average Severity before Adjustment									$211,888
(v) Impact									$0

Source: Exhibit IX-A

Federal Excess After Social Security Offset

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	356,912			-	-		
	-	-	1	384,955			-	-		
	-	-	1	216,316			-	-		
	-	-	1	394,321			-	-		
	1	52,031	-	-			-	-		
	-	-	1	212,367			-	-		
	-	-	1	154,168			-	-		
	-	-	1	766,519			-	-		
	1	-	-	-			-	-		
	-	-	1	58,979			-	-		
	-	-	1	279,369			-	-		
	-	-	1	365,527			-	-		
	-	-	1	410,349			-	-		
	-	-	1	213,418			-	-		
	-	-	1	132,182			-	-		
(i) Total	# 3	$52,031	# 13	$3,945,382	# 16	$3,997,413	# 0	$0	# 16	$3,997,413
(ii) Average		$17,344		$303,491		$249,838		$0		$249,838
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$17,344		$303,491						
(ii) Difference (Col. 2 minus Col. 1)						$286,147				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$286,147						
(iii) (e-i) + (e-ii)		$0		$286,147						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$52,031	$17,344	# 0.0000	$0	$0	# 3.0000	$52,031	$17,344
(ii) Comm./Comp.	# 13	$3,945,382	$303,491	# 0.0000	$0	$0	# 13.0000	$3,945,382	$303,491
(iii) Total	# 16	$3,997,413	$249,838	# 0.0000	$0	$0	# 16.0000	$3,997,413	$249,838
(iv) Average Severity before Adjustment									$249,838
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension Offsets

Underground Antrhacite

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	2,120	-	-			-	-		
	1	0	-	-			-	-		
	1	181,456	-	-			-	-		
	1	66	-	-			-	-		
	1	836	-	-			-	-		
	1	197,477	-	-			-	-		
	-	-	1	290,572			-	-		
	-	-	1	476,492			-	-		
	-	-	1	418,024			-	-		
(i) Total	# 6	$381,953	# 3	$1,185,089	# 9	$1,567,043	# 0	$0	# 9	$1,567,043
(ii) Average		$63,659		$395,030		$174,116		$0		$174,116
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 6		# 3		# 9					
(ii) Percentage	66.6667%		33.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$63,659		$395,030						
(ii) Difference (Col. 2 minus Col. 1)						$331,371				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	66.6667%		33.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$331,371						
(iii) (e-i) + (e-ii)		$0		$331,371						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 6	$381,953	$63,659	# 0.0000	$0	$0	# 6.0000	$381,953	$63,659
(ii) Comm./Comp.	# 3	$1,185,089	$395,030	# 0.0000	$0	$0	# 3.0000	$1,185,089	$395,030
(iii) Total	# 9	$1,567,043	$174,116	# 0.0000	$0	$0	# 9.0000	$1,567,043	$174,116
(iv) Average Severity before Adjustment									$174,116
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	324,305			-	-		
	-	-	1	329,061			-	-		
	-	-	1	274,047			-	-		
	-	-	1	289,837			-	-		
	-	-	1	244,004			-	-		
	-	-	1	323,656			-	-		
	-	-	1	319,250			-	-		
	1	0	-	-			-	-		
	1	6	-	-			-	-		
	1	147,474	-	-			-	-		
	-	-	1	249,592			-	-		
	-	-	1	112,195			-	-		
	1	0	-	-			-	-		
	-	-	1	319,057			-	-		
	-	-	1	268,083			-	-		
	1	97,353	-	-			-	-		
	-	-	1	464,371			-	-		
	-	-	1	362,285			-	-		
	-	-	1	498,945			-	-		
	-	-	1	344,194			-	-		
	-	-	1	283,113			-	-		
	-	-	1	561,372			-	-		
	-	-	1	431,877			-	-		
	-	-	1	322,938			-	-		
	-	-	1	269,914			-	-		
	-	-	1	327,549			-	-		
	-	-	1	344,562			-	-		
	-	-	1	312,919			-	-		
	-	-	1	724,171			-	-		
	-	-	1	374,407			-	-		
	-	-	1	164,870			-	-		
	-	-	1	559,973			-	-		
	-	-	1	291,475			-	-		
	-	-	1	408,657			-	-		
	-	-	1	368,360			-	-		
	-	-	1	503,968			-	-		
	-	-	1	258,604			-	-		
	-	-	1	325,589			-	-		
	-	-	1	165,881			-	-		
	-	-	1	300,783			-	-		
	-	-	1	333,676			-	-		
	-	-	1	345,635			-	-		
	-	-	1	139,848			-	-		
	-	-	1	158,692			-	-		
	-	-	1	164,210			-	-		
	-	-	1	268,975			-	-		
	-	-	1	164,688			-	-		
	-	-	1	330,949			-	-		
	-	-	1	339,939			-	-		
	-	-	1	374,779			-	-		
	-	-	1	42,125			-	-		
	-	-	1	101,130			-	-		
	-	-	1	352,463			-	-		
	-	-	1	355,187			-	-		
	-	-	1	336,525			-	-		
	-	-	1	363,362			-	-		
	-	-	1	378,036			-	-		
	-	-	1	316,726			-	-		
	-	-	1	327,410			-	-		
	-	-	1	313,033			-	-		
	-	-	1	346,025			-	-		
	-	-	1	335,728			-	-		
	1	237,655	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	179,078			-	-		
	-	-	1	303,672			-	-		
	-	-	1	333,353			-	-		
	-	-	1	360,155			-	-		
	-	-	1	254,067			-	-		
	-	-	1	160,769			-	-		
	-	-	-	-			1	153,138		
	-	-	1	179,420			-	-		
(i) Total	# 8	$482,488	# 64	$19,983,521	# 72	$20,466,009	# 1	$153,138	# 73	$20,619,148
(ii) Average		$60,311		$312,243		$284,250		$153,138		$282,454
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 64		# 72					
(ii) Percentage	11.1111%		88.8889%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$60,311		$312,243						
(ii) Difference (Col. 2 minus Col. 1)						$251,931				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	11.1111%		88.8889%							
(ii) Number	# 0.1111		# 0.8889				# 1			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$153,138		$153,138						
(ii) C/C Difference		$0		$251,931						
(iii) (e-i) + (e-ii)		$153,138		$405,070						
(iv) Total (d-ii) x (e-iii)		$17,015		$360,062						
(v) Total of (e-iv)								$377,077		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$482,488	$60,311	# 0.1111	$17,015	$153,138	# 8.1111	$499,504	$61,583
(ii) Comm./Comp.	# 64	$19,983,521	$312,243	# 0.8889	$360,062	$405,070	# 64.8889	$20,343,583	$313,514
(iii) Total	# 72	$20,466,009	$284,250	# 1.0000	$377,077	$377,077	# 73.0000	$20,843,087	$285,522
(iv) Average Severity before Adjustment									$282,454
(v) Impact									$3,068

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	-	-	-			-	-		
	-	-	1	82,396			-	-		
	1	10,193	-	-			-	-		
	1	2,196	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	341,741			-	-		
	1	-	-	-			-	-		
	1	-	-	-			-	-		
	-	-	1	150,312			-	-		
	1	1	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	-	-	-			-	-		
	1	40,914	-	-			-	-		
	-	-	1	283,090			-	-		
	1	0	-	-			-	-		
	1	-	-	-			-	-		
	1	5	-	-			-	-		
	-	-	1	129,689			-	-		
	1	78	-	-			-	-		
	1	384	-	-			-	-		
	1	-	-	-			-	-		
	1	0	-	-			-	-		
	1	0	-	-			-	-		
	1	353	-	-			-	-		
	1	68,729	-	-			-	-		
	-	-	1	259,128			-	-		
	1	219,305	-	-			-	-		
	-	-	1	325,700			-	-		
	1	-	-	-			-	-		
	1	1,552	-	-			-	-		
	-	-	1	165,974			-	-		
	-	-	1	267,884			-	-		
	-	-	1	166,989			-	-		
	-	-	1	196,163			-	-		
	-	-	1	157,318			-	-		
	-	-	1	349,901			-	-		
	-	-	1	355,480			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
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	-	-	-	-			-	-		
	-	-	-	-			-	-		
	-	-	-	-			-	-		
(i) Total	# 24	$343,709	# 14	$3,231,766	# 38	$3,575,475	# 0	$0	# 38	$3,575,475
(ii) Average		$14,321		$230,840		$94,091		$0		$94,091
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 24		# 14		# 38					
(ii) Percentage	63.1579%		36.8421%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$14,321		$230,840						
(ii) Difference (Col. 2 minus Col. 1)						$216,519				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	63.1579%		36.8421%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$216,519						
(iii) (e-i) + (e-ii)		$0		$216,519						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 24	$343,709	$14,321	# 0.0000	$0	$0	# 24.0000	$343,709	$14,321
(ii) Comm./Comp.	# 14	$3,231,766	$230,840	# 0.0000	$0	$0	# 14.0000	$3,231,766	$230,840
(iii) Total	# 38	$3,575,475	$94,091	# 0.0000	$0	$0	# 38.0000	$3,575,475	$94,091
(iv) Average Severity before Adjustment									$94,091
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded-Permanent Basis (1)		Commuted and Compromised-As Settled (2)		Total Awarded-Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	0	-	-			-	-		
	1	181,449	-	-			-	-		
	-	-	1	546,099			-	-		
	-	-	1	167,263			-	-		
	-	-	1	343,347			-	-		
	1	208,579	-	-			-	-		
	-	-	1	273,393			-	-		
	-	-	1	328,262			-	-		
	-	-	1	322,035			-	-		
	-	-	1	384,893			-	-		
	-	-	1	372,620			-	-		
	-	-	1	192,700			-	-		
	-	-	1	349,624			-	-		
	-	-	1	164,870			-	-		
	-	-	1	303,444			-	-		
	1	-	-	-			-	-		
	-	-	1	291,671			-	-		
	-	-	1	42,772			-	-		
	-	-	1	346,148			-	-		
	-	-	1	168,820			-	-		
	-	-	1	366,819			-	-		
	-	-	1	325,226			-	-		
	-	-	1	165,386			-	-		
	-	-	1	194,566			-	-		
(i) Total	# 4	$390,028	# 20	$5,649,958	# 24	$6,039,986	# 0	$0	# 24	$6,039,986
(ii) Average		$97,507		$282,498		$251,666		$0		$251,666
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 4		# 20		# 24					
(ii) Percentage	16.6667%		83.3333%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$97,507		$282,498						
(ii) Difference (Col. 2 minus Col. 1)						$184,991				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	16.6667%		83.3333%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$184,991						
(iii) (e-i) + (e-ii)		$0		$184,991						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 4	$390,028	$97,507	# 0.0000	$0	$0	# 4.0000	$390,028	$97,507
(ii) Comm./Comp.	# 20	$5,649,958	$282,498	# 0.0000	$0	$0	# 20.0000	$5,649,958	$282,498
(iii) Total	# 24	$6,039,986	$251,666	# 0.0000	$0	$0	# 24.0000	$6,039,986	$251,666
(iv) Average Severity before Adjustment									$251,666
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension Offsets

Adjustment to Severity for Possible Commutation/Compromise of Pending Claims

	Awarded- Permanent Basis (1)		Commuted and Compromised- As Settled (2)		Total Awarded- Permanent plus Commuted/Comp. (3) = (1) + (2)		Pending, on Permanent Basis (4)		Total Claims (5)	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount	Count	Amount
a. Numbers and Amounts										
(i) List	1	36	-	-			-	-		
	-	-	1	361,497			-	-		
	-	-	1	384,955			-	-		
	-	-	1	270,061			-	-		
	-	-	1	394,321			-	-		
	1	151,514	-	-			-	-		
	-	-	1	212,367			-	-		
	-	-	1	154,168			-	-		
	-	-	1	766,519			-	-		
	1	0	-	-			-	-		
	-	-	1	88,246			-	-		
	-	-	1	279,369			-	-		
	-	-	1	367,959			-	-		
	-	-	1	412,285			-	-		
	-	-	1	213,418			-	-		
	-	-	1	169,549			-	-		
(i) Total	# 3	$151,551	# 13	$4,074,715	# 16	$4,226,265	# 0	$0	# 16	$4,226,265
(ii) Average		$50,517		$313,440		$264,142		$0		$264,142
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 3		# 13		# 16					
(ii) Percentage	18.7500%		81.2500%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$50,517		$313,440						
(ii) Difference (Col. 2 minus Col. 1)						$262,923				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	18.7500%		81.2500%							
(ii) Number	# 0.0000		# 0.0000				# 0			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$262,923						
(iii) (e-i) + (e-ii)		$0		$262,923						
(iv) Total (d-ii) x (e-iii)		$0		$0						
(v) Total of (e-iv)								$0		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 3	$151,551	$50,517	# 0.0000	$0	$0	# 3.0000	$151,551	$50,517
(ii) Comm./Comp.	# 13	$4,074,715	$313,440	# 0.0000	$0	$0	# 13.0000	$4,074,715	$313,440
(iii) Total	# 16	$4,226,265	$264,142	# 0.0000	$0	$0	# 16.0000	$4,226,265	$264,142
(iv) Average Severity before Adjustment									$264,142
(v) Impact									$0

Source: Exhibit IX-A

COAL MINE COMPENSATION RATING BUREAU
Wage Level Adjustment to Current Level
State Occupational Disease Model

a) Average Weekly Wage (Smoothed):

	Year	U/G Anthracite	U/G Bituminous	Surface Anthracite	Surface Bituminous	Wage Level Decrease	
Pre Act 57:	1990	$518.79	687.60	482.42	521.22	5.1817%	
	1991	534.99	711.40	496.67	537.67	5.1817%	
	1992	551.70	736.03	511.34	554.64	5.1817%	
	1993	568.93	761.50	526.45	572.14	5.1817%	
	1994	586.70	787.86	542.00	590.20	5.1817%	
	1995	605.02	815.13	558.01	608.82	5.1817%	
Mixed Pre & Post Act 57:	1996	623.92	843.35	574.50	628.03	3.3220%	***
Post Act 57:	1997	643.40 *	872.54 *	591.47 *	647.85	0.0%	
	1998	663.50 *	902.74 *	608.94 *	668.30	0.0%	
	1999	684.22 *	933.98 *	626.93 *	689.39	0.0%	
	2000	705.59 *	966.31 *	645.45 *	711.14	0.0%	
	2001	727.63 *	999.76 *	664.52 *	733.59	0.0%	
	2002	750.35 *	1,034.36 *	684.15 *	756.74	0.0%	
	2003	773.78 *	1,070.16 *	704.36 *	780.62	0.0%	
	2004	797.95 *	1,107.21 *	725.17 *	805.25	0.0%	
	2005	822.87 *	1,145.53 *	746.60 *	830.67	0.0%	
	2006	848.57 *	1,185.18 *	768.65 *	856.88	0.0%	
	2007	875.07 *	1,226.20 *	791.36 *	883.92	0.0%	
	2008	902.40 *	1,268.64 *	814.74 *	911.82	0.0%	
	2009	930.59 *	1,312.56 *	838.81 *	940.59	0.0%	
	2010	959.65 *	1,357.99 *	863.59 *	970.27	0.0%	
	2011	989.62 *	1,404.99 *	889.10 *	1,000.89	0.0%	
	2012	1,020.53 *	1,453.62 *	915.37 *	1,032.48	0.0%	
	2013	1,052.40 *	1,503.93 *	942.41 *	1,065.06	0.0%	
	2014	1,085.27 *	1,555.99 *	970.25 *	1,098.67	0.0%	
	2015	1,119.16 *	1,609.85 *	998.91 *	1,133.35	0.0%	
	2016	1,154.12 *	1,665.57 *	1,028.42 *	1,169.11	0.0%	
	2017	1,190.16 *	1,723.22 *	1,058.80 *	1,206.01	0.0%	
	2018	1,227.33 *	1,782.86 *	1,090.08 *	1,244.07	0.0%	
	2019	1,265.66 *	1,844.57 *	1,122.29 *	1,283.33	0.0%	
	2020	1,305.19 *	1,908.42 *	1,155.44 *	1,323.83	0.0%	
	2021	1,345.95 *	1,974.47 *	1,189.58 *	1,365.60	0.0%	
	Average:					1.0754%	
	Projected to:						
Pre Act 57:	4/1/2024	1,486.37	2,092.64	1,363.11	1,505.77		
Post Act 57:	4/1/2024	1,409.35 *	1,984.21 *	1,292.48 *	1,427.75		

b) Conversion Calculation:

Conversion Factor:		5.1817%	5.1817%	5.1817%	5.1817%	
						Note:
Post Act 57:	1996	$591.59	$799.65	$544.73	$595.49	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1997	610.06	827.32	560.82	614.28	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1998	629.12	855.96	577.39	633.67	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1999	648.77	885.59	594.45	653.67	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2000	669.03	916.24	612.01	674.29	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2001	689.92	947.95	630.09	695.57	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2002	711.47	980.76	648.70	717.53	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2003	733.69	1,014.71	667.87	740.17	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2004	756.60	1,049.83	687.60	763.53	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2005	780.23	1,086.17	707.91	787.62	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2006	804.60	1,123.77	728.82	812.48	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2007	829.73	1,162.66	750.35	838.12	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2008	855.64	1,202.91	772.52	864.57	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2009	882.37	1,244.54	795.34	891.85	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2010	909.92	1,287.62	818.84	920.00	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2011	938.34	1,332.19	843.03	949.03	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2012	967.65	1,378.30	867.93	978.98	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2013	997.87	1,426.00	893.58	1,009.87	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2014	1,029.03	1,475.36	919.97	1,041.74	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2015	1,061.17	1,526.43	947.15	1,074.62	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2016	1,094.31	1,579.26	975.13	1,108.53	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2017	1,128.49	1,633.93	1,003.94	1,143.52	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2018	1,163.73	1,690.48	1,033.60	1,179.60	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2019	1,200.08	1,748.99	1,064.13	1,216.83	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2020	1,237.56	1,809.53	1,095.57	1,255.23	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2021	1,276.21	1,872.16	1,127.94	1,294.84	Pre Act 57 times (1.0 - Factor)
Post Act 57:	4/1/2024	1,409.35	1,984.21	1,292.48	1,427.75	Pre Act 57 times (1.0 - Factor)

* Post Act 57 for 1997-2021 and Projected to 04/01/2024
** Post Act 57 applies to one 1996 case on or after 8-23-96 - Pre Act 57 applies to four 1996 cases on or before 8-22-96
*** Factor reflects that 234/365ths of 1996 was Pre Act 57.

Source: Average Weekly Wage (Smoothed) - Exhibit VII-H, pages 1, 2, 3 and 4 - Column (8)
Projected 04/01/2024 Weekly Wage - Exhibit VII-H, pages 1, 2, 3 and 4 - Column (6)
Wage level decrease - Exhibit VII-G, Page 2.

COAL MINE COMPENSATION RATING BUREAU

WAGE LEVEL OFFSET (Act 57, Section 309) and PENSION PERCENTAGE

State Occupational Disease and Federal Excess

Calculation of Wage Offset	Average Benefits		State OD
	Before	After	Claim Count
(a) Wage Ranges	Offset	Offset	
Above 869.55	527.00	527.00	32
$790.50 - 869.55	527.00	503.09	10
$447.95 - 790.49	408.00	370.95	63
$395.25 - 447.94	272.00	263.50	11
$316.20 - 395.24	263.50	263.50	3
$289.95 - 316.19	263.50	247.94	0
$0.00 - 289.94	207.00	188.21	1
Average/Total	$431.90	$409.52	120

(b) Selected State Indemnity Factor:

(i) After ÷ Before ($409.52 ÷ $431.90) 94.8183%

(ii) Complement (1.0 minus 0.948183) 5.1817%

(iii) Reduced by 10% for Phase-in of Act 5 4.6635%
(See Exhibit VII-G, Page 1)

Source:

Wage Ranges - Pennsylvania Compensation Rating Bureau
Evaluation of SB801 Amendments to Section 309 of Act 57
Above $869.55 - Claims eligible for maximum under either wage calculation.
$790.50-869.55 - Claims at maximum under current but 2/3 of wage under proposed method.
$447.95-790.49 - Claims at 2/3 under either wage calculation.
$395.25-447.94 - Claims at 2/3 under current method but 50% of maximum under proposed method.
$316.20-395.24 - Claims at 50% under either method.
$289.95-316.19 - Claims at 50% under current method but 90% of maximum under proposed method.
$.00-289.94 - Claims at 90% under either method.

Average Benefits Before and After Act 57

State Claim Counts - Claimant wages from 1987 through 1996 Exposure Years from CMCRB database, projected to 1996 level.

Calculation of Pension Offset Percentage

	Estimates
(a) Union Membership	50.0%
(b) Pension Paid by Employers	50.0%
(c) Present Employer Directly Liable for Pension	50.0%
(d) Resulting Offset for State O.D.	12.5%

Sources: Percentage of Miners eligible: estimate.

COAL MINE COMPENSATION RATING BUREAU

Wage Level Adjustment to Current Level - State Occupational Disease Model

Anthracite Underground (1011)

	(1) Statewide Avg Wage	(2) Claimants' Actual Avg Wage	(3) (2) Adjusted For Act 57	(4) (3)/(1)	(5) (3) Ex. High & Low	(6) (1) Adjusted To Claimants' Wage Level	(7) (5) & (6) Adjusted Avg Wages	(8) Exponentially Fitted Wages
1990	419.00	539.87	539.87	1.2885	539.87		539.87	518.79
1991	436.00	0.00				510.68	510.68	534.99
1992	455.00	608.33	608.33	1.3370	608.33		608.33	551.70
1993	475.00	419.67	419.67	0.8835 Low		556.37	556.37	568.93
1994	493.00	0.00				577.45	577.45	586.70
1995	509.00	0.00				596.19	596.19	605.02
1996	527.00	0.00				617.27	617.27	623.92
1997	542.00	0.00				634.84	634.84	643.40
1998	561.00	0.00				657.10	657.10	663.50
1999	588.00	501.00	528.38	0.8986	528.38		528.38	684.22
2000	611.00	0.00				715.66	715.66	705.59
2001	644.00	0.00				754.31	754.31	727.63
2002	662.00	0.00				775.40	775.40	750.35
2003	675.00	0.00				790.62	790.62	773.78
2004	690.00	0.00				808.19	808.19	797.95
2005	716.00	0.00				838.65	838.65	822.87
2006	745.00	0.00				872.61	872.61	848.57
2007	779.00	0.00				912.44	912.44	875.07
2008	807.00	0.00				945.23	945.23	902.40
2009	836.00	0.00				979.20	979.20	930.59
2010	845.00	0.00				989.74	989.74	959.65
2011	858.00	1400.00	1476.51	1.7209 High		1004.97	1004.97	989.62
2012	888.00	0.00				1040.11	1040.11	1020.53
2013	917.00	1009.57	1064.74	1.1611	1064.74		1064.74	1052.40
2014	932.00	0.00				1091.65	1091.65	1085.27
2015	951.00	0.00				1113.90	1113.90	1119.16
2016	978.00	0.00				1145.53	1145.53	1154.12
2017	995.00	0.00				1165.44	1165.44	1190.16
2018	1025.00	0.00				1200.58	1200.58	1227.33
2019	1049.00	0.00				1228.69	1228.69	1265.66
2020	1081.00	0.00				1266.17	1266.17	1305.19
2021	1130.00	0.00				1323.56	1323.56	1345.95
2022	1205.00							
			High	1.7209				
			Low	0.8835				
Average Ratio Claimant/State - High & Low				1.1713				

Projected	
2023	1,241.00
2024	1,278.00
2025	1,317.00
4/1/2024	1,269.00

Projected Avg. Wage at Claimants' Level

1,269.00 * 1.1713 = $1,486.37

Act 57 Factor: 94.8183%

(1) Statewide average weekly wage
(2) CMCRB database, reported State OD average weekly wage
the reported wages were adjusted to pre-act 57 wage level by dividing them by the wage offset of (1.0 minus .051817)

(3)= Column (2) adjusted for Act 57
(4) =(3)/(1)
(5)Actual adjusted wages excluding High and Low
(6) Wage history based on State OD wages, except for high, low, and zeroes where SAWW times average indices was used
(7)Adjusted Wages using Cols. (5) & (6)
(8) Fitted Wages using Regression on data in Col.(7)

COAL MINE COMPENSATION RATING BUREAU

Wage Level Adjustment to Current Level - State Occupational Disease Model

Bituminous Underground (1002)

	(1) Statewide Avg Wage	(2) Claimants' Actual Avg Wage	(3) (2) Adjusted For Act 57	(4) (3)/(1)		(5) (3) Ex. High & Low	(6) (1) Adjusted To Claimants' Wage Level	(7) (5) & (6) Adjusted Avg Wages	(8) Exponentially Fitted Wages
1990	419.00	779.92	779.92	1.8614		779.92		779.92	687.60
1991	436.00	827.00	827.00	1.8968		827.00		827.00	711.40
1992	455.00	652.04	652.04	1.4331		652.04		652.04	736.03
1993	475.00	729.40	729.40	1.5356		729.40		729.40	761.50
1994	493.00	1043.85	1043.85	2.1173		1043.85		1043.85	787.86
1995	509.00	1525.00	1525.00	2.9961	High		839.36	839.36	815.13
1996	527.00	706.64	706.64	1.3409		706.64		706.64	843.35
1997	542.00	672.19	708.92	1.3080		708.92		708.92	872.54
1998	561.00	1058.08	1115.90	1.9891		1115.90		1115.90	902.74
1999	588.00	675.00	711.89	1.2107		711.89		711.89	933.98
2000	611.00	901.03	950.27	1.5553		950.27		950.27	966.31
2001	644.00	604.79	637.84	0.9904	Low		1061.99	1061.99	999.76
2002	662.00	800.15	843.88	1.2747		843.88		843.88	1034.36
2003	675.00	1324.39	1396.77	2.0693		1396.77		1396.77	1070.16
2004	690.00	876.68	924.59	1.3400		924.59		924.59	1107.21
2005	716.00	912.44	962.30	1.3440		962.30		962.30	1145.53
2006	745.00	0.00					1228.54	1228.54	1185.18
2007	779.00	0.00					1284.61	1284.61	1226.20
2008	807.00	1164.02	1227.63	1.5212		1227.63		1227.63	1268.64
2009	836.00	0.00					1378.60	1378.60	1312.56
2010	845.00	0.00					1393.44	1393.44	1357.99
2011	858.00	1269.97	1339.37	1.5610		1339.37		1339.37	1404.99
2012	888.00	1326.96	1399.48	1.5760		1399.48		1399.48	1453.62
2013	917.00	1500.49	1582.49	1.7257		1582.49		1582.49	1503.93
2014	932.00	1408.93	1485.93	1.5943		1485.93		1485.93	1555.99
2015	951.00	1841.04	1941.65	2.0417		1941.65		1941.65	1609.85
2016	978.00	1566.91	1652.54	1.6897		1652.54		1652.54	1665.57
2017	995.00	0.00					1640.80	1640.80	1723.22
2018	1025.00	2108.50	2223.73	2.1695		2223.73		2223.73	1782.86
2019	1049.00	1864.38	1966.27	1.8744		1966.27		1966.27	1844.57
2020	1081.00	0.00					1782.62	1782.62	1908.42
2021	1130.00	1657.92	1748.52	1.5474		1748.52		1748.52	1974.47
2022	1205.00								
			High	2.9961					
			Low	0.9904					
Average Ratio Claimant/State - High & Low				1.6490					

Projected	
2023	1,241.00
2024	1,278.00
2025	1,317.00
4/1/2024	1,269.00

Projected Avg. Wage at Claimants' Level

1,269.00 * 1.649 = $2,092.64

Act 57 Factor: 94.8183%

(1) Statewide average weekly wage
(2) CMCRB database, reported State OD average weekly wage
the reported wages were adjusted to pre-act 57 wage level by dividing them by the wage offset of (1.0 minus .051817)

(3)= Column (2) adjusted for Act 57
(4) =(3)/(1)
(5)Actual adjusted wages excluding High and Low
(6) Wage history based on State OD wages, except for high, low, and zeroes where SAWW times average indices was used
(7)Adjusted Wages using Cols. (5) & (6)
(8) Fitted Wages using Regression on data in Col.(7)

COAL MINE COMPENSATION RATING BUREAU

Wage Level Adjustment to Current Level - State Occupational Disease Model

Anthracite Surface (1016)

	(1) Statewide Avg Wage	(2) Claimants' Actual Avg Wage	(3) (2) Adjusted For Act 57	(4) (3)/(1)		(5) (3) Ex. High & Low	(6) (1) Adjusted To Claimants' Wage Level	(7) (5) & (6) Adjusted Avg Wages	(8) Exponentially Fitted Wages
1990	419.00	549.31	549.31	1.3110		549.31		549.31	482.42
1991	436.00	492.75	492.75	1.1302		492.75		492.75	496.67
1992	455.00	565.40	565.40	1.2426		565.40		565.40	511.34
1993	475.00	548.61	548.61	1.1550		548.61		548.61	526.45
1994	493.00	543.95	543.95	1.1033		543.95		543.95	542.00
1995	509.00	651.62	651.62	1.2802		651.62		651.62	558.01
1996	527.00	453.71	453.71	0.8609		453.71		453.71	574.50
1997	542.00	530.26	559.24	1.0318		559.24		559.24	591.47
1998	561.00	744.92	785.63	1.4004		785.63		785.63	608.94
1999	588.00	571.47	602.70	1.0250		602.70		602.70	626.93
2000	611.00	133.68	140.99	0.2307	Low		656.31	656.31	645.45
2001	644.00	517.49	545.77	0.8475		545.77		545.77	664.52
2002	662.00	589.00	621.19	0.9384		621.19		621.19	684.15
2003	675.00	633.40	668.01	0.9897		668.01		668.01	704.36
2004	690.00	1568.35	1654.06	2.3972	High		741.17	741.17	725.17
2005	716.00	575.91	607.38	0.8483		607.38		607.38	746.60
2006	745.00	0.00					800.25	800.25	768.65
2007	779.00	733.08	773.14	0.9925		773.14		773.14	791.36
2008	807.00	0.00					866.85	866.85	814.74
2009	836.00	0.00					898.00	898.00	838.81
2010	845.00	0.00					907.67	907.67	863.59
2011	858.00	466.84	492.35	0.5738		492.35		492.35	889.10
2012	888.00	0.00					953.86	953.86	915.37
2013	917.00	0.00					985.01	985.01	942.41
2014	932.00	0.00					1001.12	1001.12	970.25
2015	951.00	0.00					1021.53	1021.53	998.91
2016	978.00	1419.00	1496.55	1.5302		1496.55		1496.55	1028.42
2017	995.00	0.00					1068.79	1068.79	1058.80
2018	1025.00	0.00					1101.02	1101.02	1090.08
2019	1049.00	0.00					1126.80	1126.80	1122.29
2020	1081.00	0.00					1161.17	1161.17	1155.44
2021	1130.00	0.00					1213.80	1213.80	1189.58
2022	1205.00								
			High	2.3972					
			Low	0.2307					
Average Ratio Claimant/State - High & Low				1.0742					

Projected	
2023	1,241.00
2024	1,278.00
2025	1,317.00
4/1/2024	1,269.00

Projected Avg. Wage at Claimants' Level

1,269.00 * 1.0742 = $1,363.11

Act 57 Factor: 94.8183%

(1) Statewide average weekly wage
(2) CMCRB database, reported State OD average weekly wage
the reported wages were adjusted to pre-act 57 wage level by dividing them by the wage offset of (1.0 minus .051817)

(3)= Column (2) adjusted for Act 57
(4) =(3)/(1)
(5)Actual adjusted wages excluding High and Low
(6) Wage history based on State OD wages, except for high, low, and zeroes where SAWW times average indices was used
(7)Adjusted Wages using Cols. (5) & (6)
(8) Fitted Wages using Regression on data in Col.(7)

COAL MINE COMPENSATION RATING BUREAU

Wage Level Adjustment to Current Level - State Occupational Disease Model

Bituminous Surface (1013)

	(1) Statewide Avg Wage	(2) Claimants' Actual Avg Wage	(3) (2) Adjusted For Act 57	(4) (3)/(1)		(5) (3) Ex. High & Low	(6) (1) Adjusted To Claimants' Wage Level	(7) (5) & (6) Adjusted Avg Wages	(8) Exponentially Fitted Wages
1990	419.00	481.50	481.50	1.1492		481.50		481.50	521.22
1991	436.00	595.45	595.45	1.3657		595.45		595.45	537.67
1992	455.00	652.89	652.89	1.4349		652.89		652.89	554.64
1993	475.00	705.41	705.41	1.4851	High		563.63	563.63	572.14
1994	493.00	621.91	621.91	1.2615		621.91		621.91	590.20
1995	509.00	477.90	477.90	0.9389		477.90		477.90	608.82
1996	527.00	628.07	644.84	1.2236		644.84		644.84	628.03
1997	542.00	698.16	736.31	1.3585		736.31		736.31	647.85
1998	561.00	500.00	527.32	0.9400		527.32		527.32	668.30
1999	588.00	569.19	600.30	1.0209		600.30		600.30	689.39
2000	611.00	0.00					725.00	725.00	711.14
2001	644.00	0.00					764.16	764.16	733.59
2002	662.00	0.00					785.52	785.52	756.74
2003	675.00	0.00					800.94	800.94	780.62
2004	690.00	0.00					818.74	818.74	805.25
2005	716.00	676.00	712.94	0.9957		712.94		712.94	830.67
2006	745.00	0.00					884.00	884.00	856.88
2007	779.00	0.00					924.35	924.35	883.92
2008	807.00	0.00					957.57	957.57	911.82
2009	836.00	0.00					991.98	991.98	940.59
2010	845.00	0.00					1002.66	1002.66	970.27
2011	858.00	1111.56	1172.31	1.3663		1172.31		1172.31	1000.89
2012	888.00	1157.60	1220.86	1.3748		1220.86		1220.86	1032.48
2013	917.00	0.00					1088.09	1088.09	1065.06
2014	932.00	879.70	927.77	0.9955		927.77		927.77	1098.67
2015	951.00	809.44	853.67	0.8977	Low		1128.44	1128.44	1133.35
2016	978.00	0.00					1160.48	1160.48	1169.11
2017	995.00	0.00					1180.65	1180.65	1206.01
2018	1025.00	0.00					1216.24	1216.24	1244.07
2019	1049.00	0.00					1244.72	1244.72	1283.33
2020	1081.00	0.00					1282.69	1282.69	1323.83
2021	1130.00	0.00					1340.84	1340.84	1365.60
2022	1205.00								
			High	1.4851					
			Low	0.8977					
Average Ratio Claimant/State - High & Low				1.1866					

Projected	
2023	1,241.00
2024	1,278.00
2025	1,317.00
4/1/2024	1,269.00

Projected Avg. Wage at Claimants' Level

1,269.00 * 1.1866 = $1,505.77

Act 57 Factor: 94.8183%

(1) Statewide average weekly wage
(2) CMCRB database, reported State OD average weekly wage
the reported wages were adjusted to pre-act 57 wage level by dividing them by the wage offset of (1.0 minus .051817)
only one of the three claims in 1996 was adjusted by the pre-act 57 wage level
(3)= Column (2) adjusted for Act 57
(4) =(3)/(1)
(5)Actual adjusted wages excluding High and Low
(6) Wage history based on State OD wages, except for high, low, and zeroes where SAWW times average indices was used
(7)Adjusted Wages using Cols. (5) & (6)
(8) Fitted Wages using Regression on data in Col.(7)

Social Security - Cost of Living Adjustment History and Projection

The following annual cost of living percentage is used to adjust the Social Security benefit calculated at time of accident to retirement age.

Year	Annual Changes
1993	2.6%
1994	2.8%
1995	2.6%
1996	2.9%
1997	2.1%
1998	1.3%
1999	2.5%
2000	3.5%
2001	2.6%
2002	1.4%
2003	2.1%
2004	2.7%
2005	4.1%
2006	3.3%
2007	2.3%
2008	5.8%
2009	0.0%
2010	0.0%
2011	3.6%
2012	1.7%
2013	1.5%
2014	1.7%
2015	0.0%
2016	0.3%
2017	2.0%
2018	2.8%
2019	1.6%
2020	1.3%
2021	5.9%
2022	8.7%
Average All years	2.5%
Average latest 10 years	2.6%
Average latest 5 years	4.1%
Average latest 3 years	5.3%
Selected Annual Change	2.5%
Last Year's Selection was 2.3%	

Source: Social Security Administration Web Site

Social Security Formulas - Historic Primary Insurance Amounts (PIA) and Projections

The following projections are used to calculate the PIA (i.e., SS Benefit) in the SS Offset Model.

	Monthly Wage Amounts Break Points:							
Year	90% of First:	Percent Change	Plus 32% of next:	Percent Change	Plus 15% of next:	Percent Change	Annual SS Wage Base	Percent Change
1993	401		2,019		2,380		57,600	
1994	422	5.2%	2,123	5.2%	2,505	5.3%	60,600	5.2%
1995	426	0.9%	2,141	0.8%	2,533	1.1%	61,200	1.0%
1996	437	2.6%	2,198	2.7%	2,590	2.3%	62,700	2.5%
1997	455	4.1%	2,286	4.0%	2,709	4.6%	65,400	4.3%
1998	477	4.8%	2,398	4.9%	2,825	4.3%	68,400	4.6%
1999	505	5.9%	2,538	5.8%	3,007	6.4%	72,600	6.1%
2000	531	5.1%	2,671	5.2%	3,148	4.7%	76,200	5.0%
2001	561	5.6%	2,820	5.6%	3,319	5.4%	80,400	5.5%
2002	592	5.5%	2,975	5.5%	3,508	5.7%	84,900	5.6%
2003	606	2.4%	3,047	2.4%	3,597	2.5%	87,000	2.5%
2004	612	1.0%	3,077	1.0%	3,636	1.1%	87,900	1.0%
2005	627	2.5%	3,152	2.4%	3,721	2.3%	90,000	2.4%
2006	656	4.6%	3,299	4.7%	3,895	4.7%	94,200	4.7%
2007	680	3.7%	3,420	3.7%	4,025	3.3%	97,500	3.5%
2008	711	4.6%	3,577	4.6%	4,212	4.6%	102,000	4.6%
2009	744	4.6%	3,739	4.5%	4,417	4.9%	106,800	4.7%
2010	761	2.3%	3,825	2.3%	4,314	-2.3%	106,800	0.0%
2011	749	-1.6%	3,768	-1.5%	4,383	1.6%	106,800	0.0%
2012	767	2.4%	3,857	2.4%	4,551	3.8%	110,100	3.1%
2013	791	3.1%	3,977	3.1%	4,707	3.4%	113,700	3.3%
2014	816	3.2%	4,101	3.1%	4,833	2.7%	117,000	2.9%
2015	826	1.2%	4,154	1.3%	4,895	1.3%	118,500	1.3%
2016	856	3.6%	4,301	3.5%	4,718	-3.6%	118,500	0.0%
2017	885	3.4%	4,451	3.5%	5,264	11.6%	127,200	7.3%
2018	895	1.1%	4,502	1.1%	5,303	0.7%	128,400	0.9%
2019	926	3.5%	4,657	3.4%	5,492	3.6%	132,900	3.5%
2020	960	3.7%	4,825	3.6%	5,690	3.6%	137,700	3.6%
2021	996	3.8%	5,006	3.8%	5,898	3.7%	142,800	3.7%
2022	1,024	2.8%	5,148	2.8%	6,078	3.1%	147,000	2.9%
2023	1,115	8.9%	5,606	8.9%	6,629	9.1%	160,200	9.0%
Average All years		3.5%		3.5%		3.5%		3.5%
Average latest 10 years		3.5%		3.5%		3.6%		3.5%
Average latest 5 years		4.5%		4.5%		4.6%		4.5%
Average latest 3 years		5.1%		5.2%		5.3%		5.2%
Last Year's Selection		2.5%		2.5%		2.5%		2.5%
Selection		2.5%		2.5%		2.5%		2.5%
Projections		Selected		Selected		Selected		Selected
2023	1,115	Actual	5,606	Actual	6,629	Actual	160,200	Actual
2024	1,143	2.5%	5,746	2.5%	6,795	2.5%	164,200	2.5%
2025	1,172	2.5%	5,890	2.5%	6,965	2.5%	168,300	2.5%
Average Break Point For Policies effective between 4-1-2023 and 4-1-2024	1,136		5,711		6,754		163,200	

Note: Weighted average of the three calendar years: 2023, 2024, 2025.

Weights: 2023	28.125%
2024	68.750%
2025	3.125%
	100.00%

Notes:

The above weights assume 1-year policies effective between 4-1-2023 and 4-1-2024

E.G.: 28.125% of the losses will occur between 4-1-2023 and 12-31-2023.
68.750% of the losses will occur between 1-1-2024 and 12-31-2024.
3.125% of the losses will occur between 1-1-2025 and 3-31-2025.

Source: *Social Se* curity Administration Web Site

Social Security Formulas - Primary Insurance Amount (PIA) Calculations
Example Calculations

I. Break Point Monthly Wage Amounts and Factors (Exhibit VII-J, Page 2)

Break Points (Projected to average accident date of 4-1-2024 with a 4-1-2023 filing effective date.)

		Monthly Wages		
	Yearly Maximum	First Break Point	Second Break Point	Third Break Point
Wage Amount:	163,200	1,136	5,711	6,754
Factor:		90%	32%	15%

II. Example Calculations

Example Number	Monthly Wage	Adjusted Monthly Wage (a)	PIA at each Breakpoint First (b)	Second (c)	Third (d)	Total PIA
1	2,000	2,000	1,136	864	0	
			90%	32%	15%	
			1,022	276	0	1,299
2	4,000	4,000	1,136	2,864	0	
			90%	32%	15%	
			1,022	916	0	1,939
3	6,000	6,000	1,136	4,864	0	
			90%	32%	15%	
			1,022	1,556	0	2,579
4	8,000	8,000	1,136	5,711	1,153	
			90%	32%	15%	
			1,022	1,828	173	3,023
5	10,000	10,000	1,136	5,711	3,153	
			90%	32%	15%	
			1,022	1,828	473	3,323
6	12,000	12,000	1,136	5,711	5,153	
			90%	32%	15%	
			1,022	1,828	773	3,623

Notes:
(a) Monthly Wage limited to Monthly Maximum ($163,200/12 = $12,000)
(b) minimum of adjusted monthly wage and $1136
(c) minimum of (adjusted monthly wage less $1136) and $5,711
(d) minimum of (adjusted monthly wage less $1136 less $5,711) and $6,754

Source: Exhibit VII-J, Page 2

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

ANTHRACITE UNDERGROUND (0160)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Reported	Awarded	Pending	Denied	Pending Awarded	Denied Reopened	Denied Awarded	Ultimate Awarded	Ultimate Denied	IBNR	IBNR Awarded
Year					(3) * 30%			(2)+(5)+(7)	(1)-(8)		(10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	1	1	-	-	-	-	-	1.00	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	0.0187	0.0067
Total	1	1	-	-	-	-	-	1.00	-	0.0187	0.0067

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 1.3865	-	662	1.089	37.0	-
2003	-	1.3543	-	675	1.089	35.4	-
2004	-	1.3453	-	690	1.089	34.4	-
2005	-	1.4176	-	716	1.089	35.0	-
2006	-	1.4425	-	745	1.089	34.2	-
2007	-	1.6625	-	779	1.089	37.7	-
2008	-	2.1367	-	807	1.089	46.8	-
2009	-	1.3359	-	836	1.089	28.2	-
2010	-	1.2996	-	845	1.089	27.2	-
2011	-	1.2579	-	858	1.089	25.9	-
2012	-	1.0293	-	888	1.089	20.5	-
2013	1.0000	0.3819	2.6185	917	1.089	7.4	13.5135
2014	-	0.2588	-	932	1.089	4.9	-
2015	-	0.2543	-	951	1.089	4.7	-
2016	-	0.1638	-	978	1.089	3.0	-
2017	-	0.2524	-	995	1.089	4.5	-
2018	-	0.1833	-	1,025	1.089	3.2	-
2019	-	0.1794	-	1,049	1.089	3.0	-
2020	-	0.2997	-	1,081	1.089	4.9	-
2021	0.0067	0.2325	0.0290	1,130	1.089	3.6	0.1875
Total	1.0067	17.8742	0.0563			401.5	0.2507

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

BITUMINOUS UNDERGROUND(0158)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 2	# 0	# 1	# 1	# 0.30	# 0.05	# 0.05	# 0.35	# 1.65	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2005	1	1	-	-	-	-	-	1.00	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	2	2	-	-	-	-	-	2.00	-	-	-
2012	4	1	1	2	0.30	0.10	0.10	1.40	2.60	-	-
2013	6	1	4	1	1.20	0.05	0.05	2.25	3.75	-	-
2014	4	1	1	2	0.30	0.10	0.10	1.40	2.60	-	-
2015	6	2	-	4	-	0.20	0.20	2.20	3.80	-	-
2016	4	-	1	3	0.30	0.15	0.15	0.45	3.55	0.1105	0.0398
2017	-	-	-	-	-	-	-	-	-	0.2729	0.0983
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.4940	0.1779
2019	1	-	1	-	0.30	-	-	0.30	0.70	0.7049	0.2539
2020	-	-	-	-	-	-	-	-	-	0.7291	0.2626
2021	-	-	-	-	-	-	-	-	-	0.9326	0.3359
Total	38	11	9	18	2.70	0.90	0.90	14.60	23.40	3.2440	1.1685

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.3500	$ 40.8380	0.0086	662	1.582	749.9	0.0467
2003	-	36.4984	-	675	1.582	657.3	-
2004	0.0500	46.0739	0.0011	690	1.582	811.7	0.0062
2005	1.0000	66.2758	0.0151	716	1.582	1,125.2	0.0889
2006	-	70.4659	-	745	1.582	1,149.8	-
2007	-	79.9043	-	779	1.582	1,246.9	-
2008	1.0500	101.3540	0.0104	807	1.582	1,526.7	0.0688
2009	-	101.3481	-	836	1.582	1,473.7	-
2010	1.0000	125.3936	0.0080	845	1.582	1,803.9	0.0554
2011	2.0000	148.4857	0.0135	858	1.582	2,103.7	0.0951
2012	1.4000	153.6189	0.0091	888	1.582	2,102.9	0.0666
2013	2.2500	145.1463	0.0155	917	1.582	1,924.1	0.1169
2014	1.4000	183.4320	0.0076	932	1.582	2,392.5	0.0585
2015	2.2000	140.5703	0.0157	951	1.582	1,796.8	0.1224
2016	0.4898	118.5455	0.0041	978	1.582	1,473.5	0.0332
2017	0.0983	172.7088	0.0006	995	1.582	2,110.0	0.0047
2018	1.3279	180.5998	0.0074	1,025	1.582	2,141.8	0.0620
2019	0.5539	178.0190	0.0031	1,049	1.582	2,062.9	0.0269
2020	0.2626	139.3309	0.0019	1,081	1.582	1,566.8	0.0168
2021	0.3359	131.5017	0.0026	1,130	1.582	1,414.6	0.0237
Total	15.7685	2,360.1109	0.0067			31,634.7	0.0498

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

ANTHRACITE SURFACE(0153)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2004	1	1	-	-	-	-	-	1.00	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2007	2	-	-	2	-	0.10	0.10	0.10	1.90	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	1	1	-	-	-	-	-	1.00	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	0.0313	0.0113
2021	-	-	-	-	-	-	-	-	-	0.1204	0.0434
Total	9	3	-	6	-	0.30	0.30	3.30	5.70	0.1517	0.0546

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 11.0466	-	662	1.089	294.7	-
2003	1.0500	11.9282	0.0880	675	1.089	312.1	0.3364
2004	1.0000	12.3597	0.0809	690	1.089	316.3	0.3162
2005	-	12.1409	-	716	1.089	299.4	-
2006	0.0500	12.0653	0.0041	745	1.089	286.0	0.0175
2007	0.1000	14.8666	0.0067	779	1.089	337.0	0.0297
2008	-	16.2202	-	807	1.089	354.9	-
2009	-	15.8935	-	836	1.089	335.7	-
2010	-	13.3192	-	845	1.089	278.3	-
2011	1.0000	19.5074	0.0513	858	1.089	401.5	0.2491
2012	-	24.7347	-	888	1.089	491.9	-
2013	-	20.7200	-	917	1.089	399.0	-
2014	0.0500	18.9113	0.0026	932	1.089	358.3	0.0140
2015	-	22.2344	-	951	1.089	412.9	-
2016	0.0500	19.2571	0.0026	978	1.089	347.7	0.0144
2017	-	19.0946	-	995	1.089	338.9	-
2018	-	18.3035	-	1,025	1.089	315.3	-
2019	-	20.5041	-	1,049	1.089	345.2	-
2020	0.0113	19.7146	0.0006	1,081	1.089	322.1	0.0035
2021	0.0434	20.9048	0.0021	1,130	1.089	326.7	0.0133
Total	3.3546	343.7267	0.0098			6,873.9	0.0488

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

BITUMINOUS SURFACE(0156)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	2	-	-	2	-	0.10	0.10	0.10	1.90	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2015	4	-	-	4	-	0.20	0.20	0.20	3.80	-	-
2016	-	-	-	-	-	-	-	-	-	0.0118	0.0042
2017	-	-	-	-	-	-	-	-	-	0.0322	0.0116
2018	-	-	-	-	-	-	-	-	-	0.0608	0.0219
2019	-	-	-	-	-	-	-	-	-	0.0953	0.0343
2020	-	-	-	-	-	-	-	-	-	0.1038	0.0374
2021	-	-	-	-	-	-	-	-	-	0.1570	0.0566
Total	8	1	-	7	-	0.35	0.35	1.35	6.65	0.4608	0.1660

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 53.5021	-	662	1.089	1,427.2	-
2003	-	47.8737	-	675	1.089	1,252.5	-
2004	-	56.2173	-	690	1.089	1,438.8	-
2005	-	64.8716	-	716	1.089	1,600.0	-
2006	-	63.7985	-	745	1.089	1,512.2	-
2007	-	64.8081	-	779	1.089	1,469.1	-
2008	-	74.6012	-	807	1.089	1,632.5	-
2009	-	63.3067	-	836	1.089	1,337.2	-
2010	-	74.2552	-	845	1.089	1,551.8	-
2011	-	87.7305	-	858	1.089	1,805.6	-
2012	0.1000	77.8905	0.0013	888	1.089	1,549.0	0.0065
2013	-	62.7181	-	917	1.089	1,207.8	-
2014	1.0500	55.3686	0.0190	932	1.089	1,049.1	0.1001
2015	0.2000	42.0001	0.0048	951	1.089	779.9	0.0256
2016	0.0042	30.1312	0.0001	978	1.089	544.1	0.0008
2017	0.0116	34.2490	0.0003	995	1.089	607.8	0.0019
2018	0.0219	36.3052	0.0006	1,025	1.089	625.5	0.0035
2019	0.0343	36.5036	0.0009	1,049	1.089	614.5	0.0056
2020	0.0374	27.9895	0.0013	1,081	1.089	457.2	0.0082
2021	0.0566	30.2239	0.0019	1,130	1.089	472.3	0.0120
Total	1.5160	1,084.3446	0.0014			22,934.1	0.0066

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

FOUR STANDARD CLASSES

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAwd Ratio
2002	# 2	# 0	# 1	# 1	# 0.30	# 0.05	# 0.05	# 0.35	# 1.65	# 0.0000	# 0.0000
2003	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2004	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2005	1	1	-	-	-	-	-	1.00	-	-	-
2006	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2007	2	-	-	2	-	0.10	0.10	0.10	1.90	-	-
2008	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	3	3	-	-	-	-	-	3.00	-	-	-
2012	6	1	1	4	0.30	0.20	0.20	1.50	4.50	-	-
2013	7	2	4	1	1.20	0.05	0.05	3.25	3.75	-	-
2014	7	2	1	4	0.30	0.20	0.20	2.50	4.50	-	-
2015	10	2	-	8	-	0.40	0.40	2.40	7.60	-	-
2016	5	-	1	4	0.30	0.20	0.20	0.50	4.50	0.1223	0.0440
2017	-	-	-	-	-	-	-	-	-	0.3051	0.1099
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.5547	0.1998
2019	1	-	1	-	0.30	-	-	0.30	0.70	0.8003	0.2883
2020	-	-	-	-	-	-	-	-	-	0.8642	0.3113
2021	-	-	-	-	-	-	-	-	-	1.2287	0.4426
Total	56	16	9	31	2.70	1.55	1.55	20.25	35.75	3.8753	1.3959

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.3500	$ 106.7732	0.0033	662		2,508.8	0.0140
2003	1.0500	97.6546	0.0108	675		2,257.3	0.0465
2004	1.0500	115.9962	0.0091	690		2,601.2	0.0404
2005	1.0000	144.7059	0.0069	716		3,059.6	0.0327
2006	0.0500	147.7722	0.0003	745		2,982.2	0.0017
2007	0.1000	161.2415	0.0006	779		3,090.7	0.0032
2008	1.0500	194.3121	0.0054	807		3,560.9	0.0295
2009	-	181.8842	-	836		3,174.8	-
2010	1.0000	214.2676	0.0047	845		3,661.2	0.0273
2011	3.0000	256.9815	0.0117	858		4,336.7	0.0692
2012	1.5000	257.2734	0.0058	888		4,164.3	0.0360
2013	3.2500	228.9663	0.0142	917		3,538.3	0.0919
2014	2.5000	257.9707	0.0097	932		3,804.8	0.0657
2015	2.4000	205.0591	0.0117	951		2,994.3	0.0802
2016	0.5440	168.0976	0.0032	978		2,368.3	0.0230
2017	0.1099	226.3048	0.0005	995		3,061.2	0.0036
2018	1.3498	235.3918	0.0057	1,025		3,085.8	0.0437
2019	0.5883	235.2061	0.0025	1,049		3,025.6	0.0194
2020	0.3113	187.3347	0.0017	1,081		2,351.0	0.0132
2021	0.4426	182.8629	0.0024	1,130		2,217.2	0.0200
Total	21.6459	3,806.0564	0.0057			61,844.2	0.0350

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Sum of Pages 1 to 4

Col.(15): Exhibit XII-D
Col.(16): N/A
Col.(17): Total of 4 std. classes
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

COKE(0154)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0011	0.0004
2017	-	-	-	-	-	-	-	-	-	0.0024	0.0009
2018	-	-	-	-	-	-	-	-	-	0.0038	0.0014
2019	-	-	-	-	-	-	-	-	-	0.0057	0.0020
2020	-	-	-	-	-	-	-	-	-	0.0005	0.0002
2021	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	0.0134	0.0048

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 10.4850	-	662	1.089	279.7	-
2003	-	11.5341	-	675	1.089	301.8	-
2004	-	12.0491	-	690	1.089	308.4	-
2005	-	12.8610	-	716	1.089	317.2	-
2006	-	12.7374	-	745	1.089	301.9	-
2007	-	13.6699	-	779	1.089	309.9	-
2008	-	9.7611	-	807	1.089	213.6	-
2009	-	5.1736	-	836	1.089	109.3	-
2010	-	5.4357	-	845	1.089	113.6	-
2011	-	3.5991	-	858	1.089	74.1	-
2012	-	5.7381	-	888	1.089	114.1	-
2013	-	4.7919	-	917	1.089	92.3	-
2014	-	4.4644	-	932	1.089	84.6	-
2015	-	4.3404	-	951	1.089	80.6	-
2016	0.0004	4.4351	0.0001	978	1.089	80.1	0.0005
2017	0.0009	4.5661	0.0002	995	1.089	81.0	0.0011
2018	0.0014	4.4847	0.0003	1,025	1.089	77.3	0.0018
2019	0.0020	4.5199	0.0005	1,049	1.089	76.1	0.0027
2020	0.0002	0.3136	0.0006	1,081	1.089	5.1	0.0037
2021	-	-	-	1,130	1.089	-	-
Total	0.0048	134.9602	0.0000			3,020.7	0.0002

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

AUGER(0157)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0001	0.0000
2017	-	-	-	-	-	-	-	-	-	0.0002	0.0001
2018	-	-	-	-	-	-	-	-	-	0.0005	0.0002
2019	-	-	-	-	-	-	-	-	-	0.0007	0.0002
2020	-	-	-	-	-	-	-	-	-	0.0006	0.0002
2021	-	-	-	-	-	-	-	-	-	0.0004	0.0002
Total	-	-	-	-	-	-	-	-	-	0.0026	0.0009

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 1.1508	-	662	1.089	30.7	-
2003	-	1.1022	-	675	1.089	28.8	-
2004	-	1.0588	-	690	1.089	27.1	-
2005	-	1.0265	-	716	1.089	25.3	-
2006	-	1.0668	-	745	1.089	25.3	-
2007	-	1.1212	-	779	1.089	25.4	-
2008	-	2.5068	-	807	1.089	54.9	-
2009	-	0.9470	-	836	1.089	20.0	-
2010	-	0.8275	-	845	1.089	17.3	-
2011	-	1.1763	-	858	1.089	24.2	-
2012	-	0.8082	-	888	1.089	16.1	-
2013	-	1.0469	-	917	1.089	20.2	-
2014	-	0.8616	-	932	1.089	16.3	-
2015	-	0.6548	-	951	1.089	12.2	-
2016	0.0000	0.3928	0.0001	978	1.089	7.1	0.0004
2017	0.0001	0.5663	0.0002	995	1.089	10.1	0.0009
2018	0.0002	0.6001	0.0003	1,025	1.089	10.3	0.0018
2019	0.0002	0.5932	0.0004	1,049	1.089	10.0	0.0024
2020	0.0002	0.3952	0.0006	1,081	1.089	6.5	0.0035
2021	0.0002	0.2297	0.0007	1,130	1.089	3.6	0.0044
Total	0.0009	18.1327	0.0001			391.4	0.0002

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

ANTHRACITE CO-GEN(0181)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0022	0.0008
2017	-	-	-	-	-	-	-	-	-	0.0046	0.0017
2018	-	-	-	-	-	-	-	-	-	0.0098	0.0035
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.0104	0.0037
2020	-	-	-	-	-	-	-	-	-	0.0130	0.0047
2021	-	-	-	-	-	-	-	-	-	0.0179	0.0065
Total	2	-	-	2	-	0.10	0.10	0.10	1.90	0.0579	0.0209

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 5.6588	-	662	1.089	151.0	-
2003	0.0500	7.0096	0.0071	675	1.089	183.4	0.0273
2004	-	7.3515	-	690	1.089	188.1	-
2005	-	7.8553	-	716	1.089	193.7	-
2006	-	8.4125	-	745	1.089	199.4	-
2007	-	9.1867	-	779	1.089	208.3	-
2008	-	7.5214	-	807	1.089	164.6	-
2009	-	7.5347	-	836	1.089	159.2	-
2010	-	7.9580	-	845	1.089	166.3	-
2011	-	10.9816	-	858	1.089	226.0	-
2012	-	9.3118	-	888	1.089	185.2	-
2013	-	7.6308	-	917	1.089	146.9	-
2014	-	8.3609	-	932	1.089	158.4	-
2015	-	9.5548	-	951	1.089	177.4	-
2016	0.0008	7.9533	0.0001	978	1.089	143.6	0.0005
2017	0.0017	7.7936	0.0002	995	1.089	138.3	0.0012
2018	0.0035	10.0538	0.0003	1,025	1.089	173.2	0.0020
2019	0.0537	6.8075	0.0079	1,049	1.089	114.6	0.0469
2020	0.0047	6.9033	0.0007	1,081	1.089	112.8	0.0042
2021	0.0065	7.6783	0.0008	1,130	1.089	120.0	0.0054
Total	0.1209	161.5182	0.0007			3,310.4	0.0037

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau

Federal Excess Occupational Disease After Administration / Law Change Frequencies by Classification

BITUMINOUS CO-GEN(0182)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0027	0.0010
2017	-	-	-	-	-	-	-	-	-	0.0060	0.0022
2018	-	-	-	-	-	-	-	-	-	0.0101	0.0036
2019	-	-	-	-	-	-	-	-	-	0.0150	0.0054
2020	-	-	-	-	-	-	-	-	-	0.0182	0.0066
2021	-	-	-	-	-	-	-	-	-	0.0266	0.0096
Total	1	-	-	1	-	0.05	0.05	0.05	0.95	0.0786	0.0283

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 2.3861	-	662	1.089	63.7	-
2003	-	3.0525	-	675	1.089	79.9	-
2004	-	6.3745	-	690	1.089	163.1	-
2005	-	8.5248	-	716	1.089	210.3	-
2006	-	9.4236	-	745	1.089	223.4	-
2007	0.0500	10.8291	0.0046	779	1.089	245.5	0.0204
2008	-	8.4819	-	807	1.089	185.6	-
2009	-	7.8664	-	836	1.089	166.2	-
2010	-	8.7327	-	845	1.089	182.5	-
2011	-	9.1024	-	858	1.089	187.3	-
2012	-	9.0477	-	888	1.089	179.9	-
2013	-	10.3559	-	917	1.089	199.4	-
2014	-	11.7212	-	932	1.089	222.1	-
2015	-	11.7482	-	951	1.089	218.2	-
2016	0.0010	11.3276	0.0001	978	1.089	204.5	0.0005
2017	0.0022	11.4351	0.0002	995	1.089	202.9	0.0011
2018	0.0036	12.0433	0.0003	1,025	1.089	207.5	0.0018
2019	0.0054	11.8189	0.0005	1,049	1.089	199.0	0.0027
2020	0.0066	10.6785	0.0006	1,081	1.089	174.4	0.0038
2021	0.0096	12.2444	0.0008	1,130	1.089	191.3	0.0050
Total	0.0783	187.1948	0.0004			3,706.7	0.0021

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

ANTHRACITE PREP PLANT(0183)

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	1	-	1	-	0.30	-	-	0.30	0.70	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2015	1	1	-	-	-	-	-	1.00	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0042	0.0015
2017	-	-	-	-	-	-	-	-	-	0.0102	0.0037
2018	-	-	-	-	-	-	-	-	-	0.0203	0.0073
2019	-	-	-	-	-	-	-	-	-	0.0398	0.0143
2020	1	-	1	-	0.30	-	-	0.30	0.70	0.0518	0.0187
2021	-	-	-	-	-	-	-	-	-	0.0693	0.0250
Total	5	2	2	1	0.60	0.05	0.05	2.65	2.35	0.1956	0.0705

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 2.3228	-	662	1.089	62.0	-
2003	-	3.4080	-	675	1.089	89.2	-
2004	-	4.4067	-	690	1.089	112.8	-
2005	-	5.1701	-	716	1.089	127.5	-
2006	-	4.8859	-	745	1.089	115.8	-
2007	0.3000	5.8173	0.0516	779	1.089	131.9	0.2274
2008	-	5.7335	-	807	1.089	125.5	-
2009	-	6.2646	-	836	1.089	132.3	-
2010	1.0000	4.8769	0.2050	845	1.089	101.9	0.9814
2011	-	6.1233	-	858	1.089	126.0	-
2012	-	7.5690	-	888	1.089	150.5	-
2013	-	7.0749	-	917	1.089	136.2	-
2014	0.0500	6.5215	0.0077	932	1.089	123.6	0.0405
2015	1.0000	6.1966	0.1614	951	1.089	115.1	0.8688
2016	0.0015	5.5430	0.0003	978	1.089	100.1	0.0015
2017	0.0037	6.0568	0.0006	995	1.089	107.5	0.0034
2018	0.0073	6.9168	0.0011	1,025	1.089	119.2	0.0061
2019	0.0143	10.4902	0.0014	1,049	1.089	176.6	0.0081
2020	0.3187	10.2983	0.0309	1,081	1.089	168.2	0.1895
2021	0.0250	11.1773	0.0022	1,130	1.089	174.7	0.0143
Total	2.7205	126.8535	0.0214			2,496.6	0.1090

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

BITUMINOUS PREP PLANT(0184)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0057	0.0020
2017	-	-	-	-	-	-	-	-	-	0.0152	0.0055
2018	-	-	-	-	-	-	-	-	-	0.0270	0.0097
2019	-	-	-	-	-	-	-	-	-	0.0458	0.0165
2020	-	-	-	-	-	-	-	-	-	0.0567	0.0204
2021	-	-	-	-	-	-	-	-	-	0.0695	0.0250
Total	-	-	-	-	-	-	-	-	-	0.2199	0.0792

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 10.0945	-	662	1.582	185.4	-
2003	-	10.1952	-	675	1.582	183.6	-
2004	-	13.4602	-	690	1.582	237.1	-
2005	-	16.5483	-	716	1.582	281.0	-
2006	-	17.0510	-	745	1.582	278.2	-
2007	-	18.8952	-	779	1.582	294.9	-
2008	-	21.2503	-	807	1.582	320.1	-
2009	-	19.8280	-	836	1.582	288.3	-
2010	-	26.3131	-	845	1.582	378.5	-
2011	-	35.1551	-	858	1.582	498.1	-
2012	-	34.2117	-	888	1.582	468.3	-
2013	-	33.6400	-	917	1.582	445.9	-
2014	-	31.8544	-	932	1.582	415.5	-
2015	-	24.3206	-	951	1.582	310.9	-
2016	0.0020	20.0794	0.0001	978	1.582	249.6	0.0008
2017	0.0055	28.8035	0.0002	995	1.582	351.9	0.0016
2018	0.0097	32.1999	0.0003	1,025	1.582	381.9	0.0026
2019	0.0165	36.1173	0.0005	1,049	1.582	418.5	0.0039
2020	0.0204	33.2971	0.0006	1,081	1.582	374.4	0.0055
2021	0.0250	32.0531	0.0008	1,130	1.582	344.8	0.0073
Total	0.0792	495.3679	0.0002			6,706.9	0.0012

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Exh. X-A
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) / ((15) x (16) x 52) times 1000000
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

TOTAL OTHER CLASSES

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAwd Ratio
2002	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2003	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	2	-	1	1	0.30	0.05	0.05	0.35	1.65	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2015	1	1	-	-	-	-	-	1.00	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0159	0.0057
2017	-	-	-	-	-	-	-	-	-	0.0388	0.0140
2018	-	-	-	-	-	-	-	-	-	0.0715	0.0257
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.1173	0.0423
2020	1	-	1	-	0.30	-	-	0.30	0.70	0.1410	0.0508
2021	-	-	-	-	-	-	-	-	-	0.1837	0.0662
Total	8	2	2	4	0.60	0.20	0.20	2.80	5.20	0.5682	0.2047

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.0000	$ 32.0980	-	662		772.5	-
2003	0.0500	36.3016	0.0014	675		866.7	0.0058
2004	-	44.7008	-	690		1,036.6	-
2005	-	51.9860	-	716		1,155.0	-
2006	-	53.5772	-	745		1,144.0	-
2007	0.3500	59.5194	0.0059	779		1,215.9	0.0288
2008	-	55.2550	-	807		1,064.3	-
2009	-	47.6143	-	836		875.3	-
2010	1.0000	54.1439	0.0185	845		960.1	0.1042
2011	-	66.1378	-	858		1,135.7	-
2012	-	66.6865	-	888		1,114.1	-
2013	-	64.5404	-	917		1,040.9	-
2014	0.0500	63.7840	0.0008	932		1,020.5	0.0049
2015	1.0000	56.8154	0.0176	951		914.4	0.1094
2016	0.0057	49.7312	0.0001	978		785.0	0.0007
2017	0.0140	59.2214	0.0002	995		891.7	0.0016
2018	0.0257	66.2986	0.0004	1,025		969.4	0.0027
2019	0.0923	70.3470	0.0013	1,049		994.8	0.0093
2020	0.3508	61.8860	0.0057	1,081		841.4	0.0417
2021	0.0662	63.3828	0.0010	1,130		834.4	0.0079
Total	3.0047	1,124.0273	0.0027			19,632.7	0.0153

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Sum of Pages 6 to 11
Col.(15): Exhibit XII-D
Col.(16): N/A
Col.(17): Total of other classes
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

GRAND TOTAL

	Counts										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded	Ultimate Awarded (2)+(5)+(7)	Ultimate Denied (1)-(8)	IBNR	IBNR Awarded (10)xAwd Ratio
2002	# 2	# 0	# 1	# 1	# 0.30	# 0.05	# 0.05	# 0.35	# 1.65	# 0.0000	# 0.0000
2003	3	1	-	2	-	0.10	0.10	1.10	1.90	-	-
2004	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2005	1	1	-	-	-	-	-	1.00	-	-	-
2006	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2007	4	-	1	3	0.30	0.15	0.15	0.45	3.55	-	-
2008	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	2	2	-	-	-	-	-	2.00	-	-	-
2011	3	3	-	-	-	-	-	3.00	-	-	-
2012	6	1	1	4	0.30	0.20	0.20	1.50	4.50	-	-
2013	7	2	4	1	1.20	0.05	0.05	3.25	3.75	-	-
2014	8	2	1	5	0.30	0.25	0.25	2.55	5.45	-	-
2015	11	3	-	8	-	0.40	0.40	3.40	7.60	-	-
2016	5	-	1	4	0.30	0.20	0.20	0.50	4.50	0.1382	0.0498
2017	-	-	-	-	-	-	-	-	-	0.3439	0.1239
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.6262	0.2256
2019	2	-	1	1	0.30	0.05	0.05	0.35	1.65	0.9176	0.3305
2020	1	-	1	-	0.30	-	-	0.30	0.70	1.0051	0.3620
2021	-	-	-	-	-	-	-	-	-	1.4125	0.5088
Total	64	18	11	35	3.30	1.75	1.75	23.05	40.95	4.4435	1.6005

Year	(12) Total Awarded (8)+(11)	(13) Payroll ($M)	(14) Frequency (12)/(13)	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Per 100 Miner Years
2002	# 0.3500	$ 138.8712	0.0025	662		3,281.3	0.0107
2003	1.1000	133.9562	0.0082	675		3,124.0	0.0352
2004	1.0500	160.6970	0.0065	690		3,637.8	0.0289
2005	1.0000	196.6919	0.0051	716		4,214.6	0.0237
2006	0.0500	201.3494	0.0002	745		4,126.2	0.0012
2007	0.4500	220.7609	0.0020	779		4,306.6	0.0104
2008	1.0500	249.5671	0.0042	807		4,625.2	0.0227
2009	-	229.4985	-	836		4,050.1	-
2010	2.0000	268.4115	0.0075	845		4,621.3	0.0433
2011	3.0000	323.1193	0.0093	858		5,472.4	0.0548
2012	1.5000	323.9599	0.0046	888		5,278.4	0.0284
2013	3.2500	293.5067	0.0111	917		4,579.2	0.0710
2014	2.5500	321.7547	0.0079	932		4,825.3	0.0528
2015	3.4000	261.8745	0.0130	951		3,908.7	0.0870
2016	0.5498	217.8288	0.0025	978		3,153.3	0.0174
2017	0.1239	285.5262	0.0004	995		3,952.9	0.0031
2018	1.3756	301.6904	0.0046	1,025		4,055.2	0.0339
2019	0.6805	305.5531	0.0022	1,049		4,020.4	0.0169
2020	0.6620	249.2207	0.0027	1,081		3,192.4	0.0207
2021	0.5088	246.2457	0.0021	1,130		3,051.6	0.0167
Total	24.6505	4,930.0837	0.0050			81,476.9	0.0303

Sources: Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol(4)
Col.(7): (1.00)xCol(6)
Col.(10): 40% of Exh. VII-C-1 thru VII-C-6
Col.(13): Sum of Pages 5 & 12
Col.(15): Exhibit XII-D
Col.(16): N/A
Col.(17): Total of all classes
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.3602

Coal Mine Compensation Rating Bureau
Summary of Individual Claim Detail for Federal Basic
Claims from Exposure Years 1990 to 2021

Federal Basic Severities

	Indemnity	Medical	Total
Underground Anthracite Class 160			
Total	8,742,004	2,155,508	10,897,512
Number of Claims	23	23	23
Average	380,087	93,718	473,805
Underground Bituminous Class 158			
Total	32,786,165	7,987,990	40,774,155
Number of Claims	101	101	101
Average	324,615	79,089	403,705
Surface Anthracite Class 153			
Total	17,874,119	3,987,943	21,862,061
Number of Claims	53	53	53
Average	337,248	75,244	412,492
Surface Bituminous Class 156			
Total	20,281,138	4,671,868	24,953,006
Number of Claims	71	71	71
Average	285,650	65,801	351,451
Four Standard Classes Combined			
Total	79,683,426	18,803,308	98,486,734
Number of Claims	248	248	248
Average	321,304	75,820	397,124
Other Classes			
Total	7,054,309	1,894,494	8,948,803
Number of Claims	22	22	22
Average	320,650	86,113	406,764
All Classes Combined			
Total	86,737,735	20,697,802	107,435,537
Number of Claims	270	270	270
Average	321,251	76,659	397,909

Source: Exhibit IX-B

FEDERAL BASIC OCCUPATIONAL DISEASE

ANTHRACITE UNDERGROUND (0160)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.500 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.0571	0.0571	0.028550	1,029,260	0.028550	888	1.089	20.5	0.139268	
2013	4	2	0	2	0.0429	0.0429	0.021425	381,876	2.021425	917	1.089	7.4	27.316554	
2014	0	0	0	0	0.0449	0.0449	0.022435	258,809	0.022435	932	1.089	4.9	0.457857	
2015	1	0	1	0	0.0690	1.0690	0.534495	254,336	0.534495	951	1.089	4.7	11.372234	
2016	0	0	0	0	0.0679	0.0679	0.033940	163,760	0.033940	978	1.089	3.0	1.131333	
2017	0	0	0	0	0.1469	0.1469	0.073455	252,383	0.073455	995	1.089	4.5	1.632333	
2018	0	0	0	0	0.1437	0.1437	0.071830	183,346	0.071830	1,025	1.089	3.2	2.244688	
2019	0	0	0	0	0.1831	0.1831	0.091570	179,379	0.091570	1,049	1.089	3.0	3.052333	
2020	0	0	0	0	0.3834	0.3834	0.191685	299,700	0.191685	1,081	1.089	4.9	3.911939	
2021	0	0	0	0	0.3820	0.3820	0.190995	232,531	0.190995	1,130	1.089	3.6	5.305417	
TOTAL	5	2	1	2	1.5208	2.5208	1.260380	3,235,380	3.260380			59.7	56.563956	
AVERAGE													5.656396	

BITUMINOUS UNDERGROUND (0158)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.079 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	6	0	0	6	9.5474	9.5474	0.754246	153,618,908	0.754246	888	1.582	2,102.9	0.035867
2013	4	1	0	3	10.5637	10.5637	0.834535	145,146,253	1.834535	917	1.582	1,924.1	0.095345
2014	16	0	2	14	15.3606	17.3606	1.371487	183,431,952	1.371487	932	1.582	2,392.5	0.057324
2015	19	1	1	17	13.8138	14.8138	1.170293	140,570,275	2.170293	951	1.582	1,796.8	0.120787
2016	10	1	2	7	13.4798	15.4798	1.222905	118,545,477	2.222905	978	1.582	1,473.5	0.150859
2017	6	1	1	4	22.4988	23.4988	1.856403	172,708,778	2.856403	995	1.582	2,110.0	0.135375
2018	11	1	0	10	26.6240	26.6240	2.103298	180,599,760	3.103298	1,025	1.582	2,141.8	0.144892
2019	5	1	1	3	29.7221	30.7221	2.427042	178,019,000	3.427042	1,049	1.582	2,062.9	0.166127
2020	5	0	0	5	26.3530	26.3530	2.081890	139,330,882	2.081890	1,081	1.582	1,566.8	0.132875
2021	4	0	3	1	28.4741	31.4741	2.486451	131,501,704	2.486451	1,130	1.582	1,414.6	0.175771
TOTAL	86	6	10	70	196.4373	206.4373	16.308550	1,543,472,989	22.308550			18,985.9	1.215222
AVERAGE													0.121522

ANTHRACITE SURFACE (0153)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.250 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	1	0	0	1	0.9318	0.9318	0.232940	24,734,711	0.232940	888	1.089	491.9	0.047355
2013	4	1	2	1	0.9575	2.9575	0.739368	20,720,014	1.739368	917	1.089	399.0	0.435932
2014	1	0	0	1	1.0469	1.0469	0.261733	18,911,339	0.261733	932	1.089	358.3	0.073048
2015	2	0	1	1	1.4704	2.4704	0.617590	22,234,350	0.617590	951	1.089	412.9	0.149574
2016	4	1	1	2	1.5152	2.5152	0.628788	19,257,107	1.628788	978	1.089	347.7	0.468446
2017	1	0	1	0	1.7443	2.7443	0.686073	19,094,634	0.686073	995	1.089	338.9	0.202441
2018	2	0	2	0	1.9513	3.9513	0.987835	18,303,511	0.987835	1,025	1.089	315.3	0.313300
2019	0	0	0	0	2.5323	2.5323	0.633065	20,504,131	0.633065	1,049	1.089	345.2	0.183391
2020	0	0	0	0	2.8009	2.8009	0.700213	19,714,585	0.700213	1,081	1.089	322.1	0.217390
2021	0	0	0	0	3.4265	3.4265	0.856628	20,904,834	0.856628	1,130	1.089	326.7	0.262206
TOTAL	15	2	7	6	18.3769	25.3769	6.344230	204,379,216	8.344230			3,658.0	2.353083
AVERAGE													0.235308

BITUMINOUS SURFACE (0156)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.185 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	9	2	1	6	2.3172	3.3172	0.613689	77,890,500	2.613689	888	1.089	1,549.0	0.168734
2013	5	0	1	4	2.2102	3.2102	0.593883	62,718,061	0.593883	917	1.089	1,207.8	0.049171
2014	4	2	0	2	2.2613	2.2613	0.418331	55,368,615	2.418331	932	1.089	1,049.1	0.230515
2015	9	1	1	7	1.9572	2.9572	0.547082	42,000,092	1.547082	951	1.089	779.9	0.198369
2016	0	0	0	0	1.5885	1.5885	0.293876	30,131,218	0.293876	978	1.089	544.1	0.054011
2017	1	0	0	1	2.0224	2.0224	0.374144	34,248,962	0.374144	995	1.089	607.8	0.061557
2018	0	0	0	0	2.4317	2.4317	0.449868	36,305,197	0.449868	1,025	1.089	625.5	0.071921
2019	1	0	0	1	2.7491	2.7491	0.508582	36,503,594	0.508582	1,049	1.089	614.5	0.082763
2020	1	0	0	1	2.4228	2.4228	0.448212	27,989,489	0.448212	1,081	1.089	457.2	0.098034
2021	0	0	0	0	3.0393	3.0393	0.562274	30,223,927	0.562274	1,130	1.089	472.3	0.119050
TOTAL	30	5	3	22	22.9997	25.9997	4.809943	433,379,655	9.809943			7,907.2	1.134125
AVERAGE													0.113413

FOUR STANDARD CLASSES

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.130 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2012	16	2	1	13	12.8535	13.8535	1.800958	257,273,379	3.629426	888		4,164.3	0.087156	
2013	17	4	3	10	13.7742	16.7742	2.180651	228,966,204	6.189211	917		3,538.3	0.174920	
2014	21	2	2	17	18.7136	20.7136	2.692773	257,970,715	4.073985	932		3,804.8	0.107075	
2015	31	2	4	25	17.3104	21.3104	2.770351	205,059,053	4.869460	951		2,994.3	0.162624	
2016	14	2	3	9	16.6514	19.6514	2.554677	168,097,562	4.179509	978		2,368.3	0.176477	
2017	8	1	2	5	26.4124	28.4124	3.693608	226,304,757	3.990074	995		3,061.2	0.130343	
2018	13	1	2	10	31.1507	33.1507	4.309596	235,391,814	4.612831	1,025		3,085.8	0.149486	
2019	6	1	1	4	35.1865	36.1865	4.704250	235,206,104	4.660259	1,049		3,025.6	0.154028	
2020	6	0	0	6	31.9600	31.9600	4.154804	187,334,656	3.422000	1,081		2,351.0	0.145555	
2021	4	0	3	1	35.3219	38.3219	4.981844	182,862,996	4.096347	1,130		2,217.2	0.184753	
TOTAL	136	15	21	100	239.3347	260.3347	28.723103	2,184,467,240	43.723103			30,610.8	1.472417	
AVERAGE													0.147242	0.143819

Source: Claim counts - CMCRB OD Database as of 4/30/2022
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.122=15 / [15 + 108]
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

FEDERAL BASIC OCCUPATIONAL DISEASE

COKE (0154)

IBNR Factor adjusted by 0.2000

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.0622	0.0622	0.007588	5,738,105	0.007588	888	1.089	114.1	0.006651	
2013	0	0	0	0	0.0595	0.0595	0.007259	4,791,910	0.007259	917	1.089	92.3	0.007865	
2014	0	0	0	0	0.0624	0.0624	0.007613	4,464,398	0.007613	932	1.089	84.6	0.008999	
2015	0	0	0	0	0.0677	0.0677	0.008259	4,340,376	0.008259	951	1.089	80.6	0.010247	
2016	0	0	0	0	0.0765	0.0765	0.009333	4,435,066	0.009333	978	1.089	80.1	0.011652	
2017	0	0	0	0	0.0870	0.0870	0.010614	4,566,113	0.010614	995	1.089	81.0	0.013104	
2018	0	0	0	0	0.0946	0.0946	0.011541	4,484,744	0.011541	1,025	1.089	77.3	0.014930	
2019	0	0	0	0	0.1047	0.1047	0.012773	4,519,863	0.012773	1,049	1.089	76.1	0.016785	
2020	0	0	0	0	0.0080	0.0080	0.000976	313,587	0.000976	1,081	1.089	5.1	0.019137	
2021	0	0	0	0	0.0000	0.0000	0.000000	-	0.000000	1,130	1.089	0.0	N/A	
TOTAL	0	0	0	0	0.6226	0.6226	0.075957	37,654,162	0.075957			691.2	0.109370	
AVERAGE													0.012152	

AUGER (0157)

IBNR Factor adjusted by 0.5000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	1	0	0	1	0.0219	0.0219	0.002672	808,208	0.002672	888	1.089	16.1	0.016595
2013	0	0	0	0	0.0325	0.0325	0.003965	1,046,947	0.003965	917	1.089	20.2	0.019629
2014	0	0	0	0	0.0301	0.0301	0.003672	861,590	0.003672	932	1.089	16.3	0.022529
2015	0	0	0	0	0.0255	0.0255	0.003111	654,766	0.003111	951	1.089	12.2	0.025500
2016	0	0	0	0	0.0169	0.0169	0.002062	392,776	0.002062	978	1.089	7.1	0.029039
2017	0	0	0	0	0.0270	0.0270	0.003294	566,324	0.003294	995	1.089	10.1	0.032614
2018	0	0	0	0	0.0317	0.0317	0.003867	600,138	0.003867	1,025	1.089	10.3	0.037548
2019	0	0	0	0	0.0343	0.0343	0.004185	593,214	0.004185	1,049	1.089	10.0	0.041846
2020	0	0	0	0	0.0251	0.0251	0.003062	395,231	0.003062	1,081	1.089	6.5	0.047111
2021	0	0	0	0	0.0159	0.0159	0.001940	229,661	0.001940	1,130	1.089	3.6	0.053883
TOTAL	1	0	0	1	0.2609	0.2609	0.031830	6,148,855	0.031830			112.4	0.326294
AVERAGE													0.032629

ANTHRACITE CO-GEN (0181)

IBNR Factor adjusted by 0.5000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	1	0	0	1	0.2525	0.2525	0.030805	9,311,812	0.030805	888	1.089	185.2	0.016633
2013	1	0	0	1	0.2368	0.2368	0.028890	7,630,762	0.028890	917	1.089	146.9	0.019666
2014	0	0	0	0	0.2923	0.2923	0.035661	8,360,898	0.035661	932	1.089	158.4	0.022513
2015	0	0	0	0	0.3724	0.3724	0.045433	9,554,806	0.045433	951	1.089	177.4	0.025610
2016	0	0	0	0	0.3428	0.3428	0.041822	7,953,309	0.041822	978	1.089	143.6	0.029124
2017	0	0	0	0	0.3712	0.3712	0.045286	7,793,558	0.045286	995	1.089	138.3	0.032745
2018	1	0	0	1	0.5304	0.5304	0.064709	10,053,839	0.064709	1,025	1.089	173.2	0.037361
2019	0	0	0	0	0.3941	0.3941	0.048080	6,807,496	0.048080	1,049	1.089	114.6	0.041955
2020	1	0	1	0	0.4392	1.4392	0.175582	6,903,273	0.175582	1,081	1.089	112.8	0.155658
2021	0	0	0	0	0.5327	0.5327	0.064989	7,678,278	0.064989	1,130	1.089	120.0	0.054158
TOTAL	4	0	1	3	3.7644	4.7644	0.581257	82,048,031	0.581257			1,470.4	0.435423
AVERAGE													0.043542

BITUMINOUS CO-GEN (0182)

IBNR Factor adjusted by 0.4000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.1963	0.1963	0.023949	9,047,745	0.023949	888	1.089	179.9	0.013312
2013	0	0	0	0	0.2571	0.2571	0.031366	10,355,884	0.031366	917	1.089	199.4	0.015730
2014	0	0	0	0	0.3279	0.3279	0.040004	11,721,184	0.040004	932	1.089	222.1	0.018012
2015	0	0	0	0	0.3663	0.3663	0.044689	11,748,205	0.044689	951	1.089	218.2	0.020481
2016	1	0	0	1	0.3906	0.3906	0.047653	11,327,552	0.047653	978	1.089	204.5	0.023302
2017	0	0	0	0	0.4357	0.4357	0.053155	11,435,057	0.053155	995	1.089	202.9	0.026198
2018	0	0	0	0	0.5083	0.5083	0.062013	12,043,297	0.062013	1,025	1.089	207.5	0.029886
2019	0	0	0	0	0.5473	0.5473	0.066771	11,818,883	0.066771	1,049	1.089	199.0	0.033553
2020	0	0	0	0	0.5435	0.5435	0.066307	10,678,482	0.066307	1,081	1.089	174.4	0.038020
2021	0	0	0	0	0.6796	0.6796	0.082911	12,244,359	0.082911	1,130	1.089	191.3	0.043341
TOTAL	1	0	0	1	4.2526	4.2526	0.518817	112,420,648	0.518817			1,999.2	0.261835
AVERAGE													0.026184

Source: Claim counts - CMCRB OD Database as of 4/30/2022
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.122=15 / [15 + 108]
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

FEDERAL BASIC OCCUPATIONAL DISEASE

ANTHRACITE PREP PLANT (0183)

IBNR Factor adjusted by 0.9000

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2012	0	0	0	0	0.3694	0.3694	0.045067	7,569,023	0.045067	888	1.089	150.5	0.029945	
2013	1	0	1	0	0.3952	1.3952	0.170214	7,074,886	0.170214	917	1.089	136.2	0.124974	
2014	0	0	0	0	0.4104	0.4104	0.050069	6,521,541	0.050069	932	1.089	123.6	0.040509	
2015	0	0	0	0	0.4347	0.4347	0.053033	6,196,596	0.053033	951	1.089	115.1	0.046076	
2016	0	0	0	0	0.4301	0.4301	0.052472	5,542,968	0.052472	978	1.089	100.1	0.052420	
2017	0	0	0	0	0.5193	0.5193	0.063355	6,056,810	0.063355	995	1.089	107.5	0.058935	
2018	0	0	0	0	0.6568	0.6568	0.080130	6,916,759	0.080130	1,025	1.089	119.2	0.067223	
2019	0	0	0	0	1.0930	1.0930	0.133346	10,490,218	0.133346	1,049	1.089	176.6	0.075507	
2020	1	0	1	0	1.1794	2.1794	0.265887	10,298,259	0.265887	1,081	1.089	168.2	0.158078	
2021	0	0	0	0	1.3959	1.3959	0.170300	11,177,278	0.170300	1,130	1.089	174.7	0.097481	
TOTAL	2	0	2	0	6.8842	8.8842	1.083872	77,844,338	1.083872			1,371.7	0.751148	
Average													0.075115	

BITUMINOUS PREP PLANT (0184)

IBNR Factor adjusted by 0.4000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2012	0	0	0	0	0.7421	0.7421	0.090536	34,211,729	0.090536	888	1.582	468.3	0.019333
2013	0	0	0	0	0.8351	0.8351	0.101882	33,639,969	0.101882	917	1.582	445.9	0.022849
2014	3	0	1	2	0.8910	1.8910	0.230702	31,854,431	0.230702	932	1.582	415.5	0.055524
2015	1	0	1	0	0.7582	1.7582	0.214500	24,320,608	0.214500	951	1.582	310.9	0.068993
2016	0	0	0	0	0.6924	0.6924	0.084473	20,079,401	0.084473	978	1.582	249.6	0.033843
2017	0	0	0	0	1.0975	1.0975	0.133895	28,803,457	0.133895	995	1.582	351.9	0.038049
2018	1	0	1	0	1.3590	2.3590	0.287798	32,199,872	0.287798	1,025	1.582	381.9	0.075360
2019	1	0	1	0	1.6725	2.6725	0.326045	36,117,344	0.326045	1,049	1.582	418.5	0.077908
2020	1	0	0	1	1.6948	1.6948	0.206766	33,297,067	0.206766	1,081	1.582	374.4	0.055226
2021	0	0	0	0	1.7791	1.7791	0.217050	32,053,110	0.217050	1,130	1.582	344.8	0.062950
TOTAL	7	0	4	3	11.5217	15.5217	1.893647	306,576,988	1.893647			3,761.7	0.510035
Average													0.051004

TOTAL OTHER CLASSES

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2012	2	0	0	2	1.6444	1.6444	0.200617	66,686,622	0.200617	888		1,114.1	0.018007	
2013	2	0	1	1	1.8162	2.8162	0.343576	64,540,358	0.343576	917		1,040.9	0.033008	
2014	3	0	1	2	2.0141	3.0141	0.367720	63,784,042	0.367720	932		1,020.5	0.036033	
2015	1	0	1	0	2.0248	3.0248	0.369026	56,815,357	0.369026	951		914.4	0.040357	
2016	1	0	0	1	1.9493	1.9493	0.237815	49,731,072	0.237815	978		785.0	0.030295	
2017	0	0	0	0	2.5377	2.5377	0.309599	59,221,319	0.309599	995		891.7	0.034720	
2018	2	0	1	1	3.1808	4.1808	0.510058	66,298,649	0.510058	1,025		969.4	0.052616	
2019	1	0	1	0	3.8459	4.8459	0.591200	70,347,018	0.591200	1,049		994.8	0.059429	
2020	3	0	2	1	3.8900	5.8900	0.718580	61,885,899	0.718580	1,081		841.4	0.085403	
2021	0	0	0	0	4.4032	4.4032	0.537190	63,382,686	0.537190	1,130		834.4	0.064380	
TOTAL	15	0	7	8	27.3064	34.3064	4.185381	622,693,022	4.185381			9,406.6	0.454248	
Average													0.045425	0.045004

GRAND TOTAL

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.122 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2012	18	2	1	15	14.4979	15.4979	1.890746	323,960,001	3.830042	888		5,278.4	0.072561	
2013	19	4	4	11	15.5904	19.5904	2.390034	293,506,562	6.532788	917		4,579.2	0.142662	
2014	24	2	3	19	20.7277	23.7277	2.894784	321,754,757	4.441706	932		4,825.3	0.092050	
2015	32	2	5	25	19.3352	24.3352	2.968893	261,874,410	5.238486	951		3,908.7	0.134021	
2016	15	2	3	10	18.6007	21.6007	2.635281	217,828,634	4.417323	978		3,153.3	0.140086	
2017	8	1	2	5	28.9501	30.9501	3.775909	285,526,076	4.299674	995		3,952.9	0.108773	
2018	15	1	3	11	34.3315	37.3315	4.554448	301,690,463	5.122888	1,025		4,055.2	0.126329	
2019	7	1	2	4	39.0324	41.0324	5.005958	305,553,122	5.251458	1,049		4,020.4	0.130620	
2020	9	0	2	7	35.8500	37.8500	4.617704	249,220,555	4.140580	1,081		3,192.4	0.129701	
2021	4	0	3	1	39.7251	42.7251	5.212460	246,245,682	4.633538	1,130		3,051.6	0.151840	
TOTAL	151	15	28	108	266.6411	294.6411	35.946215	2,807,160,262	47.908483			40,017.4	1.228643	
Average													0.122864	0.120592

Source: Claim counts - CMCRB OD Database as of 4/30/2022
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.122=15 / [15 + 108]
The Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
Estimated Miner Years = Payroll / (SAWW x Adj. Factor x 52)
Frequency per 100 Miner Years = (Expected Ult. Awarded / Est. Miner Years) x 100 or N/A if Payroll=0

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ANTHRACITE UNDERGROUND (0160)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
24	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
36	0	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0		
48	0	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	2	0	1	0	1	0	0	0			
60	0	0	0	0	1	1	2	0	0	0	0	1	0	0	1	0	2	0	2	0	1	0	0				
72	1	0	0	0	1	1	3	0	0	0	0	1	0	1	1	0	2	0	3	0	1	0					
84	1	0	0	0	1	1	4	0	0	0	0	1	0	1	1	0	2	0	3	0	1						
96	1	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0	4	0							
108	1	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0	4								
120	1	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0									
132	1	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2										
144	1	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0											
156	2	0	0	0	2	1	4	1	1	0	0	1	0	1	1												
168	2	0	0	0	2	1	4	2	1	0	0	1	0	1													
180	2	0	0	1	3	1	4	2	1	1	0	1	0														
192	2	0	0	1	3	1	4	2	1	1	0	1															
204	2	0	0	1	3	1	4	2	1	1	0																
216	2	0	0	2	3	1	4	2	1	1																	
228	2	0	0	2	3	1	4	2	1																		
240	2	0	0	2	3	2	5	2																			

Incremental Changes

12-24													0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24-36												0	0	0	0	0	1	0	0	0	0	0	0	0	0		
36-48											0	0	0	0	0	0	1	0	0	0	1	0	0	0			
48-60										0	0	0	0	0	0	0	0	0	1	0	0	0	0				
60-72									0	0	0	0	0	1	0	0	0	0	1	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	0	1	0	0	0	0	0	0	0	0	0	1	0							
96-108						0	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					0	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	0	0	1	0	0	1	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	1	0	0	0	0	0	0													
168-180	0	0	0	1	1	0	0	0	0	1	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	0	0	0	0	0	0	0	0	0	0																
204-216	0	0	0	1	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	1	1	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	1.49352	1.61270	1.57161	1.76229	1.81416	1.37016	1.63652	1.38655	1.35427	1.34532	1.41757	1.44252	1.66254	2.13671	1.33587	1.29959	1.25794	1.02926	0.38188	0.25881	0.25434	0.16376	0.25238	0.18335	0.17938	0.29970	0.23253		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		0.00000	0.36359
24-36													0.00000	0.00000	0.00000	0.00000	0.79495	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.06115	0.25823
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.79495	0.00000	0.00000	0.00000	3.93174	0.00000	0.00000	0.00000				0.36359	0.23743
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	0.00000	0.00000	0.00000					0.20143	0.20143
60-72										0.00000	0.00000	0.00000	0.00000	0.46801	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	0.00000	0.00000						0.23743	0.16761
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000							0.00000	0.14323
84-96								0.00000	0.73841	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000								0.25823	0.09788
96-108							0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00000	0.06115
108-120						0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00000	0.05674
120-132					0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00000	0.05548
132-144				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00000	0.00000
144-156			0.00000	0.00000	0.55122	0.00000	0.00000	0.72121	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.09788	0.00000
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.72121	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.05548	0.00000
168-180	0.00000	0.00000	0.00000	0.56744	0.55122	0.00000	0.00000	0.00000	0.00000	0.74332	0.00000	0.00000	0.00000															0.14323	0.00000
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00000
192-204	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00000	0.00000
204-216	0.00000	0.00000	0.00000	0.56744	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.05674	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.72984	0.61105	0.00000																				0.16761	0.00000
																											Total=	1.64277	1.64277

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.05548	0.11222	0.17337	0.27125	0.41448	0.58209	0.78352	1.02095	1.27918	1.64277
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.05710	0.04285	0.04487	0.06899	0.06788	0.14691	0.14366	0.18314	0.38337	0.38199

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-3
File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-08-C.xlsx]VIII-C-1
Run Date: August 30, 2022 - 09:34:46 AM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
BITUMINOUS UNDERGROUND (0158)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	3	0	0	1	2	2	1	1	0	0	0	1	0	0	0	0	2	1	2	3	5	3	3	4	1	3	4
24	3	2	1	2	4	4	1	2	0	0	0	1	0	1	1	2	2	3	3	6	7	4	4	8	2	5	
36	5	2	4	5	6	4	2	4	0	1	0	1	2	1	1	2	2	4	3	10	11	6	6	10	5		
48	6	2	5	5	7	4	2	5	0	2	0	1	2	1	4	2	2	4	3	12	15	9	6	11			
60	7	3	6	5	7	4	3	6	0	2	0	1	3	1	4	2	4	4	3	14	15	9	6				
72	8	4	7	5	7	4	4	6	0	2	0	1	3	1	5	3	4	4	4	15	19	10					
84	8	4	7	5	7	5	4	6	0	2	1	1	3	1	5	4	6	5	4	15	19						
96	8	5	7	5	8	5	4	7	0	2	1	1	4	1	5	4	6	6	4	16							
108	8	5	7	5	9	5	6	7	1	2	1	1	4	1	5	5	6	6	4								
120	8	5	7	5	10	5	6	11	1	2	1	1	4	1	5	5	6	6									
132	8	5	8	5	11	8	7	11	1	2	1	1	4	1	5	5	6										
144	8	5	9	5	15	11	7	13	1	2	1	1	5	1	5	6											
156	8	5	9	5	16	11	7	15	1	3	1	2	5	1	6												
168	9	5	9	6	16	15	7	16	1	3	1	2	5	1													
180	9	5	9	6	17	22	7	17	1	3	1	2	5														
192	9	5	9	7	18	35	7	17	1	4	1	2															
204	10	6	9	7	19	37	7	20	2	4	1																
216	10	8	10	10	19	40	8	20	2	5																	
228	10	8	11	10	20	48	8	20	2																		
240	10	8	12	10	22	52	8	20																			

Incremental Changes

12-24													0	1	1	2	0	2	1	3	2	1	1	4	1	2	
24-36												0	2	0	0	0	0	1	0	4	4	2	2	2	3		
36-48											0	0	0	0	3	0	0	0	0	2	4	3	0	1			
48-60										0	0	0	1	0	0	0	2	0	0	2	0	0	0				
60-72									0	0	0	0	0	0	1	1	0	0	1	1	4	1					
72-84								0	0	0	1	0	0	0	0	1	2	1	0	0	0						
84-96							0	1	0	0	0	0	1	0	0	0	0	1	0	1							
96-108						0	2	0	1	0	0	0	0	0	0	1	0	0	0								
108-120					1	0	0	4	0	0	0	0	0	0	0	0	0	0									
120-132				0	1	3	1	0	0	0	0	0	0	0	0	0	0										
132-144			1	0	4	3	0	2	0	0	0	0	1	0	0	1											
144-156		0	0	0	1	0	0	2	0	1	0	1	0	0	1												
156-168	1	0	0	1	0	4	0	1	0	0	0	0	0	0													
168-180	0	0	0	0	1	7	0	1	0	0	0	0	0														
180-192	0	0	0	1	1	13	0	0	0	1	0	0															
192-204	1	1	0	0	1	2	0	3	1	0	0																
204-216	0	2	1	3	0	3	1	0	0	1																	
216-228	0	0	1	0	1	8	0	0	0																		
228-240	0	0	1	0	2	4	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	65.27115	75.22304	70.39669	61.08733	58.68524	47.52056	48.52263	40.83800	36.49841	46.07390	66.27576	70.46594	79.90427	101.35398	101.34814	125.39358	148.48571	153.61891	145.14625	183.43195	140.57028	118.54548	172.70878	180.59976	178.01900	139.33088	131.50170		
																												Average	Smoothed
12-24														0.00987	0.00987	0.01595	0.00000	0.01302	0.00689	0.01635	0.01423	0.00844	0.00579	0.02215	0.00562	0.01435		0.01096	0.02739
24-36													0.02503	0.00000	0.00000	0.00000	0.00000	0.00651	0.00000	0.02181	0.02846	0.01687	0.01158	0.01107	0.01685			0.01063	0.02218
36-48												0.00000	0.00000	0.00000	0.02960	0.00000	0.00000	0.00000	0.00000	0.01090	0.02846	0.02531	0.00000	0.00554				0.00768	0.01954
48-60											0.00000	0.00000	0.01251	0.00000	0.00000	0.00000	0.01347	0.00000	0.00000	0.01090	0.00000	0.00000	0.00000					0.00284	0.01715
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.00987	0.00797	0.00000	0.00000	0.00689	0.00545	0.02846	0.00844						0.00516	0.01656
72-84									0.00000	0.00000	0.01509	0.00000	0.00000	0.00000	0.00000	0.00797	0.01347	0.00651	0.00000	0.00000	0.00000							0.00331	0.01544
84-96								0.02449	0.00000	0.00000	0.00000	0.00000	0.01251	0.00000	0.00000	0.00000	0.00000	0.00651	0.00000	0.00545								0.00377	0.01453
96-108							0.04122	0.00000	0.02740	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00797	0.00000	0.00000	0.00000									0.00589	0.01096
108-120						0.00000	0.00000	0.09795	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00753	0.01063
120-132					0.01704	0.06313	0.02061	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00775	0.00962
132-144				0.00000	0.06816	0.06313	0.00000	0.04897	0.00000	0.00000	0.00000	0.00000	0.01251	0.00000	0.00000	0.00797												0.01544	0.00860
144-156			0.00000	0.00000	0.01704	0.00000	0.00000	0.04897	0.00000	0.02170	0.00000	0.01419	0.00000	0.00000	0.00987													0.00860	0.00775
156-168		0.00000	0.00000	0.01637	0.00000	0.08417	0.00000	0.02449	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00962	0.00768
168-180	0.00000	0.00000	0.00000	0.00000	0.01704	0.14730	0.00000	0.02449	0.00000	0.00000	0.00000	0.00000	0.00000															0.01453	0.00753
180-192	0.00000	0.00000	0.00000	0.01637	0.01704	0.27357	0.00000	0.00000	0.00000	0.02170	0.00000	0.00000																0.02739	0.00589
192-204	0.01532	0.01329	0.00000	0.00000	0.01704	0.04209	0.00000	0.07346	0.02740	0.00000	0.00000																	0.01715	0.00516
204-216	0.00000	0.02659	0.01421	0.04911	0.00000	0.06313	0.02061	0.00000	0.00000	0.02170																		0.01954	0.00377
216-228	0.00000	0.00000	0.01421	0.00000	0.01704	0.16835	0.00000	0.00000	0.00000																			0.02218	0.00331
228-240	0.00000	0.00000	0.01421	0.00000	0.03408	0.08417	0.00000	0.00000																				0.01656	0.00284
																											Total=	0.21653	0.21653

IBNR Claims

Cumulative Factor	0.00284	0.00615	0.00992	0.01508	0.02097	0.02850	0.03618	0.04393	0.05253	0.06215	0.07278	0.08374	0.09827	0.11371	0.13027	0.14742	0.16696	0.18914	0.21653
times Payroll	0.10366	0.28335	0.65746	1.06263	1.67559	2.88859	3.66678	5.50854	7.79995	9.54742	10.56374	15.36059	13.81384	13.47981	22.49877	26.62402	29.72205	26.35304	28.47406

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-3
File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-08-C.xlsx]VIII-C-2
Run Date: August 30, 2022 - 09:34:46 AM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ANTHRACITE SURFACE (0153)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	2	5	4	4	0	1	2	3	0	2	1	0	2	0	0	0	0	0	1	1	0	1	1	1	0	0	0
24	6	6	7	6	0	4	2	3	1	3	2	0	2	2	0	0	1	0	1	1	1	1	1	1	0	0	
36	10	6	7	6	0	4	2	4	3	3	2	0	2	2	1	0	1	1	1	1	1	1	1	1	0		
48	12	6	8	7	0	5	4	5	3	3	2	1	2	2	1	0	1	1	1	1	1	3	1	2			
60	13	6	8	7	0	5	5	5	3	4	2	1	2	2	1	0	1	1	2	1	2	3	1				
72	13	8	8	8	0	5	5	6	3	4	2	1	2	2	2	0	1	1	3	1	2	4					
84	15	8	8	8	0	5	5	6	4	5	2	1	2	2	2	0	1	1	3	1	2						
96	16	9	8	8	0	5	5	6	4	5	2	1	2	2	2	2	1	1	4	1							
108	19	9	8	8	0	5	6	6	4	5	2	1	2	2	2	2	1	1	4								
120	21	9	8	8	1	7	6	6	4	5	2	1	2	2	2	2	1	1									
132	21	9	8	8	1	7	7	6	4	5	2	1	2	2	2	2	1										
144	21	9	8	9	1	7	7	6	4	5	2	1	2	2	2	2											
156	21	9	9	9	1	7	7	6	5	5	2	1	2	2	2												
168	23	9	9	9	1	7	7	6	5	6	2	1	2	2													
180	24	10	9	9	1	7	7	6	5	6	2	1	2														
192	24	10	9	9	1	7	7	6	5	6	2	1															
204	24	11	9	9	1	10	7	6	5	6	2																
216	24	11	9	9	1	10	7	6	5	6																	
228	24	11	9	9	1	10	7	6	5																		
240	24	11	9	9	1	10	7	6																			

Incremental Changes

12-24													0	2	0	0	1	0	0	0	1	0	0	0	0	0	
24-36												0	0	0	1	0	0	1	0	0	0	0	0	0	0		
36-48											0	1	0	0	0	0	0	0	0	0	0	2	0	1			
48-60										1	0	0	0	0	0	0	0	0	1	0	1	0	0				
60-72									0	0	0	0	0	0	1	0	0	0	1	0	0	1					
72-84								0	1	1	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	0	0	0	0	0	0	0	0	2	0	0	1	0							
96-108						0	1	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					1	2	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	0	1	0	0	0	0	0	0	0	0	0	0										
132-144			0	1	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		0	1	0	0	0	0	0	1	0	0	0	0	0	0												
156-168	2	0	0	0	0	0	0	0	0	1	0	0	0	0													
168-180	1	1	0	0	0	0	0	0	0	0	0	0	0														
180-192	0	0	0	0	0	0	0	0	0	0	0	0															
192-204	0	1	0	0	0	3	0	0	0	0	0																
204-216	0	0	0	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	0	0	0	0																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
($Millions)	20.28889	16.19217	17.78314	17.37629	18.44114	16.80781	12.92375	11.04657	11.92821	12.35973	12.14091	12.06532	14.86656	16.22023	15.89353	13.31919	19.50743	24.73471	20.72001	18.91134	22.23435	19.25711	19.09463	18.30351	20.50413	19.71459	20.90483		
																												Average	Smoothed
12-24														0.12330	0.00000	0.00000	0.05126	0.00000	0.00000	0.00000	0.04498	0.00000	0.00000	0.00000	0.00000	0.00000		0.01689	0.02184
24-36													0.00000	0.00000	0.06292	0.00000	0.00000	0.04043	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.00795	0.01857
36-48												0.08288	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10386	0.00000	0.05463				0.01857	0.01689
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04826	0.00000	0.04498	0.00000	0.00000					0.00717	0.01526
60-72										0.00000	0.00000	0.00000	0.00000	0.00000	0.06292	0.00000	0.00000	0.00000	0.04826	0.00000	0.00000	0.05193						0.01255	0.01267
72-84									0.08383	0.08091	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000							0.01267	0.01255
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.15016	0.00000	0.00000	0.04826	0.00000								0.01526	0.01077
96-108							0.07738	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									0.00595	0.00915
108-120						0.11899	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00915	0.00854
120-132					0.00000	0.00000	0.07738	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00595	0.00795
132-144				0.05755	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000												0.00443	0.00717
144-156			0.05623	0.00000	0.00000	0.00000	0.00000	0.00000	0.08383	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.01077	0.00622
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.08091	0.00000	0.00000	0.00000	0.00000														0.00622	0.00595
168-180	0.04929	0.06176	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00854	0.00595
180-192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																0.00000	0.00443
192-204	0.00000	0.06176	0.00000	0.00000	0.00000	0.17849	0.00000	0.00000	0.00000	0.00000	0.00000																	0.02184	0.00000
204-216	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00000	0.00000
216-228	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																			0.00000	0.00000
228-240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00000	0.00000
																											Total=	0.16391	0.16391

IBNR Claims

Cumulative Factor	0.00000	0.00000	0.00000	0.00000	0.00443	0.01038	0.01633	0.02255	0.02972	0.03767	0.04621	0.05536	0.06613	0.07868	0.09135	0.10661	0.12350	0.14207	0.16391
times Payroll	0.00000	0.00000	0.00000	0.00000	0.06586	0.16837	0.25954	0.30035	0.57976	0.93176	0.95747	1.04693	1.47036	1.51515	1.74429	1.95134	2.53226	2.80085	3.42651

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-3
File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-08-C.xlsx]VIII-C-3
Run Date: August 30, 2022 - 09:34:46 AM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
BITUMINOUS SURFACE (0156)

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
														Year													
12	5	4	2	0	0	3	0	1	0	1	0	0	2	0	0	1	0	3	2	0	1	0	1	0	0	1	0
24	7	5	3	2	1	3	1	2	0	1	0	1	2	1	0	1	1	8	2	1	3	0	1	0	1	1	
36	8	5	3	2	1	3	1	2	1	1	1	1	2	1	0	1	1	8	2	1	6	0	1	0	1		
48	10	6	5	2	1	5	1	2	1	1	1	2	3	1	0	1	2	8	3	1	7	0	1	0			
60	11	7	5	2	1	5	1	2	1	1	1	2	3	1	0	1	3	8	3	3	8	0	1				
72	13	8	5	3	2	6	1	2	1	1	1	2	4	4	0	2	3	8	4	4	8	0					
84	14	9	7	3	2	6	2	2	1	1	1	4	5	5	0	2	4	9	4	4	9						
96	15	10	7	4	2	6	2	2	1	1	1	4	5	5	0	2	4	9	5	4							
108	18	10	7	5	2	6	2	2	2	1	1	4	5	5	1	2	5	9	5								
120	21	10	8	5	2	6	2	3	3	2	1	4	6	5	1	2	5	9									
132	21	11	8	5	2	6	3	4	3	2	1	4	6	6	1	2	6										
144	21	11	8	6	2	6	3	4	4	2	1	4	6	7	1	2											
156	21	11	8	6	2	6	3	4	5	2	1	4	6	7	1												
168	22	12	8	6	2	6	4	4	5	2	2	4	6	7													
180	22	12	8	6	2	6	5	4	5	2	2	4	6														
192	22	12	9	6	2	7	7	4	5	2	2	4															
204	22	12	10	7	2	7	7	4	5	2	2																
216	24	13	10	8	3	9	7	4	5	2																	
228	24	13	10	9	4	9	7	4	6																		
240	24	14	10	9	4	9	7	4																			

Incremental Changes

12-24													0	1	0	0	1	5	0	1	2	0	0	0	1	0	
24-36												0	0	0	0	0	0	0	0	0	3	0	0	0	0		
36-48											0	1	1	0	0	0	1	0	1	0	1	0	0	0			
48-60										0	0	0	0	0	0	0	1	0	0	2	1	0	0				
60-72									0	0	0	0	1	3	0	1	0	0	1	1	0	0					
72-84								0	0	0	0	2	1	1	0	0	1	1	0	0	1						
84-96							0	0	0	0	0	0	0	0	0	0	0	0	1	0							
96-108						0	0	0	1	0	0	0	0	0	1	0	1	0	0								
108-120					0	0	0	1	1	1	0	0	1	0	0	0	0	0									
120-132				0	0	0	1	1	0	0	0	0	0	1	0	0	1										
132-144			0	1	0	0	0	0	1	0	0	0	0	1	0	0											
144-156		0	0	0	0	0	0	0	1	0	0	0	0	0	0												
156-168	1	1	0	0	0	0	1	0	0	0	1	0	0	0													
168-180	0	0	0	0	0	0	1	0	0	0	0	0	0														
180-192	0	0	1	0	0	1	2	0	0	0	0	0															
192-204	0	0	1	1	0	0	0	0	0	0	0																
204-216	2	1	0	1	1	2	0	0	0	0																	
216-228	0	0	0	1	1	0	0	0	1																		
228-240	0	1	0	0	0	0	0	0																			

Payroll ($Millions)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
	78.75261	77.82841	67.90579	63.65156	54.16227	49.93562	58.15133	53.50209	47.87374	56.21730	64.87156	63.79850	64.80809	74.60123	63.30670	74.25518	87.73051	77.89050	62.71806	55.36862	42.00009	30.13122	34.24896	36.30520	36.50359	27.98949	30.22393		
																												Average	Smoothed
12-24														0.01340	0.00000	0.00000	0.01140	0.06419	0.00000	0.01806	0.04762	0.00000	0.00000	0.00000	0.02739	0.00000		0.01400	0.01400
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.07143	0.00000	0.00000	0.00000	0.00000			0.00549	0.01125
36-48												0.01567	0.01543	0.00000	0.00000	0.00000	0.01140	0.00000	0.01594	0.00000	0.02381	0.00000	0.00000	0.00000				0.00633	0.00833
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01140	0.00000	0.00000	0.03612	0.02381	0.00000	0.00000					0.00549	0.00793
60-72										0.00000	0.00000	0.00000	0.01543	0.04021	0.00000	0.01347	0.00000	0.00000	0.01594	0.01806	0.00000	0.00000						0.00793	0.00633
72-84									0.00000	0.00000	0.00000	0.03135	0.01543	0.01340	0.00000	0.00000	0.01140	0.01284	0.00000	0.00000	0.02381							0.00833	0.00612
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01594	0.00000								0.00123	0.00576
96-108							0.00000	0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.00000	0.01580	0.00000	0.01140	0.00000	0.00000									0.00370	0.00560
108-120						0.00000	0.00000	0.01869	0.02089	0.01779	0.00000	0.00000	0.01543	0.00000	0.00000	0.00000	0.00000	0.00000										0.00560	0.00549
120-132					0.00000	0.00000	0.01720	0.01869	0.00000	0.00000	0.00000	0.00000	0.00000	0.01340	0.00000	0.00000	0.01140											0.00467	0.00549
132-144				0.01571	0.00000	0.00000	0.00000	0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.01340	0.00000	0.00000												0.00385	0.00467
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00161	0.00385
156-168		0.01285	0.00000	0.00000	0.00000	0.00000	0.01720	0.00000	0.00000	0.00000	0.01542	0.00000	0.00000	0.00000														0.00350	0.00370
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01720	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00132	0.00350
180-192	0.00000	0.00000	0.01473	0.00000	0.00000	0.02003	0.03439	0.00000	0.00000	0.00000	0.00000	0.00000																0.00576	0.00277
192-204	0.00000	0.00000	0.01473	0.01571	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																	0.00277	0.00161
204-216	0.02540	0.01285	0.00000	0.01571	0.01846	0.04005	0.00000	0.00000	0.00000	0.00000																		0.01125	0.00161
216-228	0.00000	0.00000	0.00000	0.01571	0.01846	0.00000	0.00000	0.00000	0.02089																			0.00612	0.00132
228-240	0.00000	0.01285	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00161	0.00123
																											Total=	0.10056	0.10056

IBNR Claims

Cumulative Factor	0.00123	0.00255	0.00416	0.00577	0.00854	0.01204	0.01574	0.01959	0.02426	0.02975	0.03524	0.04084	0.04660	0.05272	0.05905	0.06698	0.07531	0.08656	0.10056
times Payroll	0.05888	0.14335	0.26987	0.36812	0.55346	0.89820	0.99645	1.45466	2.12834	2.31724	2.21018	2.26125	1.95720	1.58852	2.02240	2.43172	2.74909	2.42277	3.03932

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-3
File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-08-C.xlsx]VIII-C-4
Run Date: August 30, 2022 - 09:34:46 AM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
OTHER CLASSIFICATIONS - FEDERAL

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Year																										
12	0	0	1	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
24	0	0	2	2	1	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	3	
36	0	0	4	2	3	1	0	1	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2	1		
48	0	0	4	2	3	1	0	1	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	2			
60	0	0	5	2	4	1	0	1	0	1	1	0	0	0	0	0	1	1	2	2	0	1	0				
72	0	0	6	2	4	1	0	2	0	1	1	0	0	0	1	0	1	2	2	2	0	1					
84	0	0	6	3	4	1	0	2	1	1	1	0	0	0	1	0	1	2	2	2	1						
96	0	0	6	3	4	1	0	2	1	1	2	0	0	0	1	0	1	2	2	3							
108	0	0	6	3	4	1	0	2	1	1	2	0	1	1	1	0	1	2	2								
120	0	0	6	3	4	1	0	2	1	1	3	1	1	1	1	0	1	2									
132	0	0	6	3	4	1	0	2	1	1	3	1	1	1	1	0	1										
144	0	0	6	3	5	1	0	2	1	1	3	2	1	1	1	0											
156	0	0	6	3	5	1	0	2	2	1	3	2	1	2	1												
168	0	0	6	3	5	1	0	2	2	1	3	2	1	2													
180	0	0	7	3	5	1	0	2	2	1	3	2	1														
192	0	0	7	3	5	1	0	2	2	2	3	2															
204	0	0	7	3	5	2	0	2	2	2	3																
216	0	0	7	3	5	3	0	2	2	2																	
228	0	0	7	3	5	3	0	2	3																		
240	0	0	8	3	5	3	0	2																			

Payroll	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
($Millions)	60.34187	62.83464	73.62183	31.35678	30.45185	29.53686	30.95943	32.09811	36.30165	44.70078	51.98593	53.57718	59.51941	55.25499	47.61428	54.14396	66.13772	66.68662	64.54036	63.78404	56.81536	49.73107	59.22132	66.29865	70.34702	61.88590	63.38269

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2022
Payrolls: Exhibit X-A-3
File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-08-C.xlsx]VIII-C-5
Run Date: August 30, 2022 - 09:34:46 AM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

Claims with File Dates on or before 12-31-2021, Valued as of 4-30-2022

Incremental Frequency and IBNR

Reported Claims

Months	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Year																										
12	10	9	7	6	2	6	3	6	0	4	2	1	4	0	1	1	2	4	6	4	6	4	5	5	1	7	4
24	16	13	13	12	6	12	4	8	1	5	3	3	4	4	2	3	4	11	8	8	11	5	6	10	3	9	
36	23	13	18	15	10	13	7	11	4	6	4	3	6	4	3	3	6	13	8	12	18	7	8	13	7		
48	28	14	22	16	11	16	9	13	4	7	4	5	7	4	6	3	8	14	10	14	24	12	8	15			
60	31	16	24	16	13	16	11	14	4	8	4	5	8	4	6	3	11	14	12	20	26	13	8				
72	35	20	26	18	14	17	13	16	4	8	4	5	9	8	9	5	11	15	16	22	30	15					
84	38	21	28	19	14	18	15	16	6	9	5	7	10	9	9	6	14	17	16	22	32						
96	40	24	28	20	15	18	15	17	7	9	6	7	11	9	9	8	14	18	19	24							
108	46	24	28	21	16	18	18	17	9	9	6	7	12	10	10	9	15	18	19								
120	51	24	29	21	18	20	18	22	10	10	7	8	13	10	10	9	15	18									
132	51	25	30	21	19	23	21	23	10	10	7	8	13	11	10	9	16										
144	51	25	31	23	24	26	21	25	11	10	7	9	14	12	10	10											
156	52	25	32	23	26	26	21	28	14	11	7	10	14	13	11												
168	56	26	32	24	26	30	22	30	14	12	8	10	14	13													
180	57	27	33	25	28	37	23	31	14	13	8	10	14														
192	57	27	34	26	29	51	25	31	14	15	8	10															
204	58	29	35	27	30	57	25	34	15	15	8																
216	60	32	36	32	31	63	26	34	15	16																	
228	60	32	37	33	33	71	26	34	17																		
240	60	33	39	33	35	76	27	34																			

Incremental Changes

12-24													0	4	1	2	2	7	2	4	5	1	1	5	2	2	
24-36												0	2	0	1	0	2	2	0	4	7	2	2	3	4		
36-48											0	2	1	0	3	0	2	1	2	2	6	5	0	2			
48-60										1	0	0	1	0	0	0	3	0	2	6	2	1	0				
60-72									0	0	0	0	1	4	3	2	0	1	4	2	4	2					
72-84								0	2	1	1	2	1	1	0	1	3	2	0	0	2						
84-96							0	1	1	0	1	0	1	0	0	2	0	1	3	2							
96-108						0	3	0	2	0	0	0	1	1	1	1	1	0	0								
108-120					2	2	0	5	1	1	1	1	1	0	0	0	0	0									
120-132				0	1	3	3	1	0	0	0	0	0	1	0	0	1										
132-144			1	2	5	3	0	2	1	0	0	1	1	1	0	1											
144-156		0	1	0	2	0	0	3	3	1	0	1	0	1	1												
156-168	4	1	0	1	0	4	1	2	0	1	1	0	0	0													
168-180	1	1	1	1	2	7	1	1	0	1	0	0	0														
180-192	0	0	1	1	1	14	2	0	0	2	0	0															
192-204	1	2	1	1	1	6	0	3	1	0	0																
204-216	2	3	1	5	1	6	1	0	0	1																	
216-228	0	0	1	1	2	8	0	0	2																		
228-240	0	1	2	0	2	5	1	0																			

Payroll ($Millions)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average	Smoothed
	226.14804	233.69096	231.27906	175.23425	163.55466	145.17101	152.19366	138.87132	133.95628	160.69703	196.69173	201.34946	220.76087	249.56714	229.49852	268.41150	323.11931	323.96000	293.50656	321.75476	261.87442	217.82864	285.52607	301.69047	305.55312	249.22056	246.24568		
12-24														0.01603	0.00436	0.00745	0.00619	0.02161	0.00681	0.01243	0.01909	0.00459	0.00350	0.01657	0.00655	0.00803		0.01025	0.01151
24-36													0.00906	0.00000	0.00436	0.00000	0.00619	0.00617	0.00000	0.01243	0.02673	0.00918	0.00700	0.00994	0.01309			0.00801	0.01148
36-48												0.00993	0.00453	0.00000	0.01307	0.00000	0.00619	0.00309	0.00681	0.00622	0.02291	0.02295	0.00000	0.00663				0.00787	0.01026
48-60											0.00000	0.00000	0.00453	0.00000	0.00000	0.00000	0.00928	0.00000	0.00681	0.01865	0.00764	0.00459	0.00000					0.00396	0.01025
60-72										0.00000	0.00000	0.00000	0.00453	0.01603	0.01307	0.00745	0.00000	0.00309	0.01363	0.00622	0.01527	0.00918						0.00681	0.00905
72-84									0.01493	0.00622	0.00508	0.00993	0.00453	0.00401	0.00000	0.00373	0.00928	0.00617	0.00000	0.00000	0.00764							0.00550	0.00827
84-96								0.00720	0.00747	0.00000	0.00508	0.00000	0.00453	0.00000	0.00000	0.00745	0.00000	0.00309	0.01022	0.00622								0.00394	0.00801
96-108							0.01971	0.00000	0.01493	0.00000	0.00000	0.00000	0.00453	0.00401	0.00436	0.00373	0.00309	0.00000	0.00000									0.00418	0.00787
108-120						0.01378	0.00000	0.03600	0.00747	0.00622	0.00508	0.00497	0.00453	0.00000	0.00000	0.00000	0.00000	0.00000										0.00600	0.00783
120-132					0.00611	0.02067	0.01971	0.00720	0.00000	0.00000	0.00000	0.00000	0.00000	0.00401	0.00000	0.00000	0.00309											0.00468	0.00763
132-144				0.01141	0.03057	0.02067	0.00000	0.01440	0.00747	0.00000	0.00000	0.00497	0.00453	0.00401	0.00000	0.00373												0.00783	0.00681
144-156			0.00432	0.00000	0.01223	0.00000	0.00000	0.02160	0.02240	0.00622	0.00000	0.00497	0.00000	0.00401	0.00436													0.00616	0.00616
156-168		0.00428	0.00000	0.00571	0.00000	0.02755	0.00657	0.01440	0.00000	0.00622	0.00508	0.00000	0.00000	0.00000														0.00537	0.00600
168-180	0.00442	0.00428	0.00432	0.00571	0.01223	0.04822	0.00657	0.00720	0.00000	0.00622	0.00000	0.00000	0.00000															0.00763	0.00550
180-192	0.00000	0.00000	0.00432	0.00571	0.00611	0.09644	0.01314	0.00000	0.00000	0.01245	0.00000	0.00000																0.01151	0.00537
192-204	0.00442	0.00856	0.00432	0.00571	0.00611	0.04133	0.00000	0.02160	0.00747	0.00000	0.00000																	0.00905	0.00468
204-216	0.00884	0.01284	0.00432	0.02853	0.00611	0.04133	0.00657	0.00000	0.00000	0.00622																		0.01148	0.00418
216-228	0.00000	0.00000	0.00432	0.00571	0.01223	0.05511	0.00000	0.00000	0.01493																			0.01026	0.00396
228-240	0.00000	0.00428	0.00865	0.00000	0.01223	0.03444	0.00657	0.00000																				0.00827	0.00394
																											Total=	0.13876	0.13876

IBNR Claims

Cumulative Factor	0.00394	0.00790	0.01208	0.01676	0.02213	0.02763	0.03363	0.03979	0.04660	0.05423	0.06206	0.06993	0.07794	0.08621	0.09526	0.10551	0.11577	0.12725	0.13876
times Payroll	0.52779	1.26951	2.37604	3.37462	4.88544	6.89554	7.71804	10.68009	15.05736	17.56835	18.21502	22.50031	20.41049	18.77901	27.19921	31.83136	35.37388	31.71332	34.16905

Source: Counts and Payrolls: Sum of Exhibits VIII-C-1 thru VIII-C-5

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

IBNR By Class

		CLASSIFICATION					
A. IBNR Factor		Coke	Auger	Anthracite Co-Gen	Bituminous Co-Gen	Anthracite Prep Plant	Bituminous Prep Plant
	Year	0154	0157	0181	0182	0183	0184
	2012	0.0542	0.0542	0.0542	0.0542	0.0542	0.0542
	2013	0.0621	0.0621	0.0621	0.0621	0.0621	0.0621
	2014	0.0699	0.0699	0.0699	0.0699	0.0699	0.0699
	2015	0.0779	0.0779	0.0779	0.0779	0.0779	0.0779
	2016	0.0862	0.0862	0.0862	0.0862	0.0862	0.0862
	2017	0.0953	0.0953	0.0953	0.0953	0.0953	0.0953
	2018	0.1055	0.1055	0.1055	0.1055	0.1055	0.1055
	2019	0.1158	0.1158	0.1158	0.1158	0.1158	0.1158
	2020	0.1273	0.1273	0.1273	0.1273	0.1273	0.1273
	2021	0.1388	0.1388	0.1388	0.1388	0.1388	0.1388
B. Adjustment Factor		0.2000	0.5000	0.5000	0.4000	0.9000	0.4000
C. Payroll Per $1M							
	2012	5.73811	0.80821	9.31181	9.04775	7.56902	34.21173
	2013	4.79191	1.04695	7.63076	10.35588	7.07489	33.63997
	2014	4.46440	0.86159	8.36090	11.72118	6.52154	31.85443
	2015	4.34038	0.65477	9.55481	11.74821	6.19660	24.32061
	2016	4.43507	0.39278	7.95331	11.32755	5.54297	20.07940
	2017	4.56611	0.56632	7.79356	11.43506	6.05681	28.80346
	2018	4.48474	0.60014	10.05384	12.04330	6.91676	32.19987
	2019	4.51986	0.59321	6.80750	11.81888	10.49022	36.11734
	2020	0.31359	0.39523	6.90327	10.67848	10.29826	33.29707
	2021	0.00000	0.22966	7.67828	12.24436	11.17728	32.05311
D. IBNR							
	2012	0.0622	0.0219	0.2525	0.1963	0.3694	0.7421
	2013	0.0595	0.0325	0.2368	0.2571	0.3952	0.8351
	2014	0.0624	0.0301	0.2923	0.3279	0.4104	0.8910
	2015	0.0677	0.0255	0.3724	0.3663	0.4347	0.7582
	2016	0.0765	0.0169	0.3428	0.3906	0.4301	0.6924
	2017	0.0870	0.0270	0.3712	0.4357	0.5193	1.0975
	2018	0.0946	0.0317	0.5304	0.5083	0.6568	1.3590
	2019	0.1047	0.0343	0.3941	0.5473	1.0930	1.6725
	2020	0.0080	0.0251	0.4392	0.5435	1.1794	1.6948
	2021	0.0000	0.0159	0.5327	0.6796	1.3959	1.7791

Source: IBNR Factor - Exhibit VIII-C-6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A-3
IBNR = A times B times C

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

IBNR By Class

		CLASSIFICATION					
A. IBNR Factor		Coke	Auger	Anthracite Co-Gen	Bituminous Co-Gen	Anthracite Prep Plant	Bituminous Prep Plant
	Year	0154	0157	0181	0182	0183	0184
	2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2003	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
	2004	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079
	2005	0.0121	0.0121	0.0121	0.0121	0.0121	0.0121
	2006	0.0168	0.0168	0.0168	0.0168	0.0168	0.0168
	2007	0.0221	0.0221	0.0221	0.0221	0.0221	0.0221
	2008	0.0276	0.0276	0.0276	0.0276	0.0276	0.0276
	2009	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336
	2010	0.0398	0.0398	0.0398	0.0398	0.0398	0.0398
	2011	0.0466	0.0466	0.0466	0.0466	0.0466	0.0466
B. Adjustment Factor		0.2000	0.5000	0.5000	0.4000	0.9000	0.4000
C. Payroll Per $1M							
	2002	10.48501	1.15084	5.65877	2.38612	2.32282	10.09455
	2003	11.53408	1.10222	7.00962	3.05252	3.40800	10.19521
	2004	12.04913	1.05880	7.35151	6.37448	4.40665	13.46020
	2005	12.86098	1.02654	7.85529	8.52475	5.17007	16.54831
	2006	12.73739	1.06683	8.41253	9.42358	4.88588	17.05097
	2007	13.66993	1.12116	9.18671	10.82914	5.81729	18.89519
	2008	9.76115	2.50676	7.52140	8.48189	5.73354	21.25026
	2009	5.17355	0.94696	7.53474	7.86641	6.26461	19.82801
	2010	5.43566	0.82750	7.95805	8.73270	4.87693	26.31313
	2011	3.59909	1.17626	10.98164	9.10241	6.12326	35.15507
D. IBNR							
	2002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2003	0.0091	0.0022	0.0138	0.0048	0.0121	0.0161
	2004	0.0190	0.0042	0.0290	0.0201	0.0313	0.0425
	2005	0.0311	0.0062	0.0474	0.0412	0.0562	0.0800
	2006	0.0427	0.0089	0.0705	0.0632	0.0737	0.1143
	2007	0.0605	0.0124	0.1017	0.0959	0.1159	0.1673
	2008	0.0539	0.0346	0.1039	0.0937	0.1426	0.2349
	2009	0.0348	0.0159	0.1267	0.1058	0.1896	0.2667
	2010	0.0433	0.0165	0.1583	0.1390	0.1746	0.4188
	2011	0.0335	0.0274	0.2559	0.1697	0.2568	0.6553

Source: IBNR Factor - Exhibit VIII-C-6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A-3
IBNR = A times B times C

Occupational Disease
Federal Benefits

TABLE OF MONTHLY BLACK LUNG BENEFIT RATES

Time Period			Claimant Benefit	Dependent Benefit	Yearly Percentage Increase
10/1/1981	to	9/30/1982	293.20	146.60	
10/1/1982	to	12/31/1983	304.90	152.50	4.0%
1/1/1984	to	12/31/1984	317.10	158.60	4.0%
1/1/1985	to	12/31/1985	328.20	164.10	3.5%
1/1/1986	to	12/31/1986	328.20	164.10	0.0%
1/1/1987	to	12/31/1987	338.00	169.00	3.0%
1/1/1988	to	12/31/1988	344.80	172.40	2.0%
1/1/1989	to	12/31/1989	358.90	179.50	4.1%
1/1/1990	to	12/31/1990	371.80	185.90	3.6%
1/1/1991	to	12/31/1991	387.10	193.60	4.1%
1/1/1992	to	12/31/1992	403.30	201.70	4.2%
1/1/1993	to	12/31/1993	418.20	209.10	3.7%
1/1/1994	to	12/31/1994	427.40	213.70	2.2%
1/1/1995	to	12/31/1995	427.40	213.70	0.0%
1/1/1996	to	12/31/1996	435.10	217.60	1.8%
1/1/1997	to	12/31/1997	445.10	222.60	2.3%
1/1/1998	to	12/31/1998	455.10	227.60	2.2%
1/1/1999	to	12/31/1999	469.50	234.80	3.2%
1/1/2000	to	12/31/2000	487.40	243.60	3.8%
1/1/2001	to	12/31/2001	500.50	250.30	2.7%
1/1/2002	to	12/31/2002	518.50	259.30	3.6%
1/1/2003	to	12/31/2003	534.60	267.30	3.1%
1/1/2004	to	12/31/2004	549.00	274.50	2.7%
1/1/2005	to	12/31/2005	562.80	281.30	2.5%
1/1/2006	to	12/31/2006	574.60	287.20	2.1%
1/1/2007	to	12/31/2007	584.40	292.20	1.7%
1/1/2008	to	12/31/2008	599.00	299.00	2.5%
1/1/2009	to	12/31/2009	616.30	308.20	2.9%
1/1/2010	to	12/31/2010	625.60	312.80	1.5%
1/1/2011	to	12/31/2011	625.60	312.80	0.0%
1/1/2012	to	12/31/2012	625.60	312.80	0.0%
1/1/2013	to	12/31/2013	625.60	312.80	0.0%
1/1/2014	to	12/31/2014	631.80	315.90	1.0%
1/1/2015	to	12/31/2015	638.10	319.10	1.0%
1/1/2016	to	12/31/2016	644.50	322.30	1.0%
1/1/2017	to	12/31/2017	651.00	325.40	1.0%
1/1/2018	to	12/31/2018	660.10	330.00	1.4%
1/1/2019	to	12/31/2019	669.30	334.70	1.4%
1/1/2020	to	12/31/2020	686.70	343.40	2.6%
1/1/2021	to	12/31/2021	693.60	346.80	1.0%
1/1/2022	to	12/31/2022	708.90	354.40	2.2%

All Years	Average	2.2%
Last 10 Yrs	Average	1.3%
Last 5 Yrs	Average	1.7%
Last 3 Yrs	Average	1.9%

Selected Benefit Change from	2022	to	2023	1.00%
Selected Benefit Change from	2023	to	2024	1.50%
Selected Benefit Change from	2024	to	2025	2.50%

Selected Average Annual Benefit Change (Last Year's Selection: 2.5%) 2.50%

			Projected Benefit- Claimant	Dependant	Weight
1/1/2023	to	12/31/2023	716.00 a	358.00	28.125%
1/1/2024	to	12/31/2024	726.70 a	363.40	68.750%
1/1/2025	to	12/31/2025	744.90 a	372.50	3.125%

Average Monthly Benefit During the Policy Period Beginning 04/01/2023	724.30 b	362.20
Average Weekly Benefit During the Policy Period Beginning 04/01/2023	167.10 c	83.60
Annual (Weekly X 52)	8,689.20	4,344.60
Annual Miner and Spouse		13,033.80

a Previous year's benefit times selected benefit change
b Weighted average of projected benefit levels from 01-01-23 to 12-31-25
c Monthly Benefit times 12 months divided by 52 weeks

Sources: US Department of Labor
Employment Standards Administration
Office of Workers' Compensation Programs
Division of Coal Mine Workers' Compensation

Federal Basic Occupational Disease After Administration / Law Change Frequencies by Classification

Anthracite Underground (0160)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2013	4	2	-	2	-	0.10	0.10
2014	-	-	-	-	-	-	-
2015	1	-	1	-	0.30	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
Total	5	2	1	2	0.30	0.10	0.10

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.00	# 0.00	# 0.0571	# 0.0109	# 0.0109	$ 1,029,260	0.0106
2013	2.10	1.90	0.0429	0.0082	2.1082	381,876	5.5206
2014	-	-	0.0449	0.0086	0.0086	258,809	0.0331
2015	0.30	0.70	0.0690	0.0132	0.3132	254,336	1.2313
2016	-	-	0.0679	0.0129	0.0129	163,760	0.0790
2017	-	-	0.1469	0.0280	0.0280	252,383	0.1110
2018	-	-	0.1437	0.0274	0.0274	183,346	0.1494
2019	-	-	0.1831	0.0349	0.0349	179,379	0.1947
2020	-	-	0.3834	0.0731	0.0731	299,700	0.2439
2021	-	-	0.3820	0.0728	0.0728	232,531	0.3133
Total	2.40	2.60	1.5208	0.2900	2.6900	$ 3,235,380	0.8314

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	20.5	0.0531
2013	917	1.0890	7.4	28.4888
2014	932	1.0890	4.9	0.1746
2015	951	1.0890	4.7	6.6629
2016	978	1.0890	3.0	0.4315
2017	995	1.0890	4.5	0.6226
2018	1,025	1.0890	3.2	0.8561
2019	1,049	1.0890	3.0	1.1642
2020	1,081	1.0890	4.9	1.4920
2021	1,130	1.0890	3.6	2.0235
Total			59.7	4.5059

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Federal Basic Occupational Disease After Administration / Law Change Frequencies by Classification

Bituminous Underground (0158)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 6	# 0	# 0	# 6	# 0.00	# 0.30	# 0.30
2013	4	1	-	3	-	0.15	0.15
2014	16	-	2	14	0.60	0.70	0.70
2015	19	1	1	17	0.30	0.85	0.85
2016	10	1	2	7	0.60	0.35	0.35
2017	6	1	1	4	0.30	0.20	0.20
2018	11	1	-	10	-	0.50	0.50
2019	5	1	1	3	0.30	0.15	0.15
2020	5	-	-	5	-	0.25	0.25
2021	4	-	3	1	0.90	0.05	0.05
Total	86	6	10	70	3.00	3.50	3.50

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.30	# 5.70	# 9.5474	# 1.8207	# 2.1207	$ 153,618,908	0.0138
2013	1.15	2.85	10.5637	2.0145	3.1645	145,146,253	0.0218
2014	1.30	14.70	15.3606	2.9293	4.2293	183,431,952	0.0231
2015	2.15	16.85	13.8138	2.6343	4.7843	140,570,275	0.0340
2016	1.95	8.05	13.4798	2.5706	4.5206	118,545,477	0.0381
2017	1.50	4.50	22.4988	4.2905	5.7905	172,708,778	0.0335
2018	1.50	9.50	26.6240	5.0772	6.5772	180,599,760	0.0364
2019	1.45	3.55	29.7221	5.6680	7.1180	178,019,000	0.0400
2020	0.25	4.75	26.3530	5.0255	5.2755	139,330,882	0.0379
2021	0.95	3.05	28.4741	5.4300	6.3800	131,501,704	0.0485
Total	12.50	73.50	196.4373	37.4606	49.9606	$ 1,543,472,989	0.0324

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.5820	2,102.9	0.1008
2013	917	1.5820	1,924.1	0.1645
2014	932	1.5820	2,392.5	0.1768
2015	951	1.5820	1,796.8	0.2663
2016	978	1.5820	1,473.5	0.3068
2017	995	1.5820	2,110.0	0.2744
2018	1,025	1.5820	2,141.8	0.3071
2019	1,049	1.5820	2,062.9	0.3450
2020	1,081	1.5820	1,566.8	0.3367
2021	1,130	1.5820	1,414.6	0.4510
Total			18,985.9	0.2631

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Anthracite Surface (0153)

Year	(1) Counts Reported	(2) Counts Awarded	(3) Counts Pending	(4) Counts Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05
2013	4	1	2	1	0.60	0.05	0.05
2014	1	-	-	1	-	0.05	0.05
2015	2	-	1	1	0.30	0.05	0.05
2016	4	1	1	2	0.30	0.10	0.10
2017	1	-	1	-	0.30	-	-
2018	2	-	2	-	0.60	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
Total	15	2	7	6	2.10	0.30	0.30

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.05	# 0.95	# 0.9318	# 0.1777	# 0.2277	$ 24,734,711	0.0092
2013	1.65	2.35	0.9575	0.1826	1.8326	20,720,014	0.0884
2014	0.05	0.95	1.0469	0.1996	0.2496	18,911,339	0.0132
2015	0.35	1.65	1.4704	0.2804	0.6304	22,234,350	0.0284
2016	1.40	2.60	1.5152	0.2889	1.6889	19,257,107	0.0877
2017	0.30	0.70	1.7443	0.3326	0.6326	19,094,634	0.0331
2018	0.60	1.40	1.9513	0.3721	0.9721	18,303,511	0.0531
2019	-	-	2.5323	0.4829	0.4829	20,504,131	0.0236
2020	-	-	2.8009	0.5341	0.5341	19,714,585	0.0271
2021	-	-	3.4265	0.6534	0.6534	20,904,834	0.0313
Total	4.40	10.60	18.3769	3.5045	7.9045	$ 204,379,216	0.0387

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	491.9	0.0463
2013	917	1.0890	399.0	0.4593
2014	932	1.0890	358.3	0.0697
2015	951	1.0890	412.9	0.1527
2016	978	1.0890	347.7	0.4857
2017	995	1.0890	338.9	0.1867
2018	1,025	1.0890	315.3	0.3083
2019	1,049	1.0890	345.2	0.1399
2020	1,081	1.0890	322.1	0.1658
2021	1,130	1.0890	326.7	0.2000
Total			3,658.0	0.2161

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Bituminous Surface (0156)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 9	# 2	# 1	# 6	# 0.30	# 0.30	# 0.30
2013	5	-	1	4	0.30	0.20	0.20
2014	4	2	-	2	-	0.10	0.10
2015	9	1	1	7	0.30	0.35	0.35
2016	-	-	-	-	-	-	-
2017	1	-	-	1	-	0.05	0.05
2018	-	-	-	-	-	-	-
2019	1	-	-	1	-	0.05	0.05
2020	1	-	-	1	-	0.05	0.05
2021	-	-	-	-	-	-	-
Total	30	5	3	22	0.90	1.10	1.10

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 2.60	# 6.40	# 2.3172	# 0.4419	# 3.0419	$ 77,890,500	0.0391
2013	0.50	4.50	2.2102	0.4215	0.9215	62,718,061	0.0147
2014	2.10	1.90	2.2613	0.4312	2.5312	55,368,615	0.0457
2015	1.65	7.35	1.9572	0.3732	2.0232	42,000,092	0.0482
2016	-	-	1.5885	0.3029	0.3029	30,131,218	0.0101
2017	0.05	0.95	2.0224	0.3857	0.4357	34,248,962	0.0127
2018	-	-	2.4317	0.4637	0.4637	36,305,197	0.0128
2019	0.05	0.95	2.7491	0.5243	0.5743	36,503,594	0.0157
2020	0.05	0.95	2.4228	0.4620	0.5120	27,989,489	0.0183
2021	-	-	3.0393	0.5796	0.5796	30,223,927	0.0192
Total	7.00	23.00	22.9997	4.3860	11.3860	$ 433,379,655	0.0263

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	1,549.0	0.1964
2013	917	1.0890	1,207.8	0.0763
2014	932	1.0890	1,049.1	0.2413
2015	951	1.0890	779.9	0.2594
2016	978	1.0890	544.1	0.0557
2017	995	1.0890	607.8	0.0717
2018	1,025	1.0890	625.5	0.0741
2019	1,049	1.0890	614.5	0.0935
2020	1,081	1.0890	457.2	0.1120
2021	1,130	1.0890	472.3	0.1227
Total			7,907.2	0.1440

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Federal Basic Occupational Disease After Administration / Law Change Frequencies by Classification

Four Standard Classes

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 16	# 2	# 1	# 13	# 0.30	# 0.65	# 0.65
2013	17	4	3	10	0.90	0.50	0.50
2014	21	2	2	17	0.60	0.85	0.85
2015	31	2	4	25	1.20	1.25	1.25
2016	14	2	3	9	0.90	0.45	0.45
2017	8	1	2	5	0.60	0.25	0.25
2018	13	1	2	10	0.60	0.50	0.50
2019	6	1	1	4	0.30	0.20	0.20
2020	6	-	-	6	-	0.30	0.30
2021	4	-	3	1	0.90	0.05	0.05
Total	136	15	21	100	6.30	5.00	5.00

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 2.95	# 13.05	# 12.8535	# 2.4512	# 5.4012	$ 257,273,379	0.0210
2013	5.40	11.60	13.7742	2.6267	8.0267	228,966,204	0.0351
2014	3.45	17.55	18.7136	3.5687	7.0187	257,970,715	0.0272
2015	4.45	26.55	17.3104	3.3011	7.7511	205,059,053	0.0378
2016	3.35	10.65	16.6514	3.1754	6.5254	168,097,562	0.0388
2017	1.85	6.15	26.4124	5.0368	6.8868	226,304,757	0.0304
2018	2.10	10.90	31.1507	5.9404	8.0404	235,391,814	0.0342
2019	1.50	4.50	35.1865	6.7101	8.2101	235,206,104	0.0349
2020	0.30	5.70	31.9600	6.0948	6.3948	187,334,656	0.0341
2021	0.95	3.05	35.3219	6.7359	7.6859	182,862,996	0.0420
Total	26.30	109.70	239.3347	45.6411	71.9411	$ 2,184,467,240	0.0329

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888		4,164.3	0.1297
2013	917		3,538.3	0.2269
2014	932		3,804.8	0.1845
2015	951		2,994.3	0.2589
2016	978		2,368.3	0.2755
2017	995		3,061.2	0.2250
2018	1,025		3,085.8	0.2606
2019	1,049		3,025.6	0.2714
2020	1,081		2,351.0	0.2720
2021	1,130		2,217.2	0.3466
Total			30,610.8	0.2350

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Sum of Pages 1 to 4
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Coke (0154)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.00	# 0.00	# 0.0622	# 0.0119	# 0.0119	$ 5,738,105	0.0021
2013	-	-	0.0595	0.0113	0.0113	4,791,910	0.0024
2014	-	-	0.0624	0.0119	0.0119	4,464,398	0.0027
2015	-	-	0.0677	0.0129	0.0129	4,340,376	0.0030
2016	-	-	0.0765	0.0146	0.0146	4,435,066	0.0033
2017	-	-	0.0870	0.0166	0.0166	4,566,113	0.0036
2018	-	-	0.0946	0.0180	0.0180	4,484,744	0.0040
2019	-	-	0.1047	0.0200	0.0200	4,519,863	0.0044
2020	-	-	0.0080	0.0015	0.0015	313,587	0.0049
2021	-	-	-	-	-	-	N/A
Total	-	-	0.6226	0.1187	0.1187	$ 37,654,162	0.0032

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	114.1	0.0104
2013	917	1.0890	92.3	0.0123
2014	932	1.0890	84.6	0.0141
2015	951	1.0890	80.6	0.0160
2016	978	1.0890	80.1	0.0182
2017	995	1.0890	81.0	0.0205
2018	1,025	1.0890	77.3	0.0233
2019	1,049	1.0890	76.1	0.0262
2020	1,081	1.0890	5.1	0.0299
2021	1,130	1.0890	-	N/A
Total			691.2	0.0172

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Auger (0157)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
Total	1	-	-	1	-	0.05	0.05

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.05	# 0.95	# 0.0219	# 0.0042	# 0.0542	$ 808,208	0.0670
2013	-	-	0.0325	0.0062	0.0062	1,046,947	0.0059
2014	-	-	0.0301	0.0057	0.0057	861,590	0.0067
2015	-	-	0.0255	0.0049	0.0049	654,766	0.0074
2016	-	-	0.0169	0.0032	0.0032	392,776	0.0082
2017	-	-	0.0270	0.0051	0.0051	566,324	0.0091
2018	-	-	0.0317	0.0060	0.0060	600,138	0.0101
2019	-	-	0.0343	0.0065	0.0065	593,214	0.0110
2020	-	-	0.0251	0.0048	0.0048	395,231	0.0121
2021	-	-	0.0159	0.0030	0.0030	229,661	0.0132
Total	0.05	0.95	0.2609	0.0498	0.0998	$ 6,148,855	0.0162

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	16.1	0.3365
2013	917	1.0890	20.2	0.0307
2014	932	1.0890	16.3	0.0352
2015	951	1.0890	12.2	0.0399
2016	978	1.0890	7.1	0.0454
2017	995	1.0890	10.1	0.0510
2018	1,025	1.0890	10.3	0.0587
2019	1,049	1.0890	10.0	0.0654
2020	1,081	1.0890	6.5	0.0736
2021	1,130	1.0890	3.6	0.0842
Total			112.4	0.0887

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Anthracite Co-Gen (0181)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2012	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05
2013	1	-	-	1	-	0.05	0.05
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	1	-	-	1	-	0.05	0.05
2019	-	-	-	-	-	-	-
2020	1	-	1	-	0.30	-	-
2021	-	-	-	-	-	-	-
Total	4	-	1	3	0.30	0.15	0.15

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.05	# 0.95	# 0.2525	# 0.0482	# 0.0982	$ 9,311,812	0.0105
2013	0.05	0.95	0.2368	0.0452	0.0952	7,630,762	0.0125
2014	-	-	0.2923	0.0557	0.0557	8,360,898	0.0067
2015	-	-	0.3724	0.0710	0.0710	9,554,806	0.0074
2016	-	-	0.3428	0.0654	0.0654	7,953,309	0.0082
2017	-	-	0.3712	0.0708	0.0708	7,793,558	0.0091
2018	0.05	0.95	0.5304	0.1011	0.1511	10,053,839	0.0150
2019	-	-	0.3941	0.0752	0.0752	6,807,496	0.0110
2020	0.30	0.70	0.4392	0.0838	0.3838	6,903,273	0.0556
2021	-	-	0.5327	0.1016	0.1016	7,678,278	0.0132
Total	0.45	3.55	3.7644	0.7179	1.1679	$ 82,048,031	0.0142

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	185.2	0.0530
2013	917	1.0890	146.9	0.0648
2014	932	1.0890	158.4	0.0352
2015	951	1.0890	177.4	0.0400
2016	978	1.0890	143.6	0.0455
2017	995	1.0890	138.3	0.0512
2018	1,025	1.0890	173.2	0.0873
2019	1,049	1.0890	114.6	0.0656
2020	1,081	1.0890	112.8	0.3402
2021	1,130	1.0890	120.0	0.0847
Total			1,470.4	0.0794

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Bituminous Co-Gen (0182)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	1	-	-	1	-	0.05	0.05
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
Total	1	-	-	1	-	0.05	0.05

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.00	# 0.00	# 0.1963	# 0.0374	# 0.0374	$ 9,047,745	0.0041
2013	-	-	0.2571	0.0490	0.0490	10,355,884	0.0047
2014	-	-	0.3279	0.0625	0.0625	11,721,184	0.0053
2015	-	-	0.3663	0.0699	0.0699	11,748,205	0.0059
2016	0.05	0.95	0.3906	0.0745	0.1245	11,327,552	0.0110
2017	-	-	0.4357	0.0831	0.0831	11,435,057	0.0073
2018	-	-	0.5083	0.0969	0.0969	12,043,297	0.0080
2019	-	-	0.5473	0.1044	0.1044	11,818,883	0.0088
2020	-	-	0.5435	0.1036	0.1036	10,678,482	0.0097
2021	-	-	0.6796	0.1296	0.1296	12,244,359	0.0106
Total	0.05	0.95	4.2526	0.8110	0.8610	$ 112,420,648	0.0077

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	179.9	0.0208
2013	917	1.0890	199.4	0.0246
2014	932	1.0890	222.1	0.0282
2015	951	1.0890	218.2	0.0320
2016	978	1.0890	204.5	0.0609
2017	995	1.0890	202.9	0.0410
2018	1,025	1.0890	207.5	0.0467
2019	1,049	1.0890	199.0	0.0524
2020	1,081	1.0890	174.4	0.0594
2021	1,130	1.0890	191.3	0.0677
Total			1,999.2	0.0431

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Anthracite Prep-Plant (0183)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2012	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2013	1	-	1	-	0.30	-	-
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	1	-	1	-	0.30	-	-
2021	-	-	-	-	-	-	-
Total	2	-	2	-	0.60	-	-

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.00	# 0.00	# 0.3694	# 0.0704	# 0.0704	$ 7,569,023	0.0093
2013	0.30	0.70	0.3952	0.0754	0.3754	7,074,886	0.0531
2014	-	-	0.4104	0.0783	0.0783	6,521,541	0.0120
2015	-	-	0.4347	0.0829	0.0829	6,196,596	0.0134
2016	-	-	0.4301	0.0820	0.0820	5,542,968	0.0148
2017	-	-	0.5193	0.0990	0.0990	6,056,810	0.0164
2018	-	-	0.6568	0.1253	0.1253	6,916,759	0.0181
2019	-	-	1.0930	0.2084	0.2084	10,490,218	0.0199
2020	0.30	0.70	1.1794	0.2249	0.5249	10,298,259	0.0510
2021	-	-	1.3959	0.2662	0.2662	11,177,278	0.0238
Total	0.60	1.40	6.8842	1.3128	1.9128	$ 77,844,338	0.0246

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.0890	150.5	0.0468
2013	917	1.0890	136.2	0.2756
2014	932	1.0890	123.6	0.0633
2015	951	1.0890	115.1	0.0720
2016	978	1.0890	100.1	0.0819
2017	995	1.0890	107.5	0.0921
2018	1,025	1.0890	119.2	0.1051
2019	1,049	1.0890	176.6	0.1180
2020	1,081	1.0890	168.2	0.3121
2021	1,130	1.0890	174.7	0.1524
Total			1,371.7	0.1394

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Bituminous Prep-Plant (0184)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2013	-	-	-	-	-	-	-
2014	3	-	1	2	0.30	0.10	0.10
2015	1	-	1	-	0.30	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	1	-	1	-	0.30	-	-
2019	1	-	1	-	0.30	-	-
2020	1	-	-	1	-	0.05	0.05
2021	-	-	-	-	-	-	-
Total	7	-	4	3	1.20	0.15	0.15

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.00	# 0.00	# 0.7421	# 0.1415	# 0.1415	$ 34,211,729	0.0041
2013	-	-	0.8351	0.1593	0.1593	33,639,969	0.0047
2014	0.40	2.60	0.8910	0.1699	0.5699	31,854,431	0.0179
2015	0.30	0.70	0.7582	0.1446	0.4446	24,320,608	0.0183
2016	-	-	0.6924	0.1320	0.1320	20,079,401	0.0066
2017	-	-	1.0975	0.2093	0.2093	28,803,457	0.0073
2018	0.30	0.70	1.3590	0.2592	0.5592	32,199,872	0.0174
2019	0.30	0.70	1.6725	0.3189	0.6189	36,117,344	0.0171
2020	0.05	0.95	1.6948	0.3232	0.3732	33,297,067	0.0112
2021	-	-	1.7791	0.3393	0.3393	32,053,110	0.0106
Total	1.35	5.65	11.5217	2.1972	3.5472	$ 306,576,988	0.0116

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888	1.5820	468.3	0.0302
2013	917	1.5820	445.9	0.0357
2014	932	1.5820	415.5	0.1372
2015	951	1.5820	310.9	0.1430
2016	978	1.5820	249.6	0.0529
2017	995	1.5820	351.9	0.0595
2018	1,025	1.5820	381.9	0.1464
2019	1,049	1.5820	418.5	0.1479
2020	1,081	1.5820	374.4	0.0997
2021	1,130	1.5820	344.8	0.0984
Total			3,761.7	0.0943

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Exhibit X
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Total Other Classes

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 2	# 0	# 0	# 2	# 0.00	# 0.10	# 0.10
2013	2	-	1	1	0.30	0.05	0.05
2014	3	-	1	2	0.30	0.10	0.10
2015	1	-	1	-	0.30	-	-
2016	1	-	-	1	-	0.05	0.05
2017	-	-	-	-	-	-	-
2018	2	-	1	1	0.30	0.05	0.05
2019	1	-	1	-	0.30	-	-
2020	3	-	2	1	0.60	0.05	0.05
2021	-	-	-	-	-	-	-
Total	15	-	7	8	2.10	0.40	0.40

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 0.10	# 1.90	# 1.6444	# 0.3136	# 0.4136	$ 66,686,622	0.0062
2013	0.35	1.65	1.8162	0.3463	0.6963	64,540,358	0.0108
2014	0.40	2.60	2.0141	0.3841	0.7841	63,784,042	0.0123
2015	0.30	0.70	2.0248	0.3861	0.6861	56,815,357	0.0121
2016	0.05	0.95	1.9493	0.3717	0.4217	49,731,072	0.0085
2017	-	-	2.5377	0.4839	0.4839	59,221,319	0.0082
2018	0.35	1.65	3.1808	0.6066	0.9566	66,298,649	0.0144
2019	0.30	0.70	3.8459	0.7334	1.0334	70,347,018	0.0147
2020	0.65	2.35	3.8900	0.7418	1.3918	61,885,899	0.0225
2021	-	-	4.4032	0.8397	0.8397	63,382,686	0.0132
Total	2.50	12.50	27.3064	5.2073	7.7073	$ 622,693,022	0.0124

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888		1,114.1	0.0371
2013	917		1,040.9	0.0669
2014	932		1,020.5	0.0768
2015	951		914.4	0.0750
2016	978		785.0	0.0537
2017	995		891.7	0.0543
2018	1,025		969.4	0.0987
2019	1,049		994.8	0.1039
2020	1,081		841.4	0.1654
2021	1,130		834.4	0.1006
Total			9,406.6	0.0819

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Sum of Pages 6 to 11
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

Grand Total

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2012	# 18	# 2	# 1	# 15	# 0.30	# 0.75	# 0.75
2013	19	4	4	11	1.20	0.55	0.55
2014	24	2	3	19	0.90	0.95	0.95
2015	32	2	5	25	1.50	1.25	1.25
2016	15	2	3	10	0.90	0.50	0.50
2017	8	1	2	5	0.60	0.25	0.25
2018	15	1	3	11	0.90	0.55	0.55
2019	7	1	2	4	0.60	0.20	0.20
2020	9	-	2	7	0.60	0.35	0.35
2021	4	-	3	1	0.90	0.05	0.05
Total	151	15	28	108	8.40	5.40	5.40

Year	(8) Ultimate Awarded (2)+(5)+(7)	(9) Ultimate Denied (1)-(8)	(10) IBNR	(11) IBNR Awarded (10)xAward Ratio	(12) Total Awarded (8)+(11)	(13) Payroll	(14) Frequency (12)/(13) x 1000000
2012	# 3.05	# 14.95	# 14.4979	# 2.7648	# 5.8148	$ 323,960,001	0.0179
2013	5.75	13.25	15.5904	2.9731	8.7231	293,506,562	0.0297
2014	3.85	20.15	20.7277	3.9528	7.8028	321,754,757	0.0243
2015	4.75	27.25	19.3352	3.6872	8.4372	261,874,410	0.0322
2016	3.40	11.60	18.6007	3.5471	6.9471	217,828,634	0.0319
2017	1.85	6.15	28.9501	5.5208	7.3708	285,526,076	0.0258
2018	2.45	12.55	34.3315	6.5470	8.9970	301,690,463	0.0298
2019	1.80	5.20	39.0324	7.4435	9.2435	305,553,122	0.0303
2020	0.95	8.05	35.8500	6.8366	7.7866	249,220,555	0.0312
2021	0.95	3.05	39.7251	7.5756	8.5256	246,245,682	0.0346
Total	28.80	122.20	266.6411	50.8485	79.6485	$ 2,807,160,262	0.0284

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2012	888		5,278.4	0.1102
2013	917		4,579.2	0.1905
2014	932		4,825.3	0.1617
2015	951		3,908.7	0.2159
2016	978		3,153.3	0.2203
2017	995		3,952.9	0.1865
2018	1,025		4,055.2	0.2219
2019	1,049		4,020.4	0.2299
2020	1,081		3,192.4	0.2439
2021	1,130		3,051.6	0.2794
Total			40,017.4	0.1990

Sources:
Cols.(1) to (4): CMCRB Claims Database
Col.(6): (0.05)xCol.(4)
Col.(7): (1.00)xCol.(6)
Col.(10): Exh. VIII-C
Col.(13): Sum of Pages 5 & 12
Col.(15): Exhibit XII-D
Col.(16): Exhibit X-G
Col.(17): (13) /((15) x (16) x 52)
Col.(18): (12) / (17) x 100

IBNR Award Ratio: 0.1907

COAL MINE COMPENSATION RATING BUREAU
INDIVIDUAL CLAIM DETAIL FOR STATE AND FEDERAL EXCESS

															"All Permanent Partial" Scenario (see note)					
					Age of						Federal Excess:							Federal Excess:		
		Awd (2)		Exp.	Miner at	State	Medical	Act 44	Act	Offsets for:		After Offsets:			State	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Bef. Act 44	Factor	44 Med.	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Soc. Sec.	Pension	Base	SS	SS, PP
1717	1011	2		1993	61.3	711,112	43,437	1.00	43,437	-	174,462	3	3	2,120	374,909	-	95,284	184,808	184,808	185,718
1721	1011	2		1990	66.8	963,019	32,302	1.00	32,302	-	213,651	-	-	0	580,431	-	170,891	121,405	121,405	122,288
2053	1011	2		1992	47.4	1,988,116	75,458	1.00	75,458	368,149	221,062	-	27,633	181,456	718,085	-	-	445,385	445,385	445,385
3070	1011	2		1993	61.2	540,537	43,437	1.00	43,437	-	172,974	-	-	66	331,198	-	94,471	87,071	87,071	87,973
5551	1011	2		1993	64.8	671,230	35,797	1.00	35,797	-	188,013	0	0	836	374,614	-	124,525	156,470	156,470	157,318
5717	1011	2		1992	50.0	1,627,066	68,175	1.00	68,175	329,801	191,416	1	43,960	197,477	592,136	-	-	447,584	447,584	447,584
6627	1011	2	LS	1999	62.2	169,801	41,443	1.00	41,443	-	84,242	225,932	225,932	290,572	169,801	-	84,242	225,932	225,932	290,572
10280	1011	2	LS	2011	49.9	640,989	68,175	1.00	68,175	-	-	476,492	476,492	476,492	640,989	-	-	476,492	476,492	476,492
10536	1011	2	LS	2013	53.7	487,278	58,715	1.00	58,715	-	-	418,024	418,024	418,024	487,278	-	-	418,024	418,024	418,024
Total Underground Anthracite						9	7,799,149	466,941	466,941	697,950	1,245,821	1,120,454	1,192,046	1,567,043	4,269,441	0	569,413	2,563,171	2,563,171	2,631,354
Average of 9 claims							866,572	51,882	51,882	77,550	138,425	124,495	132,450	174,116	474,382	0	63,268	284,797	284,797	292,373
							8,266,090													
Medical plus Indemnity							918,454			77,550	138,425	124,495	132,450	174,116	526,265	0	63,268	284,797	284,797	292,373
Adjusted															526,265	0	63,268	284,797	284,797	292,373

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum, otherwise claim is Lifetime.
For the "All Permanent Partial" Scenario, Permanent claims for a Miner or Miner and Spouse were re-run with 630 weeks of State Indemnity benefits.
Widow Only, Commuted/Compromised and Lump Sums were the same as in the Base Scenario.
Source: Individual claim data from CMCRB.

COAL MINE COMPENSATION RATING BUREAU
INDIVIDUAL CLAIM DETAIL FOR STATE AND FEDERAL EXCESS

															"All Permanent Partial" Scenario (see note)					
					Age of							Federal Excess:						Federal Excess:		
		Awd (2)		Exp.	Miner at	State	Medical	Act 44	Act	Offsets for:			After Offsets:		State	Offsets for:			After Offsets:	
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Bef. Act 44	Factor	44 Med.	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Soc. Sec.	Pension	Base	SS	SS, PP
511	1002	2		1992	63.5	1,010,460	37,624	1.00	37,624	-	438,208	-	-	-	652,102	-	277,628	70,484	70,484	72,521
517	1002	2	LS	1993	64.9	137,400	35,797	1.00	35,797	-	116,632	212,349	212,349	324,305	137,400	-	116,632	212,349	212,349	324,305
518	1002	2	LS	1992	63.6	214,886	37,624	1.00	37,624	-	173,095	220,727	220,727	329,061	214,886	-	173,095	220,727	220,727	329,061
1330	1002	2	500	1993	63.3	496,873	39,505	1.00	39,505	-	153,429	274,047	274,047	274,047	496,873	-	153,429	274,047	274,047	274,047
1892	1002	2	LS	1990	67.4	76,085	32,302	1.00	32,302	-	58,893	230,944	230,944	289,837	76,085	-	58,893	230,944	230,944	289,837
3222	1002	2	500	1992	62.8	184,246	39,505	1.00	39,505	-	56,893	235,764	235,764	244,004	184,246	-	56,893	235,764	235,764	244,004
3532	1002	2	LS	1995	58.1	372,896	49,734	1.00	49,734	71,797	26,706	286,459	301,921	323,656	372,896	71,797	26,706	286,459	301,921	323,656
3706	1002	2	LS	1992	65.1	143,923	35,797	1.00	35,797	-	115,013	210,237	210,237	319,250	143,923	-	115,013	210,237	210,237	319,250
5479	1002	2		1992	63.7	1,042,191	37,624	1.00	37,624	-	283,155	-	-	0	564,557	-	179,393	168,906	168,906	170,223
5918	1002	2		1990	66.7	1,331,902	32,302	1.00	32,302	-	432,199	-	-	6	744,827	-	339,203	134,541	134,541	136,363
5966	1002	2		1994	58.8	1,870,362	47,586	1.00	47,586	390,383	385,598	-	2,894	147,474	764,531	128,953	156,757	312,172	314,321	339,283
6415	1002	2	500	1992	62.4	552,408	41,443	1.00	41,443	-	179,577	249,592	249,592	249,592	552,408	-	179,577	249,592	249,592	249,592
6771	1002	2	500	1992	62.5	123,767	41,443	1.00	41,443	-	33,011	106,179	106,179	112,195	123,767	-	33,011	106,179	106,179	112,195
7004	1002	2		1992	60.7	1,407,421	43,437	1.00	43,437	-	355,145	-	-	0	724,744	-	209,917	195,457	195,457	197,209
7051	1002	2	LS	1997	56.5	183,376	54,154	1.00	54,154	17,131	-	304,982	319,057	319,057	183,376	17,131	-	304,982	319,057	319,057
7941	1002	2	LS	1994	66.3	22,378	34,023	1.00	34,023	-	17,003	251,080	251,080	268,083	22,378	-	17,003	251,080	251,080	268,083
8028	1002	2		1992	55.5	1,778,156	54,154	1.00	54,154	365,384	307,474	-	2,814	97,353	756,074	66,888	70,766	310,581	312,680	315,409
9826	1002	2	LS	1999	52.9	60,438	61,043	1.00	61,043	-	-	464,371	464,371	464,371	60,438	-	-	464,371	464,371	464,371
9829	1002	2	LS	2001	61.4	165,244	43,437	1.00	43,437	-	97,591	278,479	278,479	362,285	165,244	-	97,591	278,479	278,479	362,285
9835	1002	2	LS	1999	55.0	4,098	56,418	1.00	56,418	105	-	498,840	498,945	498,945	4,098	105	-	498,840	498,945	498,945
9841	1002	2	LS	2001	59.3	156,983	47,586	1.00	47,586	55,000	118	293,577	344,076	344,194	156,983	55,000	118	293,577	344,076	344,194
9886	1002	2	LS	2000	59.9	732,243	45,486	1.00	45,486	96,200	115,737	282,296	282,296	283,113	732,243	96,200	115,737	282,296	282,296	283,113
9901	1002	2	LS	2002	45.3	228,610	80,339	1.00	80,339	-	-	561,372	561,372	561,372	228,610	-	-	561,372	561,372	561,372
9996	1002	2	LS	2004	52.3	105,770	63,399	1.00	63,399	-	-	431,877	431,877	431,877	105,770	-	-	431,877	431,877	431,877
10016	1002	2	LS	2002	58.7	189,775	47,586	1.00	47,586	66,597	35	272,492	322,905	322,938	189,775	66,597	35	272,492	322,905	322,938
10021	1002	2	LS	2000	66.1	110,493	34,023	1.00	34,023	-	84,686	185,228	185,228	269,914	110,493	-	84,686	185,228	185,228	269,914
10022	1002	2	LS	2000	59.0	109,926	47,586	1.00	47,586	38,596	-	289,265	327,549	327,549	109,926	38,596	-	289,265	327,549	327,549
10025	1002	2	LS	2000	57.7	109,967	49,734	1.00	49,734	29,048	-	315,712	344,562	344,562	109,967	29,048	-	315,712	344,562	344,562
10026	1002	2	LS	2000	61.4	110,307	43,437	1.00	43,437	-	66,660	246,865	246,865	312,919	110,307	-	66,660	246,865	246,865	312,919
10038	1002	2	LS	2000	44.4	90,089	82,767	1.00	82,767	-	-	724,171	724,171	724,171	90,089	-	-	724,171	724,171	724,171
10048	1002	2	LS	2005	54.6	108,030	56,418	1.00	56,418	2,770	-	371,637	374,407	374,407	108,030	2,770	-	371,637	374,407	374,407
10088	1002	2	LS	2005	60.5	147,514	45,486	1.00	45,486	-	87,085	106,436	106,436	164,870	147,514	-	87,085	106,436	106,436	164,870
10164	1002	2	LS	2001	53.4	104,655	61,043	1.00	61,043	-	-	559,973	559,973	559,973	104,655	-	-	559,973	559,973	559,973
10208	1002	2	LS	2005	61.6	274,020	41,443	1.00	41,443	-	163,918	219,939	219,939	291,475	274,020	-	163,918	219,939	219,939	291,475
10286	1002	2	LS	2008	58.0	135,208	49,734	1.00	49,734	35,716	-	373,316	408,657	408,657	135,208	35,716	-	373,316	408,657	408,657
10330	1002	2	LS	2012	63.3	230,840	39,505	1.00	39,505	-	160,038	275,038	275,038	368,360	230,840	-	160,038	275,038	275,038	368,360
10345	1002	2	LS	2008	49.6	612,614	68,175	1.00	68,175	-	-	503,968	503,968	503,968	612,614	-	-	503,968	503,968	503,968
10347	1002	2	LS	2011	65.3	279,976	35,797	1.00	35,797	-	186,027	180,397	180,397	258,604	279,976	-	186,027	180,397	180,397	258,604
10357	1002	2	LS	2012	62.4	114,038	41,443	1.00	41,443	-	70,614	255,675	255,675	325,589	114,038	-	70,614	255,675	255,675	325,589
10360	1002	2	LS	2013	59.7	125,713	45,486	1.00	45,486	55,213	-	123,303	165,881	165,881	125,713	55,213	-	123,303	165,881	165,881
10433	1002	2	LS	2012	68.0	103,288	30,636	1.00	30,636	-	79,826	220,957	220,957	300,783	103,288	-	79,826	220,957	220,957	300,783
10434	1002	2	LS	2013	62.7	87,450	39,505	1.00	39,505	-	62,218	271,461	271,461	333,676	87,450	-	62,218	271,461	271,461	333,676
10435	1002	2	LS	2013	58.5	250,452	49,734	1.00	49,734	59,588	6,570	306,752	339,141	345,635	250,452	59,588	6,570	306,752	339,141	345,635
10465	1002	2	LS	2011	65.8	19,362	34,023	1.00	34,023	-	-	139,848	139,848	139,848	19,362	-	-	139,848	139,848	139,848
10516	1002	2	LS	2014	75.8	87,418	19,394	1.00	19,394	-	51,763	106,930	106,930	158,692	87,418	-	51,763	106,930	106,930	158,692
10561	1002	2	LS	2014	60.6	153,251	43,437	1.00	43,437	-	103,731	98,202	98,202	164,210	153,251	-	103,731	98,202	98,202	164,210
10601	1002	2	LS	2015	61.6	327,224	41,443	1.00	41,443	-	133,423	258,076	258,076	268,975	327,224	-	133,423	258,076	258,076	268,975
10652	1002	2	LS	2016	57.5	177,575	49,734	1.00	49,734	46,907	-	138,432	164,688	164,688	177,575	46,907	-	138,432	164,688	164,688
10671	1002	2	LS	2013	57.4	243,495	51,925	1.00	51,925	36,566	6,841	304,268	324,236	330,949	243,495	36,566	6,841	304,268	324,236	330,949
10698	1002	2	LS	2014	65.1	66,382	35,797	1.00	35,797	-	53,543	286,396	286,396	339,939	66,382	-	53,543	286,396	286,396	339,939
10699	1002	2	LS	2014	55.3	107,592	56,418	1.00	56,418	2,759	-	372,020	374,779	374,779	107,592	2,759	-	372,020	374,779	374,779
10700	1002	2	LS	2014	73.8	80,694	21,880	1.00	21,880	-	-	42,125	42,125	42,125	80,694	-	-	42,125	42,125	42,125
10701	1002	2	LS	2014	65.0	73,970	35,797	1.00	35,797	-	-	101,130	101,130	101,130	73,970	-	-	101,130	101,130	101,130
10703	1002	2	LS	2016	62.4	6,910	41,443	1.00	41,443	-	4,279	348,184	348,184	352,463	6,910	-	4,279	348,184	348,184	352,463
10731	1002	2	LS	2018	62.8	70,428	39,505	1.00	39,505	-	50,108	305,080	305,080	355,187	70,428	-	50,108	305,080	305,080	355,187
10740	1002	2	LS	2016	64.0	69,102	37,624	1.00	37,624	-	55,663	280,862	280,862	336,525	69,102	-	55,663	280,862	280,862	336,525
10743	1002	2	LS	2016	61.4	56,538	43,437	1.00	43,437	-	34,167	329,195	329,195	363,362	56,538	-	34,167	329,195	329,195	363,362
10744	1002	2	LS	2014	59.7	67,245	45,486	1.00	45,486	29,534	-	348,502	378,036	378,036	67,245	29,534	-	348,502	378,036	378,036
10745	1002	2	LS	2013	60.6	69,570	43,437	1.00	43,437	-	47,090	269,636	269,636	316,726	69,570	-	47,090	269,636	269,636	316,726
10749	1002	2	LS	2015	64.3	71,495	37,624	1.00	37,624	-	57,590	269,819	269,819	327,410	71,495	-	57,590	269,819	269,819	327,410
10772	1002	2	LS	2013	64.5	20,906	37,624	1.00	37,624	-	16,840	296,193	296,193	313,033	20,906	-	16,840	296,193	296,193	313,033
10778	1002	2	LS	2015	59.9	227,893	45,486	1.00	45,486	94,079	6,012	283,461	340,057	346,025	227,893	94,079	6,012	283,461	340,057	346,025
10812	1002	2	LS	2015	65.6	13,746	34,023	1.00	34,023	-	10,977	324,752	324,752	335,728	13,746	-	10,977	324,752	324,752	335,728
10828	1002	2		2014	44.3	2,046,480	82,767	1.00	82,767	343,489	151,223	692	96,725	237,655	606,458	-	-	713,788	713,788	713,788
10853	1002	2		2018	70.2	1,641,977	27,476	1.00	27,476	-	298,506	-	-	-	719,360	-	230,548	278,185	278,185	279,454
10860	1002	2	LS	2014	58.8	67,245	47,586	1.00	47,586	23,610	-	155,467	179,078	179,078	67,245	23,610	-	155,467	179,078	179,078
10861	1002	2	LS	2015	60.6	220,983	43,437	1.00	43,437	-	149,576	208,054	208,054	303,672	220,983	-	149,576	208,054	208,054	303,672
10891	1002	2	LS	2018	64.8	17,607	35,797	1.00	35,797	-	14,946	318,407	318,407	333,353	17,607	-	14,946	318,407	318,407	333,353
10945	1002	2	LS	2015	62.0	12,999	41,443	1.00	41,443	-	8,049	352,106	352,106	360,155	12,999	-	8,049	352,106	352,106	360,155
10954	1002	2	LS	2019	63.2	227,038	39,505	1.00	39,505	-	161,533	159,787	159,787	254,067	227,038	-	161,533	159,787	159,787	254,067
10958	1002	2	LS	2021	64.8	157,910	35,797	1.00	35,797	-	130,892	83,051	83,051	160,769	157,910	-	130,892	83,051	83,051	160,769
10968	1002	1		2021	57.4	1,806,009	51,925	1.00	51,925	390,115	360,953	-	3,693	153,138	765,224	90,810	106,695	291,672	293,887	312,117
10969	1002	2	LS	2015	61.6	3,900	41,443	1.00	41,443	-	2,705	176,715	176,715	179,420	3,900	-	2,705	176,715	176,715	179,420
Total Underground Bituminous				73		23,909,414	3,244,017		3,244,017	2,250,589	6,223,564	17,553,144	18,128,069	20,619,148	16,272,333	1,047,868	4,782,010	20,028,238	20,504,190	22,519,887
Average of 73 claims						327,526	44,439		44,439	30,830	85,254	240,454	248,330	282,454	222,909	14,354	65,507	274,359	280,879	308,492
						27,153,431														
Medical plus Indemnity						371,965				30,830	85,254	240,454	248,330	282,454	267,347	14,354	65,507	274,359	280,879	308,492
Adjusted															267,347	14,354	65,507	274,359	280,879	308,492

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum, otherwise claim is Lifetime.
For the "All Permanent Partial" Scenario, Permanent claims for a Miner or Miner and Spouse were re-run with 630 weeks of State Indemnity benefits.
Widow Only, Commuted/Compromised and Lump Sums were the same as in the Base Scenario.
Source: Individual claim data from CMCRB.

COAL MINE COMPENSATION RATING BUREAU
INDIVIDUAL CLAIM DETAIL FOR STATE AND FEDERAL EXCESS

															"All Permanent Partial" Scenario (see note)					
					Age of						Federal Excess:							Federal Excess:		
		Awd (2)		Exp.	Miner at	State	Medical	Act 44	Act	Offsets for:		After Offsets:			State	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Bef. Act 44	Factor	44 Med.	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Soc. Sec.	Pension	Base	SS	SS, PP
408	1016	2		1994	69.0	974,778	29,026	1.00	29,026	-	211,838	-	-	-	634,917	-	179,004	91,692	91,692	92,487
439	1016	2	LS	1999	73.6	26,335	21,880	1.00	21,880	-	-	82,396	82,396	82,396	26,335	-	-	82,396	82,396	82,396
566	1016	2		1990	63.6	1,046,048	37,624	1.00	37,624	-	192,026	7,074	7,074	10,193	385,857	-	121,659	451,882	451,882	452,775
636	1016	2		1994	62.3	682,350	41,443	1.00	41,443	-	172,086	2	2	2,196	364,425	-	93,986	175,077	175,077	175,974
778	1016	2	WO	1991	#N/A	351,352	-	1.00	-	-	-	-	-	-	351,352	-	-	-	-	-
924	1016	2	LS	1997	62.6	34,569	39,505	1.00	39,505	-	24,595	317,146	317,146	341,741	34,569	-	24,595	317,146	317,146	341,741
1719	1016	2		1996	63.1	820,323	39,505	1.00	39,505	-	279,232	-	-	-	515,828	-	165,047	78,411	78,411	79,789
2268	1016	2		1997	66.6	616,656	32,302	1.00	32,302	-	-	-	-	-	430,059	-	-	52,973	52,973	52,973
2287	1016	2	LS	1998	67.8	620,781	30,636	1.00	30,636	-	156,122	150,312	150,312	150,312	620,781	-	156,122	150,312	150,312	150,312
2479	1016	2		1990	63.9	920,868	37,624	1.00	37,624	-	262,930	-	-	1	522,225	-	166,579	145,968	145,968	147,190
2794	1016	2		1993	65.9	1,162,189	34,023	1.00	34,023	-	263,983	-	-	-	718,068	-	215,736	106,547	106,547	107,606
2827	1016	2		1992	66.1	915,540	34,023	1.00	34,023	-	202,184	-	-	0	559,986	-	163,259	113,797	113,797	114,624
3350	1016	2	WO	1993	#N/A	780,404	-	1.00	-	-	-	-	-	-	780,404	-	-	-	-	-
3814	1016	2		1993	71.8	73,087	24,563	1.00	24,563	-	-	40,914	40,914	40,914	57,648	-	-	56,353	56,353	56,353
3970	1016	2	LS	1991	43.1	381,667	85,179	1.00	85,179	-	-	283,090	283,090	283,090	381,667	-	-	283,090	283,090	283,090
5605	1016	2		1992	69.3	864,131	29,026	1.00	29,026	-	186,824	-	-	0	571,502	-	159,452	86,426	86,426	87,109
5805	1016	2		1992	67.2	693,116	32,302	1.00	32,302	-	-	-	-	-	483,383	-	-	52,629	52,629	52,629
6071	1016	2		1994	60.3	1,052,998	45,486	1.00	45,486	-	251,155	-	-	5	547,463	-	137,171	194,193	194,193	195,502
6322	1016	2	LS	1991	59.5	648,111	47,586	1.00	47,586	65,124	63,645	129,689	129,689	129,689	648,111	65,124	63,645	129,689	129,689	129,689
6481	1016	2		1990	65.7	776,268	34,023	1.00	34,023	-	172,987	-	-	78	431,627	-	131,387	158,704	158,704	159,454
6603	1016	2		1995	69.8	534,265	27,476	1.00	27,476	-	115,394	0	0	384	341,171	-	96,949	102,130	102,130	102,567
6765	1016	2	WO	1990	#N/A	610,864	-	1.00	-	-	-	-	-	-	610,864	-	-	-	-	-
7028	1016	2		1997	62.3	717,708	41,443	1.00	41,443	-	229,667	-	-	0	439,754	-	125,435	86,253	86,253	87,451
7473	1016	2		1995	67.0	1,567,125	32,302	1.00	32,302	-	396,520	-	-	0	752,584	-	296,138	197,606	197,606	199,339
7825	1016	2		1995	67.6	559,492	30,636	1.00	30,636	-	122,719	0	0	353	353,351	-	101,456	104,760	104,760	105,243
7857	1016	2		1993	59.7	859,036	45,486	1.00	45,486	304,777	241,610	-	3,245	68,729	499,904	115,178	109,822	101,306	102,950	106,474
9805	1016	2	LS	2000	74.6	22,724	20,613	1.00	20,613	-	15,493	243,635	243,635	259,128	22,724	-	15,493	243,635	243,635	259,128
9811	1016	2		2001	48.1	1,162,320	73,020	1.00	73,020	260,464	114,819	395	110,227	219,305	424,367	-	-	439,399	439,399	439,399
9939	1016	2	LS	2003	61.4	241,900	43,437	1.00	43,437	-	97,475	286,023	286,023	325,700	241,900	-	97,475	286,023	286,023	325,700
9981	1016	2		2004	79.6	672,865	15,021	1.00	15,021	-	185,925	-	-	-	582,091	-	182,307	15,889	15,889	16,061
10030	1016	2		2005	60.2	781,540	45,486	1.00	45,486	-	183,297	4	4	1,552	400,013	-	100,110	204,692	204,692	205,647
10074	1016	2	LS	2003	61.5	116,112	43,437	1.00	43,437	-	70,168	107,572	107,572	165,974	116,112	-	70,168	107,572	107,572	165,974
10140	1016	2	LS	2007	68.8	122,504	29,026	1.00	29,026	-	91,869	176,015	176,015	267,884	122,504	-	91,869	176,015	176,015	267,884
10190	1016	2	LS	2007	60.6	94,738	43,437	1.00	43,437	-	64,125	103,567	103,567	166,989	94,738	-	64,125	103,567	103,567	166,989
10259	1016	2	LS	2007	72.9	51,847	23,195	1.00	23,195	-	34,183	161,981	161,981	196,163	51,847	-	34,183	161,981	161,981	196,163
10278	1016	2	LS	2011	76.7	117,046	18,226	1.00	18,226	-	53,971	103,348	103,348	157,318	117,046	-	53,971	103,348	103,348	157,318
10602	1016	2	LS	2016	63.7	179,333	37,624	1.00	37,624	-	144,457	240,847	240,847	349,901	179,333	-	144,457	240,847	240,847	349,901
10810	1016	2	LS	2016	51.6	232,109	63,399	1.00	63,399	-	-	355,480	355,480	355,480	232,109	-	-	355,480	355,480	355,480
Total Surface Anthracite		38				22,085,099	1,309,021		1,309,021	630,365	4,601,297	2,789,490	2,902,567	3,575,475	14,648,619	180,302	3,361,598	5,757,788	5,759,432	6,268,412
Average of 38 claims						581,187	34,448		34,448	16,589	121,087	73,408	76,383	94,091	385,490	4,745	88,463	151,521	151,564	164,958
						23,394,120														
Medical plus Indemnity						615,635				16,589	121,087	73,408	76,383	94,091	419,938	4,745	88,463	151,521	151,564	164,958
Adjusted															419,938	4,745	88,463	151,521	151,564	164,958

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum, otherwise claim is Lifetime.
For the "All Permanent Partial" Scenario, Permanent claims for a Miner or Miner and Spouse were re-run with 630 weeks of State Indemnity benefits.
Widow Only, Commuted/Compromised and Lump Sums were the same as in the Base Scenario.
Source: Individual claim data from CMCRB.

COAL MINE COMPENSATION RATING BUREAU
INDIVIDUAL CLAIM DETAIL FOR STATE AND FEDERAL EXCESS

															"All Permanent Partial" Scenario (see note)					
					Age of						Federal Excess:							Federal Excess:		
		Awd (2)		Exp.	Miner at	State	Medical	Act 44	Act	Offsets for:		After Offsets:			State	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Bef. Act 44	Factor	44 Med.	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Soc. Sec.	Pension	Base	SS	SS, PP
513	1013	2		1993	64.4	1,556,561	37,624	1.00	37,624	-	457,420	-	-	0	754,134	-	289,799	203,457	203,457	205,583
656	1013	2		1999	53.5	1,240,584	58,715	1.00	58,715	290,813	185,519	1	35,556	181,449	509,743	23,938	20,662	339,858	341,557	349,306
1135	1013	2	LS	1990	45.5	677,072	80,339	1.00	80,339	-	-	546,099	546,099	546,099	677,072	-	-	546,099	546,099	546,099
2486	1013	2	LS	1996	64.2	90,972	37,624	1.00	37,624	-	73,280	95,678	95,678	167,263	90,972	-	73,280	95,678	95,678	167,263
3386	1013	2	LS	1993	57.8	396,970	49,734	1.00	49,734	46,747	44,204	317,187	319,063	343,347	396,970	46,747	44,204	317,187	319,063	343,347
3867	1013	2		1994	45.8	1,908,896	77,900	1.00	77,900	356,053	184,865	0	54,139	208,579	652,489	-	-	508,400	508,400	508,400
3968	1013	2	500	1991	43.7	507,492	82,767	1.00	82,767	-	-	273,393	273,393	273,393	507,492	-	-	273,393	273,393	273,393
5814	1013	2	LS	1997	61.0	12,864	43,437	1.00	43,437	-	7,774	320,488	320,488	328,262	12,864	-	7,774	320,488	320,488	328,262
5816	1013	2	LS	1996	61.0	216,956	43,437	1.00	43,437	-	131,110	236,863	236,863	322,035	216,956	-	131,110	236,863	236,863	322,035
5963	1013	2	LS	1994	59.1	76,539	47,586	1.00	47,586	26,874	-	358,020	384,893	384,893	76,539	26,874	-	358,020	384,893	384,893
5968	1013	2	LS	1995	56.9	371,025	51,925	1.00	51,925	27,352	24,019	358,397	360,309	372,620	371,025	27,352	24,019	358,397	360,309	372,620
7788	1013	2	LS	1991	69.2	225,278	29,026	1.00	29,026	-	150,620	99,479	99,479	192,700	225,278	-	150,620	99,479	99,479	192,700
9770	1013	2	LS	1999	59.2	51,425	47,586	1.00	47,586	18,056	-	331,568	349,624	349,624	51,425	18,056	-	331,568	349,624	349,624
9771	1013	2	LS	1998	62.5	134,242	39,505	1.00	39,505	-	95,510	98,786	98,786	164,870	134,242	-	95,510	98,786	98,786	164,870
9999	1013	2	LS	2005	46.2	41,819	77,900	1.00	77,900	-	-	303,444	303,444	303,444	41,819	-	-	303,444	303,444	303,444
10439	1013	2		2011	61.5	898,246	41,443	1.00	41,443	-	305,758	-	-	-	564,827	-	180,725	77,995	77,995	79,504
10537	1013	2	LS	2012	64.5	131,256	37,624	1.00	37,624	-	105,729	188,984	188,984	291,671	131,256	-	105,729	188,984	188,984	291,671
10582	1013	2	LS	2015	72.1	112,931	24,563	1.00	24,563	-	-	42,772	42,772	42,772	112,931	-	-	42,772	42,772	42,772
10598	1013	2	LS	2012	61.7	29,168	41,443	1.00	41,443	-	20,230	325,918	325,918	346,148	29,168	-	20,230	325,918	325,918	346,148
10659	1013	2	LS	2015	56.9	99,645	51,925	1.00	51,925	17,764	-	151,085	168,820	168,820	99,645	17,764	-	151,085	168,820	168,820
10665	1013	2	LS	2014	55.8	329,605	54,154	1.00	54,154	16,557	14,234	354,167	359,169	366,819	329,605	16,557	14,234	354,167	359,169	366,819
10826	1013	2	LS	2015	63.1	179,361	39,505	1.00	39,505	-	127,611	228,020	228,020	325,226	179,361	-	127,611	228,020	228,020	325,226
10895	1013	2	LS	2014	63.0	123,907	39,505	1.00	39,505	-	88,157	99,262	99,262	165,386	123,907	-	88,157	99,262	99,262	165,386
10899	1013	2	LS	2015	54.8	66,430	56,418	1.00	56,418	1,704	-	192,863	194,566	194,566	66,430	1,704	-	192,863	194,566	194,566
Total Surface Bituminous						24	9,479,244	1,191,686		1,191,686	801,918	2,016,041	4,922,471	5,085,322	6,039,986	6,356,149	178,991	1,373,665	6,052,181	6,127,037	6,792,752
Average of 24 claims							394,968	49,654		49,654	33,413	84,002	205,103	211,888	251,666	264,840	7,458	57,236	252,174	255,293	283,031
							10,670,930														
Medical plus Indemnity							444,622				33,413	84,002	205,103	211,888	251,666	314,493	7,458	57,236	252,174	255,293	283,031
Adjusted																314,493	7,458	57,236	252,174	255,293	283,031

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum, otherwise claim is Lifetime.
For the "All Permanent Partial" Scenario, Permanent claims for a Miner or Miner and Spouse were re-run with 630 weeks of State Indemnity benefits.
Widow Only, Commuted/Compromised and Lump Sums were the same as in the Base Scenario.
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COAL MINE COMPENSATION RATING BUREAU
INDIVIDUAL CLAIM DETAIL FOR STATE AND FEDERAL EXCESS

															"All Permanent Partial" Scenario (see note)					
											Federal Excess:							Federal Excess:		
		Awd (2)		Exp.	Age of Miner at	State	Medical	Act 44	Act	Offsets for:		After Offsets:			State	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Bef. Act 44	Factor	44 Med.	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Soc. Sec.	Pension	Base	SS	SS, PP
3221	1017	2		1993	60.8	1,717,573	43,437	1.00	43,437	-	492,071	-	-	36	753,965	-	290,850	259,029	259,029	261,457
3224	1017	2	LS	1992	56.9	275,055	51,925	1.00	51,925	43,857	5,176	335,421	356,912	361,497	275,055	43,857	5,176	335,421	356,912	361,497
9944	1022	2	LS	2003	53.1	99,818	61,043	1.00	61,043	-	-	384,955	384,955	384,955	99,818	-	-	384,955	384,955	384,955
10817	1022	2	LS	2019	60.6	228,085	43,437	1.00	43,437	-	111,192	216,316	216,316	270,061	228,085	-	111,192	216,316	216,316	270,061
10124	1024	2	LS	2006	60.0	135,621	45,486	1.00	45,486	59,565	-	335,419	394,321	394,321	135,621	59,565	-	335,419	394,321	394,321
1126	1026	2		1997	55.4	578,510	56,418	1.00	56,418	211,637	110,468	5	52,031	151,514	297,177	28,155	21,250	146,153	147,382	160,147
9877	1026	2	LS	1997	54.7	46,092	56,418	1.00	56,418	1,182	-	211,185	212,367	212,367	46,092	1,182	-	211,185	212,367	212,367
9993	1026	2	LS	2004	78.1	86,885	-	1.00	-	-	-	154,168	154,168	154,168	86,885	-	-	154,168	154,168	154,168
10161	1026	2	LS	2007	43.2	34,450	85,179	1.00	85,179	-	-	766,519	766,519	766,519	34,450	-	-	766,519	766,519	766,519
10245	1026	2		2010	74.5	509,554	21,880	1.00	21,880	-	105,403	-	-	0	385,179	-	97,512	48,715	48,715	48,977
10600	1026	2	LS	2015	72.2	207,775	24,563	1.00	24,563	-	65,950	58,979	58,979	88,246	207,775	-	65,950	58,979	58,979	88,246
10650	1026	2	LS	2017	52.5	106,010	63,399	1.00	63,399	-	-	279,369	279,369	279,369	106,010	-	-	279,369	279,369	279,369
10718	1026	2	LS	2014	58.6	130,119	47,586	1.00	47,586	43,255	2,431	322,842	365,527	367,959	130,119	43,255	2,431	322,842	365,527	367,959
10904	1026	2	LS	2020	54.6	345,777	56,418	1.00	56,418	3,688	3,035	410,349	410,349	412,285	345,777	3,688	3,035	410,349	410,349	412,285
9784	1028	2	LS	2000	78.3	80,227	-	1.00	-	-	-	213,418	213,418	213,418	80,227	-	-	213,418	213,418	213,418
10741	1028	2	LS	2016	64.2	46,389	37,624	1.00	37,624	-	37,367	132,182	132,182	169,549	46,389	-	37,367	132,182	132,182	169,549
Total Surface Bituminous						16	4,627,939	694,813		694,813	363,183	933,095	3,821,127	3,997,413	4,226,265	3,258,624	179,702	634,764	4,275,019	4,400,508	4,545,296
Average of 16 claims							289,246	43,426		43,426	22,699	58,318	238,820	249,838	264,142	203,664	11,231	39,673	267,189	275,032	284,081
							5,322,753														
Medical plus Indemnity							332,672				22,699	58,318	238,820	249,838	264,142	247,090	11,231	39,673	267,189	275,032	284,081
Adjusted																247,090	11,231	39,673	267,189	275,032	284,081

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum, otherwise claim is Lifetime.
For the "All Permanent Partial" Scenario, Permanent claims for a Miner or Miner and Spouse were re-run with 630 weeks of State Indemnity benefits.
Widow Only, Commuted/Compromised and Lump Sums were the same as in the Base Scenario.
Source: Individual claim data from CMCRB.

Coal Mine Compensation Rating Bureau
Individual Claim Detail for Federal Basic

ID No.	Class	Awd (2) Pend (1)	Exp. Date	Type*	Age of Miner at Comp. Date	Federal Benefit	Medical
1117	160	1	6/22/1990	0	49.37	608,917	152,945
1335	160	2	4/4/1994	0	61.23	197,226	94,114
2051	160	2	12/6/1990	0	64.94	317,423	77,560
3089	160	2	12/6/1990	0	52.39	629,490	137,365
3156	160	2	6/22/1990	0	67.11	456,779	69,989
3720	160	2	10/1/1990	WO	N/A	256,553	-
4555	160	2	6/22/1990	0	67.34	314,538	69,989
4735	160	2	5/5/1992	WO	N/A	292,982	-
7258	160	2	12/2/1993	0	59.78	458,902	98,552
7489	160	2	6/22/1990	0	54.50	576,829	122,239
7863	160	2	12/6/1990	0	56.42	682,683	117,334
9876	160	2	6/13/2001	0	64.89	308,523	77,560
9929	160	2	5/7/2001	0	51.00	473,649	142,519
9960	160	2	4/1/1999	WO	N/A	145,022	-
10199	160	2	1/1/1990	0	60.50	434,387	98,552
10200	160	2	10/24/2006	0	53.47	606,648	132,261
10237	160	2	7/21/2003	0	65.28	299,974	77,560
10395	160	2	6/30/1999	0	59.24	215,109	103,102
10422	160	1	3/1/2011	0	53.44	272,138	132,261
10482	160	2	6/1/1991	0	61.87	445,682	89,793
10814	160	1	1/1/2015	0	54.84	252,708	122,239
10873	160	2	3/22/2013	0	55.43	252,708	122,239
10896	160	2	3/1/2013	0	56.00	243,134	117,334

Total Underground Anthracite		8,742,004	2,155,508
Average of 23 claims	58.45	380,087	93,718
Medical plus Indemnity		473,805	

*Type is "WO" for Widow Only claims; 0 for all other claims.
Source: Individual claim detail from CMCRB.

Coal Mine Compensation Rating Bureau
Individual Claim Detail for Federal Basic

ID No.	Class	Awd (2) Pend (1)	Exp. Date	Type*	Age of Miner at Comp. Date	Federal Benefit	Medical
275	158	2	9/25/1992	0	71.39	293,097	56,308
508	158	2	8/15/1991	0	75.55	90,630	42,021
917	158	2	4/1/1993	0	62.00	397,708	89,793
931	158	2	3/3/1995	0	68.32	308,815	66,377
3481	158	2	5/20/1990	0	57.28	468,061	112,504
5821	158	2	5/1/1992	0	69.52	261,722	59,531
6950	158	2	9/30/1990	0	57.91	426,182	107,756
7484	158	2	1/1/1990	WO	N/A	344,726	-
7689	158	2	9/19/1991	0	54.11	515,743	127,216
8381	158	2	12/31/1997	0	77.23	183,076	39,490
9758	158	1	6/28/2000	0	52.23	544,413	137,365
9839	158	2	11/1/2000	0	68.63	267,224	62,890
9857	158	2	7/14/1992	0	79.44	168,522	34,755
9863	158	2	5/1/1990	0	73.06	107,845	50,256
9870	158	2	6/1/1994	WO	N/A	318,481	-
10019	158	1	1/4/1999	0	73.18	215,097	50,256
10032	158	2	1/3/1999	0	74.23	260,219	47,407
10042	158	2	11/15/2001	0	55.61	500,380	117,334
10065	158	2	10/9/1992	WO	N/A	113,494	-
10086	158	2	2/9/2006	0	56.41	500,380	117,334
10090	158	2	5/1/2004	0	61.18	372,919	94,114
10123	158	2	3/1/1999	0	52.44	519,548	137,365
10129	158	2	7/1/1993	0	61.63	529,266	89,793
10134	158	2	5/1/2004	0	77.77	154,084	37,069
10182	158	2	9/1/2001	0	61.75	365,906	89,793
10189	158	2	7/11/2002	0	55.34	252,708	122,239
10194	158	2	10/10/2001	0	66.61	324,322	69,989
10215	158	1	6/6/2007	0	55.18	548,012	122,239
10218	158	2	1/1/1999	0	66.66	296,070	69,989
10254	158	2	5/1/1999	0	67.52	272,986	66,377
10255	158	2	12/1/1992	WO	N/A	181,467	-
10265	158	2	5/15/1999	0	63.36	465,833	85,595
10287	158	2	2/19/2007	0	67.35	296,070	69,989
10291	158	2	6/30/2002	0	67.37	148,515	69,989
10292	158	1	4/29/2002	0	47.94	321,601	158,209
10293	158	2	12/1/2003	0	65.01	367,600	77,560
10299	158	2	2/4/2001	0	65.28	283,920	77,560
10315	158	2	4/1/1993	0	66.37	302,176	73,717
10327	158	2	12/1/1991	0	68.11	272,986	66,377
10328	158	2	4/6/1994	0	72.51	215,097	50,256
10366	158	2	10/12/1991	0	71.12	240,214	56,308
10367	158	2	6/10/1997	0	64.04	408,340	81,518
10368	158	2	2/24/1996	0	70.14	351,647	59,531
10387	158	2	10/12/1991	0	61.09	353,903	94,114
10397	158	1	12/15/1996	0	75.22	178,996	44,662
10402	158	2	1/15/2013	0	65.42	317,423	77,560
10443	158	2	6/30/1998	0	72.56	283,816	50,256
10446	158	2	12/1/1992	0	69.46	133,971	62,890
10455	158	2	3/1/2002	0	67.39	287,363	69,989
10464	158	1	9/12/2014	0	64.50	367,600	77,560
10486	158	1	5/26/2000	0	61.38	197,226	94,114
10498	158	2	5/15/1992	0	75.59	90,630	42,021
10499	158	2	9/30/1996	0	62.19	188,580	89,793
10523	158	1	4/11/1995	0	66.87	324,322	69,989
10526	158	1	5/26/2000	0	69.75	279,224	59,531
10529	158	2	5/26/2000	0	66.26	293,547	73,717
10530	158	1	5/26/2000	0	65.36	356,779	77,560
10531	158	2	5/26/2000	0	72.88	194,902	50,256
10558	158	2	9/30/1994	0	66.17	285,264	73,717
10584	158	2	7/15/1996	0	79.41	162,070	34,755
10593	158	2	5/29/2000	0	62.50	359,145	85,595
10595	158	2	2/11/2010	0	73.09	222,497	50,256
10597	158	1	4/19/1991	0	38.60	894,638	204,913
10610	158	2	7/31/1999	0	66.67	429,435	69,989
10639	158	2	11/24/1996	0	62.00	356,113	89,793
10655	158	2	5/31/2017	0	61.49	353,903	94,114
10669	158	1	12/31/2014	0	59.10	533,894	103,102
10673	158	2	11/18/2011	0	65.02	291,773	77,560
10687	158	1	8/1/1997	0	35.99	432,393	219,248
10695	158	2	3/30/2000	0	59.79	380,180	98,552
10720	158	1	12/1/1992	0	52.39	584,986	137,365
10721	158	2	7/1/1992	0	79.66	70,621	32,545
10725	158	2	4/1/1993	0	76.03	152,396	42,021
10757	158	1	5/1/1992	0	55.38	252,708	122,239
10765	158	1	6/30/2002	0	49.75	301,743	147,713
10770	158	2	9/1/2004	0	80.30	171,701	32,545
10795	158	2	12/31/1996	0	81.28	110,198	30,447
10821	158	1	1/17/2017	0	66.19	330,209	73,717
10824	158	2	1/15/2016	0	62.77	369,419	85,595
10830	158	2	12/1/2015	0	59.77	446,442	98,552
10846	158	1	7/20/2016	0	56.95	506,031	112,504
10872	158	2	7/1/1994	0	60.52	336,413	94,114
10874	158	2	7/7/2018	0	66.24	277,329	73,717
10875	158	2	10/31/1992	0	73.59	242,253	47,407
10881	158	2	7/20/2000	0	66.63	279,001	69,989
10883	158	2	5/19/2000	0	69.22	293,783	62,890
10885	158	2	4/15/1994	WO	N/A	171,884	-
10890	158	1	5/29/2000	0	66.99	279,001	69,989
10897	158	1	1/2/2003	0	51.00	592,846	142,519
10914	158	2	2/23/1997	0	73.43	215,097	50,256
10923	158	1	1/15/2021	0	63.21	180,146	85,595
10927	158	1	11/11/2016	0	62.05	329,054	89,793
10935	158	2	1/1/2019	0	64.57	326,686	77,560
10943	158	1	1/15/2010	0	61.16	393,551	94,114
10953	158	1	9/30/2019	0	63.76	342,676	81,518
10960	158	1	2/28/2021	0	31.85	1,004,978	236,514
10961	158	1	4/1/2021	0	62.32	575,866	89,793
10962	158	1	8/31/2015	0	54.11	515,743	127,216
10964	158	1	5/26/2000	0	68.73	251,238	62,890
10965	158	1	7/16/1999	0	65.09	317,423	77,560
10970	158	1	5/26/2000	0	69.95	238,050	59,531
Total Underground Bituminous						32,786,165	7,987,990
Average of 101 claims					64.60	324,615	79,089
Medical plus Indemnity						403,705	

*Type is "WO" for Widow Only claims; 0 for all other claims.
Source: Individual claim detail from CMCRB.

Coal Mine Compensation Rating Bureau
Individual Claim Detail for Federal Basic

ID No.	Class	Awd (2) Pend (1)	Exp. Date	Type*	Age of Miner at Comp. Date	Federal Benefit	Medical
926	153	2	2/29/1996	0	58.31	415,512	107,756
2157	153	1	10/10/1990	0	54.96	607,298	122,239
2299	153	2	1/15/1990	0	60.12	434,387	98,552
3725	153	2	9/30/1995	0	65.56	269,745	73,717
3955	153	2	10/29/1995	0	66.54	345,044	69,989
4749	153	2	1/3/1992	0	65.72	255,628	73,717
5044	153	2	2/4/1990	0	71.50	220,089	53,219
5131	153	2	5/22/1992	0	68.11	339,506	66,377
5372	153	2	3/10/1997	0	60.04	422,733	98,552
5952	153	2	1/31/1995	WO	N/A	128,662	-
6287	153	2	10/28/1990	0	73.92	196,417	47,407
6303	153	2	8/5/1990	WO	N/A	201,523	-
6581	153	2	6/5/1997	WO	N/A	211,970	-
7032	153	2	2/10/1993	0	62.41	386,703	89,793
7250	153	2	9/30/1993	WO	N/A	318,481	-
7263	153	2	3/1/1991	WO	N/A	211,970	-
7451	153	2	11/5/1990	0	72.80	201,306	50,256
9726	153	2	8/10/1995	0	68.28	290,206	66,377
9739	153	2	12/22/2000	0	73.86	225,610	47,407
9760	153	2	2/7/2000	0	75.44	198,606	44,662
9793	153	1	1/26/2001	0	53.76	503,342	127,216
9883	153	1	10/10/2000	0	65.83	340,310	73,717
9885	153	2	6/1/1998	0	66.88	279,001	69,989
9940	153	2	12/1/1990	0	63.20	508,274	85,595
10049	153	2	11/19/2005	0	72.28	220,089	53,219
10073	153	2	3/1/2005	0	60.49	411,484	98,552
10107	153	2	1/6/2004	0	56.26	452,615	117,334
10109	153	2	4/4/2003	0	65.00	163,919	77,560
10145	153	2	5/24/2007	0	59.55	446,442	98,552
10156	153	2	10/21/2002	0	75.14	221,187	44,662
10222	153	2	2/2/2006	0	74.97	205,796	44,662
10231	153	2	4/2/2003	0	65.03	308,523	77,560
10232	153	2	7/31/2004	0	56.70	444,843	112,504
10261	153	2	5/30/1996	0	67.25	314,538	69,989
10275	153	2	3/31/2003	0	68.92	313,242	62,890
10384	153	2	10/23/2007	0	76.31	90,630	42,021
10429	153	2	5/22/2013	0	54.36	528,578	127,216
10459	153	2	8/3/2009	0	57.34	433,853	112,504
10621	153	1	2/28/2013	0	63.34	380,099	85,595
10672	153	1	5/12/2013	0	65.49	317,423	77,560
10693	153	1	4/17/1992	0	38.90	877,157	204,913
10704	153	1	3/5/2017	WO	N/A	344,726	-
10717	153	2	1/30/2008	0	70.84	240,214	56,308
10752	153	1	6/15/2016	0	59.28	215,109	103,102
10785	153	2	8/1/2016	0	66.94	305,124	69,989
10791	153	1	8/18/1996	0	57.47	233,664	112,504
10856	153	1	8/9/2018	0	61.42	393,551	94,114
10876	153	2	1/5/2004	0	79.13	139,344	34,755
10878	153	2	4/2/2003	0	63.12	369,419	85,595
10882	153	2	3/1/2004	0	64.07	333,114	81,518
10933	153	1	7/1/1992	0	38.62	912,270	204,913
10952	153	1	12/1/2018	0	61.83	420,909	89,793
10971	153	1	5/15/2015	0	64.28	323,931	81,518

Total Surface Anthracite		17,874,119	3,987,943
Average of 53 claims	64.08	337,248	75,244
Medical plus Indemnity		412,492	

*Type is "WO" for Widow Only claims; 0 for all other claims.
Source: Individual claim detail from CMCRB.

Coal Mine Compensation Rating Bureau
Individual Claim Detail for Federal Basic

ID No.	Class	Awd (2) Pend (1)	Exp. Date	Type*	Age of Miner at Comp. Date	Federal Benefit	Medical
178	156	2	9/23/1994	0	70.19	261,722	59,531
600	156	2	9/10/1992	0	62.67	349,269	85,595
601	156	2	6/19/1992	0	66.18	320,495	73,717
1356	156	2	5/1/1995	0	55.30	562,210	122,239
2494	156	2	4/19/1996	0	64.66	356,779	77,560
3047	156	2	12/31/1996	0	77.58	159,874	37,069
3058	156	2	1/17/1991	0	65.64	330,209	73,717
5221	156	2	6/4/1995	0	66.01	293,547	73,717
5374	156	2	10/21/1991	WO	N/A	525,324	-
5483	156	2	8/6/1990	0	61.43	197,226	94,114
6244	156	2	10/10/1990	0	81.72	106,578	28,490
6949	156	2	12/7/1994	0	54.92	576,829	122,239
7245	156	2	9/1/1991	0	77.57	159,874	37,069
7248	156	2	8/31/1995	0	64.94	317,423	77,560
7893	156	2	2/19/1992	0	61.43	372,919	94,114
8012	156	2	1/1/1990	0	70.45	245,590	59,531
8022	156	2	11/1/1995	0	61.86	365,906	89,793
9761	156	2	9/30/1991	0	74.06	196,417	47,407
9767	156	2	6/1/2000	0	62.11	376,101	89,793
9795	156	2	12/1/1992	0	69.69	261,722	59,531
9866	156	2	9/20/1994	0	78.84	75,306	34,755
9945	156	2	8/31/1995	0	73.69	210,338	47,407
9953	156	2	3/1/1994	0	55.28	576,829	122,239
9961	156	2	5/31/2000	0	52.09	614,230	137,365
9967	156	2	1/15/1990	0	71.04	232,602	56,308
10003	156	2	5/30/1995	0	72.79	230,243	50,256
10104	156	2	6/1/1990	0	71.51	114,001	53,219
10112	156	2	12/1/2007	0	63.94	245,830	81,518
10114	156	2	10/26/1991	WO	N/A	181,467	-
10128	156	2	8/1/1994	0	74.82	198,606	44,662
10204	156	2	2/28/1992	0	69.75	270,304	59,531
10206	156	2	2/8/2010	0	70.65	283,433	56,308
10214	156	1	1/1/2006	0	61.77	458,663	89,793
10217	156	2	11/25/2008	0	63.72	323,931	81,518
10221	156	2	1/1/1993	0	81.01	126,814	30,447
10281	156	1	5/1/2011	0	68.47	141,129	66,377
10305	156	2	3/1/1995	0	61.87	386,703	89,793
10333	156	2	6/15/1992	0	80.08	70,621	32,545
10335	156	2	6/1/1995	WO	N/A	233,690	-
10351	156	2	12/27/2012	0	58.61	429,887	103,102
10385	156	2	3/1/2012	WO	N/A	256,553	-
10400	156	1	2/28/1993	0	80.02	158,387	32,545
10414	156	2	4/27/2001	0	75.85	216,970	42,021
10416	156	1	9/24/1998	0	48.42	321,601	158,209
10418	156	2	1/1/2003	0	73.15	230,243	50,256
10447	156	2	12/1/2008	0	76.83	176,421	39,490
10458	156	2	11/1/2008	0	73.78	210,338	47,407
10517	156	2	4/1/2014	0	67.97	281,424	66,377
10521	156	2	5/1/1996	0	67.14	314,538	69,989
10554	156	2	4/13/2015	0	76.53	183,076	39,490
10566	156	2	8/31/2001	0	76.17	162,781	42,021
10609	156	2	7/1/1996	0	68.92	275,736	62,890
10679	156	2	10/1/2008	0	60.63	383,030	94,114
10690	156	2	8/1/1995	0	67.23	305,124	69,989
10692	156	2	11/1/1994	0	74.28	289,637	47,407
10694	156	2	8/1/1992	0	76.16	157,425	42,021
10756	156	2	10/1/1991	0	60.98	328,204	94,114
10774	156	1	6/1/2012	0	63.74	342,676	81,518
10779	156	2	11/1/2014	0	74.24	217,803	47,407
10833	156	1	1/1/2015	0	61.06	383,030	94,114
10836	156	1	3/1/2008	0	61.84	409,111	89,793
10844	156	2	10/10/1997	0	82.97	58,096	26,667
10857	156	2	11/17/1993	0	84.89	93,680	23,379
10879	156	2	12/13/1994	0	76.53	158,316	39,490
10880	156	2	8/14/2007	0	61.18	492,150	94,114
10884	156	2	1/1/1994	0	68.06	281,424	66,377
10889	156	1	4/30/1997	0	66.73	148,515	69,989
10902	156	1	6/1/2013	0	64.79	317,423	77,560
10944	156	1	9/10/2011	0	56.36	513,382	117,334
10949	156	1	2/1/2003	0	45.76	707,438	168,783
10963	156	1	2/12/1995	0	78.24	165,966	37,069

Total Surface Bituminous		20,281,138	4,671,868
Average of 71 claims	68.19	285,650	65,801
Medical plus Indemnity		351,451	

*Type is "WO" for Widow Only claims; 0 for all other claims.
Source: Individual claim detail from CMCRB.

Coal Mine Compensation Rating Bureau
Individual Claim Detail for Federal Basic

ID No.	Class	Awd (2) Pend (1)	Exp. Date	Type*	Age of Miner at Comp. Date	Federal Benefit	Medical
10808	157	2	2/3/2008	0	73.71	225,610	47,407
3158	181	2	3/14/1997	0	62.00	386,703	89,793
10886	181	1	1/24/2020	0	51.77	557,500	137,365
10451	182	2	5/1/2005	0	65.93	156,114	73,717
4592	183	2	7/19/1997	WO	N/A	120,933	-
9887	183	1	2/2/2000	0	51.88	281,966	137,365
9904	183	2	12/31/1997	WO	N/A	153,661	-
9992	183	2	7/22/2004	0	71.54	235,103	53,219
10620	183	1	10/1/2013	0	53.08	549,597	132,261
10877	183	2	4/4/2003	0	58.24	437,261	107,756
10907	183	1	7/3/2020	0	59.29	429,887	103,102
10135	184	2	2/1/2002	0	75.55	251,969	42,021
10244	184	2	1/1/1999	0	81.69	139,429	28,490
10338	184	2	10/15/2005	0	68.77	133,971	62,890
10680	184	1	5/17/2006	0	54.69	495,486	122,239
10838	184	1	7/1/2004	0	45.32	684,800	174,069
10892	184	1	3/30/2018	0	64.15	315,113	81,518
10901	184	1	1/1/2008	0	54.58	483,426	122,239
10926	184	1	3/7/2019	0	62.99	402,650	85,595
10940	184	1	12/1/2003	0	56.31	243,134	117,334
10946	184	1	10/1/2015	0	65.03	163,919	77,560
10950	184	1	3/1/2014	0	59.50	206,074	98,552

Total Other Classes		7,054,309	1,894,494
Average of 22 claims	61.80	320,650	86,113
Medical plus Indemnity		406,764	

*Type is "WO" for Widow Only claims; 0 for all other claims.
Source: Individual claim detail from CMCRB.

COAL MINE COMPENSATION RATING BUREAU
Summary of Developed & Adjusted Payrolls
Traumatic

Traumatic	Anthracite Underground (1010)	Bituminous Underground (1001)	Anthracite Surface (1012)	Bituminous Surface (1014)	Coke (1469)	Auger (1015)	Anthracite Co-gen (1021)	Bituminous Co-gen (1023)	Anthracite Prep Plant (1025)	Bituminous Prep Plant (1027)	Total
1979	Payroll data for these years is not readily available										
1980											
1981											
1982											
1983											
1984											
1985											
1986											
1987											
1988											
1989											
1990											
1991											
1992											
1993											
1994											
1995											
1996											
1997	591,339	71,376,959	17,783,135	67,905,789	53,119,079	1,193,492	3,520,161	856,052	1,149,401	13,783,647	231,279,054
1998	507,288	62,342,332	17,376,290	63,651,561	13,353,903	1,237,897	3,458,775	1,161,196	1,032,902	11,112,104	175,234,248
1999	537,329	59,962,066	18,441,144	54,162,273	12,293,477	1,136,891	3,604,305	1,494,276	1,231,124	10,691,780	163,554,665
2000	336,885	48,553,836	16,807,810	49,935,622	12,092,574	1,205,877	4,473,458	1,870,720	1,319,466	8,574,760	145,171,008
2001	434,499	49,724,653	13,940,797	58,151,332	10,375,826	1,429,131	5,234,468	2,121,331	3,609,649	10,155,025	155,176,711
2002	197,351	50,439,544	12,251,258	53,502,085	10,485,005	1,150,843	6,358,543	2,386,124	3,781,693	12,649,826	153,202,272
2003	75,855	55,493,906	12,166,211	47,873,740	11,534,080	1,102,223	7,137,655	3,052,523	3,721,296	14,752,318	156,909,807
2004	-	66,842,986	12,359,731	56,217,298	12,049,126	1,058,799	7,351,514	6,374,483	4,406,653	18,067,286	184,727,876
2005	-	72,290,188	12,140,911	64,871,562	12,860,979	1,026,537	7,855,289	8,524,752	5,170,069	17,690,358	202,430,645
2006	530	71,907,931	11,946,382	63,008,975	12,737,394	1,066,831	8,405,393	9,397,580	4,885,882	17,050,967	200,407,865
2007	-	81,566,803	14,555,579	63,295,774	13,669,925	1,121,156	9,160,450	10,789,214	5,756,439	18,895,192	218,810,532
2008	-	103,490,690	16,954,313	73,054,482	9,761,146	2,488,558	7,958,335	8,468,561	6,390,767	21,250,256	249,817,108
2009	-	102,684,006	16,445,462	61,784,394	5,173,552	926,163	8,004,644	7,866,413	6,749,748	19,828,012	229,462,394
2010	5,700	126,687,464	14,295,288	72,711,558	5,435,658	806,696	8,481,228	8,732,701	5,762,086	26,313,130	269,231,509
2011	110,125	149,633,528	21,034,600	86,074,064	3,599,086	1,176,255	11,720,035	9,102,411	7,236,583	35,155,068	324,841,755
2012	219,407	154,428,761	26,295,907	76,452,811	5,738,105	808,208	10,273,004	9,047,745	8,671,140	34,211,729	326,146,817
2013	175,900	149,953,068	22,449,824	61,349,745	4,791,910	1,025,399	8,342,651	10,355,884	8,265,665	34,253,697	300,963,743
2014	258,809	271,230,707	20,466,075	54,050,731	4,464,398	806,976	9,060,883	11,721,184	8,234,771	43,520,040	423,814,574
2015	254,336	216,454,460	24,218,779	40,934,048	4,340,376	582,619	10,469,089	11,748,205	7,606,274	33,564,176	350,172,362
2016	163,760	148,556,407	20,873,611	29,127,089	4,435,066	372,496	8,994,602	11,327,552	7,018,927	23,689,882	254,559,392
2017	252,383	172,708,778	21,167,074	33,140,780	4,566,113	449,009	8,819,700	11,435,057	7,746,154	28,803,457	289,088,505
2018	183,346	180,553,142	19,576,675	35,242,187	4,484,744	600,138	11,600,891	12,043,297	9,651,288	32,199,872	306,135,580
2019	179,379	177,833,672	23,563,089	35,362,714	4,466,971	539,914	8,191,669	11,818,883	12,534,373	36,099,579	310,590,243
2020	299,700	139,141,836	22,813,839	27,274,125	313,587	384,571	7,660,069	10,678,482	12,170,346	33,297,067	254,033,622
2021	232,531	131,501,704	24,267,567	29,582,319	-	208,581	8,263,749	12,244,359	12,790,962	32,053,110	251,144,882

Source: Exhibits X-C and X-D
Prior filings for 2010 and prior.

COAL MINE COMPENSATION RATING BUREAU
Summary of Developed & Adjusted Payrolls
State Occupational Disease

State OD	Anthracite Underground (1011)	Bituminous Underground (1002)	Anthracite Surface (1016)	Bituminous Surface (1013)	Coke (1017)	Auger (1019)	Anthracite Co-gen (1022)	Bituminous Co-gen (1024)	Anthracite Prep Plant (1026)	Bituminous Prep Plant (1028)	Total
1979	3,398,172	155,459,760	33,547,630	189,274,623	8,602,156	1,250,040	-	-	-	-	391,532,381
1980	3,933,740	146,370,736	39,976,938	180,192,249	4,240,988	1,445,092	-	-	-	-	376,159,743
1981	4,989,959	141,497,489	45,905,609	193,710,747	3,521,616	1,581,422	-	-	-	-	391,206,842
1982	5,295,887	170,306,624	42,724,737	194,074,092	1,831,640	1,682,037	-	-	-	-	415,915,017
1983	4,169,015	82,776,145	34,841,224	146,423,067	124,805	1,260,780	-	-	-	-	269,595,036
1984	4,137,720	77,024,693	34,531,000	174,212,221	2,078,069	1,778,957	-	-	-	-	293,762,660
1985	4,507,670	46,693,499	31,216,341	143,422,695	2,528,033	1,561,675	-	-	-	-	229,929,913
1986	4,896,054	43,203,448	32,077,958	136,641,573	19,044,481	1,669,241	-	-	-	-	237,532,755
1987	4,061,875	55,036,577	25,008,155	134,305,891	26,573,681	1,695,582	-	-	-	-	246,681,761
1988	2,745,685	64,843,301	23,099,360	126,493,210	18,498,632	1,626,194	-	-	-	-	237,306,382
1989	2,066,292	74,335,286	27,044,506	125,361,713	12,583,451	1,888,442	-	-	-	-	243,279,690
1990	1,547,051	77,524,448	32,392,891	124,189,071	61,308,712	2,295,585	676,180	-	-	-	299,933,938
1991	718,147	59,439,370	30,956,584	104,583,500	52,451,102	1,718,758	1,093,089	-	-	-	250,960,550
1992	932,801	63,646,939	29,476,120	100,999,381	42,761,324	1,181,625	3,505,476	47,640	-	-	242,551,306
1993	1,181,997	52,756,526	30,103,392	94,556,592	53,619,736	1,112,232	3,624,439	391,507	-	-	237,346,421
1994	1,310,675	60,590,938	30,210,452	92,464,635	54,721,324	1,485,044	3,704,499	377,617	-	-	244,865,184
1995	1,493,523	65,271,146	20,288,894	78,752,605	55,000,220	1,499,639	3,481,847	360,161	-	-	226,148,035
1996	1,612,698	75,223,041	16,192,165	77,828,405	54,571,209	846,623	3,758,973	370,201	221,068	3,066,567	233,690,950
1997	1,571,605	70,396,693	17,783,135	67,905,789	53,119,079	1,193,492	3,520,161	856,052	1,149,401	13,783,647	231,279,054
1998	1,762,286	61,087,334	17,376,290	63,651,561	13,353,903	1,237,897	3,458,775	1,161,196	1,032,902	11,112,104	175,234,248
1999	1,814,157	58,685,238	18,441,144	54,162,273	12,293,477	1,136,891	3,604,305	1,494,276	1,231,124	10,691,780	163,554,665
2000	1,370,159	47,520,562	16,807,810	49,935,622	12,092,574	1,205,877	4,473,458	1,870,720	1,319,466	8,574,760	145,171,008
2001	1,636,522	48,522,630	13,940,797	58,151,332	10,375,826	1,429,131	5,234,468	2,121,331	3,609,649	10,155,025	155,176,711
2002	1,386,545	49,250,350	12,251,258	53,502,085	10,485,005	1,150,843	6,358,543	2,386,124	3,781,693	12,649,826	153,202,272
2003	1,354,265	54,215,496	12,166,211	47,873,740	11,534,080	1,102,223	7,137,655	3,052,523	3,721,296	14,752,318	156,909,807
2004	1,345,321	65,497,665	12,359,731	56,217,298	12,049,126	1,058,799	7,351,514	6,374,483	4,406,653	18,067,286	184,727,876
2005	1,417,568	70,872,620	12,140,911	64,871,562	12,860,979	1,026,537	7,855,289	8,524,752	5,170,069	17,690,358	202,430,645
2006	1,442,524	70,465,937	11,946,382	63,008,975	12,737,394	1,066,831	8,405,393	9,397,580	4,885,882	17,050,967	200,407,865
2007	1,662,537	79,904,266	14,555,579	63,295,774	13,669,925	1,121,156	9,160,450	10,789,214	5,756,439	18,895,192	218,810,532
2008	2,136,713	101,353,977	16,954,313	73,054,482	9,761,146	2,488,558	7,958,335	8,468,561	6,390,767	21,250,256	249,817,108
2009	1,335,866	101,348,140	16,445,462	61,784,394	5,173,552	926,163	8,004,644	7,866,413	6,749,748	19,828,012	229,462,394
2010	1,299,588	125,393,576	14,295,288	72,711,558	5,435,658	806,696	8,481,228	8,732,701	5,762,086	26,313,130	269,231,509
2011	1,257,944	148,485,709	21,034,600	86,074,064	3,599,086	1,176,255	11,720,035	9,102,411	7,236,583	35,155,068	324,841,755
2012	1,029,260	153,618,908	26,295,907	76,452,811	5,738,105	808,208	10,273,004	9,047,745	8,671,140	34,211,729	326,146,817
2013	381,876	149,747,092	22,449,824	61,349,745	4,791,910	1,025,399	8,342,651	10,355,884	8,265,665	34,253,697	300,963,743
2014	258,809	271,230,707	20,466,075	54,050,731	4,464,398	806,976	9,060,883	11,721,184	8,234,771	43,520,040	423,814,574
2015	254,336	216,454,460	24,218,779	40,934,048	4,340,376	582,619	10,469,089	11,748,205	7,606,274	33,564,176	350,172,362
2016	163,760	148,556,407	20,873,611	29,127,089	4,435,066	372,496	8,994,602	11,327,552	7,018,927	23,689,882	254,559,392
2017	252,383	172,708,778	21,167,074	33,140,780	4,566,113	449,009	8,819,700	11,435,057	7,746,154	28,803,457	289,088,505
2018	183,346	180,553,142	19,576,675	35,242,187	4,484,744	600,138	11,600,891	12,043,297	9,651,288	32,199,872	306,135,580
2019	179,379	177,833,672	23,563,089	35,362,714	4,466,971	539,914	8,191,669	11,818,883	12,534,373	36,099,579	310,590,243
2020	299,700	139,141,836	22,813,839	27,274,125	313,587	384,571	7,660,069	10,678,482	12,170,346	33,297,067	254,033,622
2021	232,531	131,501,704	24,267,567	29,582,319	-	208,581	8,263,749	12,244,359	12,790,962	32,053,110	251,144,882

Source: Exhibits X-C and X-D
Prior filings for 2010 and prior.

COAL MINE COMPENSATION RATING BUREAU
Summary of Developed & Adjusted Payrolls
Federal Occupational Disease

Federal OD	Anthracite Underground (0160)	Bituminous Underground (0158)	Anthracite Surface (0153)	Bituminous Surface (0156)	Coke (0154)	Auger (0157)	Anthracite Co-gen (0181)	Bituminous Co-gen (0182)	Anthracite Prep Plant (0183)	Bituminous Prep Plant (0184)	Total
1979	3,398,172	155,459,760	33,547,630	189,274,623	8,602,156	1,250,040	-	-	-	-	391,532,381
1980	3,933,740	146,370,736	39,976,938	180,192,249	4,240,988	1,445,092	-	-	-	-	376,159,743
1981	4,989,959	141,497,489	45,905,609	193,710,747	3,521,616	1,581,422	-	-	-	-	391,206,842
1982	5,295,887	170,306,624	42,724,737	194,074,092	1,831,640	1,682,037	-	-	-	-	415,915,017
1983	4,169,015	82,776,145	34,841,224	146,423,067	124,805	1,260,780	-	-	-	-	269,595,036
1984	4,137,720	77,024,693	34,531,000	174,212,221	2,078,069	1,778,957	-	-	-	-	293,762,660
1985	4,507,670	46,693,499	31,216,341	143,422,695	2,528,033	1,561,675	-	-	-	-	229,929,913
1986	4,896,054	43,203,448	32,077,958	136,641,573	19,044,481	1,669,241	-	-	-	-	237,532,755
1987	4,061,875	42,076,700	25,008,155	134,305,891	26,573,681	1,695,582	-	-	-	-	233,721,884
1988	2,745,685	51,133,431	23,099,360	126,493,210	18,498,632	1,626,194	-	-	-	-	223,596,512
1989	2,066,292	58,507,532	27,044,506	125,361,713	12,583,451	1,888,442	-	-	-	-	227,451,936
1990	1,547,051	63,271,520	32,392,891	124,189,071	61,308,712	2,295,585	676,180	-	-	-	285,681,010
1991	718,147	58,318,242	30,956,584	104,583,500	52,451,102	1,718,758	1,093,089	-	-	-	249,839,422
1992	932,801	63,401,297	29,476,120	100,999,381	42,761,324	1,181,625	3,505,476	47,640	-	-	242,305,664
1993	1,181,997	52,756,526	30,103,392	94,556,592	53,619,736	1,112,232	3,624,439	391,507	-	-	237,346,421
1994	1,310,675	60,590,938	30,210,452	92,464,635	54,721,324	1,485,044	3,704,499	377,617	-	-	244,865,184
1995	1,493,523	65,271,146	20,288,894	78,752,605	55,000,220	1,499,639	3,481,847	360,161	-	-	226,148,035
1996	1,612,698	75,223,041	16,192,165	77,828,405	54,571,209	846,623	3,758,973	370,201	221,068	3,066,567	233,690,950
1997	1,571,605	70,396,693	17,783,135	67,905,789	53,119,079	1,193,492	3,520,161	856,052	1,149,401	13,783,647	231,279,054
1998	1,762,286	61,087,334	17,376,290	63,651,561	13,353,903	1,237,897	3,458,775	1,161,196	1,032,902	11,112,104	175,234,248
1999	1,814,157	58,685,238	18,441,144	54,162,273	12,293,477	1,136,891	3,604,305	1,494,276	1,231,124	10,691,780	163,554,665
2000	1,370,159	47,520,562	16,807,810	49,935,622	12,092,574	1,205,877	4,473,458	1,870,720	1,319,466	8,574,760	145,171,008
2001	1,636,522	48,522,630	12,923,748	58,151,332	10,375,826	1,429,131	4,661,813	2,121,331	2,216,299	10,155,025	152,193,657
2002	1,386,545	40,837,995	11,046,570	53,502,085	10,485,005	1,150,843	5,658,774	2,386,124	2,322,815	10,094,549	138,871,305
2003	1,354,265	36,498,406	11,928,209	47,873,740	11,534,080	1,102,223	7,009,619	3,052,523	3,407,998	10,195,206	133,956,269
2004	1,345,321	46,073,900	12,359,731	56,217,298	12,049,126	1,058,799	7,351,514	6,374,483	4,406,653	13,460,201	160,697,026
2005	1,417,568	66,275,755	12,140,911	64,871,562	12,860,979	1,026,537	7,855,289	8,524,752	5,170,069	16,548,307	196,691,729
2006	1,442,524	70,465,937	12,065,323	63,798,502	12,737,394	1,066,831	8,412,527	9,423,575	4,885,882	17,050,967	201,349,462
2007	1,662,537	79,904,266	14,866,556	64,808,093	13,669,925	1,121,156	9,186,706	10,829,140	5,817,291	18,895,192	220,760,862
2008	2,136,713	101,353,977	16,220,231	74,601,231	9,761,146	2,506,758	7,521,400	8,481,888	5,733,543	21,250,256	249,567,143
2009	1,335,866	101,348,140	15,893,528	63,306,695	5,173,552	946,963	7,534,735	7,866,413	6,264,606	19,828,012	229,498,510
2010	1,299,588	125,393,576	13,319,185	74,255,177	5,435,658	827,496	7,958,048	8,732,701	4,876,927	26,313,130	268,411,486
2011	1,257,944	148,485,709	19,507,428	87,730,506	3,599,086	1,176,255	10,981,642	9,102,411	6,123,259	35,155,068	323,119,308
2012	1,029,260	153,618,908	24,734,711	77,890,500	5,738,105	808,208	9,311,812	9,047,745	7,569,023	34,211,729	323,960,001
2013	381,876	145,146,253	20,720,014	62,718,061	4,791,910	1,046,947	7,630,762	10,355,884	7,074,886	33,639,969	293,506,562
2014	258,809	183,431,952	18,911,339	55,368,615	4,464,398	861,590	8,360,898	11,721,184	6,521,541	31,854,431	321,754,757
2015	254,336	140,570,275	22,234,350	42,000,092	4,340,376	654,766	9,554,806	11,748,205	6,196,596	24,320,608	261,874,410
2016	163,760	118,545,477	19,257,107	30,131,218	4,435,066	392,776	7,953,309	11,327,552	5,542,968	20,079,401	217,828,634
2017	252,383	172,708,778	19,094,634	34,248,962	4,566,113	566,324	7,793,558	11,435,057	6,056,810	28,803,457	285,526,076
2018	183,346	180,599,760	18,303,511	36,305,197	4,484,744	600,138	10,053,839	12,043,297	6,916,759	32,199,872	301,690,463
2019	179,379	178,019,000	20,504,131	36,503,594	4,519,863	593,214	6,807,496	11,818,883	10,490,218	36,117,344	305,553,122
2020	299,700	139,330,882	19,714,585	27,989,489	313,587	395,231	6,903,273	10,678,482	10,298,259	33,297,067	249,220,555
2021	232,531	131,501,704	20,904,834	30,223,927	-	229,661	7,678,278	12,244,359	11,177,278	32,053,110	246,245,682

Source: Exhibits X-C and X-D
Prior filings for 2010 and prior.

COAL MINE COMPENSATION RATING BUREAU
TRAUMATIC LOSS COST PREMIUM

	ANTHRACITE UNDERGROUND (1010)			BITUMINOUS UNDERGROUND (1001)			ANTHRACITE SURFACE (1012)			BITUMINOUS SURFACE (1014)		
YEAR	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM
2011	18.18	110,125	20,021	6.88	149,633,528	10,294,787	6.63	21,034,600	1,394,594	1.60	86,074,064	1,377,185
2012	18.18	219,407	39,888	6.88	154,428,761	10,624,699	6.63	26,295,907	1,743,419	1.60	76,452,811	1,223,245
2013	18.18	175,900	31,979	6.88	149,953,068	10,316,771	6.63	22,449,824	1,488,423	1.60	61,349,745	981,596
2014	18.18	258,809	47,051	6.88	271,230,707	18,660,673	6.63	20,466,075	1,356,901	1.60	54,050,731	864,812
2015	18.18	254,336	46,238	6.88	216,454,460	14,892,067	6.63	24,218,779	1,605,705	1.60	40,934,048	654,945
2016	18.18	163,760	29,772	6.88	148,556,407	10,220,681	6.63	20,873,611	1,383,920	1.60	29,127,089	466,033
2017	18.18	252,383	45,883	6.88	172,708,778	11,882,364	6.63	21,167,074	1,403,377	1.60	33,140,780	530,252
2018	18.18	183,346	33,332	6.88	180,553,142	12,422,056	6.63	19,576,675	1,297,934	1.60	35,242,187	563,875
2019	18.18	179,379	32,611	6.88	177,833,672	12,234,957	6.63	23,563,089	1,562,233	1.60	35,362,714	565,803
2020	18.18	299,700	54,485	6.88	139,141,836	9,572,958	6.63	22,813,839	1,512,558	1.60	27,274,125	436,386
2021	18.18	232,531	42,274	6.88	131,501,704	9,047,317	6.63	24,267,567	1,608,940	1.60	29,582,319	473,317

	COKE (1469)			AUGER (1015)			ANTHRACITE CO-GEN (1021)			BITUMINOUS CO-GEN (1023)		
YEAR	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM
2011	4.22	3,599,086	151,881	6.17	1,176,255	72,575	8.00	11,720,035	937,603	1.11	9,102,411	101,037
2012	4.22	5,738,105	242,148	6.17	808,208	49,866	8.00	10,273,004	821,840	1.11	9,047,745	100,430
2013	4.22	4,791,910	202,219	6.17	1,025,399	63,267	8.00	8,342,651	667,412	1.11	10,355,884	114,950
2014	4.22	4,464,398	188,398	6.17	806,976	49,790	8.00	9,060,883	724,871	1.11	11,721,184	130,105
2015	4.22	4,340,376	183,164	6.17	582,619	35,948	8.00	10,469,089	837,527	1.11	11,748,205	130,405
2016	4.22	4,435,066	187,160	6.17	372,496	22,983	8.00	8,994,602	719,568	1.11	11,327,552	125,736
2017	4.22	4,566,113	192,690	6.17	449,009	27,704	8.00	8,819,700	705,576	1.11	11,435,057	126,929
2018	4.22	4,484,744	189,256	6.17	600,138	37,029	8.00	11,600,891	928,071	1.11	12,043,297	133,681
2019	4.22	4,466,971	188,506	6.17	539,914	33,313	8.00	8,191,669	655,334	1.11	11,818,883	131,190
2020	4.22	313,587	13,233	6.17	384,571	23,728	8.00	7,660,069	612,806	1.11	10,678,482	118,531
2021	4.22	0	0	6.17	208,581	12,869	8.00	8,263,749	661,100	1.11	12,244,359	135,912

	ANTHRACITE PREP PLANT (1025)			BITUMINOUS PREP PLANT (1027)				TOTAL
YEAR	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	LOSS COST	DEVELOPED PAYROLL	LOSS COST PREMIUM	DEVELOPED PAYROLL	LOSS COST PREMIUM
2011	3.68	7,236,583	266,306	2.62	35,155,068	921,063	324,841,755	15,537,052
2012	3.68	8,671,140	319,098	2.62	34,211,729	896,347	326,146,817	16,060,980
2013	3.68	8,265,665	304,176	2.62	34,253,697	897,447	300,963,743	15,068,240
2014	3.68	8,234,771	303,040	2.62	43,520,040	1,140,225	423,814,574	23,465,866
2015	3.68	7,606,274	279,911	2.62	33,564,176	879,381	350,172,362	19,545,291
2016	3.68	7,018,927	258,297	2.62	23,689,882	620,675	254,559,392	14,034,825
2017	3.68	7,746,154	285,058	2.62	28,803,457	754,651	289,088,505	15,954,484
2018	3.68	9,651,288	355,167	2.62	32,199,872	843,637	306,135,580	16,804,038
2019	3.68	12,534,373	461,265	2.62	36,099,579	945,809	310,590,243	16,811,021
2020	3.68	12,170,346	447,869	2.62	33,297,067	872,383	254,033,622	13,664,937
2021	3.68	12,790,962	470,707	2.62	32,053,110	839,791	251,144,882	13,292,227

Payroll - Exhibit X-D, pages 1, 2, 3, 4 and 5; Loss Costs - Exhibit X-B Page 2

Coal Mine Compensation Rating Bureau
Traumatic & OD Loss costs
Approved Effective April 1, 2022

CLASS DESCRIPTION	CLASS CODE	CURRENT MANUAL LOSS COST	CLASS CODE	CURRENT MANUAL LOSS COST	CLASS CODE	CURRENT MANUAL LOSS COST
	TRAUMATIC		**STATE O D**		**FEDERAL O D**	
UNDERGROUND						
Anthracite	1010	$18.18	1011	$19.18	0160	$11.35
Bituminous	1001	$6.88	1002	$0.66	0158	$0.75
SURFACE						
Anthracite	1012	$6.63	1016	$1.01	0153	$1.40
Bituminous	1014	$1.60	1013	$0.39	0156	$0.81
COKE	1469	$4.22	1017	$0.08	0154	$0.09
AUGER	1015	$6.17	1019	$0.17	0157	$0.41
CO-GEN						
Anthracite	1021	$8.00	1022	$0.35	0181	$0.34
Bituminous	1023	$1.11	1024	$0.19	0182	$0.25
PREP PLANT						
Anthracite	1025	$3.68	1026	$2.75	0183	$0.76
Bituminous	1027	$2.62	1028	$0.17	0184	$0.25

CLASS DESCRIPTION	CLASS CODE	UNLOADED APPROVED LOSS COST	CLASS CODE	UNLOADED APPROVED LOSS COST	CLASS CODE	UNLOADED APPROVED LOSS COST
	TRAUMATIC		**STATE O D**		**FEDERAL O D**	
UNDERGROUND						
Anthracite	1010	$17.59	1011	$19.18	0160	$11.35
Bituminous	1001	$6.52	1002	$0.66	0158	$0.75
SURFACE						
Anthracite	1012	$6.45	1016	$1.01	0153	$1.40
Bituminous	1014	$1.53	1013	$0.39	0156	$0.81
	1469	$4.09	1017	$0.08	0154	$0.09
	1015	$5.94	1019	$0.17	0157	$0.41
CO-GEN						
Anthracite	1021	$7.80	1022	$0.35	0181	$0.34
Bituminous	1023	$1.05	1024	$0.19	0182	$0.25
PREP PLANT						
Anthracite	1025	$3.56	1026	$2.75	0183	$0.76
Bituminous	1027	$2.53	1028	$0.17	0184	$0.25

Source: Current Manual Loss Costs from Exhibit I-A-M approved filing effective April 1, 2022
Unloaded Approved Loss Costs from Exhibit I-A-UL approved filing effective April 1, 2022

Coal Mine Compensation Rating Bureau
Adjustments from 2022 Filing

Section 1 Catastrophic Loss Cost (2022)

Underground			
	Anthracite	0.22	
	Bituminous	0.22	
Auger		0.10	(1/3 Underground, 2/3 Surface)
Other Classes		0.04	

Section 2 Load Factors (2022)

Experience Rating	1.0000
Merit Rating (Exh XIV-A, page 1)	1.0001
Safety Committee (Exh. XIV-B)	1.0209
	1.0210
Small Business Advocate (XI-A)	1.0001

ANTHRACITE UNDERGROUND (1010)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	1,257,944	0	0	1.0000	1,257,944	1.257944
2012	1,029,260	0	0	1.0000	1,029,260	1.029260
2013	381,876	0	0	1.0000	381,876	0.381876
2014	258,809	0	0	1.0000	258,809	0.258809
2015	254,336	0	0	1.0000	254,336	0.254336
2016	163,760	0	0	1.0000	163,760	0.163760
2017	252,383	0	0	1.0000	252,383	0.252383
2018	183,346	0	0	1.0000	183,346	0.183346
2019	179,379	0	0	1.0000	179,379	0.179379
2020	299,700	0	0	1.0000	299,700	0.299700
2021	232,531	0	0	1.0000	232,531	0.232531

BITUMINOUS UNDERGROUND (1001)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	148,485,709	0	0	1.0000	148,485,709	148.485709
2012	153,618,908	0	0	1.0000	153,618,908	153.618908
2013	149,747,092	4,600,839	0	1.0000	145,146,253	145.146253
2014	271,230,707	87,798,755	0	1.0000	183,431,952	183.431952
2015	216,454,460	75,884,185	0	1.0000	140,570,275	140.570275
2016	148,556,407	30,010,930	0	1.0000	118,545,477	118.545477
2017	172,708,778	0	0	1.0000	172,708,778	172.708778
2018	180,553,142	0	46,618	1.0000	180,599,760	180.599760
2019	177,833,672	0	185,328	1.0000	178,019,000	178.019000
2020	139,141,836	0	189,046	1.0000	139,330,882	139.330882
2021	131,501,704	0	0	1.0000	131,501,704	131.501704

ANTHRACITE SURFACE (1012)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	21,034,600	1,929,891	402,719	1.0000	19,507,428	19.507428
2012	26,295,907	1,973,449	412,253	1.0000	24,734,711	24.734711
2013	22,449,824	2,307,223	577,413	1.0000	20,720,014	20.720014
2014	20,466,075	2,210,807	656,071	1.0000	18,911,339	18.911339
2015	24,218,779	2,669,091	684,662	1.0000	22,234,350	22.234350
2016	20,873,611	2,378,155	761,651	1.0000	19,257,107	19.257107
2017	21,167,074	2,801,185	728,745	1.0000	19,094,634	19.094634
2018	19,576,675	1,971,490	698,326	1.0000	18,303,511	18.303511
2019	23,563,089	3,889,152	830,194	1.0000	20,504,131	20.504131
2020	22,813,839	3,744,355	645,101	1.0000	19,714,585	19.714585
2021	24,267,567	3,817,925	475,580	1.0061	20,904,834	20.904834

BITUMINOUS SURFACE (1014)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	86,074,064	0	1,656,442	1.0000	87,730,506	87.730506
2012	76,452,811	0	1,437,689	1.0000	77,890,500	77.890500
2013	61,349,745	0	1,368,316	1.0000	62,718,061	62.718061
2014	54,050,731	0	1,317,884	1.0000	55,368,615	55.368615
2015	40,934,048	0	1,066,044	1.0000	42,000,092	42.000092
2016	29,127,089	0	1,004,129	1.0000	30,131,218	30.131218
2017	33,140,780	0	1,108,182	1.0000	34,248,962	34.248962
2018	35,242,187	0	1,063,010	1.0000	36,305,197	36.305197
2019	35,362,714	0	1,140,880	1.0000	36,503,594	36.503594
2020	27,274,125	0	715,364	1.0000	27,989,489	27.989489
2021	29,582,319	0	641,608	1.0000	30,223,927	30.223927

Source: Anthracite Underground (1010) - Exhibit X-C, page 4
Bituminous Underground (1001) - Exhibit X-C, page 4
Anthracite Surface (1012) - Exhibit X-D, page 2
Bituminous Surface (1014) - Exhibit X-D, page 2

COKE (1469)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	3,599,086	0	0	1.0000	3,599,086	3.599086
2012	5,738,105	0	0	1.0000	5,738,105	5.738105
2013	4,791,910	0	0	1.0000	4,791,910	4.791910
2014	4,464,398	0	0	1.0000	4,464,398	4.464398
2015	4,340,376	0	0	1.0000	4,340,376	4.340376
2016	4,435,066	0	0	1.0000	4,435,066	4.435066
2017	4,566,113	0	0	1.0000	4,566,113	4.566113
2018	4,484,744	0	0	1.0000	4,484,744	4.484744
2019	4,466,971	0	52,892	1.0000	4,519,863	4.519863
2020	313,587	0	0	1.0000	313,587	0.313587
2021	0	0	0	1.0097	0	0.000000

AUGER (1015)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	1,176,255	0	0	1.0000	1,176,255	1.176255
2012	808,208	0	0	1.0000	808,208	0.808208
2013	1,025,399	0	21,548	1.0000	1,046,947	1.046947
2014	806,976	0	54,614	1.0000	861,590	0.861590
2015	582,619	0	72,147	1.0000	654,766	0.654766
2016	372,496	0	20,280	1.0000	392,776	0.392776
2017	449,009	0	117,315	1.0000	566,324	0.566324
2018	600,138	0	0	1.0000	600,138	0.600138
2019	539,914	0	53,300	1.0000	593,214	0.593214
2020	384,571	0	10,660	1.0000	395,231	0.395231
2021	208,581	0	21,080	1.0000	229,661	0.229661

ANTHRACITE CO-GEN (1021)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	11,720,035	827,364	88,971	1.0000	10,981,642	10.981642
2012	10,273,004	1,025,112	63,920	1.0000	9,311,812	9.311812
2013	8,342,651	792,519	80,630	1.0000	7,630,762	7.630762
2014	9,060,883	838,824	138,839	1.0000	8,360,898	8.360898
2015	10,469,089	1,048,903	134,620	1.0000	9,554,806	9.554806
2016	8,994,602	1,137,185	95,892	1.0000	7,953,309	7.953309
2017	8,819,700	1,121,002	94,860	1.0000	7,793,558	7.793558
2018	11,600,891	1,704,620	157,568	1.0000	10,053,839	10.053839
2019	8,191,669	1,508,278	124,105	1.0000	6,807,496	6.807496
2020	7,660,069	1,316,271	559,475	1.0000	6,903,273	6.903273
2021	8,263,749	1,323,798	738,327	1.0000	7,678,278	7.678278

BITUMINOUS CO-GEN (1023)

Year	State OD Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	9,102,411	0	0	1.0000	9,102,411	9.102411
2012	9,047,745	0	0	1.0000	9,047,745	9.047745
2013	10,355,884	0	0	1.0000	10,355,884	10.355884
2014	11,721,184	0	0	1.0000	11,721,184	11.721184
2015	11,748,205	0	0	1.0000	11,748,205	11.748205
2016	11,327,552	0	0	1.0000	11,327,552	11.327552
2017	11,435,057	0	0	1.0000	11,435,057	11.435057
2018	12,043,297	0	0	1.0000	12,043,297	12.043297
2019	11,818,883	0	0	1.0000	11,818,883	11.818883
2020	10,678,482	0	0	1.0000	10,678,482	10.678482
2021	12,244,359	0	0	1.0000	12,244,359	12.244359

Source: Auger (1015) - Exhibit X-D, page 3
Coke (1469) - Exhibit X-D, page 3
Anthracite Co-Gen (1021) - Exhibit X-D, page 4
Bituminous Co-Gen (1023) - Exhibit X-D, page 4

ANTHRACITE PREP PLANT (1025)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	7,236,583	1,246,194	132,870	1.0000	6,123,259	6.123259
2012	8,671,140	1,248,180	146,063	1.0000	7,569,023	7.569023
2013	8,265,665	1,400,236	209,457	1.0000	7,074,886	7.074886
2014	8,234,771	1,877,979	164,749	1.0000	6,521,541	6.521541
2015	7,606,274	1,549,878	140,200	1.0000	6,196,596	6.196596
2016	7,018,927	1,728,560	252,601	1.0000	5,542,968	5.542968
2017	7,746,154	1,886,894	197,550	1.0000	6,056,810	6.056810
2018	9,651,288	2,865,985	131,456	1.0000	6,916,759	6.916759
2019	12,534,373	2,160,285	116,130	1.0000	10,490,218	10.490218
2020	12,170,346	1,982,278	110,191	1.0000	10,298,259	10.298259
2021	12,790,962	1,803,692	206,301	1.0102	11,177,278	11.177278

BITUMINOUS PREP PLANT (1027)

Year	State OD Developed Payroll (1)	Federal Exempt Reported Payroll (2)	Partnership Reported Payroll (3)	Development Factor (4)	Federal OD Payroll (1) + [(3)-(2)]*(4) (5)	Payroll Per Million (5)/1000000 (6)
2011	35,155,068	0	0	1.0000	35,155,068	35.155068
2012	34,211,729	0	0	1.0000	34,211,729	34.211729
2013	34,253,697	613,728	0	1.0000	33,639,969	33.639969
2014	43,520,040	11,665,609	0	1.0000	31,854,431	31.854431
2015	33,564,176	9,243,568	0	1.0000	24,320,608	24.320608
2016	23,689,882	3,610,481	0	1.0000	20,079,401	20.079401
2017	28,803,457	0	0	1.0000	28,803,457	28.803457
2018	32,199,872	0	0	1.0000	32,199,872	32.199872
2019	36,099,579	0	17,765	1.0000	36,117,344	36.117344
2020	33,297,067	0	0	1.0000	33,297,067	33.297067
2021	32,053,110	0	0	1.0158	32,053,110	32.053110

Source: Anthracite Prep Plant (1025) - Exhibit X-D, page 5
Bituminous Prep Plant (1027) - Exhibit X-D, page 5

ANTHRACITE UNDERGROUND (1010)

Year	Developed Payroll (1)	Files 258,330,4027 & 4049 Developed Payroll* (2)	OD Payroll (3) = (1) + (2)	Payroll Per Million (4) = (3)/1000000
2011	110,125	1,147,819	1,257,944	1.257944
2012	219,407	809,853	1,029,260	1.029260
2013	175,900	205,976	381,876	0.381876
2014	258,809	0	258,809	0.258809
2015	254,336	0	254,336	0.254336
2016	163,760	0	163,760	0.163760
2017	252,383	0	252,383	0.252383
2018	183,346	0	183,346	0.183346
2019	179,379	0	179,379	0.179379
2020	299,700	0	299,700	0.299700
2021	232,531	0	232,531	0.232531

BITUMINOUS UNDERGROUND (1001)

Year	Developed Payroll (1)	Files 258,330,4027 & 4049 Developed Payroll* (2)	OD Payroll (3) = (1) - (2)	Payroll Per Million (4) = (3)/1000000
2011	149,633,528	1,147,819	148,485,709	148.485709
2012	154,428,761	809,853	153,618,908	153.618908
2013	149,953,068	205,976	149,747,092	149.747092
2014	271,230,707	0	271,230,707	271.230707
2015	216,454,460	0	216,454,460	216.454460
2016	148,556,407	0	148,556,407	148.556407
2017	172,708,778	0	172,708,778	172.708778
2018	180,553,142	0	180,553,142	180.553142
2019	177,833,672	0	177,833,672	177.833672
2020	139,141,836	0	139,141,836	139.141836
2021	131,501,704	0	131,501,704	131.501704

The reclassification from Anthracite U/G to Bituminous U/G applies to Traumatic, but not to OD. For Traumatic Files 258, 330, 4027 & 4049 are coded 1001 (payroll and losses).

The above reclassification is made to move State and Federal O.D. exposures from Class 1001 (Bituminous U/G) back to Class 1010 (Anthracite U/G)

Other classification payrolls for these four files are unaffected by the re-classification.

Source: Developed Payroll - Exhibit X-D, page 1
CMCRB database for files 258, 330, 4027 and 4049 Payrolls as of 4-30-2022

ANTHRACITE UNDERGROUND (1010)

Year	REPORTED PAYROLL* (1)	DEVELOPMENT FACTORS** (2)	DEVELOPED PAYROLL (3) = (1) * (2)
2011	1,147,819	1.0000	1,147,819
2012	809,853	1.0000	809,853
2013	205,976	1.0000	205,976
2014	0	1.0000	0
2015	0	1.0000	0
2016	0	1.0000	0
2017	0	1.0000	0
2018	0	1.0000	0
2019	0	1.0000	0
2020	0	1.0000	0
2021	0	1.0000	0

CMCRB database for files 258, 330, 4027 and 4049 Payrolls as of 4-30-2022

* For Traumatic Files 258, 330, 4027 and 4049 only.

** Development Factors are averages of U/G Ant. and U/G Bit. Development Factors from Exhibit X-E-1

ANTHRACITE UNDERGROUND (1010)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	110,125	1.0000	110,125	0.110125
2012	219,407	1.0000	219,407	0.219407
2013	175,900	1.0000	175,900	0.175900
2014	258,809	1.0000	258,809	0.258809
2015	254,336	1.0000	254,336	0.254336
2016	163,760	1.0000	163,760	0.163760
2017	252,383	1.0000	252,383	0.252383
2018	183,346	1.0000	183,346	0.183346
2019	179,379	1.0000	179,379	0.179379
2020	299,700	1.0000	299,700	0.299700
2021	232,531	1.0000	232,531	0.232531

BITUMINOUS UNDERGROUND (1001)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	149,633,528	1.0000	149,633,528	149.633528
2012	154,428,761	1.0000	154,428,761	154.428761
2013	149,953,068	1.0000	149,953,068	149.953068
2014	271,230,707	1.0000	271,230,707	271.230707
2015	216,454,460	1.0000	216,454,460	216.454460
2016	148,556,407	1.0000	148,556,407	148.556407
2017	172,708,778	1.0000	172,708,778	172.708778
2018	180,553,142	1.0000	180,553,142	180.553142
2019	177,833,672	1.0000	177,833,672	177.833672
2020	139,141,836	1.0000	139,141,836	139.141836
2021	131,501,704	1.0000	131,501,704	131.501704

Source: (1) Payroll and (2) Development - Exhibit X-E, page 1

ANTHRACITE SURFACE (1012)

YEAR	REPORTED PAYROLL (1)	DEVELOP FACTORS (2)	DEVELOPMENT PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	21,034,600	1.0000	21,034,600	21.034600
2012	26,295,907	1.0000	26,295,907	26.295907
2013	22,449,824	1.0000	22,449,824	22.449824
2014	20,466,075	1.0000	20,466,075	20.466075
2015	24,218,779	1.0000	24,218,779	24.218779
2016	20,873,611	1.0000	20,873,611	20.873611
2017	21,167,074	1.0000	21,167,074	21.167074
2018	19,576,675	1.0000	19,576,675	19.576675
2019	23,563,089	1.0000	23,563,089	23.563089
2020	22,813,839	1.0000	22,813,839	22.813839
2021	24,120,432	1.0061	24,267,567	24.267567

BITUMINOUS SURFACE (1014)

YEAR	REPORTED PAYROLL (1)	DEVELOP FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	86,074,064	1.0000	86,074,064	86.074064
2012	76,452,811	1.0000	76,452,811	76.452811
2013	61,349,745	1.0000	61,349,745	61.349745
2014	54,050,731	1.0000	54,050,731	54.050731
2015	40,934,048	1.0000	40,934,048	40.934048
2016	29,127,089	1.0000	29,127,089	29.127089
2017	33,140,780	1.0000	33,140,780	33.140780
2018	35,242,187	1.0000	35,242,187	35.242187
2019	35,362,714	1.0000	35,362,714	35.362714
2020	27,274,125	1.0000	27,274,125	27.274125
2021	29,582,319	1.0000	29,582,319	29.582319

Source: (1) Payroll and (2) Development - Exhibit X-E, page 2

COKE (1469)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	3,599,086	1.0000	3,599,086	3.599086
2012	5,738,105	1.0000	5,738,105	5.738105
2013	4,791,910	1.0000	4,791,910	4.791910
2014	4,464,398	1.0000	4,464,398	4.464398
2015	4,340,376	1.0000	4,340,376	4.340376
2016	4,435,066	1.0000	4,435,066	4.435066
2017	4,566,113	1.0000	4,566,113	4.566113
2018	4,484,744	1.0000	4,484,744	4.484744
2019	4,466,971	1.0000	4,466,971	4.466971
2020	313,587	1.0000	313,587	0.313587
2021	-	1.0097	-	0.000000

AUGER (1015)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	1,176,255	1.0000	1,176,255	1.176255
2012	808,208	1.0000	808,208	0.808208
2013	1,025,399	1.0000	1,025,399	1.025399
2014	806,976	1.0000	806,976	0.806976
2015	582,619	1.0000	582,619	0.582619
2016	372,496	1.0000	372,496	0.372496
2017	449,009	1.0000	449,009	0.449009
2018	600,138	1.0000	600,138	0.600138
2019	539,914	1.0000	539,914	0.539914
2020	384,571	1.0000	384,571	0.384571
2021	208,581	1.0000	208,581	0.208581

Source: (1) Payroll and (2) Development - Exhibit X-E, page 3

ANTHRACITE CO-GEN (1021)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	11,720,035	1.0000	11,720,035	11.720035
2012	10,273,004	1.0000	10,273,004	10.273004
2013	8,342,651	1.0000	8,342,651	8.342651
2014	9,060,883	1.0000	9,060,883	9.060883
2015	10,469,089	1.0000	10,469,089	10.469089
2016	8,994,602	1.0000	8,994,602	8.994602
2017	8,819,700	1.0000	8,819,700	8.819700
2018	11,600,891	1.0000	11,600,891	11.600891
2019	8,191,669	1.0000	8,191,669	8.191669
2020	7,660,069	1.0000	7,660,069	7.660069
2021	8,263,749	1.0000	8,263,749	8.263749

BITUMINOUS CO-GEN (1023)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	9,102,411	1.0000	9,102,411	9.102411
2012	9,047,745	1.0000	9,047,745	9.047745
2013	10,355,884	1.0000	10,355,884	10.355884
2014	11,721,184	1.0000	11,721,184	11.721184
2015	11,748,205	1.0000	11,748,205	11.748205
2016	11,327,552	1.0000	11,327,552	11.327552
2017	11,435,057	1.0000	11,435,057	11.435057
2018	12,043,297	1.0000	12,043,297	12.043297
2019	11,818,883	1.0000	11,818,883	11.818883
2020	10,678,482	1.0000	10,678,482	10.678482
2021	12,244,359	1.0000	12,244,359	12.244359

Source: (1) Payroll and (2) Development - Exhibit X-E, page 4

ANTHRACITE PREP PLANT (1025)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	7,236,583	1.0000	7,236,583	7.236583
2012	8,671,140	1.0000	8,671,140	8.671140
2013	8,265,665	1.0000	8,265,665	8.265665
2014	8,234,771	1.0000	8,234,771	8.234771
2015	7,606,274	1.0000	7,606,274	7.606274
2016	7,018,927	1.0000	7,018,927	7.018927
2017	7,746,154	1.0000	7,746,154	7.746154
2018	9,651,288	1.0000	9,651,288	9.651288
2019	12,534,373	1.0000	12,534,373	12.534373
2020	12,170,346	1.0000	12,170,346	12.170346
2021	12,661,812	1.0102	12,790,962	12.790962

BITUMINOUS PREP PLANT (1027)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
2011	35,155,068	1.0000	35,155,068	35.155068
2012	34,211,729	1.0000	34,211,729	34.211729
2013	34,253,697	1.0000	34,253,697	34.253697
2014	43,520,040	1.0000	43,520,040	43.520040
2015	33,564,176	1.0000	33,564,176	33.564176
2016	23,689,882	1.0000	23,689,882	23.689882
2017	28,803,457	1.0000	28,803,457	28.803457
2018	32,199,872	1.0000	32,199,872	32.199872
2019	36,099,579	1.0000	36,099,579	36.099579
2020	33,297,067	1.0000	33,297,067	33.297067
2021	31,554,548	1.0158	32,053,110	32.053110

Source: (1) Payroll and (2) Development - Exhibit X-E, page 5

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE UNDERGROUND (1010)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	110,125	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379	299,700	232,531
2ND	110,125	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379	299,700	
3RD	110,125	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379		
4TH	110,125	219,407	175,900	258,809	254,336	163,760	252,383	183,346			
5TH	110,125	219,407	175,900	258,809	254,336	163,760	252,383				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

PAYROLLS
BITUMINOUS UNDERGROUND (1001)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	150,087,771	156,022,224	148,858,839	269,946,018	216,498,553	148,894,215	169,570,264	178,663,437	184,595,015	138,142,265	131,501,704
2ND	149,633,528	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,800,836	180,553,142	177,833,672	139,141,836	
3RD	149,633,528	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778	180,553,142	177,833,672		
4TH	149,633,528	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778	180,553,142			
5TH	149,633,528	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9970	0.9898	1.0074	1.0048	0.9998	0.9977	1.0191	1.0106	0.9634	1.0072	0.9996	0.9995	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9995	1.0000	1.0000		0.9999	0.9999	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

Source: CMCRB Database as of 4-30-2022 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE SURFACE (1012)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	21,041,889	26,061,126	22,127,846	20,422,650	24,275,156	20,717,621	20,760,851	19,515,547	23,605,037	22,766,320	24,120,432
2ND	21,034,600	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675	23,563,089	22,813,839	
3RD	21,034,600	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675	23,563,089		
4TH	21,034,600	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675			
5TH	21,034,600	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1ST	0.9997	1.0090	1.0146	1.0021	0.9977	1.0075	1.0196	1.0031	0.9982	1.0021	1.0061	1.0061	1.0061
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

PAYROLLS
BITUMINOUS SURFACE (1014)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	84,685,809	77,151,225	63,473,577	54,685,762	41,179,672	28,999,042	34,474,120	35,266,431	35,476,154	27,341,658	29,582,319
2ND	86,074,064	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780	35,242,187	35,362,714	27,274,125	
3RD	86,074,064	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780	35,242,187	35,362,714		
4TH	86,074,064	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780	35,242,187			
5TH	86,074,064	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0164	0.9909	0.9665	0.9884	0.9940	1.0044	0.9613	0.9993	0.9968	0.9975	0.9919	0.9919	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

Source: CMCRB Database as of 4-30-2022 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
COKE (1469)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	3,599,086	5,738,105	4,791,910	4,464,398	4,057,561	4,435,066	4,462,231	4,375,412	4,466,971	313,587	0
2ND	3,599,086	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113	4,484,744	4,466,971	313,587	
3RD	3,599,086	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113	4,484,744	4,466,971		
4TH	3,599,086	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113	4,484,744			
5TH	3,599,086	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0000	1.0000	1.0000	1.0000	1.0697	1.0000	1.0233	1.0250	1.0000	1.0000	1.0097	1.0097	1.0097
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

PAYROLLS
AUGER (1015)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	1,151,902	789,136	1,082,639	876,196	592,775	372,496	452,051	560,126	539,914	388,307	208,581
2ND	1,176,255	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138	539,914	384,571	
3RD	1,176,255	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138	539,914		
4TH	1,176,255	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138			
5TH	1,176,255	808,208	1,025,399	806,976	582,619	372,496	449,009				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0211	1.0242	0.9471	0.9210	0.9829	1.0000	0.9933	1.0714	1.0000	0.9904	1.0110	1.0110	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

Source: CMCRB Database as of 4-30-2022 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE CO-GEN (1021)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	11,710,908	10,377,312	8,678,376	9,279,611	10,646,550	10,847,424	9,038,435	11,591,488	8,219,127	7,659,713	8,263,749
2ND	11,720,035	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700	11,600,891	8,191,669	7,660,069	
3RD	11,720,035	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700	11,600,891	8,191,669		
4TH	11,720,035	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700	11,600,891			
5TH	11,720,035	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0008	0.9899	0.9613	0.9764	0.9833	0.8292	0.9758	1.0008	0.9967	1.0000	0.9605	0.9605	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

PAYROLLS
BITUMINOUS CO-GEN (1023)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	9,015,644	9,057,266	13,079,796	11,451,621	11,723,112	11,386,837	11,576,297	11,996,610	11,778,971	10,877,350	12,244,359
2ND	9,102,411	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057	12,043,297	11,818,883	10,678,482	
3RD	9,102,411	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057	12,043,297	11,818,883		
4TH	9,102,411	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057	12,043,297			
5TH	9,102,411	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0096	0.9989	0.7917	1.0235	1.0021	0.9948	0.9878	1.0039	1.0034	0.9817	0.9943	0.9943	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

Source: CMCRB Database as of 4-30-2022 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE PREP PLANT (1025)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	7,300,075	8,617,327	8,249,896	8,098,851	7,770,095	6,971,270	7,502,719	9,572,250	12,538,743	12,124,609	12,661,812
2ND	7,236,583	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288	12,534,373	12,170,346	
3RD	7,236,583	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288	12,534,373		
4TH	7,236,583	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288			
5TH	7,236,583	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9913	1.0062	1.0019	1.0168	0.9789	1.0068	1.0324	1.0083	0.9997	1.0038	1.0102	1.0102	1.0102
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

PAYROLLS
BITUMINOUS PREP PLANT (1027)

RPT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1ST	34,632,323	34,353,700	33,730,152	43,397,620	34,011,862	22,065,227	28,602,522	31,517,751	36,922,176	33,334,214	31,554,548
2ND	35,155,068	34,211,729	34,207,489	43,520,040	33,564,176	23,689,882	28,816,678	32,199,872	36,099,579	33,297,067	
3RD	35,155,068	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457	32,199,872	36,099,579		
4TH	35,155,068	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457	32,199,872			
5TH	35,155,068	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457				

DEV.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0151	0.9959	1.0142	1.0028	0.9868	1.0736	1.0075	1.0216	0.9777	0.9989	1.0159	1.0158	1.0158
2-3	1.0000	1.0000	1.0014	1.0000	1.0000	1.0000	0.9995	1.0000	1.0000		0.9999	0.9999	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			1.0000	1.0000	1.0000
4-5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000				1.0000	1.0000	1.0000

Source: CMCRB Database as of 4-30-2022 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
OD Frequencies From Approved Filing

		State OD Class Code	State OD Indicated Frequency (Eff. 4/1/2022) (1)	Federal OD Class Code	Fedeal OD Basic Indicated Frequency (Eff. 4/1/2022) (2)	Fedeal OD Excess Indicated Frequency (Eff. 4/1/2022) (3)
Underground:	Anthracite	1011	0.248961	160	0.221177	0.090421
	Bituminous	1002	0.021968	158	0.013874	0.008047
Surface:	Anthracite	1016	0.018567	153	0.036690	0.008831
	Bituminous	1013	0.012229	156	0.020263	0.003966
	Coke	1017	0.002236	154	0.002066	0.000873
	Auger	1019	0.004576	157	0.010173	0.001867
Co-Gen:	Anthracite	1022	0.006510	181	0.008721	0.002244
	Bituminous	1024	0.005236	182	0.005833	0.001805
Prep Plants:	Anthracite	1026	0.050565	183	0.016482	0.020271
	Bituminous	1028	0.004572	184	0.006199	0.001559

Source: (1): Exhibit III Column (3) of prior filing.
(2) & (3): Exhibit IV-A Column (3) of prior filing.

COAL MINE COMPENSATION RATING BUREAU

Exhibit X-G

Calculation of Coal Class Adjustment Factor to SAWW

	Average Coal Class Weekly Wages									
	Anthracite Underground	Bituminous Underground	Anthracite Surface	Bituminous Surface	Coke	Auger	Anthracite Co-gen	Bituminous Co-gen	Anthracite Prep Plant	Bituminous Prep Plant
Year	1010	1001	1012	1014	1469	1015	1021	1023	1025	1027
2012	#	1,409.80	1,026.52	1,030.84		405.00	1,049.67	1,370.33	1,225.08	1,074.90
2013	#	1,450.44	961.94	1,056.17	584.76	556.80	933.53	1,188.00	836.20	1,268.33
2014	#	1,489.37	972.96	972.11	100.00	520.00	843.52	908.00	943.94	1,307.50
2015	#	1,632.46	1,071.78	968.80	564.33	722.00	1,075.00	836.67	1,019.38	1,295.56
2016	#	1,660.09	1,076.11	1,001.43	2,109.00		1,133.39	714.00	1,148.41	1,816.23
2017	#	1,576.88	1,163.04	1,381.20	588.83		1,206.39	1,376.75	1,277.00	1,419.95
2018	#	1,621.64	1,434.53	1,260.86	546.00		950.16	1,388.60	1,021.75	1,103.76
2019	#	1,644.08	1,008.62	1,038.07	607.00		1,330.00	914.00	1,122.17	2,226.66
2020	#	1,672.08	1,319.82	1,326.58		710.31	1,267.77	1,180.50	1,161.30	1,298.33
2021	#	1,620.13	1,219.42	1,050.00			580.00	1,471.25	943.00	1,401.53

	Number of Wage Records Used to Calculate Average Coal Class Weekly Wages									
Year	1010	1001	1012	1014	1469	1015	1021	1023	1025	1027
2012	#	124	20	31	0	1	6	3	7	10
2013	#	90	25	29	2	5	7	1	7	9
2014	#	216	21	18	1	2	3	5	6	16
2015	#	135	18	10	3	2	3	3	5	8
2016	#	99	22	7	1		7	1	4	9
2017	#	123	23	5	6		7	4	1	6
2018	#	127	11	7	1		11	5	4	5
2019	#	125	16	11	1		2	1	6	8
2020	#	87	11	12		1	11	2	10	3
2021	#	107	13	3			1	4	2	6
Total		1233	180	133	15	11	58	29	52	80

		Average Coal Class Weekly Wage Indexed to Statewide Average Weekly Wage									
Year	SAWW	1010	1001	1012	1014	1469	1015	1021	1023	1025	1027
2012	888	#	1.588	1.156	1.161		0.456	1.182	1.543	1.380	1.210
2013	917	#	1.582	1.049	1.152	0.638	0.607	1.018	1.296	0.912	1.383
2014	932	#	1.598	1.044	1.043	0.107	0.558	0.905	0.974	1.013	1.403
2015	951	#	1.717	1.127	1.019	0.593	0.759	1.130	0.880	1.072	1.362
2016	978	#	1.697	1.100	1.024	2.156		1.159	0.730	1.174	1.857
2017	995	#	1.585	1.169	1.388	0.592		1.212	1.384	1.283	1.427
2018	1025	#	1.582	1.400	1.230	0.533		0.927	1.355	0.997	1.077
2019	1049	#	1.567	0.962	0.990	0.579		1.268	0.871	1.070	2.123
2020	1081	#	1.547	1.221	1.227		0.657	1.173	1.092	1.074	1.201
2021	1130	#	1.434	1.079	0.929			0.513	1.302	0.835	1.240
Average			1.590	1.131	1.116	0.743	0.607	1.049	1.143	1.081	1.428

		Average Coal Class Weekly Wage Indexed to Statewide Average Weekly Wage - Classes Combined	
Year	SAWW	Bit. Und. & Prep	All Other Classes
2012	888	1.560	1.190
2013	917	1.564	1.036
2014	932	1.585	0.993
2015	951	1.697	1.026
2016	978	1.710	1.121
2017	995	1.578	1.145
2018	1025	1.563	1.167
2019	1049	1.600	0.992
2020	1081	1.535	1.163
2021	1130	1.424	1.052
Average		1.582	1.089
Selected Coal Class Adjt. Factor to SAWW		1.582	1.089

Notes: Average Coal Class Weekly Wages were derived from CMCRB database for Traumatic Claims.
Average Weekly Wages by class exclude years with zero claims.
# Data for Anthracite Underground was too thin for inclusion.
SAWW = Statewide Average Weekly Wage
The number of records with wage histories are very close to, but less than, lost time claim counts due to missing wage records for some lost time accidents.
For these Classes and Years, there isn't any data.

File: C:\Users\Forum\OneDrive\Clients\Coal Mine\2022 Rate Filing\XL\[2022-10.xlsx]X-G

PAB

Run Date: August 05, 2022 - 11:23:13 AM

Effective Date - April 01, 2023

228,880.850000

Section A. Office of Small Business Advocate Assessment Factor Calculation

1.	2022-2023 Small Business Advocate Assessment	$	350,000
2.	2021 Insurance Carrier Paid Losses		
	CMCRB		15,657,358
	PCRB		1,998,306,401
	Total		2,013,963,759
3.	Insurer Assessment Ratio (item 1 divided by item 2)		0.0002

Section B. Employer Assessment Factor Calculation

1.	2022/2023 INSURANCE CARRIER ASSESSMENT AMOUNTS		
	A. Administrative Fund		56,710,227
	B. Subsequent Injury Fund		104,672
	C. Supersedeas Fund		23,397,626
	D. Uninsured Employers Guaranty Fund		5,034,938
	TOTAL		85,247,463
2.	2021 Employer Assessment Premium Base		2,947,335,293
3.	2021 Coal Mine Premium Base		18,452,891
4.	Coal Premium percent of Total	(3)/(2)	0.626%
5.	Assessments to be paid by coal employers		533,724
6.	Coal Employer Assessment Factor		0.0289

Source: Pa. Dept. of Labor & Industry
PCRB

COAL MINE COMPENSATION RATING BUREAU

CATASTROPHE - Spread of Loss Cost to Classes

Classification		(1) 2021 Developed Payrolls	(2) Hazard Weights	(3) Payroll Weight (1)x(2)/1000	(4) Percentage of Exposure	(5) Catastrophe Losses (4)xAverage	(6) Actual Loss Cost Spread [(5)/(1)]x100	(7) Approved Loss Cost 4/1/2022	(8) Selected	(9) Change (8)/(7) - 1
Underground										
Anthracite Underground	1010	$232,531								
Bituminous Underground	1001	131,501,704								
Total		131,734,235	7	922,140	88.5%	496,213	0.38	0.22	0.27	22.7%
Other than Underground										
Anthracite Surface	1012	24,267,567								
Bituminous Surface	1014	29,582,319								
Coke	1469	0								
Auger	1015	208,581								
Anthracite Co-Gen	1021	8,263,749								
Bituminous Co-Gen	1023	12,244,359								
Anthracite Prep Plant	1025	12,790,962								
Bituminous Prep Plant	1027	32,053,110								
Total		119,410,647	1	119,411	11.5%	64,256	0.05	0.04	0.05	25.0%
Grand Total		251,144,882	8	1,041,551	100.0%	560,469	0.22	a-0.13	0.17	30.8%

a - Current Total Loss Cost is based on 2021 Payroll weights
b- Auger = one-third underground & two-thirds surface or $0.12

Source: Column (1) - Exhibit X-A
Column (2) - Judgement
Column (5) - Exhibit XII-B

COAL MINE COMPENSATION RATING BUREAU
CATASTROPHE CALCULATION
TRAUMATIC ON-LEVEL LOSSES IN EXCESS OF $1,250,000

Accident Year	Number of Excess Claims	Excess Over $ 1,250,000
2002	2	745,745
2003	2	1,331,745
2004	2	2,180,734
2005	4	2,199,652
2006	-	-
2007	2	3,234,621
2008	2	724,373
2009	1	116,705
2010	-	-
2011	2	470,603
2012	1	200,625
2013	-	-
2014	-	-
2015	1	4,571
2016	-	-
2017	-	-
2018	-	-
2019	-	-
2020	-	-
2021	-	-
	19	11,209,374

Average over 20 years	560,469
2021 Developed Payroll from Exhibit XII-A	251,144,882
Loss Cost	0.22

Source: Exhibit XII-C

COAL MINE COMPENSATION RATING BUREAU
CATASTROPHE CALCULATION
TRAUMATIC LOSSES OVER $1,250,000

(1) Key Number	(2) Class	(3) Accident Year	(4) Injury Type	(5) Incurred Indemnity & Funeral	(6) Incurred Medical	(7) Paid Medical	(8) O/S Medical	(9) Act 44 Factor	(10) Trend	(11) Medical w/Trend & Act 44 Factor	(12) Loss at Current Level	(13) Excess Over $1,250,000
Que Creek	100100	2002	9	892,793	116,396	116,396	-	1.0000	1.9169	223,119	1,934,514	684,514
39420	100100	2002	9	366,640	317,397	317,397	-	1.0000	1.9169	608,418	1,311,231	61,231
39840	100100	2003	2	419,207	485,877	279,008	206,869	1.0000	1.8800	913,449	1,701,558	451,558
39990	100100	2003	1	1,133,078	-	-	-	1.0000	1.8800	-	2,130,187	880,187
40926	100100	2004	9	791,595	603,806	497,498	106,308	1.0000	1.8391	1,110,460	2,566,282	1,316,282
41102	102700	2004	2	505,991	643,730	643,730	-	1.0000	1.8391	1,183,884	2,114,452	864,452
41672	100100	2005	2	913,746	650,000	509,622	140,378	1.0000	1.7723	1,151,995	2,771,427	1,521,427
41676	100100	2005	2	681,537	94,638	94,638	-	1.0000	1.7723	167,727	1,375,615	125,615
41534	101400	2005	1	985,831	25,566	25,566	-	1.0000	1.7723	45,311	1,792,499	542,499
41618	101400	2005	2	231,682	479,321	479,321	-	1.0000	1.7723	849,501	1,260,111	10,111
42863	100100	2007	9	423,025	391,002	391,002	-	1.0000	1.6290	636,942	1,326,050	76,050
43059	101200	2007	2	706,305	2,000,000	1,813,483	186,517	1.0000	1.6290	3,258,000	4,408,571	3,158,571
43335	100100	2008	1	918,605	223	223	-	1.0000	1.5725	351	1,444,857	194,857
43835	100100	2008	1	1,120,216	11,432	11,432	-	1.0000	1.5725	17,977	1,779,516	529,516
45177	101200	2009	9	629,643	270,749	270,749	-	1.0000	1.5179	410,970	1,366,705	116,705
46013	100100	2011	9	312,490	741,810	515,017	226,793	1.0000	1.4790	1,097,137	1,559,310	309,310
45686	101400	2011	9	321,808	632,413	568,548	63,865	1.0000	1.4790	935,339	1,411,293	161,293
46135	100100	2012	9	246,748	768,314	768,314	-	1.0000	1.4291	1,097,998	1,450,625	200,625
48542	100100	2015	1	940,176	-	-	-	1.0000	1.3344	-	1,254,571	4,571
Totals	19										34,959,374	11,209,374

20 Year Average	560,469
2021 Developed Payroll	251,144,882
Loss Cost	0.22

Sources: Columns (1) through (8) from CMCRB Database.
Injury types are as follows: 1 (Death), 2 (Permanent Total), 9 (Permanent Partial).
Column (9): Exhibit VI-B page 1
Column (10): Exhibit XII-D.
Column (11) is equal to Columns [(7) X (9) + (8)] x (10)
Column (12) is equal to Columns (5) X (10) + (11)
Column (13) is equal to Column (12), minus $1,250,000

Coal Mine Compensation Rating Bureau
Catastrophe Calculation
Trend Factors for Medical and Indemnity

Year	Statewide Average Weekly Wage	Yearly Percentage Change	Trend Factor	Year	Statewide Average Weekly Wage	Yearly Percentage Change	Trend Factor
2002	$662		1.9169				
2003	$675	2.0%	1.8800	2013	$917	3.3%	1.3839
2004	$690	2.2%	1.8391	2014	$932	1.6%	1.3616
2005	$716	3.8%	1.7723	2015	$951	2.0%	1.3344
2006	$745	4.1%	1.7034	2016	$978	2.8%	1.2975
2007	$779	4.6%	1.6290	2017	$995	1.7%	1.2754
2008	$807	3.6%	1.5725	2018	$1,025	3.0%	1.2380
2009	$836	3.6%	1.5179	2019	$1,049	2.3%	1.2097
2010	$845	1.1%	1.5018	2020	$1,081	3.1%	1.1739
2011	$858	1.5%	1.4790	2021	$1,130	4.5%	1.1230
2012	$888	3.5%	1.4291	2022	$1,205	6.6%	1.0531

Average of All Years=	3.05%
Average of last 10 years=	3.11%
Average of last 5 years=	3.92%
Average of last 3 years=	4.74%

Selected= 3.00% (Last Year's Selection was 2.80%)

	Projected Wage		Weight
01-01-2023	$1,241	a	28.125%
01-01-2024	$1,278	a	68.750%
01-01-2025	$1,317	a	3.125%

Average Weekly Wage For Policies effective between 04-01-2023 and 04-01-2025

$1,269 b

a. Previous year's wage times annual increase of 3.00%
b. Weighted average of projected wage levels from 01-01-2023 to 01-01-2025

Source: Statewide Average Weekly Wage data is from the Pennsylvania Workers' Compensation Act booklet or the Department of Labor and Industry website.

Coal Mine Compensation Rating Bureau
Catastrophe Calculation
Traumatic Losses by Class

Class Code	Description	Number of Claims	Excess Over $1,250,000
1010	Anthracite Underground	-	-
1001	Bituminous Underground	13	6,355,743
1012	Anthracite Surface	2	3,275,276
1014	Bituminous Surface	3	713,903
1469	Coke	-	-
1015	Auger	-	-
1021	Anthracite Co-Gen	-	-
1023	Bituminous Co-Gen	-	-
1025	Anthracite Prep Plant	-	-
1027	Bituminous Prep Plant	1	864,452
	Total	19	$11,209,374

Sources: Exhibit XII-C

PAB

Coal Mine Compensation Rating Bureau of Pennsylvania

Experience Rating Plan

Basic Data Lookup Tables

2023 plan factors at 50k and 150 k splits:

Table A: Ratemaking Factors

Year:	2021	2020	2019	Average split by Layer
Loss Develop.	1.6227	1.1679	1.0780	
Layers:	Split of total losses by Layer			
0- 50	0.51204	0.41739	0.40313	0.44419
50-150	0.28392	0.27218	0.26072	0.27227
Over 150	0.20404	0.31043	0.33615	0.28354
Trend	1.0207	1.0299	1.0377	1.0000

Table B: Payroll Development

Classification		Payroll Development
1001	Bit deep	1.0000
1010	Anth deep	1.0000
1012	Anth surf	1.0061
1014	Bit surf	1.0000
1015	Auger	1.0000
1021	Anth Co-gen	1.0000
1023	Bit Co-gen	1.0000
1025	Anth Prep	1.0102
1027	Bit Prep	1.0158
1469	Coke	1.0097

Table C: Unloaded Loss Costs - Traumatic

Classification		Unloaded Loss Cost (1)
1001	Bit deep	6.73
1010	Anth deep	16.87
1012	Anth surf	6.14
1014	Bit surf	1.18
1015	Auger	6.08
1021	Anth Co-gen	7.55
1023	Bit Co-gen	1.22
1025	Anth Prep	2.67
1027	Bit Prep	1.96
1469	Coke	4.45

Table D: Manual Loss Costs - Traumatic

Classification		Unloaded Loss Cost (1)	Loadings: Catastrophe Exh. XII-A (2)	Loadings: Small Business Assessment (3)	Loadings: Off-Balances# (4)	Manual Loss Cost (5)
1001	Bit deep	6.73	0.27	1.0001	1.0230	7.16
1010	Anth deep	16.87	0.27	1.0001	1.0230	17.53
1012	Anth surf	6.14	0.05	1.0001	1.0230	6.33
1014	Bit surf	1.18	0.05	1.0001	1.0230	1.26
1015	Auger	6.08	0.12	1.0001	1.0230	6.34
1021	Anth Co-gen	7.55	0.05	1.0001	1.0230	7.77
1023	Bit Co-gen	1.22	0.05	1.0001	1.0230	1.30
1025	Anth Prep	2.67	0.05	1.0001	1.0230	2.78
1027	Bit Prep	1.96	0.05	1.0001	1.0230	2.06
1469	Coke	4.45	0.05	1.0001	1.0230	4.60

	Off-* Balances
Merit Rating Exh. XIV-A	1.0002
Safety Rating Exh XIV-B	1.0228
Combined	1.0230

Table E: Expected Traumatic Loss Costs

Classification		Unloaded Manual Loss Cost	2021 All Layers: De-trended Loss Cost*	2021 All Layers: Undeveloped Losses**	2021 Layer 0-50 (0.51204): Undeveloped Expected Loss Cost***	2021 Layer 50-150 (0.28392): Undeveloped Expected Loss Cost***	2021 XS over 150 (0.20404): Undeveloped Expected Loss Cost***	2020 All Layers: De-trended Loss Cost*	2020 All Layers: Undeveloped Losses**	2020 Layer 0-50 (0.41739): Undeveloped Expected Loss Cost***	2020 Layer 50-150 (0.27218): Undeveloped Expected Loss Cost***	2020 XS over 150 (0.31043): Undeveloped Expected Loss Cost***	2019 All Layers: De-trended Loss Cost*	2019 All Layers: Undeveloped Losses**	2019 Layer 0-50 (0.40313): Undeveloped Expected Loss Cost***	2019 Layer 50-150 (0.26072): Undeveloped Expected Loss Cost***	2019 XS over 150 (0.33615): Undeveloped Expected Loss Cost***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1001	Bit deep	6.73	6.59	4.06	2.08	1.15	0.83	6.53	5.59	2.33	1.52	1.74	6.49	6.02	2.43	1.57	2.02
1010	Anth deep	16.87	16.53	10.19	5.22	2.89	2.08	16.38	14.03	5.86	3.82	4.36	16.26	15.08	6.08	3.93	5.07
1012	Anth surf	6.14	6.02	3.71	1.90	1.05	0.76	5.96	5.10	2.13	1.39	1.58	5.92	5.49	2.21	1.43	1.85
1014	Bit surf	1.18	1.16	0.71	0.36	0.20	0.14	1.15	0.98	0.41	0.27	0.30	1.14	1.06	0.43	0.28	0.36
1015	Auger	6.08	5.96	3.67	1.88	1.04	0.75	5.90	5.05	2.11	1.37	1.57	5.86	5.44	2.19	1.42	1.83
1021	Anth Co-gen	7.55	7.40	4.56	2.33	1.29	0.93	7.33	6.28	2.62	1.71	1.95	7.28	6.75	2.72	1.76	2.27
1023	Bit Co-gen	1.22	1.20	0.74	0.38	0.21	0.15	1.18	1.01	0.42	0.27	0.31	1.18	1.09	0.44	0.28	0.37
1025	Anth Prep	2.67	2.62	1.61	0.82	0.46	0.33	2.59	2.22	0.93	0.60	0.69	2.57	2.38	0.96	0.62	0.80
1027	Bit Prep	1.96	1.92	1.18	0.60	0.34	0.24	1.90	1.63	0.68	0.44	0.51	1.89	1.75	0.71	0.46	0.59
1469	Coke	4.45	4.36	2.69	1.38	0.76	0.55	4.32	3.70	1.54	1.01	1.15	4.29	3.98	1.60	1.04	1.34
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

* Detrended loss costs are calculated by dividing the unloaded manual lost costs (Table C) by the trend factors (table A row 7), and rounding.

** The total undeveloped loss costs are calculated by dividing the De-trended loss cost by the Total Limits loss development factor (Table A row 2), and rounding; then the costs are allocated to layers.

*** Detrended, undeveloped loss costs are allocated to layers by the splitting factors (Table A rows 4-6) based on the average shares for the same report age for the latest 6 years, and rounded to 2 decimal places.

Coal Mine Compensation Rating Bureau of Pennsylvania

Experience Rating Plan

Loss Development and Trend Factors by Experience Year

		Reported Losses	LDF	Untrended Developed Losses	Weight: Percent Indemnity vs Medical	Medical Loss Development	Indemnity Loss Development	Combined Loss Development Weighted by % indemnity vs medical by year
Indemnity	2019	$7,903,631	1.0900	$8,614,958	68.35%	1.0521	1.0900	1.0780
	2020	$7,200,675	1.2288	$8,848,189	67.89%	1.0391	1.2288	1.1679
	2021	$4,395,644	1.8738	$8,236,558	69.23%	1.0577	1.8738	1.6227
				$25,699,705	68.47%			
Medical	2019	$3,791,810	1.0521	$3,989,363	31.65%			
	2020	$4,026,550	1.0391	$4,183,988	32.11%			
	2021	$3,461,236	1.0577	$3,660,949	30.77%			
				$11,834,300	31.53%			
	Total			$37,534,005	1.0000			

		Years of Trend	Medical / HB 1846 Trend at 2.4%	Indemnity / HB 1840 Trend at 0.0%	Combined Trend Weighted by % indemnity vs medical by year
Average Exp date AY 2019	7/1/2019	4.75	1.1192	1.0000	1.0377
Average Exp date AY 2020	7/1/2020	3.75	1.0930	1.0000	1.0299
Average Exp date AY 2021	7/1/2021	2.75	1.0674	1.0000	1.0207
Average Date of Accident	4/1/2024				

Source: Loss Development - Exhibit V-C
Trend - Exhibit V-F
Reported Losses - Exhibit V-B page 1

2023 Credibility Tables

PCRB shape

Expected Losses Greater than	Equivalent Modified Payroll at $4.97 *	Primary Credibility	Excess Credibility
14,394	300,000	0.30	0.06
17,632	354,774	0.31	0.06
21,218	426,922	0.32	0.06
23,729	477,450	0.33	0.06
25,895	521,026	0.34	0.07
28,223	567,872	0.35	0.07
31,724	638,310	0.36	0.07
33,340	670,815	0.37	0.07
36,148	727,324	0.38	0.07
39,261	789,951	0.39	0.07
42,723	859,623	0.40	0.07
46,173	929,027	0.41	0.07
50,260	1,011,263	0.42	0.07
54,480	1,096,168	0.43	0.07
58,930	1,185,709	0.44	0.07
64,137	1,290,489	0.45	0.07
69,460	1,397,583	0.46	0.07
72,885	1,466,496	0.47	0.07
75,602	1,521,158	0.48	0.07
78,457	1,578,615	0.49	0.07
81,395	1,637,720	0.50	0.07
84,414	1,698,472	0.51	0.07
87,590	1,762,382	0.52	0.07
90,840	1,827,763	0.53	0.07
94,219	1,895,758	0.54	0.07
97,737	1,966,544	0.55	0.07
101,336	2,038,951	0.56	0.07
105,125	2,115,184	0.57	0.07
109,027	2,193,692	0.58	0.07
113,042	2,274,477	0.59	0.07
117,273	2,359,608	0.60	0.08
121,605	2,446,783	0.61	0.08
126,119	2,537,603	0.62	0.08
130,628	2,628,337	0.63	0.08
135,136	2,719,034	0.64	0.08
146,976	2,957,266	0.65	0.08
159,790	3,215,099	0.66	0.08
174,343	3,507,914	0.67	0.08
190,774	3,838,517	0.68	0.08
208,366	4,192,482	0.69	0.08
228,292	4,593,398	0.70	0.09
249,705	5,024,245	0.71	0.09
274,047	5,514,030	0.72	0.09
302,119	6,078,853	0.73	0.09
333,210	6,704,427	0.74	0.10
366,752	7,379,306	0.75	0.10
407,662	8,202,455	0.76	0.10
450,677	9,067,941	0.77	0.11
498,112	10,022,374	0.78	0.11
558,410	11,235,620	0.79	0.12
624,012	12,555,571	0.80	0.12
697,648	14,037,183	0.81	0.13
788,985	15,874,950	0.82	0.13
894,945	18,006,942	0.83	0.14
1,018,370	20,490,342	0.84	0.15
1,157,231	23,284,329	0.85	0.16
1,321,831	26,596,194	0.86	0.17
1,528,079	30,746,060	0.87	0.18
1,795,880	36,134,398	0.88	0.19
1,795,880	39,562,251	0.88	0.20
2,120,319	42,662,354	0.89	0.21
2,505,663	50,415,755	0.90	0.22
2,505,663	55,913,525	0.90	0.23
3,000,680	60,375,848	0.91	0.24
3,000,680	70,084,630	0.91	0.25
3,851,016	77,485,225	0.92	0.26
4,547,151	91,491,972	0.93	0.27
4,547,151	99,118,112	0.93	0.28
4,547,151	111,852,096	0.93	0.29
6,019,437	121,115,435	0.94	0.30
6,019,437	144,482,928	0.94	0.31
6,019,437	165,861,750	0.94	0.32
6,019,437	192,174,145	0.94	0.33
6,019,437	225,350,644	0.94	0.34
6,019,437	268,480,093	0.94	0.35
6,019,437	326,831,699	0.94	0.36
6,019,437	410,191,138	0.94	0.37

Credibility Zp or Ze
= (S*Payroll+I*G)/(J*S*Payroll+K*G)
[where S adjusts Payroll to Expected Losses]

Variable	Layer 1	Layer 2
Av Claim G	N/A	11,512
S	N/A	0.054
I	N/A	43.50
J	N/A	2.4000
K	N/A	700.00

* The average unloaded loss cost underlying the proposed filing is $4.97.
the table was updated to reflect this change.

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2023
Mod Comparisons

File	Proposed Manual Premium	Proposed 2023 Mod	Proposed Experience Rated Premium	2022 Mod	Change in Mod Factor
37	251,543	0.869	218,591	1.067	-0.198
52	4,946	0.785	3,883	0.804	-0.019
55	13,434	0.795	10,680	0.879	-0.084
66	2,441	1.300	3,173	1.400	-0.100
99	11,364	0.831	9,443	0.844	-0.013
119	77,090	0.756	58,280	0.916	-0.160
121	165,358	0.891	147,334	0.918	-0.027
124	8,346	0.715	5,967	0.716	-0.001
214	13,255	0.685	9,080	0.699	-0.014
283	5,603	0.699	3,916	0.696	0.003
288	1,913	0.844	1,615	0.860	-0.016
306	0	0.918	0	1.108	-0.190
352	4,698	0.789	3,707	1.089	-0.300
354	10,170	1.934	19,669	3.581	-1.647
360	1,574	0.840	1,322	0.864	-0.024
370	2,202	0.835	1,839	0.856	-0.021
421	3,104	1.771	5,497	1.474	0.297
652	347,165	1.073	372,508	1.100	-0.027
690	14,804	0.805	11,917	0.817	-0.012
954	4,004	0.781	3,127	0.809	-0.028
1016	3,635	0.834	3,032	1.256	-0.422
1037	40,763	0.810	33,018	0.830	-0.020
1158	1,449	0.844	1,223	0.864	-0.020
1444	396,662	1.623	643,782	1.422	0.201
1700	15,641	0.670	10,479	0.678	-0.008
2353	6,974	0.807	5,628	0.826	-0.019
2458	9,366	0.806	7,549	1.180	-0.374
2687	22,356	0.698	15,604	0.791	-0.093
2839	4,962	1.565	7,766	1.223	0.342
3157	20,314	0.794	16,129	0.813	-0.019
3552	3,798	0.804	3,054	0.831	-0.027
3614	22,537	1.349	30,402	1.691	-0.342
3619	9,361	0.851	7,966	0.875	-0.024
3629	13,311	0.810	10,782	0.822	-0.012
3691	4,043	2.329	9,416	1.471	0.858
3804	5,659	0.998	5,648	0.786	0.212
3932	3,834	0.790	3,029	0.805	-0.015
3977	52,029	1.180	61,394	0.861	0.319
3988	3,935	1.200	4,722	1.300	-0.100
3997	1,671	0.836	1,397	0.855	-0.019

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2023
Mod Comparisons

File	Proposed Manual Premium	Proposed 2023 Mod	Proposed Experience Rated Premium	2022 Mod	Change in Mod Factor
4024	6,205	0.840	5,212	0.850	-0.010
4025	36,388	0.808	29,402	0.855	-0.047
4030	1,503	0.832	1,250	0.851	-0.019
4031	15,673	1.510	23,666	1.135	0.375
4042	0	1.289	0	1.667	-0.378
4044	94,578	1.417	134,017	1.103	0.314
4052	39,824	1.148	45,718	0.664	0.484
4058	16,571	2.378	39,406	1.049	1.329
4061	5,114	0.845	4,321	0.864	-0.019
4072	344,537	0.889	306,293	0.940	-0.051
4077	872,841	0.870	759,372	1.129	-0.259
4078	60,041	0.719	43,169	1.017	-0.298
4089	10,436	0.831	8,672	0.851	-0.020
4094	25,418	1.772	45,041	1.729	0.043
4102	0	0.814	0	0.826	-0.012
4103	15,701	0.810	12,718	0.831	-0.021
4110	10,742	1.077	11,569	1.042	0.035
4114	21,870	0.692	15,134	0.701	-0.009
4118	3,516	0.789	2,774	0.792	-0.003
4120	8,497	0.825	7,010	0.777	0.048
4121	64,225	0.945	60,693	0.764	0.181
4122	0	0.846	0	0.822	0.024
4123	8,397	0.839	7,045	0.871	-0.032
4125	117,497	0.842	98,932	1.004	-0.162
4127	4,730	0.786	3,718	0.813	-0.027
4133	9,847	0.840	8,271	n/a	n/a
999014	1,126,184	1.056	1,189,250	n/a	n/a
999019	501,363	0.738	370,006	0.864	-0.126
999020	3,871	0.777	3,008	0.819	-0.042
999027	597	0.837	500	n/a	n/a
999031	67,400	0.878	59,177	1.013	-0.135
999038	87,403	0.935	81,722	1.446	-0.511
999039	36,105	1.531	55,277	1.210	0.321
999048	4,557	0.811	3,696	0.819	-0.008
999051	956,854	0.893	854,471	0.889	0.004
999052	26,774	0.803	21,500	0.849	-0.046
999063	3,855,775	0.938	3,616,717	0.913	0.025
999065	1,536	1.200	1,843	1.184	0.016
999071	3,090,505	1.109	3,427,370	1.035	0.074
999075	29,657	1.207	35,796	1.769	-0.562

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2023
Mod Comparisons

The following files have indicated increases or decreases in their Experience Mods of greater than 0.35 as displayed on Exhibit XIII-B, pages 1-3. This list includes all files with increases or decreases of this magnitude. It is proposed that the indicated increases or decreases be limited to a maximum of 0.35. Below are the affected files, their current mod and their proposed mod. If approved, the below stated limited mod would apply to the respective file number.

Experience Mod Caps (plus or minus 0.35)

File	2022 Mod	Proposed 2023 Mod	Limited Mod
354	3.581	1.934	3.231
1016	1.256	0.834	0.906
2458	1.180	0.806	0.830
3691	1.471	2.329	1.821
4031	1.135	1.510	1.485
4042	1.667	1.289	1.317
4052	0.664	1.148	1.014
4058	1.049	2.378	1.399
999038	1.446	0.935	1.096
999075	1.769	1.207	1.419

MERIT RATING PLAN OFF-BALANCE CALCULATION

Class	(1) 2021 Developed Payroll	(2) Traumatic Proposed Unloaded Loss Cost	(3) Credit/ Surcharge	(4) Loss Cost Premium	Off-Balance
Underground Anthracite (1010)					
Total	$232,531	16.87		$39,228	
Credit	0	16.87	-5.00%	0	
Surcharge	0	16.87	5.00%	0	
Underground Bituminous (1001)					
Total	$131,501,704	6.73		$8,850,065	
Credit	5,251	6.73	-5.00%	-18	
Surcharge	0	6.73	5.00%	0	
Surface Anthracite (1012)					
Total	$24,267,567	6.14		$1,490,029	
Credit	50,236	6.14	-5.00%	-154	
Surcharge	0	6.14	5.00%	0	
Surface Bituminous (1014)					
Total	$29,582,319	1.18		$349,071	
Credit	244,445	1.18	-5.00%	-144	
Surcharge	0	1.18	5.00%	0	
Coke (1469)					
Total	$0	4.45		$0	
Credit	0	4.45	-5.00%	0	
Surcharge	0	4.45	5.00%	0	
Auger (1015)					
Total	$208,581	6.08		$12,682	
Credit	17,061	6.08	-5.00%	-52	
Surcharge	0	6.08	5.00%	0	
Anthracite Co-Gen (1021)					
Total	$8,263,749	7.55		$623,913	
Credit	534,138	7.55	-5.00%	-2,016	
Surcharge	6,033	7.55	5.00%	23	
Bituminous Co-Gen (1023)					
Total	$12,244,359	1.22		$149,381	
Credit	0	1.22	-5.00%	0	
Surcharge	0	1.22	5.00%	0	
Anthracite Prep Plant (1025)					
Total	$12,790,962	2.67		$341,519	
Credit	42,676	2.67	-5.00%	-57	
Surcharge	0	2.67	5.00%	0	
Bituminous Prep Plant (1027)					
Total	$32,053,110	1.96		$628,241	
Credit	100,947	1.96	-5.00%	-99	
Surcharge	0	1.96	5.00%	0	
All Classes Combined					
Total	$251,144,882			$12,484,129	
Credit	994,754		-5.00%	-2,540	
Surcharge	6,033		5.00%	23	
				$12,481,612	1.0002

Source: (1) Exhibit XIV-A Page2
(2) Exhibit II
(4) = [(1) / 100] * (2) * (3)

2021 PAYROLL BY CLASS

Class	2021 Total Developed Payroll	2021 Experience Rated Payroll	2021 Merit Rated Payroll	2021 Manual Payroll
Underground Anthracite (1010)	$232,531	$232,531	$0	$0
Underground Bituminous(1001)	131,501,704	130,254,346	5,251	1,242,107
Surface Anthracite (1012)	24,267,567	24,128,914	50,236	88,417
Surface Bituminous (1014)	29,582,319	29,305,324	244,445	32,550
Coke (1469)	0	0	0	0
Auger (1015)	208,581	147,645	17,061	43,875
Anthracite Co-Gen (1021)	8,263,749	7,723,578	540,171	0
Bituminous Co-Gen (1023)	12,244,359	12,209,359	0	35,000
Anthracite Prep Plant(1025)	12,790,962	12,655,492	42,676	92,794
Bituminous Prep Plant(1027)	32,053,110	31,469,159	100,947	483,004
TOTAL	$251,144,882	$248,126,348	$1,000,787	$2,017,747

MERIT PAYROLL - CREDIT/SURCHARGE

Class	2021 Merit Rated Payroll	2021 Merit Credit Payroll	2021 Merit No Adjustment Payroll	2021 Merit Surcharge Payroll
Underground Anthracite (1010)	$0	$0	$0	$0
Underground Bituminous(1001)	5,251	5,251	0	0
Surface Anthracite (1012)	50,236	50,236	0	0
Surface Bituminous (1014)	244,445	244,445	0	0
Coke (1469)	0	0	0	0
Auger (1015)	17,061	17,061	0	0
Anthracite Co-Gen (1021)	540,171	534,138	0	6,033
Bituminous Co-Gen (1023)	0	0	0	0
Anthracite Prep Plant(1025)	42,676	42,676	0	0
Bituminous Prep Plant(1027)	100,947	100,947	0	0
TOTAL	$1,000,787	$994,754	$0	$6,033

Source: Exhibit X-A and CMCRB database as of 4/30/2022

COAL MINE COMPENSATION RATING BUREAU
SAFETY COMMITTEE CREDIT OFFSET

CLASS	(1) 2021 Developed Payroll	(2) Traumatic Proposed Unloaded Loss Cost	(3) Credit	(4) Loss Cost Premium	Off-Balance
Underground Anthracite(1010)					
Total	$232,531	$16.87		$39,228	
Safety Committee	0	16.87	-5.00%	0	
Underground Bituminous(1001)					
Total	131,501,704	6.73		$8,850,065	
Safety Committee	61,500,028	6.73	-5.00%	(206,948)	
Surface Anthracite(1012)					
Total	24,267,567	6.14		$1,490,029	
Safety Committee	10,443,204	6.14	-5.00%	(32,061)	
Surface Bituminous(1014)					
Total	29,582,319	1.18		$349,071	
Safety Committee	5,738,219	1.18	-5.00%	(3,386)	
Coke(1469)					
Total	0	4.45		$0	
Safety Committee	0	4.45	-5.00%	0	
Auger(1015)					
Total	$208,581	6.08		$12,682	
Safety Committee	0	6.08	-5.00%	0	
Anthracite Co-gen(1021)					
Total	8,263,749	7.55		$623,913	
Safety Committee	2,329,472	7.55	-5.00%	(8,794)	
Bituminous Co-gen(1023)					
Total	12,244,359	1.22		$149,381	
Safety Committee	782,335	1.22	-5.00%	(477)	
Anthracite Prep Plant(1025)					
Total	12,790,962	2.67		$341,519	
Safety Committee	6,069,999	2.67	-5.00%	(8,103)	
Bituminous Prep Plant(1027)					
Total	32,053,110	1.96		$628,241	
Safety Committee	18,506,171	1.96	-5.00%	(18,136)	
All Classes Combined					
Total	251,144,882			12,484,129	
Safety Committee	105,369,428			(277,905)	
				12,206,224	1.0228

Source: (1) Exhibit X-A and CMCRB Database as of 4-30-2022
(2) Exhibit II
(4) = [(1) / 100] * (2) * (3)